Parameter List for REF 541 and REF 543							
Document ID:	1MRS751774-MTI						
Revision:	D						
Description:	REF541 K 4.61		Note! This list covers the maximum set of cards and				
	REF541R K 4.61		corresponds to the functionality level M (Multi), including				
	REF543 K 4.61		all optional functions.				
	REF543R K 4.61						
SW build:	4.61						
BIO1 version:	118001 / Rev F sw build 2.08						
BIO2 version:	118002 / Rev F sw build 2.08						
PS1 version:	118003 / Rev F sw build 2.08						
RTD1 version:	118021 / Rev E sw build 1.17						
MIMIC version:	118005 / Rev E sw build 1.15						
MIP version:	118020 / MIP50E						

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
GLOVAR / Rev B GLOVAR										
	Rated frequency	1V10	MMI,RST	General	10.00...60.00	Hz	50.00	Read	Retain	Rated frequency of the network
	Reset indication	1V11	RST	General	1=Reset	-	0	Write	Volatile	Resetting of operation indications
	Reset outputs	1V12	RST	General	1=Reset	-	0	Write	Volatile	Resetting of operation indications & latched output signals
	Reset registers	1V13	RST	General	1=Reset	-	0	Write	Volatile	Resetting of operation indications, latched output signals, registers & waveform memory
	Command timeout	1V19	MMI,RST	General	0...65535	ms	100	Rd/Wr	Retain	Timeout for open/close request
	Reset energy	1V20	Internal	Control setting	1=Reset	-	0	Write	Volatile	Resetting of accumulated energy measurement
	Free conf.	1V21	Internal	Control setting	0...1	-	0	Rd/Wr	Volatile	Free configuration point (F-key)
	Select timeout	2V1	MMI,RST	General	10...600	s	30	Rd/Wr	Retain	Control: Object selection timeout for local and remote selection
	Interl bypass	2V4	MMI,RST	General	0=Normal mode; 1=Bypass mode	-	0	Rd/Wr	Volatile	Control: Interlocking bypass mode for all control objects (Enables all)
	Control position	2V5	RST	General	0=Disable; 1=Local; 2=Remote	-	0	Read	Volatile	Control: Recent control position
	Control poll	2V6	Internal	Control setting	1=LON virtual inputs has been polled, 0=LON virtual inputs hasn't been polled or the polling is going on	-	0	Read	Volatile	Control: Virtual LON input poll status
	Execute all	900V251	Internal	Control setting	1=Execute	-	0	Write	Volatile	Control: Execute all command for selected objects (global)
	Cancel all	900V252	Internal	Control setting	1=Cancel	-	0	Write	Volatile	Control: Cancel all command for selected objects (global)
	Execute	0V251	Internal	Control setting	1=Execute	-	0	Write	Volatile	Control: Execute all command for selected objects (inside module)
	Cancel	0V252	Internal	Control setting	1=Cancel	-	0	Write	Volatile	Control: Cancel all command for selected objects (inside module)
JMAA-38R000 / Rev D CH000 General SPA parameters										
	Store	0V151	MMI	General	0=OK/Done; 1=Start/Progress; 2=Error	-	0	Rd/Wr	Volatile	Store issued settings into nonvolatile memory
	Software reset	0V250	MMI	General	0=0, 1=Reset; 2=Error	-	0	Rd/Wr	Volatile	Software reset for relay
	SPA address	0V200	MMI	SPA	0....999	-	1	Rd/Wr	Retain	Slave number for communication
	Baud rate	0V201	MMI	SPA	0=4800; 1=9600, 2=19200	Bd	1	Rd/Wr	Retain	Data transfer rate for communication
	Rear connection	0V202	RST	SPA	1=Connect	-	0	Write	Volatile	Activate rear SPA connection
	Input osc. Level	0V241	MMI,RST	General	2 ... 50	1/s	50	Rd/Wr	Retain	Oscillation suppression for inputs
	Input osc. Hystr	0V242	MMI,RST	General	2 ... 50	1/s	10	Rd/Wr	Retain	Oscillation suppression hysteresis for inputs
	Open file	0M200	Internal	Control setting	ID/block count	-	-	Write	Volatile	Open file for write
	Write data	0M201	Internal	Control setting	ID/data	-	-	Write	Volatile	Send file block
	Close file	0M202	Internal	Control setting	ID	-	-	Write	Volatile	End of file transfer
	Open password	0V160	Internal	Control setting	1...999	-	1	Write	Volatile	Opening of password for remote setting
	Change/close pw	0V161	Internal	Control setting	0=close; 1...999=new password	-	1	Write	Volatile	Changing and closing the password for remote setting
	SPAFTR block	0V203	Internal	Control setting	0...100	-	18	Rd/Wr	Volatile	SPAFTR transfer block size
	SPAFTR coding	0V204	Internal	Control setting	0=Hex coding; 1=4/5 coding	-	0	Rd/Wr	Volatile	SPAFTR message coding
JMAA-38R001 / Rev K CH001 General parameters and analog channel parameters										
	Serial No	1V2	MMI,RST	Identification	xxxxxx	-	0	Rd/Wr	Retain	Serial number of the feeder terminal
	Software No	1V3	MMI,RST	Identification	1MRSxxxxxx	-	0	Rd/Wr	Retain	Configuration number of the software
	Hardware No	1V4	MMI,RST	Identification	1MRSxxxxxx	-	0	Rd/Wr	Retain	Hardware ordering number of the feeder terminal
	Final test date	1V5	MMI,RST	Identification	YYYYMMDD	-	19960101	Rd/Wr	Retain	Date of the final tests
	Activate IRF	1V14	MMI	General	0...1	-	0	Write	Volatile	Activation of selfsupervision input
	IRF code	1V15	MMI,RST	General	0... 4294967295	-	0	Read	Volatile	Fault code of selfsupervision system
	Start led latch	1V16	MMI,RST	Display mode	0=Non-latching; 1=Latching	-	0	Rd/Wr	Retain	Selection of latching feature for start led
	Default view	1V31	MMI,RST	Display mode	0=MIMIC;1=Measurement;2=Event;3=Alarm	-	1	Rd/Wr	Retain	Selection of the default view
	FB naming conv.	1V32	MMI,RST	Display mode	0=ABB;1=ANSI;2=IEC	-	0	Rd/Wr	Retain	Function block naming convention
	Test mode	1V17	MMI	General	0=Normal mode; 1=Test Mode	-	-	Rd/Wr	Volatile	Test mode of binary inputs

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Protocol 2	1V23	MMI,RST	General	0=NONE; 1=SPA; 2=Modbus;3=IEC103; 4=DNP 3.0; 5=IEC61850; 6=Profibus	-	0	Rd/Wr	Retain	Protocol for rear X 3.2 connector
	Protocol 3	1V18	MMI,RST	General	1=LON; 2=SPA;	-	1	Rd/Wr	Retain	Protocol for rear X 3.3 connector
	Timesync source	1V30	MMI,RST	General	SYNCTYPE	-	0	Rd/Wr	Retain	Source for time syncronization
	Open/read	1M200	Internal	Control setting	-	-	-	Rd/Wr	Volatile	open file or read # data blocks
	Read file data	1M201	Internal	Control setting	-	-	-	Read	Volatile	read data block
	FB secur. code	1M300	Internal	Control setting	1...n	-	0	Write	Volatile	Nothing here
	FB secur. status	1M301	Internal	Control setting	0...n	-	0	Read	Volatile	Nothing here
	FB set request	1M302	Internal	Control setting	0...n	-	0	Rd/Wr	Volatile	Nothing here
	FB set status	1M303	Internal	Control setting	0...n	-	0	Read	Volatile	Nothing here
	Config. counter	1M305	MMI,RST	General	0...n	-	0	Read	Retain	Configuration counter
	Config. status	1M307	Internal	Control setting	0...n	-	0	Rd/Wr	Volatile	-
	Sett.file status	1M309	Internal	Control setting	0...n	-	0	Rd/Wr	Volatile	-
	User Lib. Reset	1M310	Internal	Control setting	0...n	-	0	Rd/Wr	Volatile	-
	Config. capacity	1M311	MMI,RST	General	000.0...200.0	%	0	Read	Retain	Processor execution time capacity used by the configuration
	Instance count	1M313	Internal	Control setting	1...255	-	1	Rd/Wr	Volatile	Instance count for FB locking interface
	Error log status	1M314	Internal	Control setting	0...255	-	0	Read	Volatile	Status of error logging file interface
	Protocol instant	1M315	Internal	Control setting	INSTTYPE	-	0	Rd/Wr	Retain	Protocol instatiation interface
	Event file stat.	1M316	Internal	Control setting	0...255	-	-	Rd/Wr	Volatile	Status of file request for event view upload
	SW version	1V501	MMI,RST	CPU1 [3]	1MRS######	-	-	Read	Volatile	Software version (1MRS118xxx)
	SW revision	1V502	MMI,RST	CPU1 [3]	A-Z	-	-	Read	Volatile	Software revision (A)
	AutostoreTimeOut	1V225	Internal	Control setting	0...65535	-	-	Rd/Wr	Retain	Timeout for periodic storing
	Author	1V504	MMI,RST	Configuration	-	-	-	Rd/Wr	Retain	Author of relay configuration
	Title	1V505	MMI,RST	Configuration	-	-	-	Rd/Wr	Retain	Title of relay configuration
	Last edit date	1V506	MMI,RST	Configuration	-	-	-	Rd/Wr	Retain	Last edit date of relay configuration
	Last downl. date	1V507	MMI,RST	Configuration	-	-	-	Rd/Wr	Retain	Last download date of relay configuration
	Bay name	1V508	MMI,RST	Configuration	-	-	-	Rd/Wr	Retain	Bay name from relay configuration
	Ordering number	1V6	MMI,RST	Identification	-	-	-	Rd/Wr	Retain	Ordering number of the feeder terminal
	SW build	1V503	MMI,RST	CPU1 [3]	##.##	-	-	Read	Volatile	Software build (##.##)
	Serial No	1V260	MMI,RST	CPU1 [3]	MR######	-	MR00000	Read	Volatile	Serial number of CPU1 card
	Factory password	1V168	Internal	Control setting	0	-	-	Write	Volatile	Password for factory settings
	ZIP file	1V222	Internal	Control setting	-	-	-	Rd/Wr	Retain	Zipped project file
	ZIP comm resp	1V223	Internal	Control setting	0...3	-	0	Rd/Wr	Volatile	Zip file control command
	Calib par locat.	1V224	Internal	Control setting	-	-	0	Rd/Wr	Volatile	Calibration parameters location indication and control
JMAA-38R002 / Rev D CH002 Control parameters										
	Position setting	2V7	MMI,RST	General	0=Disable;1=Local;2=Remote;3=Logic	-	0	Read	Retain	Control position setting
	MIMIC file	2V8	Internal	Control setting	-	-	0	Rd/Wr	Retain	MIMIC configuration file
	CB close delay	2V21	MMI,RST	General	0..30	s	0	Rd/Wr	Retain	Delay between CB 'Close select' and 'Execute' commands for local control
	Event mask 1	2V101	MMI,RST	General	0...55	-	55	Rd/Wr	Retain	Event mask 1 for event transmission
	Event mask 2	2V103	MMI,RST	General	0...55	-	55	Rd/Wr	Retain	Event mask 2 for event transmission
	Event mask 3	2V105	MMI,RST	General	0...55	-	55	Rd/Wr	Retain	Event mask 3 for event transmission
	Event mask 4	2V107	MMI,RST	General	0...55	-	55	Rd/Wr	Retain	Event mask 4 for event transmission
	Factory cnf	2V9	Internal	Control setting	Bit 0(1)=Graphical mimic	-	1	Rd/Wr	Retain	Factory setting of mimic functionality
	File trns. stat	2V10	Internal	Control setting	0=No actions; 1=File received; 2=File correct (ready for nov-strore), 3=Erroneus file	-	0	Read	Volatile	File transfer success status
JMAA-38R025 / Rev C CH025 LON snvt inputs/outputs										
	COMM_IN1	25I001	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 1

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	COMM_IN2	25I002	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 2
	COMM_IN3	25I003	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 3
	COMM_IN4	25I004	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 4
	COMM_IN5	25I005	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 5
	COMM_IN6	25I006	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 6
	COMM_IN7	25I007	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 7
	COMM_IN8	25I008	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 8
	COMM_IN9	25I009	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 9
	COMM_IN10	25I010	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 10
	COMM_IN11	25I011	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 11
	COMM_IN12	25I012	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 12
	COMM_IN13	25I013	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 13
	COMM_IN14	25I014	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 14
	COMM_IN15	25I015	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 15
	COMM_IN16	25I016	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 16
	COMM_OUT1	25O001	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 1
	COMM_OUT2	25O002	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 2
	COMM_OUT3	25O003	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 3
	COMM_OUT4	25O004	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 4
	COMM_OUT5	25O005	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 5
	COMM_OUT6	25O006	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 6
	COMM_OUT7	25O007	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 7
	COMM_OUT8	25O008	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 8
	COMM_OUT9	25O009	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 9
	COMM_OUT10	25O010	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 10
	COMM_OUT11	25O011	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 11
	COMM_OUT12	25O012	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 12
	COMM_OUT13	25O013	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 13
	COMM_OUT14	25O014	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 14
	COMM_OUT15	25O015	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 15
	COMM_OUT16	25O016	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 16
JMAA-38R026 / Rev C CH026 LON snvt inputs/outputs										
	COMM_IN17	26I001	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 17
	COMM_IN18	26I002	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 18
	COMM_IN19	26I003	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 19
	COMM_IN20	26I004	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 20
	COMM_IN21	26I005	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 21
	COMM_IN22	26I006	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 22
	COMM_IN23	26I007	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 23
	COMM_IN24	26I008	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 24
	COMM_IN25	26I009	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 25
	COMM_IN26	26I010	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 26
	COMM_IN27	26I011	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 27
	COMM_IN28	26I012	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 28
	COMM_IN29	26I013	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 29
	COMM_IN30	26I014	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 30
	COMM_IN31	26I015	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 31
	COMM_IN32	26I016	MMI	Comm. inputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication input 32
	COMM_OUT17	26O001	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 17

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	COMM_OUT18	26O002	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 18
	COMM_OUT19	26O003	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 19
	COMM_OUT20	26O004	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 20
	COMM_OUT21	26O005	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 21
	COMM_OUT22	26O006	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 22
	COMM_OUT23	26O007	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 23
	COMM_OUT24	26O008	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 24
	COMM_OUT25	26O009	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 25
	COMM_OUT26	26O010	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 26
	COMM_OUT27	26O011	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 27
	COMM_OUT28	26O012	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 28
	COMM_OUT29	26O013	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 29
	COMM_OUT30	26O014	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 30
	COMM_OUT31	26O015	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 31
	COMM_OUT32	26O016	MMI	Comm. outputs	0 ... 65535	-	0	Rd/Wr	Volatile	Communication output 32
CH231 / Rev B CH231 LON Communication Protocol Adapter										
	Subnet number	231V001	MMI	LON	1...255	-	1	Rd/Wr	Volatile	LON subnet number
	Node number	231V002	MMI	LON	1...127	-	1	Rd/Wr	Volatile	LON node number
MOD_BUS / Rev B MOD_BUS Modbus for REF and REM										
	Unit Address	504V001	MMI,RST	Modbus	1...247	-	1	Rd/Wr	Retain	Address of the unit in the Modbus network
	CRC Order	504V002	MMI,RST	Modbus	0..1 [0=Low/High; 1= High/Low]	-	0	Rd/Wr	Retain	The order of CRC bytes in protocol frame 0 = LO/HI, 1 = HI/LO Not used in ASCII mode
	Modbus Mode	504V003	MMI,RST	Modbus	0..1 [0=ASCII; 1=RTU]	-	1	Rd/Wr	Retain	ASCII or RTU mode
	Password	504V004	MMI,RST	Modbus	-	-	' '	Rd/Wr	Retain	Password
	POD entries max	504V060	Internal	Control setting	0	-	0	Read	Volatile	INTERNAL USE / POD GENERATION: Total number of visible POD entries, parameter used by POD Tool
	Entr. not used	504V061	Internal	Control setting	0	-	0	Read	Volatile	INTERNAL USE / POD GENERATION: Number of POD entries not in use, parameter used by POD Tool
	No INV entries	504V062	Internal	Control setting	0	-	0	Read	Volatile	INTERNAL USE / POD GENERATION: Number of POD entries with invalid (uncorrectable content) INV, parameter used by POD Tool
	No COR entries	504V063	Internal	Control setting	0	-	0	Read	Volatile	INTERNAL USE / POD GENERATION: Number of POD entries with corrected contents(COR), parameter used by POD Tool
	No NBL entries	504V064	Internal	Control setting	0	-	0	Read	Volatile	INTERNAL USE / POD GENERATION: Number of POD entries referring to nonexistent FBs (NBL), parameter used by POD Tool
	No NOB entries	504V065	Internal	Control setting	0	-	0	Read	Volatile	INTERNAL USE / POD GENERATION: Number of POD entries referring to invalid objects from existent FBs (NOB), used by POD Tool
	Entry to OP.POD	504V066	Internal	Control setting	0	-	0	Read	Volatile	INTERNAL USE / POD GENERATION: Number of POD entries translated into operational POD, parameter used by POD Tool
	POD ID string	504V700	Internal	Control setting	0	-	0	Read	Volatile	INTERNAL USE / POD GENERATION: POD identification string used by POD Tool
	POD tables	504M001	Internal	Control setting	0	-	0	Rd/Wr	Retain	Pod table upload/download parameter
	Baud rate	504V211	MMI,RST	Modbus	0..6 [0=300; 1=600; 2=1200; 3=2400; 4=4800; 5=9600; 6=19200]	Bd	19200	Rd/Wr	Retain	Communication speed of modbus protocol
	No of stop bits	504V212	MMI	Modbus	0..2	-	1	Rd/Wr	Retain	Number of stop bits

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Next char. TO	504V215	MMI	Modbus	0..65535	ms	0	Rd/Wr	Retain	Next character timeout
	End of frame TO	504V216	MMI	Modbus	2..65535	ms	2	Rd/Wr	Retain	End of frame timeout
	Parity	504V230	MMI,RST	Modbus	0..2 [0=NONE; 1=ODD; 2=EVEN]	-	2	Rd/Wr	Retain	Parity setting
	No of data bits	504V231	MMI	Modbus	5,6,7,8	-	8	Rd/Wr	Retain	Number of data bits
	Frame err cnt	504V261	Internal	Control setting	0..65535	-	0	Read	Volatile	Frame error counter
	Parity err cnt	504V262	Internal	Control setting	0..65535	-	0	Read	Volatile	Parity error counter
	Overrun err cnt	504V263	Internal	Control setting	0..65535	-	0	Read	Volatile	Overrun error counter
CCODED1 / Rev E CCODED1										
	Ch1 meas. device	1V51	MMI,RST	Analog channels	0..53[0=Not in use; 1=CT 1; 2=CT 2; 3=CT 3; 4=CT 4; 5=CT 5; 6=VT 1; 7=VT 2; 8=VT 3; 9=VT 4; 10=RS 1; 11=RS 2; 12=RS 3; 13=VD 1; 14=VD 2; 15=VD 3; 16=CT 6; 17=CT 7; 18=CT 8; 19=CT 9; 20=CT 10; 21=VT 5; 22=VT 6; 23=VT 7; 24=VT 8; 25=VT 9; 26=VT 10; 27=RS 4; 28=RS 5; 29=RS 6; 30=RS 7; 31=RS 8; 32=RS 9; 33=RS 10; 34=VD 4; 35=VD 5; 36=VD 6; 37=VD 7; 38=VD 8; 39=VD 9; 40=VD 10; 41=KS 1; 42=KS 2; 43=KS 3; 44=KS 4; 45=KS 5; 46=KS 6; 47=KS 7; 48=KS 8; 49=KS 9; 50=KS 10; 51=GE 1; 52=GE 2; 53=GE 3]	-	0	Read	Retain	Measuring device
	Ch2 meas. device	1V53	MMI,RST	Analog channels	0..53[0=Not in use; 1=CT 1; 2=CT 2; 3=CT 3; 4=CT 4; 5=CT 5; 6=VT 1; 7=VT 2; 8=VT 3; 9=VT 4; 10=RS 1; 11=RS 2; 12=RS 3; 13=VD 1; 14=VD 2; 15=VD 3; 16=CT 6; 17=CT 7; 18=CT 8; 19=CT 9; 20=CT 10; 21=VT 5; 22=VT 6; 23=VT 7; 24=VT 8; 25=VT 9; 26=VT 10; 27=RS 4; 28=RS 5; 29=RS 6; 30=RS 7; 31=RS 8; 32=RS 9; 33=RS 10; 34=VD 4; 35=VD 5; 36=VD 6; 37=VD 7; 38=VD 8; 39=VD 9; 40=VD 10; 41=KS 1; 42=KS 2; 43=KS 3; 44=KS 4; 45=KS 5; 46=KS 6; 47=KS 7; 48=KS 8; 49=KS 9; 50=KS 10; 51=GE 1; 52=GE 2; 53=GE 3]	-	0	Read	Retain	Measuring device
	Ch3 meas. device	1V55	MMI,RST	Analog channels	0..53[0=Not in use; 1=CT 1; 2=CT 2; 3=CT 3; 4=CT 4; 5=CT 5; 6=VT 1; 7=VT 2; 8=VT 3; 9=VT 4; 10=RS 1; 11=RS 2; 12=RS 3; 13=VD 1; 14=VD 2; 15=VD 3; 16=CT 6; 17=CT 7; 18=CT 8; 19=CT 9; 20=CT 10; 21=VT 5; 22=VT 6; 23=VT 7; 24=VT 8; 25=VT 9; 26=VT 10; 27=RS 4; 28=RS 5; 29=RS 6; 30=RS 7; 31=RS 8; 32=RS 9; 33=RS 10; 34=VD 4; 35=VD 5; 36=VD 6; 37=VD 7; 38=VD 8; 39=VD 9; 40=VD 10; 41=KS 1; 42=KS 2; 43=KS 3; 44=KS 4; 45=KS 5; 46=KS 6; 47=KS 7; 48=KS 8; 49=KS 9; 50=KS 10; 51=GE 1; 52=GE 2; 53=GE 3]	-	0	Read	Retain	Measuring device

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Ch4 meas. device	1V57	MMI,RST	Analog channels	0..53[0=Not in use; 1=CT 1; 2=CT 2; 3=CT 3; 4=CT 4; 5=CT 5; 6=VT 1; 7=VT 2; 8=VT 3; 9=VT 4; 10=RS 1; 11=RS 2; 12=RS 3; 13=VD 1; 14=VD 2; 15=VD 3; 16=CT 6; 17=CT 7; 18=CT 8; 19=CT 9; 20=CT 10; 21=VT 5; 22=VT 6; 23=VT 7; 24=VT 8; 25=VT 9; 26=VT 10; 27=RS 4; 28=RS 5; 29=RS 6; 30=RS 7; 31=RS 8; 32=RS 9; 33=RS 10; 34=VD 4; 35=VD 5; 36=VD 6; 37=VD 7; 38=VD 8; 39=VD 9; 40=VD 10; 41=KS 1; 42=KS 2; 43=KS 3; 44=KS 4; 45=KS 5; 46=KS 6; 47=KS 7; 48=KS 8; 49=KS 9; 50=KS 10; 51=GE 1; 52=GE 2; 53=GE 3]	-	0	Read	Retain	Measuring device
	Ch5 meas. device	1V59	MMI,RST	Analog channels	0..53[0=Not in use; 1=CT 1; 2=CT 2; 3=CT 3; 4=CT 4; 5=CT 5; 6=VT 1; 7=VT 2; 8=VT 3; 9=VT 4; 10=RS 1; 11=RS 2; 12=RS 3; 13=VD 1; 14=VD 2; 15=VD 3; 16=CT 6; 17=CT 7; 18=CT 8; 19=CT 9; 20=CT 10; 21=VT 5; 22=VT 6; 23=VT 7; 24=VT 8; 25=VT 9; 26=VT 10; 27=RS 4; 28=RS 5; 29=RS 6; 30=RS 7; 31=RS 8; 32=RS 9; 33=RS 10; 34=VD 4; 35=VD 5; 36=VD 6; 37=VD 7; 38=VD 8; 39=VD 9; 40=VD 10; 41=KS 1; 42=KS 2; 43=KS 3; 44=KS 4; 45=KS 5; 46=KS 6; 47=KS 7; 48=KS 8; 49=KS 9; 50=KS 10; 51=GE 1; 52=GE 2; 53=GE 3]	-	0	Read	Retain	Measuring device
	Ch6 meas. device	1V61	MMI,RST	Analog channels	0..53[0=Not in use; 1=CT 1; 2=CT 2; 3=CT 3; 4=CT 4; 5=CT 5; 6=VT 1; 7=VT 2; 8=VT 3; 9=VT 4; 10=RS 1; 11=RS 2; 12=RS 3; 13=VD 1; 14=VD 2; 15=VD 3; 16=CT 6; 17=CT 7; 18=CT 8; 19=CT 9; 20=CT 10; 21=VT 5; 22=VT 6; 23=VT 7; 24=VT 8; 25=VT 9; 26=VT 10; 27=RS 4; 28=RS 5; 29=RS 6; 30=RS 7; 31=RS 8; 32=RS 9; 33=RS 10; 34=VD 4; 35=VD 5; 36=VD 6; 37=VD 7; 38=VD 8; 39=VD 9; 40=VD 10; 41=KS 1; 42=KS 2; 43=KS 3; 44=KS 4; 45=KS 5; 46=KS 6; 47=KS 7; 48=KS 8; 49=KS 9; 50=KS 10; 51=GE 1; 52=GE 2; 53=GE 3]	-	0	Read	Retain	Measuring device
	Ch7 meas. device	1V63	MMI,RST	Analog channels	0..53[0=Not in use; 1=CT 1; 2=CT 2; 3=CT 3; 4=CT 4; 5=CT 5; 6=VT 1; 7=VT 2; 8=VT 3; 9=VT 4; 10=RS 1; 11=RS 2; 12=RS 3; 13=VD 1; 14=VD 2; 15=VD 3; 16=CT 6; 17=CT 7; 18=CT 8; 19=CT 9; 20=CT 10; 21=VT 5; 22=VT 6; 23=VT 7; 24=VT 8; 25=VT 9; 26=VT 10; 27=RS 4; 28=RS 5; 29=RS 6; 30=RS 7; 31=RS 8; 32=RS 9; 33=RS 10; 34=VD 4; 35=VD 5; 36=VD 6; 37=VD 7; 38=VD 8; 39=VD 9; 40=VD 10; 41=KS 1; 42=KS 2; 43=KS 3; 44=KS 4; 45=KS 5; 46=KS 6; 47=KS 7; 48=KS 8; 49=KS 9; 50=KS 10; 51=GE 1; 52=GE 2; 53=GE 3]	-	0	Read	Retain	Measuring device

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Ch8 meas. device	1V65	MMI,RST	Analog channels	0..53[0=Not in use; 1=CT 1; 2=CT 2; 3=CT 3; 4=CT 4; 5=CT 5; 6=VT 1; 7=VT 2; 8=VT 3; 9=VT 4; 10=RS 1; 11=RS 2; 12=RS 3; 13=VD 1; 14=VD 2; 15=VD 3; 16=CT 6; 17=CT 7; 18=CT 8; 19=CT 9; 20=CT 10; 21=VT 5; 22=VT 6; 23=VT 7; 24=VT 8; 25=VT 9; 26=VT 10; 27=RS 4; 28=RS 5; 29=RS 6; 30=RS 7; 31=RS 8; 32=RS 9; 33=RS 10; 34=VD 4; 35=VD 5; 36=VD 6; 37=VD 7; 38=VD 8; 39=VD 9; 40=VD 10; 41=KS 1; 42=KS 2; 43=KS 3; 44=KS 4; 45=KS 5; 46=KS 6; 47=KS 7; 48=KS 8; 49=KS 9; 50=KS 10; 51=GE 1; 52=GE 2; 53=GE 3]	-	0	Read	Retain	Measuring device
	Ch9 meas. device	1V67	MMI,RST	Analog channels	0..53[0=Not in use; 1=CT 1; 2=CT 2; 3=CT 3; 4=CT 4; 5=CT 5; 6=VT 1; 7=VT 2; 8=VT 3; 9=VT 4; 10=RS 1; 11=RS 2; 12=RS 3; 13=VD 1; 14=VD 2; 15=VD 3; 16=CT 6; 17=CT 7; 18=CT 8; 19=CT 9; 20=CT 10; 21=VT 5; 22=VT 6; 23=VT 7; 24=VT 8; 25=VT 9; 26=VT 10; 27=RS 4; 28=RS 5; 29=RS 6; 30=RS 7; 31=RS 8; 32=RS 9; 33=RS 10; 34=VD 4; 35=VD 5; 36=VD 6; 37=VD 7; 38=VD 8; 39=VD 9; 40=VD 10; 41=KS 1; 42=KS 2; 43=KS 3; 44=KS 4; 45=KS 5; 46=KS 6; 47=KS 7; 48=KS 8; 49=KS 9; 50=KS 10; 51=GE 1; 52=GE 2; 53=GE 3]	-	0	Read	Retain	Measuring device
	Ch10 meas.device	1V69	MMI,RST	Analog channels	0..53[0=Not in use; 1=CT 1; 2=CT 2; 3=CT 3; 4=CT 4; 5=CT 5; 6=VT 1; 7=VT 2; 8=VT 3; 9=VT 4; 10=RS 1; 11=RS 2; 12=RS 3; 13=VD 1; 14=VD 2; 15=VD 3; 16=CT 6; 17=CT 7; 18=CT 8; 19=CT 9; 20=CT 10; 21=VT 5; 22=VT 6; 23=VT 7; 24=VT 8; 25=VT 9; 26=VT 10; 27=RS 4; 28=RS 5; 29=RS 6; 30=RS 7; 31=RS 8; 32=RS 9; 33=RS 10; 34=VD 4; 35=VD 5; 36=VD 6; 37=VD 7; 38=VD 8; 39=VD 9; 40=VD 10; 41=KS 1; 42=KS 2; 43=KS 3; 44=KS 4; 45=KS 5; 46=KS 6; 47=KS 7; 48=KS 8; 49=KS 9; 50=KS 10; 51=GE 1; 52=GE 2; 53=GE 3]	-	0	Read	Retain	Measuring device
	Ch1 signal type	1V52	MMI,RST	Analog channels	0..42[0=Not in use; 1=IL1; 2=IL2; 3=IL3; 4=I0; 5=I0b; 6=U0; 7=U12; 8= U23; 9=U31; 10=U12b; 11=U12c; 12=U1; 13=U2 ; 14=U3; 15=U1b; 16=U1c; 17=IL1b; 18=IL2b; 19=IL3b; 20=GE1; 21=GE2; 22=GE3; 23=I0s; 24=U0s; 25=U23b; 26=U31b; 27=U2b; 28=U3b; 29=U0b; 30=I0bs; 31=I0cs; 32=U0bs; 33=U0cs; 34=U12s; 35=U23s; 36=U31s; 37=U12bs; 38=U23bs; 39=U31bs; 40=U12cs; 41=U23cs; 42=U31cs]	-	0	Read	Retain	Signal type
	Ch2 signal type	1V54	MMI,RST	Analog channels	0..42[0=Not in use; 1=IL1; 2=IL2; 3=IL3; 4=I0; 5=I0b; 6=U0; 7=U12; 8= U23; 9=U31; 10=U12b; 11=U12c; 12=U1; 13=U2 ; 14=U3; 15=U1b; 16=U1c; 17=IL1b; 18=IL2b; 19=IL3b; 20=GE1; 21=GE2; 22=GE3; 23=I0s; 24=U0s; 25=U23b; 26=U31b; 27=U2b; 28=U3b; 29=U0b; 30=I0bs; 31=I0cs; 32=U0bs; 33=U0cs; 34=U12s; 35=U23s; 36=U31s; 37=U12bs; 38=U23bs; 39=U31bs; 40=U12cs; 41=U23cs; 42=U31cs]	-	0	Read	Retain	Signal type

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Ch3 signal type	1V56	MMI,RST	Analog channels	0..42[0=Not in use; 1=IL1; 2=IL2; 3=IL3; 4=I0; 5=I0b; 6=U0; 7=U12; 8= U23; 9=U31; 10=U12b; 11=U12c; 12=U1; 13=U2 ; 14=U3; 15=U1b; 16=U1c; 17=IL1b; 18=IL2b; 19=IL3b; 20=GE1; 21=GE2; 22=GE3; 23=I0s; 24=U0s; 25=U23b; 26=U31b; 27=U2b; 28=U3b; 29=U0b; 30=I0bs; 31=I0cs; 32=U0bs; 33=U0cs; 34=U12s; 35=U23s; 36=U31s; 37=U12bs; 38=U23bs; 39=U31bs; 40=U12cs; 41=U23cs; 42=U31cs]	-	0	Read	Retain	Signal type
	Ch4 signal type	1V58	MMI,RST	Analog channels	0..42[0=Not in use; 1=IL1; 2=IL2; 3=IL3; 4=I0; 5=I0b; 6=U0; 7=U12; 8= U23; 9=U31; 10=U12b; 11=U12c; 12=U1; 13=U2 ; 14=U3; 15=U1b; 16=U1c; 17=IL1b; 18=IL2b; 19=IL3b; 20=GE1; 21=GE2; 22=GE3; 23=I0s; 24=U0s; 25=U23b; 26=U31b; 27=U2b; 28=U3b; 29=U0b; 30=I0bs; 31=I0cs; 32=U0bs; 33=U0cs; 34=U12s; 35=U23s; 36=U31s; 37=U12bs; 38=U23bs; 39=U31bs; 40=U12cs; 41=U23cs; 42=U31cs]	-	0	Read	Retain	Signal type
	Ch5 signal type	1V60	MMI,RST	Analog channels	0..42[0=Not in use; 1=IL1; 2=IL2; 3=IL3; 4=I0; 5=I0b; 6=U0; 7=U12; 8= U23; 9=U31; 10=U12b; 11=U12c; 12=U1; 13=U2 ; 14=U3; 15=U1b; 16=U1c; 17=IL1b; 18=IL2b; 19=IL3b; 20=GE1; 21=GE2; 22=GE3; 23=I0s; 24=U0s; 25=U23b; 26=U31b; 27=U2b; 28=U3b; 29=U0b; 30=I0bs; 31=I0cs; 32=U0bs; 33=U0cs; 34=U12s; 35=U23s; 36=U31s; 37=U12bs; 38=U23bs; 39=U31bs; 40=U12cs; 41=U23cs; 42=U31cs]	-	0	Read	Retain	Signal type
	Ch6 signal type	1V62	MMI,RST	Analog channels	0..42[0=Not in use; 1=IL1; 2=IL2; 3=IL3; 4=I0; 5=I0b; 6=U0; 7=U12; 8= U23; 9=U31; 10=U12b; 11=U12c; 12=U1; 13=U2 ; 14=U3; 15=U1b; 16=U1c; 17=IL1b; 18=IL2b; 19=IL3b; 20=GE1; 21=GE2; 22=GE3; 23=I0s; 24=U0s; 25=U23b; 26=U31b; 27=U2b; 28=U3b; 29=U0b; 30=I0bs; 31=I0cs; 32=U0bs; 33=U0cs; 34=U12s; 35=U23s; 36=U31s; 37=U12bs; 38=U23bs; 39=U31bs; 40=U12cs; 41=U23cs; 42=U31cs]	-	0	Read	Retain	Signal type
	Ch7 signal type	1V64	MMI,RST	Analog channels	0..42[0=Not in use; 1=IL1; 2=IL2; 3=IL3; 4=I0; 5=I0b; 6=U0; 7=U12; 8= U23; 9=U31; 10=U12b; 11=U12c; 12=U1; 13=U2 ; 14=U3; 15=U1b; 16=U1c; 17=IL1b; 18=IL2b; 19=IL3b; 20=GE1; 21=GE2; 22=GE3; 23=I0s; 24=U0s; 25=U23b; 26=U31b; 27=U2b; 28=U3b; 29=U0b; 30=I0bs; 31=I0cs; 32=U0bs; 33=U0cs; 34=U12s; 35=U23s; 36=U31s; 37=U12bs; 38=U23bs; 39=U31bs; 40=U12cs; 41=U23cs; 42=U31cs]	-	0	Read	Retain	Signal type
	Ch8 signal type	1V66	MMI,RST	Analog channels	0..42[0=Not in use; 1=IL1; 2=IL2; 3=IL3; 4=I0; 5=I0b; 6=U0; 7=U12; 8= U23; 9=U31; 10=U12b; 11=U12c; 12=U1; 13=U2 ; 14=U3; 15=U1b; 16=U1c; 17=IL1b; 18=IL2b; 19=IL3b; 20=GE1; 21=GE2; 22=GE3; 23=I0s; 24=U0s; 25=U23b; 26=U31b; 27=U2b; 28=U3b; 29=U0b; 30=I0bs; 31=I0cs; 32=U0bs; 33=U0cs; 34=U12s; 35=U23s; 36=U31s; 37=U12bs; 38=U23bs; 39=U31bs; 40=U12cs; 41=U23cs; 42=U31cs]	-	0	Read	Retain	Signal type

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Ch9 signal type	1V68	MMI,RST	Analog channels	0..42[0=Not in use; 1=IL1; 2=IL2; 3=IL3; 4=I0; 5=I0b; 6=U0; 7=U12; 8= U23; 9=U31; 10=U12b; 11=U12c; 12=U1; 13=U2 ; 14=U3; 15=U1b; 16=U1c; 17=IL1b; 18=IL2b; 19=IL3b; 20=GE1; 21=GE2; 22=GE3; 23=I0s; 24=U0s; 25=U23b; 26=U31b; 27=U2b; 28=U3b; 29=U0b; 30=I0bs; 31=I0cs; 32=U0bs; 33=U0cs; 34=U12s; 35=U23s; 36=U31s; 37=U12bs; 38=U23bs; 39=U31bs; 40=U12cs; 41=U23cs; 42=U31cs]	-	0	Read	Retain	Signal type
	Ch10 signal type	1V70	MMI,RST	Analog channels	0..42[0=Not in use; 1=IL1; 2=IL2; 3=IL3; 4=I0; 5=I0b; 6=U0; 7=U12; 8= U23; 9=U31; 10=U12b; 11=U12c; 12=U1; 13=U2 ; 14=U3; 15=U1b; 16=U1c; 17=IL1b; 18=IL2b; 19=IL3b; 20=GE1; 21=GE2; 22=GE3; 23=I0s; 24=U0s; 25=U23b; 26=U31b; 27=U2b; 28=U3b; 29=U0b; 30=I0bs; 31=I0cs; 32=U0bs; 33=U0cs; 34=U12s; 35=U23s; 36=U31s; 37=U12bs; 38=U23bs; 39=U31bs; 40=U12cs; 41=U23cs; 42=U31cs]	-	0	Read	Retain	Signal type
	IL1 pu-scale	1V81	MMI,RST	Analog scales	0...6000	A	0	Read	Volatile	pu-scale of IL1
	IL2 pu-scale	1V82	MMI,RST	Analog scales	0...6000	A	0	Read	Volatile	pu-scale of IL2
	IL3 pu-scale	1V83	MMI,RST	Analog scales	0...6000	A	0	Read	Volatile	pu-scale of IL3
	Io pu-scale	1V84	MMI,RST	Analog scales	0...6000	A	0	Read	Volatile	pu-scale of Io
	Iob pu-scale	1V85	MMI,RST	Analog scales	0...6000	A	0	Read	Volatile	pu-scale of Iob
	Uo pu-scale	1V86	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of Uo
	U12 pu-scale	1V87	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U12
	U23 pu-scale	1V88	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U23
	U31 pu-scale	1V89	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U31
	U12b pu-scale	1V90	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U12b
	U12c pu-scale	1V91	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U12c
	U1 pu-scale	1V92	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U1
	U2 pu-scale	1V93	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U2
	U3 pu-scale	1V94	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U3
	U1b pu-scale	1V95	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U1b
	U1c pu-scale	1V96	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U1c
	IL1b pu-scale	1V97	MMI,RST	Analog scales	0...6000	A	0	Read	Volatile	pu-scale of IL1b
	IL2b pu-scale	1V98	MMI,RST	Analog scales	0...6000	A	0	Read	Volatile	pu-scale of IL2b
	IL3b pu-scale	1V99	MMI,RST	Analog scales	0...6000	A	0	Read	Volatile	pu-scale of IL3b
	Ios pu-scale	1V100	MMI,RST	Analog scales	0...6000	A	0	Read	Volatile	pu-scale of virtual Io channel
	Uos pu-scale	1V111	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of virtual Uo channel
	U23b pu-scale	1V112	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U23b
	U31b pu-scale	1V113	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U31b
	U2b pu-scale	1V114	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U2b
	U3b pu-scale	1V115	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U3b
	Uob pu-scale	1V116	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of Uob
	IoBs pu-scale	1V117	MMI,RST	Analog scales	0...6000	A	0	Read	Volatile	pu-scale of IoBs
	IoCs pu-scale	1V118	Internal	Control setting	0...6000	A	0	Read	Volatile	pu-scale of IoCs
	UoBs pu-scale	1V119	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of UoBs
	UoCs pu-scale	1V120	Internal	Control setting	0...440.000	kV	0.000	Read	Volatile	pu-scale of UoCs
	U12s pu-scale	1V121	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U12s
	U23s pu-scale	1V122	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U23s
	U31s pu-scale	1V123	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U31s

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	U12Bs pu-scale	1V124	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U12Bs
	U23Bs pu-scale	1V125	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U23Bs
	U31Bs pu-scale	1V126	MMI,RST	Analog scales	0...440.000	kV	0.000	Read	Volatile	pu-scale of U31Bs
	U12Cs pu-scale	1V127	Internal	Control setting	0...440.000	kV	0.000	Read	Volatile	pu-scale of U12Cs
	U23Cs pu-scale	1V128	Internal	Control setting	0...440.000	kV	0.000	Read	Volatile	pu-scale of U23Cs
	U31Cs pu-scale	1V129	Internal	Control setting	0...440.000	kV	0.000	Read	Volatile	pu-scale of U31Cs
	CPU1 C1 gain	4V1	Internal	Control setting	0.95 .. 9.95 (Acceptance limits are 4.807 +/- 4%)	-	1	Rd/Wr	Retain	Scal. for raw data (to nominal)
	CPU1 C2 gain	4V2	Internal	Control setting	0.95 .. 9.95 (Acceptance limits are 4.807 +/- 4%)	-	1	Rd/Wr	Retain	Scal. for raw data (to nominal)
	CPU1 C3 gain	4V3	Internal	Control setting	0.95 .. 9.95 (Acceptance limits are 4.807 +/- 4%)	-	1	Rd/Wr	Retain	Scal. for raw data (to nominal)
	CPU1 C4 gain	4V4	Internal	Control setting	0.95 .. 9.95 (Acceptance limits are 4.807 +/- 4%)	-	1	Rd/Wr	Retain	Scal. for raw data (to nominal)
	CPU1 C5 gain	4V5	Internal	Control setting	0.95 .. 9.95 (Acceptance limits are 4.807 +/- 4%)	-	1	Rd/Wr	Retain	Scal. for raw data (to nominal)
	CPU1 C6 gain	4V6	Internal	Control setting	0.95 .. 9.95 (Acceptance limits are 4.807 +/- 4%)	-	1	Rd/Wr	Retain	Scal. for raw data (to nominal)
	CPU1 C7 gain	4V7	Internal	Control setting	0.95 .. 9.95 (Acceptance limits are 4.807 +/- 4%)	-	1	Rd/Wr	Retain	Scal. for raw data (to nominal)
	CPU1 C8 gain	4V8	Internal	Control setting	0.95 .. 9.95 (Acceptance limits are 4.807 +/- 4%)	-	1	Rd/Wr	Retain	Scal. for raw data (to nominal)
	CPU1 C9 gain	4V9	Internal	Control setting	0.95 .. 9.95 (Acceptance limits are 4.807 +/- 4%)	-	1	Rd/Wr	Retain	Scal. for raw data (to nominal)
	CPU1 C10 gain	4V10	Internal	Control setting	0.95 .. 9.95 (Acceptance limits are 4.807 +/- 4%)	-	1	Rd/Wr	Retain	Scal. for raw data (to nominal)
	PGA 1 gain 1	4V21	Internal	Control setting	6.3578288e-3 ± 5%	-	6.3578288e-3	Rd/Wr	Retain	Scal. of ADC1 gain
	PGA 1 gain 2	4V22	Internal	Control setting	1.3034737e-3 ± 5%	-	1.3034737e-3	Rd/Wr	Retain	Scal. of ADC1 gain
	PGA 1 gain 3	4V23	Internal	Control setting	2.7648995e-4 ± 5%	-	2.7648995e-4	Rd/Wr	Retain	Scal. of ADC1 gain
	PGA 1 gain 4	4V24	Internal	Control setting	6.5684820e-5 ± 5%	-	6.5684820e-5	Rd/Wr	Retain	Scal. of ADC1 gain
	PGA 1 gain 5	4V25	Internal	Control setting	1.1579783e-5 ± 5%	-	1.1579783e-5	Rd/Wr	Retain	Scal. of ADC1 gain
	PGA 2 gain 1	4V31	Internal	Control setting	6.3578288e-3 ± 5%	-	6.3578288e-3	Rd/Wr	Retain	Scal. of ADC2 gain
	PGA 2 gain 2	4V32	Internal	Control setting	1.3034737e-3 ± 5%	-	1.3034737e-3	Rd/Wr	Retain	Scal. of ADC2 gain
	PGA 2 gain 3	4V33	Internal	Control setting	2.7648995e-4 ± 5%	-	2.7648995e-4	Rd/Wr	Retain	Scal. of ADC2 gain
	PGA 2 gain 4	4V34	Internal	Control setting	6.5684820e-5 ± 5%	-	6.5684820e-5	Rd/Wr	Retain	Scal. of ADC2 gain
	PGA 2 gain 5	4V35	Internal	Control setting	1.1579783e-5 ± 5%	-	1.1579783e-5	Rd/Wr	Retain	Scal. of ADC2 gain
	PGA 1 offset 1	4V41	Internal	Control setting	0.0 ±3	-	0	Rd/Wr	Retain	Offs. of ADC1
	PGA 1 offset 2	4V42	Internal	Control setting	0.0 ±4	-	0	Rd/Wr	Retain	Offs. of ADC1
	PGA 1 offset 3	4V43	Internal	Control setting	0.0 ±6	-	0	Rd/Wr	Retain	Offs. of ADC1
	PGA 1 offset 4	4V44	Internal	Control setting	0.0 ±25	-	0	Rd/Wr	Retain	Offs. of ADC1
	PGA 1 offset 5	4V45	Internal	Control setting	0.0 ±140	-	0	Rd/Wr	Retain	Offs. of ADC1
	PGA 2 offset 1	4V51	Internal	Control setting	0.0 ±3	-	0	Rd/Wr	Retain	Offs. of ADC2
	PGA 2 offset 2	4V52	Internal	Control setting	0.0 ±4	-	0	Rd/Wr	Retain	Offs. of ADC2
	PGA 2 offset 3	4V53	Internal	Control setting	0.0 ±6	-	0	Rd/Wr	Retain	Offs. of ADC2
	PGA 2 offset 4	4V54	Internal	Control setting	0.0 ±25	-	0	Rd/Wr	Retain	Offs. of ADC2
	PGA 2 offset 5	4V55	Internal	Control setting	0.0 ±140	-	0	Rd/Wr	Retain	Offs. of ADC2
	C1 sg1 (RS,VD,KS	4V61	Internal	Control setting	0.0...1.1000	-	1	Rd/Wr	Retain	RS, VD, KS, GE gain
	C2 sg1 (RS,VD,KS	4V62	Internal	Control setting	0.0...1.1000	-	1	Rd/Wr	Retain	RS, VD, KS, GE gain
	C3 sg1 (RS,VD,KS	4V63	Internal	Control setting	0.0...1.1000	-	1	Rd/Wr	Retain	RS, VD, KS, GE gain
	C4 sg1 (RS,VD,KS	4V64	Internal	Control setting	0.0...1.1000	-	1	Rd/Wr	Retain	RS, VD, KS, GE gain
	C5 sg1 (RS,VD,KS	4V65	Internal	Control setting	0.0...1.1000	-	1	Rd/Wr	Retain	RS, VD, KS, GE gain
	C6 sg1 (RS,VD,KS	4V66	Internal	Control setting	0.0...1.1000	-	1	Rd/Wr	Retain	RS, VD, KS, GE gain
	C7 sg1 (RS,VD,KS	4V67	Internal	Control setting	0.0...1.1000	-	1	Rd/Wr	Retain	RS, VD, KS, GE gain
	C8 sg1 (RS,VD,KS	4V68	Internal	Control setting	0.0...1.1000	-	1	Rd/Wr	Retain	RS, VD, KS, GE gain
	C9 sg1 (RS,VD,KS	4V69	Internal	Control setting	0.0...1.1000	-	1	Rd/Wr	Retain	RS, VD, KS, GE gain
	C10 sg1(RS,VD,KS	4V70	Internal	Control setting	0.0...1.1000	-	1	Rd/Wr	Retain	RS, VD, KS, GE gain
	C1 o1 (All devic	4V71	Internal	Control setting	±0.03	-	0	Rd/Wr	Retain	Offset, all devices
	C2 o1 (All devic	4V72	Internal	Control setting	±0.03	-	0	Rd/Wr	Retain	Offset, all devices
	C3 o1 (All devic	4V73	Internal	Control setting	±0.03	-	0	Rd/Wr	Retain	Offset, all devices

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	C4 o1 (All devic	4V74	Internal	Control setting	±0.03	-	0	Rd/Wr	Retain	Offset, all devices
	C5 o1 (All devic	4V75	Internal	Control setting	±0.03	-	0	Rd/Wr	Retain	Offset, all devices
	C6 o1 (All devic	4V76	Internal	Control setting	±0.03	-	0	Rd/Wr	Retain	Offset, all devices
	C7 o1 (All devic	4V77	Internal	Control setting	±0.03	-	0	Rd/Wr	Retain	Offset, all devices
	C8 o1 (All devic	4V78	Internal	Control setting	±0.03	-	0	Rd/Wr	Retain	Offset, all devices
	C9 o1 (All devic	4V79	Internal	Control setting	±0.03	-	0	Rd/Wr	Retain	Offset, all devices
	C10 o1 (All devi	4V80	Internal	Control setting	±0.03	-	0	Rd/Wr	Retain	Offset, all devices
	C1 tg1 (CT, VT)	4V81	Internal	Control setting	0.9...1.1000	-	1	Rd/Wr	Retain	Ampl. gain CT(1%*In), VT
	C2 tg1 (CT, VT)	4V82	Internal	Control setting	0.9...1.1000	-	1	Rd/Wr	Retain	Ampl. gain CT(1%*In), VT
	C3 tg1 (CT, VT)	4V83	Internal	Control setting	0.9...1.1000	-	1	Rd/Wr	Retain	Ampl. gain CT(1%*In), VT
	C4 tg1 (CT, VT)	4V84	Internal	Control setting	0.9...1.1000	-	1	Rd/Wr	Retain	Ampl. gain CT(1%*In), VT
	C5 tg1 (CT, VT)	4V85	Internal	Control setting	0.9...1.1000	-	1	Rd/Wr	Retain	Ampl. gain CT(1%*In), VT
	C6 tg1 (CT, VT)	4V86	Internal	Control setting	0.9...1.1000	-	1	Rd/Wr	Retain	Ampl. gain CT(1%*In), VT
	C7 tg1 (CT, VT)	4V87	Internal	Control setting	0.9...1.1000	-	1	Rd/Wr	Retain	Ampl. gain CT(1%*In), VT
	C8 tg1 (CT, VT)	4V88	Internal	Control setting	0.9...1.1000	-	1	Rd/Wr	Retain	Ampl. gain CT(1%*In), VT
	C9 tg1 (CT, VT)	4V89	Internal	Control setting	0.9...1.1000	-	1	Rd/Wr	Retain	Ampl. gain CT(1%*In), VT
	C10 tg1 (CT, VT)	4V90	Internal	Control setting	0.9...1.1000	-	1	Rd/Wr	Retain	Ampl. gain CT(1%*In), VT
	C1 tp1 (CT, VT)	4V91	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(1%*In), VT
	C2 tp1 (CT, VT)	4V92	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(1%*In), VT
	C3 tp1 (CT, VT)	4V93	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(1%*In), VT
	C4 tp1 (CT, VT)	4V94	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(1%*In), VT
	C5 tp1 (CT, VT)	4V95	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(1%*In), VT
	C6 tp1 (CT, VT)	4V96	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(1%*In), VT
	C7 tp1 (CT, VT)	4V97	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(1%*In), VT
	C8 tp1 (CT, VT)	4V98	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(1%*In), VT
	C9 tp1 (CT, VT)	4V99	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(1%*In), VT
	C10 tp1 (CT, VT)	4V100	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(1%*In), VT
	C1 tg2 (CT)	4V201	Internal	Control setting	0.900...1.100	-	1	Rd/Wr	Retain	Ampl. gain CT(100%*In)
	C2 tg2 (CT)	4V202	Internal	Control setting	0.900...1.100	-	1	Rd/Wr	Retain	Ampl. gain CT(100%*In)
	C3 tg2 (CT)	4V203	Internal	Control setting	0.900...1.100	-	1	Rd/Wr	Retain	Ampl. gain CT(100%*In)
	C4 tg2 (CT)	4V204	Internal	Control setting	0.900...1.100	-	1	Rd/Wr	Retain	Ampl. gain CT(100%*In)
	C5 tg2 (CT)	4V205	Internal	Control setting	0.900...1.100	-	1	Rd/Wr	Retain	Ampl. gain CT(100%*In)
	C6 tg2 (CT)	4V206	Internal	Control setting	0.900...1.100	-	1	Rd/Wr	Retain	Ampl. gain CT(100%*In)
	C7 tg2 (CT)	4V207	Internal	Control setting	0.900...1.100	-	1	Rd/Wr	Retain	Ampl. gain CT(100%*In)
	C8 tg2 (CT)	4V208	Internal	Control setting	0.900...1.100	-	1	Rd/Wr	Retain	Ampl. gain CT(100%*In)
	C9 tg2 (CT)	4V209	Internal	Control setting	0.900...1.100	-	1	Rd/Wr	Retain	Ampl. gain CT(100%*In)
	C10 tg2 (CT)	4V210	Internal	Control setting	0.900...1.100	-	1	Rd/Wr	Retain	Ampl. gain CT(100%*In)
	Factory setting	4V111	Internal	Control setting	0..255[0 = Normal mode; 1 = Autocalibrate PGA and CPU offsets; 2..11 = Channel gain calibration; 180 = Set integration time]	-	0	Rd/Wr	Volatile	Factory setting: mode
	Factory status	4V112	Internal	Control setting	0..2[0 = Idle/wait; 1 = OK; 2 = Error]	-	0	Rd/Wr	Volatile	Factory setting: status
	Factory value	4V113	Internal	Control setting	0...1000.000	-	1.0	Rd/Wr	Volatile	Factory setting: value
	Factory samples	4V114	Internal	Control setting	0...1000.000	-	0	Rd/Wr	Volatile	Factory setting: inspectable data
	C1 tp2 (CT)	4V121	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(100%*In)
	C2 tp2 (CT)	4V122	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(100%*In)
	C3 tp2 (CT)	4V123	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(100%*In)
	C4 tp2 (CT)	4V124	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(100%*In)
	C5 tp2 (CT)	4V125	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(100%*In)
	C6 tp2 (CT)	4V126	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(100%*In)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	C7 tp2 (CT)	4V127	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(100%*In)
	C8 tp2 (CT)	4V128	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(100%*In)
	C9 tp2 (CT)	4V129	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(100%*In)
	C10 tp2 (CT)	4V130	Internal	Control setting	-10.00...2.00	Deg.	0	Rd/Wr	Retain	Phase displ. CT(100%*In)
	CPU1 C1 offset	4V131	Internal	Control setting	±0.012	-	0	Rd/Wr	Retain	Offset for raw data
	CPU1 C2 offset	4V132	Internal	Control setting	±0.012	-	0	Rd/Wr	Retain	Offset for raw data
	CPU1 C3 offset	4V133	Internal	Control setting	±0.012	-	0	Rd/Wr	Retain	Offset for raw data
	CPU1 C4 offset	4V134	Internal	Control setting	±0.012	-	0	Rd/Wr	Retain	Offset for raw data
	CPU1 C5 offset	4V135	Internal	Control setting	±0.012	-	0	Rd/Wr	Retain	Offset for raw data
	CPU1 C6 offset	4V136	Internal	Control setting	±0.012	-	0	Rd/Wr	Retain	Offset for raw data
	CPU1 C7 offset	4V137	Internal	Control setting	±0.012	-	0	Rd/Wr	Retain	Offset for raw data
	CPU1 C8 offset	4V138	Internal	Control setting	±0.012	-	0	Rd/Wr	Retain	Offset for raw data
	CPU1 C9 offset	4V139	Internal	Control setting	±0.012	-	0	Rd/Wr	Retain	Offset for raw data
	CPU1 C10 offset	4V140	Internal	Control setting	±0.012	-	0	Rd/Wr	Retain	Offset for raw data
CCODED2 / Rev E CCODED2										
	Second. current	3V1	MMI,RST	Current trafo1	0..3[0= 5 A; 1= 2 A; 2= 1 A; 3= 0.2 A]	-	0	Rd/Wr	Retain	Rated secondary current of CT 1
	Primary current	3V2	MMI,RST	Current trafo1	1...6000	A	400	Rd/Wr	Retain	Rated primary current of CT 1
	Current terminal	3V3	MMI,RST	Current trafo1	0..2[0 = 5 A; 1 = 1 A; 2 = 0.2 A]	-	0	Rd/Wr	Retain	Current terminal of relay
	Corr. factor 1	3V4	MMI,RST	Current trafo1	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V5	MMI,RST	Current trafo1	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V6	MMI,RST	Current trafo1	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.01 x In
	Displ. error 2	3V7	MMI,RST	Current trafo1	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.01 x In
	Second. current	3V11	MMI,RST	Current trafo2	0..3[0= 5 A; 1= 2 A; 2= 1 A; 3= 0.2 A]	-	0	Rd/Wr	Retain	Rated secondary current of CT 2
	Primary current	3V12	MMI,RST	Current trafo2	1...6000	A	400	Rd/Wr	Retain	Rated primary current of CT 2
	Current terminal	3V13	MMI,RST	Current trafo2	0..2[0 = 5 A; 1 = 1 A; 2 = 0.2 A]	-	0	Rd/Wr	Retain	Current terminal of relay
	Corr. factor 1	3V14	MMI,RST	Current trafo2	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V15	MMI,RST	Current trafo2	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V16	MMI,RST	Current trafo2	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.01 x In
	Displ. error 2	3V17	MMI,RST	Current trafo2	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.01 x In
	Second. current	3V21	MMI,RST	Current trafo3	0..3[0= 5 A; 1= 2 A; 2= 1 A; 3= 0.2 A]	-	0	Rd/Wr	Retain	Rated secondary current of CT 3
	Primary current	3V22	MMI,RST	Current trafo3	1...6000	A	400	Rd/Wr	Retain	Rated primary current of CT 3
	Current terminal	3V23	MMI,RST	Current trafo3	0..2[0 = 5 A; 1 = 1 A; 2 = 0.2 A]	-	0	Rd/Wr	Retain	Current terminal of relay
	Corr. factor 1	3V24	MMI,RST	Current trafo3	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V25	MMI,RST	Current trafo3	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V26	MMI,RST	Current trafo3	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.01 x In
	Displ. error 2	3V27	MMI,RST	Current trafo3	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.01 x In
	Second. current	3V31	MMI,RST	Current trafo4	0..3[0= 5 A; 1= 2 A; 2= 1 A; 3= 0.2 A]	-	0	Rd/Wr	Retain	Rated secondary current of CT 4
	Primary current	3V32	MMI,RST	Current trafo4	1...6000	A	400	Rd/Wr	Retain	Rated primary current of CT 4
	Current terminal	3V33	MMI,RST	Current trafo4	0..2[0 = 5 A; 1 = 1 A; 2 = 0.2 A]	-	0	Rd/Wr	Retain	Current terminal of relay
	Corr. factor 1	3V34	MMI,RST	Current trafo4	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V35	MMI,RST	Current trafo4	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V36	MMI,RST	Current trafo4	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.01 x In
	Displ. error 2	3V37	MMI,RST	Current trafo4	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.01 x In
	Second. current	3V41	MMI,RST	Current trafo5	0..3[0= 5 A; 1= 2 A; 2= 1 A; 3= 0.2 A]	-	0	Rd/Wr	Retain	Rated secondary current of CT 5
	Primary current	3V42	MMI,RST	Current trafo5	1...6000	A	400	Rd/Wr	Retain	Rated primary current of CT 5
	Current terminal	3V43	MMI,RST	Current trafo5	0..2[0 = 5 A; 1 = 1 A; 2 = 0.2 A]	-	0	Rd/Wr	Retain	Current terminal of relay
	Corr. factor 1	3V44	MMI,RST	Current trafo5	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V45	MMI,RST	Current trafo5	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V46	MMI,RST	Current trafo5	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.01 x In

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Displ. error 2	3V47	MMI,RST	Current trafo5	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.01 x In
	Second. current	3V151	MMI,RST	Current trafo6	0..3[0= 5 A; 1= 2 A; 2= 1 A; 3= 0.2 A]	-	0	Rd/Wr	Retain	Rated secondary current of CT 6
	Primary current	3V152	MMI,RST	Current trafo6	1...6000	A	400	Rd/Wr	Retain	Rated primary current of CT 6
	Current terminal	3V153	MMI,RST	Current trafo6	0..2[0 = 5 A; 1 = 1 A; 2 = 0.2 A]	-	0	Rd/Wr	Retain	Current terminal of relay
	Corr. factor 1	3V154	MMI,RST	Current trafo6	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V155	MMI,RST	Current trafo6	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V156	MMI,RST	Current trafo6	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.01 x In
	Displ. error 2	3V157	MMI,RST	Current trafo6	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.01 x In
	Second. current	3V161	MMI,RST	Current trafo7	0..3[0= 5 A; 1= 2 A; 2= 1 A; 3= 0.2 A]	-	0	Rd/Wr	Retain	Rated secondary current of CT 7
	Primary current	3V162	MMI,RST	Current trafo7	1...6000	A	400	Rd/Wr	Retain	Rated primary current of CT 7
	Current terminal	3V163	MMI,RST	Current trafo7	0..2[0 = 5 A; 1 = 1 A; 2 = 0.2 A]	-	0	Rd/Wr	Retain	Current terminal of relay
	Corr. factor 1	3V164	MMI,RST	Current trafo7	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V165	MMI,RST	Current trafo7	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V166	MMI,RST	Current trafo7	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.01 x In
	Displ. error 2	3V167	MMI,RST	Current trafo7	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.01 x In
	Second. current	3V171	MMI,RST	Current trafo8	0..3[0= 5 A; 1= 2 A; 2= 1 A; 3= 0.2 A]	-	0	Rd/Wr	Retain	Rated secondary current of CT 8
	Primary current	3V172	MMI,RST	Current trafo8	1...6000	A	400	Rd/Wr	Retain	Rated primary current of CT 8
	Current terminal	3V173	MMI,RST	Current trafo8	0..2[0 = 5 A; 1 = 1 A; 2 = 0.2 A]	-	0	Rd/Wr	Retain	Current terminal of relay
	Corr. factor 1	3V174	MMI,RST	Current trafo8	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V175	MMI,RST	Current trafo8	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V176	MMI,RST	Current trafo8	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.01 x In
	Displ. error 2	3V177	MMI,RST	Current trafo8	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.01 x In
	Second. current	3V181	MMI,RST	Current trafo9	0..3[0= 5 A; 1= 2 A; 2= 1 A; 3= 0.2 A]	-	0	Rd/Wr	Retain	Rated secondary current of CT 9
	Primary current	3V182	MMI,RST	Current trafo9	1...6000	A	400	Rd/Wr	Retain	Rated primary current of CT 9
	Current terminal	3V183	MMI,RST	Current trafo9	0..2[0 = 5 A; 1 = 1 A; 2 = 0.2 A]	-	0	Rd/Wr	Retain	Current terminal of relay
	Corr. factor 1	3V184	MMI,RST	Current trafo9	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V185	MMI,RST	Current trafo9	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V186	MMI,RST	Current trafo9	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.01 x In
	Displ. error 2	3V187	MMI,RST	Current trafo9	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.01 x In
	Second. current	3V191	MMI,RST	Current tra.10	0..3[0= 5 A; 1= 2 A; 2= 1 A; 3= 0.2 A]	-	0	Rd/Wr	Retain	Rated secondary current of CT 10
	Primary current	3V192	MMI,RST	Current tra.10	1...6000	A	400	Rd/Wr	Retain	Rated primary current of CT 10
	Current terminal	3V193	MMI,RST	Current tra.10	0..2[0 = 5 A; 1 = 1 A; 2 = 0.2 A]	-	0	Rd/Wr	Retain	Current terminal of relay
	Corr. factor 1	3V194	MMI,RST	Current tra.10	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V195	MMI,RST	Current tra.10	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V196	MMI,RST	Current tra.10	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.01 x In
	Displ. error 2	3V197	MMI,RST	Current tra.10	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.01 x In
	Output voltage	3V51	MMI,RST	Rog. sensor 1	100...300	mV	150	Rd/Wr	Retain	Rated output voltage of RS 1
	Rated current	3V52	MMI,RST	Rog. sensor 1	1...6000	A	80	Rd/Wr	Retain	Rated current
	Corr. factor	3V53	MMI,RST	Rog. sensor 1	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V54	MMI,RST	Rog. sensor 1	-1.0000..1.0000	°	0.0000	Rd/Wr	Retain	Phase displacement error
	Output voltage	3V61	MMI,RST	Rog. sensor 2	100...300	mV	150	Rd/Wr	Retain	Rated output voltage of RS 2
	Rated current	3V62	MMI,RST	Rog. sensor 2	1...6000	A	80	Rd/Wr	Retain	Rated current
	Corr. factor	3V63	MMI,RST	Rog. sensor 2	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V64	MMI,RST	Rog. sensor 2	-1.0000..1.0000	°	0.0000	Rd/Wr	Retain	Phase displacement error
	Output voltage	3V71	MMI,RST	Rog. sensor 3	100...300	mV	150	Rd/Wr	Retain	Rated output voltage of RS 3
	Rated current	3V72	MMI,RST	Rog. sensor 3	1...6000	A	80	Rd/Wr	Retain	Rated current
	Corr. factor	3V73	MMI,RST	Rog. sensor 3	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V74	MMI,RST	Rog. sensor 3	-1.0000..1.0000	°	0.0000	Rd/Wr	Retain	Phase displacement error
	Output voltage	3V211	MMI,RST	Rog. sensor 4	100...300	mV	150	Rd/Wr	Retain	Rated output voltage of RS 4

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Rated current	3V212	MMI,RST	Rog. sensor 4	1...6000	A	80	Rd/Wr	Retain	Rated current
	Corr. factor	3V213	MMI,RST	Rog. sensor 4	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V214	MMI,RST	Rog. sensor 4	-1.0000..1.0000	°	0.0000	Rd/Wr	Retain	Phase displacement error
	Output voltage	3V221	MMI,RST	Rog. sensor 5	100...300	mV	150	Rd/Wr	Retain	Rated output voltage of RS 5
	Rated current	3V222	MMI,RST	Rog. sensor 5	1...6000	A	80	Rd/Wr	Retain	Rated current
	Corr. factor	3V223	MMI,RST	Rog. sensor 5	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V224	MMI,RST	Rog. sensor 5	-1.0000..1.0000	°	0.0000	Rd/Wr	Retain	Phase displacement error
	Output voltage	3V231	MMI,RST	Rog. sensor 6	100...300	mV	150	Rd/Wr	Retain	Rated output voltage of RS 6
	Rated current	3V232	MMI,RST	Rog. sensor 6	1...6000	A	80	Rd/Wr	Retain	Rated current
	Corr. factor	3V233	MMI,RST	Rog. sensor 6	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V234	MMI,RST	Rog. sensor 6	-1.0000..1.0000	°	0.0000	Rd/Wr	Retain	Phase displacement error
	Output voltage	3V241	MMI,RST	Rog. sensor 7	100...300	mV	150	Rd/Wr	Retain	Rated output voltage of RS 7
	Rated current	3V242	MMI,RST	Rog. sensor 7	1...6000	A	80	Rd/Wr	Retain	Rated current
	Corr. factor	3V243	MMI,RST	Rog. sensor 7	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V244	MMI,RST	Rog. sensor 7	-1.0000..1.0000	°	0.0000	Rd/Wr	Retain	Phase displacement error
	Output voltage	3V251	MMI,RST	Rog. sensor 8	100...300	mV	150	Rd/Wr	Retain	Rated output voltage of RS 8
	Rated current	3V252	MMI,RST	Rog. sensor 8	1...6000	A	80	Rd/Wr	Retain	Rated current
	Corr. factor	3V253	MMI,RST	Rog. sensor 8	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V254	MMI,RST	Rog. sensor 8	-1.0000..1.0000	°	0.0000	Rd/Wr	Retain	Phase displacement error
	Output voltage	3V261	MMI,RST	Rog. sensor 9	100...300	mV	150	Rd/Wr	Retain	Rated output voltage of RS 9
	Rated current	3V262	MMI,RST	Rog. sensor 9	1...6000	A	80	Rd/Wr	Retain	Rated current
	Corr. factor	3V263	MMI,RST	Rog. sensor 9	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V264	MMI,RST	Rog. sensor 9	-1.0000..1.0000	°	0.0000	Rd/Wr	Retain	Phase displacement error
	Output voltage	3V271	MMI,RST	Rog. sensor 10	100...300	mV	150	Rd/Wr	Retain	Rated output voltage of RS 10
	Rated current	3V272	MMI,RST	Rog. sensor 10	1...6000	A	80	Rd/Wr	Retain	Rated current
	Corr. factor	3V273	MMI,RST	Rog. sensor 10	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V274	MMI,RST	Rog. sensor 10	-1.0000..1.0000	°	0.0000	Rd/Wr	Retain	Phase displacement error
CCODED3 / Rev D CCODED3										
	Second. voltage	3V81	MMI,RST	Voltage trafo1	0..4[0 = 100 V; 1 = 110 V; 2 = 115V; 3 = 120 V; 4 = 230V Direct]	-	0	Rd/Wr	Retain	Rated secondary voltage of VT 1
	Primary voltage	3V82	MMI,RST	Voltage trafo1	0.100...440.000	kV	20.000	Rd/Wr	Retain	Rated primary voltage
	Corr. factor	3V83	MMI,RST	Voltage trafo1	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x Un
	Displ. error	3V84	MMI,RST	Voltage trafo1	-2.00...+2.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x Un
	Second. voltage	3V91	MMI,RST	Voltage trafo2	0..4[0 = 100 V; 1 = 110 V; 2 = 115V; 3 = 120 V; 4 = 230V Direct]	-	0	Rd/Wr	Retain	Rated secondary voltage of VT 2
	Primary voltage	3V92	MMI,RST	Voltage trafo2	0.100...440.000	kV	20.000	Rd/Wr	Retain	Rated primary voltage
	Corr. factor	3V93	MMI,RST	Voltage trafo2	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x Un
	Displ. error	3V94	MMI,RST	Voltage trafo2	-2.00...+2.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x Un
	Second. voltage	3V201	MMI,RST	Voltage trafo3	0..4[0 = 100 V; 1 = 110 V; 2 = 115V; 3 = 120 V; 4 = 230V Direct]	-	0	Rd/Wr	Retain	Rated secondary voltage of VT 3
	Primary voltage	3V202	MMI,RST	Voltage trafo3	0.100...440.000	kV	20.000	Rd/Wr	Retain	Rated primary voltage
	Corr. factor	3V203	MMI,RST	Voltage trafo3	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x Un
	Displ. error	3V204	MMI,RST	Voltage trafo3	-2.00...+2.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x Un
	Second. voltage	3V111	MMI,RST	Voltage trafo4	0..4[0 = 100 V; 1 = 110 V; 2 = 115V; 3 = 120 V; 4 = 230V Direct]	-	0	Rd/Wr	Retain	Rated secondary voltage of VT 4
	Primary voltage	3V112	MMI,RST	Voltage trafo4	0.100...440.000	kV	20.000	Rd/Wr	Retain	Rated primary voltage
	Corr. factor	3V113	MMI,RST	Voltage trafo4	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x Un
	Displ. error	3V114	MMI,RST	Voltage trafo4	-2.00...+2.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x Un

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Second. voltage	3V281	MMI,RST	Voltage trafo5	0..4[0 = 100 V; 1 = 110 V; 2 = 115V; 3 = 120 V; 4 = 230V Direct]	-	0	Rd/Wr	Retain	Rated secondary voltage of VT 5
	Primary voltage	3V282	MMI,RST	Voltage trafo5	0.100...440.000	kV	20.000	Rd/Wr	Retain	Rated primary voltage
	Corr. factor	3V283	MMI,RST	Voltage trafo5	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x Un
	Displ. error	3V284	MMI,RST	Voltage trafo5	-2.00...+2.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x Un
	Second. voltage	3V291	MMI,RST	Voltage trafo6	0..4[0 = 100 V; 1 = 110 V; 2 = 115V; 3 = 120 V; 4 = 230V Direct]	-	0	Rd/Wr	Retain	Rated secondary voltage of VT 6
	Primary voltage	3V292	MMI,RST	Voltage trafo6	0.100...440.000	kV	20.000	Rd/Wr	Retain	Rated primary voltage
	Corr. factor	3V293	MMI,RST	Voltage trafo6	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x Un
	Displ. error	3V294	MMI,RST	Voltage trafo6	-2.00...+2.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x Un
	Second. voltage	3V301	MMI,RST	Voltage trafo7	0..4[0 = 100 V; 1 = 110 V; 2 = 115V; 3 = 120 V; 4 = 230V Direct]	-	0	Rd/Wr	Retain	Rated secondary voltage of VT 7
	Primary voltage	3V302	MMI,RST	Voltage trafo7	0.100...440.000	kV	20.000	Rd/Wr	Retain	Rated primary voltage
	Corr. factor	3V303	MMI,RST	Voltage trafo7	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x Un
	Displ. error	3V304	MMI,RST	Voltage trafo7	-2.00...+2.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x Un
	Second. voltage	3V311	MMI,RST	Voltage trafo8	0..4[0 = 100 V; 1 = 110 V; 2 = 115V; 3 = 120 V; 4 = 230V Direct]	-	0	Rd/Wr	Retain	Rated secondary voltage of VT 8
	Primary voltage	3V312	MMI,RST	Voltage trafo8	0.100...440.000	kV	20.000	Rd/Wr	Retain	Rated primary voltage
	Corr. factor	3V313	MMI,RST	Voltage trafo8	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x Un
	Displ. error	3V314	MMI,RST	Voltage trafo8	-2.00...+2.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x Un
	Second. voltage	3V321	MMI,RST	Voltage trafo9	0..4[0 = 100 V; 1 = 110 V; 2 = 115V; 3 = 120 V; 4 = 230V Direct]	-	0	Rd/Wr	Retain	Rated secondary voltage of VT 9
	Primary voltage	3V322	MMI,RST	Voltage trafo9	0.100...440.000	kV	20.000	Rd/Wr	Retain	Rated primary voltage
	Corr. factor	3V323	MMI,RST	Voltage trafo9	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x Un
	Displ. error	3V324	MMI,RST	Voltage trafo9	-2.00...+2.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x Un
	Second. voltage	3V331	MMI,RST	Voltage tra.10	0..4[0 = 100 V; 1 = 110 V; 2 = 115V; 3 = 120 V; 4 = 230V Direct]	-	0	Rd/Wr	Retain	Rated secondary voltage of VT 10
	Primary voltage	3V332	MMI,RST	Voltage tra.10	0.100...440.000	kV	20.000	Rd/Wr	Retain	Rated primary voltage
	Corr. factor	3V333	MMI,RST	Voltage tra.10	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x Un
	Displ. error	3V334	MMI,RST	Voltage tra.10	-2.00...+2.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x Un
	Division ratio	3V121	MMI,RST	Volt. divider1	100...20000	-	10000	Rd/Wr	Retain	Division ratio of VD 1
	Primary voltage	3V122	MMI,RST	Volt. divider1	0.100...440.000	kV	20.000	Rd/Wr	Retain	Nominal phase-to-phase voltage
	Corr. factor	3V123	MMI,RST	Volt. divider1	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V124	MMI,RST	Volt. divider1	-1.0000...1.0000	°	0.0	Rd/Wr	Retain	Phase displacement error
	Division ratio	3V131	MMI,RST	Volt. divider2	100...20000	-	10000	Rd/Wr	Retain	Division ratio of VD 2
	Primary voltage	3V132	MMI,RST	Volt. divider2	0.100...440.000	kV	20.000	Rd/Wr	Retain	Nominal phase-to-phase voltage
	Corr. factor	3V133	MMI,RST	Volt. divider2	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V134	MMI,RST	Volt. divider2	-1.0000...1.0000	°	0.0	Rd/Wr	Retain	Phase displacement error
	Division ratio	3V141	MMI,RST	Volt. divider3	100...20000	-	10000	Rd/Wr	Retain	Division ratio of VD 3
	Primary voltage	3V142	MMI,RST	Volt. divider3	0.100...440.000	kV	20.000	Rd/Wr	Retain	Nominal phase-to-phase voltage
	Corr. factor	3V143	MMI,RST	Volt. divider3	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V144	MMI,RST	Volt. divider3	-1.0000...1.0000	°	0.0	Rd/Wr	Retain	Phase displacement error
	Division ratio	3V341	MMI,RST	Volt. divider4	100...20000	-	10000	Rd/Wr	Retain	Division ratio of VD 4
	Primary voltage	3V342	MMI,RST	Volt. divider4	0.100...440.000	kV	20.000	Rd/Wr	Retain	Nominal phase-to-phase voltage
	Corr. factor	3V343	MMI,RST	Volt. divider4	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V344	MMI,RST	Volt. divider4	-1.0000...1.0000	°	0.0	Rd/Wr	Retain	Phase displacement error
	Division ratio	3V351	MMI,RST	Volt. divider5	100...20000	-	10000	Rd/Wr	Retain	Division ratio of VD 5
	Primary voltage	3V352	MMI,RST	Volt. divider5	0.100...440.000	kV	20.000	Rd/Wr	Retain	Nominal phase-to-phase voltage
	Corr. factor	3V353	MMI,RST	Volt. divider5	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Displ. error	3V354	MMI,RST	Volt. divider5	-1.0000...1.0000	°	0.0	Rd/Wr	Retain	Phase displacement error
	Division ratio	3V361	MMI,RST	Volt. divider6	100...20000	-	10000	Rd/Wr	Retain	Division ratio of VD 6
	Primary voltage	3V362	MMI,RST	Volt. divider6	0.100...440.000	kV	20.000	Rd/Wr	Retain	Nominal phase-to-phase voltage
	Corr. factor	3V363	MMI,RST	Volt. divider6	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V364	MMI,RST	Volt. divider6	-1.0000...1.0000	°	0.0	Rd/Wr	Retain	Phase displacement error
	Division ratio	3V371	MMI,RST	Volt. divider7	100...20000	-	10000	Rd/Wr	Retain	Division ratio of VD 7
	Primary voltage	3V372	MMI,RST	Volt. divider7	0.100...440.000	kV	20.000	Rd/Wr	Retain	Nominal phase-to-phase voltage
	Corr. factor	3V373	MMI,RST	Volt. divider7	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V374	MMI,RST	Volt. divider7	-1.0000...1.0000	°	0.0	Rd/Wr	Retain	Phase displacement error
	Division ratio	3V381	MMI,RST	Volt. divider8	100...20000	-	10000	Rd/Wr	Retain	Division ratio of VD 8
	Primary voltage	3V382	MMI,RST	Volt. divider8	0.100...440.000	kV	20.000	Rd/Wr	Retain	Nominal phase-to-phase voltage
	Corr. factor	3V383	MMI,RST	Volt. divider8	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V384	MMI,RST	Volt. divider8	-1.0000...1.0000	°	0.0	Rd/Wr	Retain	Phase displacement error
	Division ratio	3V391	MMI,RST	Volt. divider9	100...20000	-	10000	Rd/Wr	Retain	Division ratio of VD 9
	Primary voltage	3V392	MMI,RST	Volt. divider9	0.100...440.000	kV	20.000	Rd/Wr	Retain	Nominal phase-to-phase voltage
	Corr. factor	3V393	MMI,RST	Volt. divider9	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V394	MMI,RST	Volt. divider9	-1.0000...1.0000	°	0.0	Rd/Wr	Retain	Phase displacement error
	Division ratio	3V401	MMI,RST	Volt. divid.10	100...20000	-	10000	Rd/Wr	Retain	Division ratio of VD 10
	Primary voltage	3V402	MMI,RST	Volt. divid.10	0.100...440.000	kV	20.000	Rd/Wr	Retain	Nominal phase-to-phase voltage
	Corr. factor	3V403	MMI,RST	Volt. divid.10	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor
	Displ. error	3V404	MMI,RST	Volt. divid.10	-1.0000...1.0000	°	0.0	Rd/Wr	Retain	Phase displacement error
CCODED4 / Rev D CCODED4										
	Second. current	3V411	MMI,RST	KOHU/KOKU 1	0[0 = 0.1 A]	A	0	Rd/Wr	Retain	Rated secondary current of KS 1
	Primary current	3V412	MMI,RST	KOHU/KOKU 1	0[0 = 400 A]	A	0	Rd/Wr	Retain	Rated primary current of KS 1
	Corr. factor 1	3V413	MMI,RST	KOHU/KOKU 1	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V414	MMI,RST	KOHU/KOKU 1	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V415	MMI,RST	KOHU/KOKU 1	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.05 x In
	Displ. error 2	3V416	MMI,RST	KOHU/KOKU 1	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.05 x In
	Second. current	3V421	MMI,RST	KOHU/KOKU 2	0[0 = 0.1 A]	A	0	Rd/Wr	Retain	Rated secondary current of KS 2
	Primary current	3V422	MMI,RST	KOHU/KOKU 2	0[0 = 400 A]	A	0	Rd/Wr	Retain	Rated primary current of KS 2
	Corr. factor 1	3V423	MMI,RST	KOHU/KOKU 2	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V424	MMI,RST	KOHU/KOKU 2	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V425	MMI,RST	KOHU/KOKU 2	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.05 x In
	Displ. error 2	3V426	MMI,RST	KOHU/KOKU 2	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.05 x In
	Second. current	3V431	MMI,RST	KOHU/KOKU 3	0[0 = 0.1 A]	A	0	Rd/Wr	Retain	Rated secondary current of KS 3
	Primary current	3V432	MMI,RST	KOHU/KOKU 3	0[0 = 400 A]	A	0	Rd/Wr	Retain	Rated primary current of KS 3
	Corr. factor 1	3V433	MMI,RST	KOHU/KOKU 3	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V434	MMI,RST	KOHU/KOKU 3	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V435	MMI,RST	KOHU/KOKU 3	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.05 x In
	Displ. error 2	3V436	MMI,RST	KOHU/KOKU 3	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.05 x In
	Second. current	3V441	MMI,RST	KOHU/KOKU 4	0[0 = 0.1 A]	A	0	Rd/Wr	Retain	Rated secondary current of KS 4
	Primary current	3V442	MMI,RST	KOHU/KOKU 4	0[0 = 400 A]	A	0	Rd/Wr	Retain	Rated primary current of KS 4
	Corr. factor 1	3V443	MMI,RST	KOHU/KOKU 4	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V444	MMI,RST	KOHU/KOKU 4	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V445	MMI,RST	KOHU/KOKU 4	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.05 x In
	Displ. error 2	3V446	MMI,RST	KOHU/KOKU 4	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.05 x In
	Second. current	3V451	MMI,RST	KOHU/KOKU 5	0[0 = 0.1 A]	A	0	Rd/Wr	Retain	Rated secondary current of KS 5
	Primary current	3V452	MMI,RST	KOHU/KOKU 5	0[0 = 400 A]	A	0	Rd/Wr	Retain	Rated primary current of KS 5
	Corr. factor 1	3V453	MMI,RST	KOHU/KOKU 5	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Displ. error 1	3V454	MMI,RST	KOHU/KOKU 5	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V455	MMI,RST	KOHU/KOKU 5	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.05 x In
	Displ. error 2	3V456	MMI,RST	KOHU/KOKU 5	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.05 x In
	Second. current	3V461	MMI,RST	KOHU/KOKU 6	0[0 = 0.1 A]	A	0	Rd/Wr	Retain	Rated secondary current of KS 6
	Primary current	3V462	MMI,RST	KOHU/KOKU 6	0[0 = 400 A]	A	0	Rd/Wr	Retain	Rated primary current of KS 6
	Corr. factor 1	3V463	MMI,RST	KOHU/KOKU 6	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V464	MMI,RST	KOHU/KOKU 6	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V465	MMI,RST	KOHU/KOKU 6	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.05 x In
	Displ. error 2	3V466	MMI,RST	KOHU/KOKU 6	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.05 x In
	Second. current	3V471	MMI,RST	KOHU/KOKU 7	0[0 = 0.1 A]	A	0	Rd/Wr	Retain	Rated secondary current of KS 7
	Primary current	3V472	MMI,RST	KOHU/KOKU 7	0[0 = 400 A]	A	0	Rd/Wr	Retain	Rated primary current of KS 7
	Corr. factor 1	3V473	MMI,RST	KOHU/KOKU 7	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V474	MMI,RST	KOHU/KOKU 7	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V475	MMI,RST	KOHU/KOKU 7	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.05 x In
	Displ. error 2	3V476	MMI,RST	KOHU/KOKU 7	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.05 x In
	Second. current	3V481	MMI,RST	KOHU/KOKU 8	0[0 = 0.1 A]	A	0	Rd/Wr	Retain	Rated secondary current of KS 8
	Primary current	3V482	MMI,RST	KOHU/KOKU 8	0[0 = 400 A]	A	0	Rd/Wr	Retain	Rated primary current of KS 8
	Corr. factor 1	3V483	MMI,RST	KOHU/KOKU 8	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V484	MMI,RST	KOHU/KOKU 8	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V485	MMI,RST	KOHU/KOKU 8	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.05 x In
	Displ. error 2	3V486	MMI,RST	KOHU/KOKU 8	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.05 x In
	Second. current	3V491	MMI,RST	KOHU/KOKU 9	0[0 = 0.1 A]	A	0	Rd/Wr	Retain	Rated secondary current of KS 9
	Primary current	3V492	MMI,RST	KOHU/KOKU 9	0[0 = 400 A]	A	0	Rd/Wr	Retain	Rated primary current of KS 9
	Corr. factor 1	3V493	MMI,RST	KOHU/KOKU 9	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V494	MMI,RST	KOHU/KOKU 9	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V495	MMI,RST	KOHU/KOKU 9	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.05 x In
	Displ. error 2	3V496	MMI,RST	KOHU/KOKU 9	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.05 x In
	Second. current	3V501	MMI,RST	KOHU/KOKU 10	0[0 = 0.1 A]	A	0	Rd/Wr	Retain	Rated secondary current of KS 10
	Primary current	3V502	MMI,RST	KOHU/KOKU 10	0[0 = 400 A]	A	0	Rd/Wr	Retain	Rated primary current of KS 10
	Corr. factor 1	3V503	MMI,RST	KOHU/KOKU 10	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 1.00 x In
	Displ. error 1	3V504	MMI,RST	KOHU/KOKU 10	-5.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 1.00 x In
	Corr. factor 2	3V505	MMI,RST	KOHU/KOKU 10	0.9000...1.1000	-	1.0000	Rd/Wr	Retain	Correction factor for amplitude error at 0.05 x In
	Displ. error 2	3V506	MMI,RST	KOHU/KOKU 10	-10.00...0.00	°	0.00	Rd/Wr	Retain	Phase displacement error at 0.05 x In
	Corr. factor	3V511	MMI,RST	General input1	-10000.00000...10000.00000	-	1.0000	Rd/Wr	Retain	Correction factor of GE 1
	Offset corr.	3V512	MMI,RST	General input1	-10000.00000...10000.00000	-	0.0000	Rd/Wr	Retain	Offset correction
	Corr. factor	3V521	MMI,RST	General input2	-10000.00000...10000.00000	-	1.0000	Rd/Wr	Retain	Correction factor of GE 2
	Offset corr.	3V522	MMI,RST	General input2	-10000.00000...10000.00000	-	0.0000	Rd/Wr	Retain	Offset correction
	Corr. factor	3V531	MMI,RST	General input3	-10000.00000...10000.00000	-	1.0000	Rd/Wr	Retain	Correction factor of GE 3
	Offset corr.	3V532	MMI,RST	General input3	-10000.00000...10000.00000	-	0.0000	Rd/Wr	Retain	Offset correction
	Ch1: scaling	3V541	MMI,RST	Protected unit	0.500...3.000	-	1.000	Rd/Wr	Retain	Scaling factor for protected unit
	Ch2: scaling	3V542	MMI,RST	Protected unit	0.500...3.000	-	1.000	Rd/Wr	Retain	Scaling factor for protected unit
	Ch3: scaling	3V543	MMI,RST	Protected unit	0.500...3.000	-	1.000	Rd/Wr	Retain	Scaling factor for protected unit
	Ch4: scaling	3V544	MMI,RST	Protected unit	0.500...3.000	-	1.000	Rd/Wr	Retain	Scaling factor for protected unit
	Ch5: scaling	3V545	MMI,RST	Protected unit	0.500...3.000	-	1.000	Rd/Wr	Retain	Scaling factor for protected unit
	Ch6: scaling	3V546	MMI,RST	Protected unit	0.500...3.000	-	1.000	Rd/Wr	Retain	Scaling factor for protected unit
	Ch7: scaling	3V547	MMI,RST	Protected unit	0.500...3.000	-	1.000	Rd/Wr	Retain	Scaling factor for protected unit
	Ch8: scaling	3V548	MMI,RST	Protected unit	0.500...3.000	-	1.000	Rd/Wr	Retain	Scaling factor for protected unit
	Ch9: scaling	3V549	MMI,RST	Protected unit	0.500...3.000	-	1.000	Rd/Wr	Retain	Scaling factor for protected unit
	Ch10: scaling	3V550	MMI,RST	Protected unit	0.500...3.000	-	1.000	Rd/Wr	Retain	Scaling factor for protected unit

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
PS1 / Rev D PS1 PS1 (1MRS500009 & 1MRS500010) module general parameters										
	Output 1 state	14O001	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 1
	Output 2 state	14O002	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 2
	Output 3 state	14O003	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 3
	Output 4 state	14O004	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 4
	Output 5 state	14O005	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 5
	Output 6 state	14O006	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 6
	Input 1 state	14I001	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 1
	Input 2 state	14I002	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 2
	Input 3 state	14I003	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 3
	TCS 1 state	14I004	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of Trip Circuit Supervisory 1
	TCS 2 state	14I005	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of Trip Circuit Supervisory 2
	Over Tmp	14I006	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of over temperature
	ACfail	14I007	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of AC fail
	Input 1 valid	14I021	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 1
	Input 2 valid	14I022	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 2
	Input 3 valid	14I023	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 3
	Input 1 counter	14I041	MMI,RST	PS1 [4]	0 ... 2147483647	-	0	Read	Volatile	Count of positive transitions on input 1
	Input 2 counter	14I042	MMI,RST	PS1 [4]	0 ... 2147483647	-	0	Read	Volatile	Count of positive transitions on input 2
	Input 3 counter	14I043	MMI,RST	PS1 [4]	0 ... 2147483647	-	0	Read	Volatile	Count of positive transitions on input 3
	Input 1 preset	14V201	MMI,RST	Counter settings	0 ... 2147483647	-	0	Rd/Wr	Retain	Set value for counter on input 1
	Input 2 preset	14V202	MMI,RST	Counter settings	0 ... 2147483647	-	0	Rd/Wr	Retain	Set value for counter on input 2
	Input 3 preset	14V203	MMI,RST	Counter settings	0 ... 2147483647	-	0	Rd/Wr	Retain	Set value for counter on input 3
	Input 1 filter	14V221	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 1
	Input 2 filter	14V222	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 2
	Input 3 filter	14V223	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 3
	Input 1 invert.	14V281	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 1
	Input 2 invert.	14V282	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 2
	Input 3 invert.	14V283	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 3
	Input 1 mode	14V301	MMI,RST	Input mode	1 = Binary input;2 = Counter	-	1	Read	Retain	Mode for input 1
	Input 2 mode	14V302	MMI,RST	Input mode	1 = Binary input;2 = Counter	-	1	Read	Retain	Mode for input 2
	Input 3 mode	14V303	MMI,RST	Input mode	1 = Binary input;2 = Counter	-	1	Read	Retain	Mode for input 3
	Counter trigger	14V401	MMI,RST	Counter settings	0 = clear counters;1 = load updated values;2 = update all values	-	0	Write	Volatile	Loads the counter Preseted value(s) in to counters
	SW version	14V501	MMI,RST	PS1 [4]	-	-	0	Read	Volatile	Software version
	SW revision	14V502	MMI,RST	PS1 [4]	-	-	0	Read	Volatile	Software revision
	Event mask 1A	14V101	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E31)
	Event mask 1B	14V102	MMI,RST	Event mask	0 ... 7	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E32 ... E34)
	Event mask 2A	14V103	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E31)
	Event mask 2B	14V104	MMI,RST	Event mask	0 ... 7	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E32 ... E34)
	Event mask 3A	14V105	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E31)
	Event mask 3B	14V106	MMI,RST	Event mask	0 ... 7	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E32 ... E34)
	Event mask 4A	14V107	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E31)
	Event mask 4B	14V108	MMI,RST	Event mask	0 ... 7	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E32 ... E34)
BIO1 / Rev C BIO1 BIO1 (1MRS050020) module general parameters										
	Output 1 state	15O001	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 1
	Output 2 state	15O002	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 2
	Output 3 state	15O003	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 3
	Output 4 state	15O004	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 4

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Output 5 state	15O005	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 5
	Output 6 state	15O006	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 6
	Input 1 state	15I001	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 1
	Input 2 state	15I002	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 2
	Input 3 state	15I003	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 3
	Input 4 state	15I004	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 4
	Input 5 state	15I005	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 5
	Input 6 state	15I006	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 6
	Input 7 state	15I007	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 7
	Input 8 state	15I008	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 8
	Input 9 state	15I009	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 9
	Input 10 state	15I010	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 10
	Input 11 state	15I011	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 11
	Input 12 state	15I012	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 12
	Input 1 valid	15I021	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 1
	Input 2 valid	15I022	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 2
	Input 3 valid	15I023	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 3
	Input 4 valid	15I024	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 4
	Input 5 valid	15I025	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 5
	Input 6 valid	15I026	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 6
	Input 7 valid	15I027	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 7
	Input 8 valid	15I028	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 8
	Input 9 valid	15I029	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 9
	Input 10 valid	15I030	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 10
	Input 11 valid	15I031	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 11
	Input 12 valid	15I032	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 12
	Input 9 counter	15I041	MMI,RST	BIO1 [5]	0 ... 2147483647	-	0	Read	Volatile	Count of positive transitions on input 9
	Input 10 counter	15I042	MMI,RST	BIO1 [5]	0 ... 2147483647	-	0	Read	Volatile	Count of positive transitions on input 10
	Input 11 counter	15I043	MMI,RST	BIO1 [5]	0 ... 2147483647	-	0	Read	Volatile	Count of positive transitions on input 11
	Input 12 counter	15I044	MMI,RST	BIO1 [5]	0 ... 2147483647	-	0	Read	Volatile	Count of positive transitions on input 12
	Input 9 preset	15V201	MMI,RST	Counter settings	0 ... 2147483647	-	0	Rd/Wr	Retain	Set value for counter on input 9
	Input 10 preset	15V202	MMI,RST	Counter settings	0 ... 2147483647	-	0	Rd/Wr	Retain	Set value for counter on input 10
	Input 11 preset	15V203	MMI,RST	Counter settings	0 ... 2147483647	-	0	Rd/Wr	Retain	Set value for counter on input 11
	Input 12 preset	15V204	MMI,RST	Counter settings	0 ... 2147483647	-	0	Rd/Wr	Retain	Set value for counter on input 12
	Input 1 filter	15V221	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 1
	Input 2 filter	15V222	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 2
	Input 3 filter	15V223	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 3
	Input 4 filter	15V224	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 4
	Input 5 filter	15V225	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 5
	Input 6 filter	15V226	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 6
	Input 7 filter	15V227	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 7
	Input 8 filter	15V228	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 8
	Input 9 filter	15V229	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 9
	Input 10 filter	15V230	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 10
	Input 11 filter	15V231	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 11
	Input 12 filter	15V232	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 12
	Input 1 invert.	15V281	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 1
	Input 2 invert.	15V282	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 2
	Input 3 invert.	15V283	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 3

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Input 4 invert.	15V284	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 4
	Input 5 invert.	15V285	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 5
	Input 6 invert.	15V286	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 6
	Input 7 invert.	15V287	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 7
	Input 8 invert.	15V288	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 8
	Input 9 invert.	15V289	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 9
	Input 10 invert.	15V290	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 10
	Input 11 invert.	15V291	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 11
	Input 12 invert.	15V292	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 12
	Input 9 mode	15V309	MMI,RST	Input mode	1 = Binary input;2 = Counter	-	1	Read	Retain	Mode for input 9
	Input 10 mode	15V310	MMI,RST	Input mode	1 = Binary input;2 = Counter	-	1	Read	Retain	Mode for input 10
	Input 11 mode	15V311	MMI,RST	Input mode	1 = Binary input;2 = Counter	-	1	Read	Retain	Mode for input 11
	Input 12 mode	15V312	MMI,RST	Input mode	1 = Binary input;2 = Counter	-	1	Read	Retain	Mode for input 12
	Counter trigger	15V401	MMI,RST	Counter settings	0 = clear counters;1 = load updated values;2 = update all values	-	0	Write	Volatile	Loads the counter Presetted value(s) in to counters
	SW version	15V501	MMI,RST	BIO1 [5]	-	-	-	Read	Volatile	Software version
	SW revision	15V502	MMI,RST	BIO1 [5]	-	-	-	Read	Volatile	Software revision
	Event mask 1A	15V101	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E31)
	Event mask 1B	15V102	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E32 ... E63)
	Event mask 2A	15V103	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E31)
	Event mask 2B	15V104	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E32 ... E63)
	Event mask 3A	15V105	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E31)
	Event mask 3B	15V106	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E32 ... E63)
	Event mask 4A	15V107	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E31)
	Event mask 4B	15V108	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E32 ... E63)
BIO2 / Rev C BIO2 BIO2 (1MRS050000) module general parameters										
	Output 1 state	17O001	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 1
	Output 2 state	17O002	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 2
	Output 3 state	17O003	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 3
	Output 4 state	17O004	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 4
	Output 5 state	17O005	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 5
	Output 6 state	17O006	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary output 6
	Input 1 state	17I001	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 1
	Input 2 state	17I002	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 2
	Input 3 state	17I003	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 3
	Input 4 state	17I004	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 4
	Input 5 state	17I005	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 5
	Input 6 state	17I006	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 6
	Input 7 state	17I007	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 7
	Input 8 state	17I008	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 8
	Input 9 state	17I009	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 9
	Input 10 state	17I010	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	State of binary input 10
	Input 1 valid	17I021	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 1
	Input 2 valid	17I022	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 2
	Input 3 valid	17I023	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 3
	Input 4 valid	17I024	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 4
	Input 5 valid	17I025	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 5
	Input 6 valid	17I026	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 6
	Input 7 valid	17I027	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 7

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Input 8 valid	17I028	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 8
	Input 9 valid	17I029	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 9
	Input 10 valid	17I030	Internal	Control setting	0 ... 1	-	0	Rd/Wr	Volatile	Validity of binary input 10
	Input 9 counter	17I041	MMI,RST	BIO2 [7]	0 ... 2147483647	-	0	Read	Volatile	Count of positive transitions on input 1
	Input 10 counter	17I042	MMI,RST	BIO2 [7]	0 ... 2147483647	-	0	Read	Volatile	Count of positive transitions on input 2
	Input 9 preset	17V201	MMI,RST	Counter settings	0 ... 2147483647	-	0	Rd/Wr	Retain	Set value for counter on input 1
	Input 10 preset	17V202	MMI,RST	Counter settings	0 ... 2147483647	-	0	Rd/Wr	Retain	Set value for counter on input 2
	Input 1 filter	17V221	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 1
	Input 2 filter	17V222	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 2
	Input 3 filter	17V223	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 3
	Input 4 filter	17V224	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 4
	Input 5 filter	17V225	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 5
	Input 6 filter	17V226	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 6
	Input 7 filter	17V227	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 7
	Input 8 filter	17V228	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 8
	Input 9 filter	17V229	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 9
	Input 10 filter	17V230	MMI,RST	Input filtering	1 ... 15000	ms	5	Rd/Wr	Retain	Debounce filter time for input 10
	Input 1 invert.	17V281	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 1
	Input 2 invert.	17V282	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 2
	Input 3 invert.	17V283	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 3
	Input 4 invert.	17V284	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 4
	Input 5 invert.	17V285	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 5
	Input 6 invert.	17V286	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 6
	Input 7 invert.	17V287	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 7
	Input 8 invert.	17V288	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 8
	Input 9 invert.	17V289	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 9
	Input 10 invert.	17V290	MMI,RST	Input inversion	0 ... 1	-	0	Rd/Wr	Retain	Invert input 10
	Input 9 mode	17V309	MMI,RST	Input mode	1 = Binary input;2 = Counter	-	1	Read	Retain	Mode for input 9
	Input 10 mode	17V310	MMI,RST	Input mode	1 = Binary input;2 = Counter	-	1	Read	Retain	Mode for input 10
	CountTrigg	17V401	MMI,RST	Counter settings	0 = clear counters;1 = load updated values;2 = update all values	-	0	Write	Volatile	Loads the counter Preseted value(s) in to counters
	SW version	17V501	MMI,RST	BIO2 [7]	-	-	-	Read	Volatile	Software version (1MRS118xxx)
	SW revision	17V502	MMI,RST	BIO2 [7]	-	-	-	Read	Volatile	Software revision (A)
	Event mask 1A	17V101	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E31)
	Event mask 1B	17V102	MMI,RST	Event mask	0 ... 4194303	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E32 ... E53)
	Event mask 2A	17V103	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E31)
	Event mask 2B	17V104	MMI,RST	Event mask	0 ... 4194303	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E32 ... E53)
	Event mask 3A	17V105	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E31)
	Event mask 3B	17V106	MMI,RST	Event mask	0 ... 4194303	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E32 ... E53)
	Event mask 4A	17V107	MMI,RST	Event mask	0 ... 4294967295	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E31)
	Event mask 4B	17V108	MMI,RST	Event mask	0 ... 4194303	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E32 ... E53)
LocalMMI027 / Rev D LocalMMI Graphical MIMIC module (1MRS050132)										
	Menutree	27M300	Internal	Control setting	0	-	0	Read	Volatile	Menutree data. The structure of the menu, no language depending data.
	Deutsch	27M004	MMI	Languages	0	-	0	Read	Volatile	Menu file in German
	English	27M001	MMI	Languages	0	-	0	Read	Volatile	Menu file in English
	Suomi	27M002	MMI	Languages	0	-	0	Read	Volatile	Menu file in Finnish
	Svenska	27M003	MMI	Languages	0	-	0	Read	Volatile	Menu file in Swedish
	Event mask 1	27V101	MMI,RST	MIMIC [17]	0..127	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E6)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 2	27V103	MMI,RST	MIMIC [17]	0..127	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E6)
	Event mask 3	27V105	MMI,RST	MIMIC [17]	0..127	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E6)
	Event mask 4	27V107	MMI,RST	MIMIC [17]	0..127	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E6)
	SW version	27V501	MMI,RST	MIMIC [17]	0	-	0	Read	Retain	Software version (1MRSxxxxxx)
	SW revision	27V502	MMI,RST	MIMIC [17]	A..Z	-	0	Read	Retain	Software revisioin (A-Z)
	Default lang.	27V400	Internal	Control setting	0..255	-	0	Read	Retain	Current default language in relay. I.e. Index of language which is active when relay boots.
	Language set	27V401	Internal	Control setting	0...4294967296	-	0	Read	Retain	Bitmask which shows the currently loaded languages.
	ML Init Status	27V402	Internal	Control setting	0...4294967296	-	0	Read	Retain	32-bit value showing the ML init status.
RTDMA / Rev E RTD1 RTD1 (1MRS050105) module general parameters										
	Output 1 value	16O001	RST	Output	-10000.00000..10000.00	mA	0	Rd/Wr	Volatile	Output 1 value
	Output 2 value	16O002	RST	Output	-10000.00000..10000.000	mA	0	Rd/Wr	Volatile	Output 2 value
	Output 3 value	16O003	RST	Output	-10000.00000..10000.000	mA	0	Rd/Wr	Volatile	Output 3 value
	Output 4 value	16O004	RST	Output	-10000.00000..10000.000	mA	0	Rd/Wr	Volatile	Output 4 value
	Output 1 invalid	16I021	RST	Output	0 = Not active; 1 = Active;	-	1	Rd/Wr	Volatile	Output 1 invalid signal
	Output 2 invalid	16I022	RST	Output	0 = Not active; 1 = Active;	-	1	Rd/Wr	Volatile	Output 2 invalid signal
	Output 3 invalid	16I023	RST	Output	0 = Not active; 1 = Active;	-	1	Rd/Wr	Volatile	Output 3 invalid signal
	Output 4 invalid	16I024	RST	Output	0 = Not active; 1 = Active;	-	1	Rd/Wr	Volatile	Output 4 invalid signal
	Output range	16V201	MMI,RST	Output 1	0 = 0..20; 1 = 4..20;	mA	0	Rd/Wr	Retain	Output 1 range
	Output range	16V202	MMI,RST	Output 2	0 = 0..20; 1 = 4..20;	mA	0	Rd/Wr	Retain	Output 2 range
	Output range	16V203	MMI,RST	Output 3	0 = 0..20; 1 = 4..20;	mA	0	Rd/Wr	Retain	Output 3 range
	Output range	16V204	MMI,RST	Output 4	0 = 0..20; 1 = 4..20;	mA	0	Rd/Wr	Retain	Output 4 range
	Input 1 value	16I001	RST	Input	-10000.00000..10000.000	-	0	Rd/Wr	Volatile	Measured value of input 1
	Input 2 value	16I002	RST	Input	-10000.00000..10000.000	-	0	Rd/Wr	Volatile	Measured value of input 2
	Input 3 value	16I003	RST	Input	-10000.00000..10000.000	-	0	Rd/Wr	Volatile	Measured value of input 3
	Input 4 value	16I004	RST	Input	-10000.00000..10000.000	-	0	Rd/Wr	Volatile	Measured value of input 4
	Input 5 value	16I005	RST	Input	-10000.00000..10000.000	-	0	Rd/Wr	Volatile	Measured value of input 5
	Input 6 value	16I006	RST	Input	-10000.00000..10000.000	-	0	Rd/Wr	Volatile	Measured value of input 6
	Input 7 value	16I007	RST	Input	-10000.00000..10000.000	-	0	Rd/Wr	Volatile	Measured value of input 7
	Input 8 value	16I008	RST	Input	-10000.00000..10000.000	-	0	Rd/Wr	Volatile	Measured value of input 8
	Input 1 invalid	16I011	RST	Input	0 = Not active; 1 = Active;	-	1	Rd/Wr	Volatile	Input 1 invalid signal
	Input 2 invalid	16I012	RST	Input	0 = Not active; 1 = Active;	-	1	Rd/Wr	Volatile	Input 2 invalid signal
	Input 3 invalid	16I013	RST	Input	0 = Not active; 1 = Active;	-	1	Rd/Wr	Volatile	Input 3 invalid signal
	Input 4 invalid	16I014	RST	Input	0 = Not active; 1 = Active;	-	1	Rd/Wr	Volatile	Input 4 invalid signal
	Input 5 invalid	16I015	RST	Input	0 = Not active; 1 = Active;	-	1	Rd/Wr	Volatile	Input 5 invalid signal
	Input 6 invalid	16I016	RST	Input	0 = Not active; 1 = Active;	-	1	Rd/Wr	Volatile	Input 6 invalid signal
	Input 7 invalid	16I017	RST	Input	0 = Not active; 1 = Active;	-	1	Rd/Wr	Volatile	Input 7 invalid signal
	Input 8 invalid	16I018	RST	Input	0 = Not active; 1 = Active;	-	1	Rd/Wr	Volatile	Input 8 invalid signal
	Filter time	16V001	MMI,RST	Input 1	0 = 0.4; 1 = 1; 2 = 2; 3 = 3; 4 = 4; 5 = 5;	s	5	Rd/Wr	Retain	Input 1 filter time (step response time)
	Filter time	16V002	MMI,RST	Input 2	0 = 0.4; 1 = 1; 2 = 2; 3 = 3; 4 = 4; 5 = 5;	s	5	Rd/Wr	Retain	Input 2 filter time (step response time)
	Filter time	16V003	MMI,RST	Input 3	0 = 0.4; 1 = 1; 2 = 2; 3 = 3; 4 = 4; 5 = 5;	s	5	Rd/Wr	Retain	Input 3 filter time (step response time)
	Filter time	16V004	MMI,RST	Input 4	0 = 0.4; 1 = 1; 2 = 2; 3 = 3; 4 = 4; 5 = 5;	s	5	Rd/Wr	Retain	Input 4 filter time (step response time)
	Filter time	16V005	MMI,RST	Input 5	0 = 0.4; 1 = 1; 2 = 2; 3 = 3; 4 = 4; 5 = 5;	s	5	Rd/Wr	Retain	Input 5 filter time (step response time)
	Filter time	16V006	MMI,RST	Input 6	0 = 0.4; 1 = 1; 2 = 2; 3 = 3; 4 = 4; 5 = 5;	s	5	Rd/Wr	Retain	Input 6 filter time (step response time)
	Filter time	16V007	MMI,RST	Input 7	0 = 0.4; 1 = 1; 2 = 2; 3 = 3; 4 = 4; 5 = 5;	s	5	Rd/Wr	Retain	Input 7 filter time (step response time)
	Filter time	16V008	MMI,RST	Input 8	0 = 0.4; 1 = 1; 2 = 2; 3 = 3; 4 = 4; 5 = 5;	s	5	Rd/Wr	Retain	Input 8 filter time (step response time)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Input mode	16V011	MMI,RST	Input 1	0 = Off; 1 = Voltage measurement; 2 = Current measurement; 3 = 2 wire resistance measurement; 4 = 3 wire resistance measurement; 5 = 2 wire temperature measurement; 6 = 3 wire temperature measurement;	-	0	Rd/Wr	Retain	Input 1 measurement mode
	Input mode	16V012	MMI,RST	Input 2	0 = Off; 1 = Voltage measurement; 2 = Current measurement; 3 = 2 wire resistance measurement; 4 = 3 wire resistance measurement; 5 = 2 wire temperature measurement; 6 = 3 wire temperature measurement;	-	0	Rd/Wr	Retain	Input 2 measurement mode
	Input mode	16V013	MMI,RST	Input 3	0 = Off; 1 = Voltage measurement; 2 = Current measurement; 3 = 2 wire resistance measurement; 4 = 3 wire resistance measurement; 5 = 2 wire temperature measurement; 6 = 3 wire temperature measurement;	-	0	Rd/Wr	Retain	Input 3 measurement mode
	Input mode	16V014	MMI,RST	Input 4	0 = Off; 1 = Voltage measurement; 2 = Current measurement; 3 = 2 wire resistance measurement; 4 = 3 wire resistance measurement; 5 = 2 wire temperature measurement; 6 = 3 wire temperature measurement;	-	0	Rd/Wr	Retain	Input 4 measurement mode
	Input mode	16V015	MMI,RST	Input 5	0 = Off; 1 = Voltage measurement; 2 = Current measurement; 3 = 2 wire resistance measurement; 4 = 3 wire resistance measurement; 5 = 2 wire temperature measurement; 6 = 3 wire temperature measurement;	-	0	Rd/Wr	Retain	Input 5 measurement mode
	Input mode	16V016	MMI,RST	Input 6	0 = Off; 1 = Voltage measurement; 2 = Current measurement; 3 = 2 wire resistance measurement; 4 = 3 wire resistance measurement; 5 = 2 wire temperature measurement; 6 = 3 wire temperature measurement;	-	0	Rd/Wr	Retain	Input 6 measurement mode
	Input mode	16V017	MMI,RST	Input 7	0 = Off; 1 = Voltage measurement; 2 = Current measurement; 3 = 2 wire resistance measurement; 4 = 3 wire resistance measurement; 5 = 2 wire temperature measurement; 6 = 3 wire temperature measurement;	-	0	Rd/Wr	Retain	Input 7 measurement mode
	Input mode	16V018	MMI,RST	Input 8	0 = Off; 1 = Voltage measurement; 2 = Current measurement; 3 = 2 wire resistance measurement; 4 = 3 wire resistance measurement; 5 = 2 wire temperature measurement; 6 = 3 wire temperature measurement;	-	0	Rd/Wr	Retain	Input 8 measurement mode
	Voltage range	16V021	MMI,RST	Input 1	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 2..10; 5 = -5..5; 6 = -10..10;	V	0	Rd/Wr	Retain	Input 1 voltage measurement range
	Voltage range	16V022	MMI,RST	Input 2	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 2..10; 5 = -5..5; 6 = -10..10;	V	0	Rd/Wr	Retain	Input 2 voltage measurement range
	Voltage range	16V023	MMI,RST	Input 3	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 2..10; 5 = -5..5; 6 = -10..10;	V	0	Rd/Wr	Retain	Input 3 voltage measurement range
	Voltage range	16V024	MMI,RST	Input 4	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 2..10; 5 = -5..5; 6 = -10..10;	V	0	Rd/Wr	Retain	Input 4 voltage measurement range
	Voltage range	16V025	MMI,RST	Input 5	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 2..10; 5 = -5..5; 6 = -10..10;	V	0	Rd/Wr	Retain	Input 5 voltage measurement range
	Voltage range	16V026	MMI,RST	Input 6	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 2..10; 5 = -5..5; 6 = -10..10;	V	0	Rd/Wr	Retain	Input 6 voltage measurement range
	Voltage range	16V027	MMI,RST	Input 7	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 2..10; 5 = -5..5; 6 = -10..10;	V	0	Rd/Wr	Retain	Input 7 voltage measurement range
	Voltage range	16V028	MMI,RST	Input 8	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 2..10; 5 = -5..5; 6 = -10..10;	V	0	Rd/Wr	Retain	Input 8 voltage measurement range

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Current range	16V031	MMI,RST	Input 1	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 0..20; 5 = 4..20; 6 = -1..1; 7 = -2.5..2.5; 8 = -5..5; 9 = -10..10; 10 = -20..20;	mA	0	Rd/Wr	Retain	Input 1 current measurement range
	Current range	16V032	MMI,RST	Input 2	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 0..20; 5 = 4..20; 6 = -1..1; 7 = -2.5..2.5; 8 = -5..5; 9 = -10..10; 10 = -20..20;	mA	0	Rd/Wr	Retain	Input 2 current measurement range
	Current range	16V033	MMI,RST	Input 3	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 0..20; 5 = 4..20; 6 = -1..1; 7 = -2.5..2.5; 8 = -5..5; 9 = -10..10; 10 = -20..20;	mA	0	Rd/Wr	Retain	Input 3 current measurement range
	Current range	16V034	MMI,RST	Input 4	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 0..20; 5 = 4..20; 6 = -1..1; 7 = -2.5..2.5; 8 = -5..5; 9 = -10..10; 10 = -20..20;	mA	0	Rd/Wr	Retain	Input 4 current measurement range
	Current range	16V035	MMI,RST	Input 5	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 0..20; 5 = 4..20; 6 = -1..1; 7 = -2.5..2.5; 8 = -5..5; 9 = -10..10; 10 = -20..20;	mA	0	Rd/Wr	Retain	Input 5 current measurement range
	Current range	16V036	MMI,RST	Input 6	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 0..20; 5 = 4..20; 6 = -1..1; 7 = -2.5..2.5; 8 = -5..5; 9 = -10..10; 10 = -20..20;	mA	0	Rd/Wr	Retain	Input 6 current measurement range
	Current range	16V037	MMI,RST	Input 7	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 0..20; 5 = 4..20; 6 = -1..1; 7 = -2.5..2.5; 8 = -5..5; 9 = -10..10; 10 = -20..20;	mA	0	Rd/Wr	Retain	Input 7 current measurement range
	Current range	16V038	MMI,RST	Input 8	0 = 0..1; 1 = 0..5; 2 = 1..5; 3 = 0..10; 4 = 0..20; 5 = 4..20; 6 = -1..1; 7 = -2.5..2.5; 8 = -5..5; 9 = -10..10; 10 = -20..20;	mA	0	Rd/Wr	Retain	Input 8 current measurement range
	Resistance range	16V041	MMI,RST	Input 1	0 = 0..100; 1 = 0..200; 2 = 0..500; 3 = 0..1000; 4 = 0..2000; 5 = 0..5000; 6 = 0..10000;	-	0	Rd/Wr	Retain	Input 1 resistance measurement range
	Resistance range	16V042	MMI,RST	Input 2	0 = 0..100; 1 = 0..200; 2 = 0..500; 3 = 0..1000; 4 = 0..2000; 5 = 0..5000; 6 = 0..10000;	-	0	Rd/Wr	Retain	Input 2 resistance measurement range
	Resistance range	16V043	MMI,RST	Input 3	0 = 0..100; 1 = 0..200; 2 = 0..500; 3 = 0..1000; 4 = 0..2000; 5 = 0..5000; 6 = 0..10000;	-	0	Rd/Wr	Retain	Input 3 resistance measurement range
	Resistance range	16V044	MMI,RST	Input 4	0 = 0..100; 1 = 0..200; 2 = 0..500; 3 = 0..1000; 4 = 0..2000; 5 = 0..5000; 6 = 0..10000;	-	0	Rd/Wr	Retain	Input 4 resistance measurement range
	Resistance range	16V045	MMI,RST	Input 5	0 = 0..100; 1 = 0..200; 2 = 0..500; 3 = 0..1000; 4 = 0..2000; 5 = 0..5000; 6 = 0..10000;	-	0	Rd/Wr	Retain	Input 5 resistance measurement range
	Resistance range	16V046	MMI,RST	Input 6	0 = 0..100; 1 = 0..200; 2 = 0..500; 3 = 0..1000; 4 = 0..2000; 5 = 0..5000; 6 = 0..10000;	-	0	Rd/Wr	Retain	Input 6 resistance measurement range
	Resistance range	16V047	MMI,RST	Input 7	0 = 0..100; 1 = 0..200; 2 = 0..500; 3 = 0..1000; 4 = 0..2000; 5 = 0..5000; 6 = 0..10000;	-	0	Rd/Wr	Retain	Input 7 resistance measurement range
	Resistance range	16V048	MMI,RST	Input 8	0 = 0..100; 1 = 0..200; 2 = 0..500; 3 = 0..1000; 4 = 0..2000; 5 = 0..5000; 6 = 0..10000;	-	0	Rd/Wr	Retain	Input 8 resistance measurement range
	Temperat. range	16V051	MMI,RST	Input 1	0 = Pt100 -45..150øC; 1 = Pt100 -45..600øC; 2 = Pt250 -45..150øC; 3 = Pt250 -45..600øC; 4 = Pt1000 -45..150øC; 5 = Pt1000 -45..600øC; 6 = Ni100 -45..150øC; 7 = Ni100 -45..250øC; 8 = Ni120 -45..150øC; 9 = Ni120 -45..250øC; 10 = Ni250 -45..150øC; 11 = Ni250 -45..250øC; 12 = Ni1000 -45..150øC; 13 = Ni1000 -45..250øC; 14 = Cu10 -45..150øC; 15 = Ni120US -45..150øC; 16 = Ni120US -45..250øC;	-	0	Rd/Wr	Retain	Input 1 temperature measurement range

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Temperat. range	16V052	MMI,RST	Input 2	0 = Pt100 -45..150øC; 1 = Pt100 -45..600øC; 2 = Pt250 -45..150øC; 3 = Pt250 -45..600øC; 4 = Pt1000 -45..150øC; 5 = Pt1000 -45..600øC; 6 = Ni100 -45..150øC; 7 = Ni100 -45..250øC; 8 = Ni120 -45..150øC; 9 = Ni120 -45..250øC; 10 = Ni250 -45..150øC; 11 = Ni250 -45..250øC; 12 = Ni1000 -45..150øC; 13 = Ni1000 -45..250øC; 14 = Cu10 -45..150øC; 15 = Ni120US -45..150øC; 16 = Ni120US -45..250øC;	-	0	Rd/Wr	Retain	Input 2 temperature measurement range
	Temperat. range	16V053	MMI,RST	Input 3	0 = Pt100 -45..150øC; 1 = Pt100 -45..600øC; 2 = Pt250 -45..150øC; 3 = Pt250 -45..600øC; 4 = Pt1000 -45..150øC; 5 = Pt1000 -45..600øC; 6 = Ni100 -45..150øC; 7 = Ni100 -45..250øC; 8 = Ni120 -45..150øC; 9 = Ni120 -45..250øC; 10 = Ni250 -45..150øC; 11 = Ni250 -45..250øC; 12 = Ni1000 -45..150øC; 13 = Ni1000 -45..250øC; 14 = Cu10 -45..150øC; 15 = Ni120US -45..150øC; 16 = Ni120US -45..250øC;	-	0	Rd/Wr	Retain	Input 3 temperature measurement range
	Temperat. range	16V054	MMI,RST	Input 4	0 = Pt100 -45..150øC; 1 = Pt100 -45..600øC; 2 = Pt250 -45..150øC; 3 = Pt250 -45..600øC; 4 = Pt1000 -45..150øC; 5 = Pt1000 -45..600øC; 6 = Ni100 -45..150øC; 7 = Ni100 -45..250øC; 8 = Ni120 -45..150øC; 9 = Ni120 -45..250øC; 10 = Ni250 -45..150øC; 11 = Ni250 -45..250øC; 12 = Ni1000 -45..150øC; 13 = Ni1000 -45..250øC; 14 = Cu10 -45..150øC; 15 = Ni120US -45..150øC; 16 = Ni120US -45..250øC;	-	0	Rd/Wr	Retain	Input 4 temperature measurement range
	Temperat. range	16V055	MMI,RST	Input 5	0 = Pt100 -45..150øC; 1 = Pt100 -45..600øC; 2 = Pt250 -45..150øC; 3 = Pt250 -45..600øC; 4 = Pt1000 -45..150øC; 5 = Pt1000 -45..600øC; 6 = Ni100 -45..150øC; 7 = Ni100 -45..250øC; 8 = Ni120 -45..150øC; 9 = Ni120 -45..250øC; 10 = Ni250 -45..150øC; 11 = Ni250 -45..250øC; 12 = Ni1000 -45..150øC; 13 = Ni1000 -45..250øC; 14 = Cu10 -45..150øC; 15 = Ni120US -45..150øC; 16 = Ni120US -45..250øC;	-	0	Rd/Wr	Retain	Input 5 temperature measurement range
	Temperat. range	16V056	MMI,RST	Input 6	0 = Pt100 -45..150øC; 1 = Pt100 -45..600øC; 2 = Pt250 -45..150øC; 3 = Pt250 -45..600øC; 4 = Pt1000 -45..150øC; 5 = Pt1000 -45..600øC; 6 = Ni100 -45..150øC; 7 = Ni100 -45..250øC; 8 = Ni120 -45..150øC; 9 = Ni120 -45..250øC; 10 = Ni250 -45..150øC; 11 = Ni250 -45..250øC; 12 = Ni1000 -45..150øC; 13 = Ni1000 -45..250øC; 14 = Cu10 -45..150øC; 15 = Ni120US -45..150øC; 16 = Ni120US -45..250øC;	-	0	Rd/Wr	Retain	Input 6 temperature measurement range

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Temperat. range	16V057	MMI,RST	Input 7	0 = Pt100 -45..150øC; 1 = Pt100 -45..600øC; 2 = Pt250 -45..150øC; 3 = Pt250 -45..600øC; 4 = Pt1000 -45..150øC; 5 = Pt1000 -45..600øC; 6 = Ni100 -45..150øC; 7 = Ni100 -45..250øC; 8 = Ni120 -45..150øC; 9 = Ni120 -45..250øC; 10 = Ni250 -45..150øC; 11 = Ni250 -45..250øC; 12 = Ni1000 -45..150øC; 13 = Ni1000 -45..250øC; 14 = Cu10 -45..150øC; 15 = Ni120US -45..150øC; 16 = Ni120US -45..250øC;	-	0	Rd/Wr	Retain	Input 7 temperature measurement range
	Temperat. range	16V058	MMI,RST	Input 8	0 = Pt100 -45..150øC; 1 = Pt100 -45..600øC; 2 = Pt250 -45..150øC; 3 = Pt250 -45..600øC; 4 = Pt1000 -45..150øC; 5 = Pt1000 -45..600øC; 6 = Ni100 -45..150øC; 7 = Ni100 -45..250øC; 8 = Ni120 -45..150øC; 9 = Ni120 -45..250øC; 10 = Ni250 -45..150øC; 11 = Ni250 -45..250øC; 12 = Ni1000 -45..150øC; 13 = Ni1000 -45..250øC; 14 = Cu10 -45..150øC; 15 = Ni120US -45..150øC; 16 = Ni120US -45..250øC;	-	0	Rd/Wr	Retain	Input 8 temperature measurement range
	Threshold value	16V061	MMI,RST	Input 1	0.1..10.0	%	0.1	Rd/Wr	Retain	Input 1 threshold value for updating of measured value
	Threshold value	16V062	MMI,RST	Input 2	0.1..10.0	%	0.1	Rd/Wr	Retain	Input 2 threshold value for updating of measured value
	Threshold value	16V063	MMI,RST	Input 3	0.1..10.0	%	0.1	Rd/Wr	Retain	Input 3 threshold value for updating of measured value
	Threshold value	16V064	MMI,RST	Input 4	0.1..10.0	%	0.1	Rd/Wr	Retain	Input 4 threshold value for updating of measured value
	Threshold value	16V065	MMI,RST	Input 5	0.1..10.0	%	0.1	Rd/Wr	Retain	Input 5 threshold value for updating of measured value
	Threshold value	16V066	MMI,RST	Input 6	0.1..10.0	%	0.1	Rd/Wr	Retain	Input 6 threshold value for updating of measured value
	Threshold value	16V067	MMI,RST	Input 7	0.1..10.0	%	0.1	Rd/Wr	Retain	Input 7 threshold value for updating of measured value
	Threshold value	16V068	MMI,RST	Input 8	0.1..10.0	%	0.1	Rd/Wr	Retain	Input 8 threshold value for updating of measured value
	Input low limit	16V071	MMI,RST	Input 1	-10000.00000..10000.000	-	-4	Rd/Wr	Retain	Input 1 valid range low limit
	Input low limit	16V072	MMI,RST	Input 2	-10000.00000..10000.000	-	-4	Rd/Wr	Retain	Input 2 valid range low limit
	Input low limit	16V073	MMI,RST	Input 3	-10000.00000..10000.000	-	-4	Rd/Wr	Retain	Input 3 valid range low limit
	Input low limit	16V074	MMI,RST	Input 4	-10000.00000..10000.000	-	-4	Rd/Wr	Retain	Input 4 valid range low limit
	Input low limit	16V075	MMI,RST	Input 5	-10000.00000..10000.000	-	-4	Rd/Wr	Retain	Input 5 valid range low limit
	Input low limit	16V076	MMI,RST	Input 6	-10000.00000..10000.000	-	-4	Rd/Wr	Retain	Input 6 valid range low limit
	Input low limit	16V077	MMI,RST	Input 7	-10000.00000..10000.000	-	-4	Rd/Wr	Retain	Input 7 valid range low limit
	Input low limit	16V078	MMI,RST	Input 8	-10000.00000..10000.000	-	-4	Rd/Wr	Retain	Input 8 valid range low limit
	Input high limit	16V081	MMI,RST	Input 1	-10000.00000..10000.000	-	104	Rd/Wr	Retain	Input 1 valid range high limit
	Input high limit	16V082	MMI,RST	Input 2	-10000.00000..10000.000	-	104	Rd/Wr	Retain	Input 2 valid range high limit
	Input high limit	16V083	MMI,RST	Input 3	-10000.00000..10000.000	-	104	Rd/Wr	Retain	Input 3 valid range high limit
	Input high limit	16V084	MMI,RST	Input 4	-10000.00000..10000.000	-	104	Rd/Wr	Retain	Input 4 valid range high limit
	Input high limit	16V085	MMI,RST	Input 5	-10000.00000..10000.000	-	104	Rd/Wr	Retain	Input 5 valid range high limit
	Input high limit	16V086	MMI,RST	Input 6	-10000.00000..10000.000	-	104	Rd/Wr	Retain	Input 6 valid range high limit
	Input high limit	16V087	MMI,RST	Input 7	-10000.00000..10000.000	-	104	Rd/Wr	Retain	Input 7 valid range high limit
	Input high limit	16V088	MMI,RST	Input 8	-10000.00000..10000.000	-	104	Rd/Wr	Retain	Input 8 valid range high limit
	Linear. curve	16V091	MMI,RST	Input 1	0 = Disabled; 1 = Enabled	-	0	Rd/Wr	Retain	Input 1 user linearization curve
	Linear. curve	16V092	MMI,RST	Input 2	0 = Disabled; 1 = Enabled	-	0	Rd/Wr	Retain	Input 2 user linearization curve
	Linear. curve	16V093	MMI,RST	Input 3	0 = Disabled; 1 = Enabled	-	0	Rd/Wr	Retain	Input 3 user linearization curve
	Linear. curve	16V094	MMI,RST	Input 4	0 = Disabled; 1 = Enabled	-	0	Rd/Wr	Retain	Input 4 user linearization curve
	Linear. curve	16V095	MMI,RST	Input 5	0 = Disabled; 1 = Enabled	-	0	Rd/Wr	Retain	Input 5 user linearization curve
	Linear. curve	16V096	MMI,RST	Input 6	0 = Disabled; 1 = Enabled	-	0	Rd/Wr	Retain	Input 6 user linearization curve
	Linear. curve	16V097	MMI,RST	Input 7	0 = Disabled; 1 = Enabled	-	0	Rd/Wr	Retain	Input 7 user linearization curve

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Linear. curve	16V098	MMI,RST	Input 8	0 = Disabled; 1 = Enabled	-	0	Rd/Wr	Retain	Input 8 user linearization curve
	SW version	16V501	MMI,RST	RTD1 [6]	-	-	0	Read	Volatile	Software version
	SW revision	16V502	MMI,RST	RTD1 [6]	-	-	0	Read	Volatile	Software revision
	Lin. data file	16M001	Internal	Control setting	-	-	-	Rd/Wr	Retain	INTERNAL USE / POD GENERATION
	Event mask 1	16V101	MMI,RST	Event mask	0..255	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E7)
	Event mask 2	16V103	MMI,RST	Event mask	0..255	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E7)
	Event mask 3	16V105	MMI,RST	Event mask	0..255	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E7)
	Event mask 4	16V107	MMI,RST	Event mask	0..255	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E7)
IEC_103 / Rev C IEC_103 IEC_103 common parameters										
	Unit address	507V1	MMI,RST	IEC 103	0..254	-	1	Rd/Wr	Retain	IEC 103 station address
	Baud rate	507V2	MMI,RST	IEC 103	0..1 [0=9600 bps; 1=19200 bps]	bps	0	Rd/Wr	Retain	Communication speed
	Scale factor	507V4	MMI,RST	IEC 103	0..1 [0=1.2; 1=2.4]	-	0	Rd/Wr	Retain	Analog value scale factor
	Command timeout	507V5	Internal	Control setting	0.1..25.0	-	5	Rd/Wr	Retain	Command sequence timeout
	Frame type	507V6	MMI,RST	IEC 103	0..11[0=Not in use; 1=Meas I: 144; 2=Meas I: 145; 3=Meas I: 146; 4=Meas I: 147; 5=Meas II: 148; 6=Meas II:ABB 1; 7=Meas II:ABB 2; 8=Meas II:ABB 3; 9=Meas II:ABB 4; 10=Meas II:ABB 5c; 11=Meas II:ABB 6;12=Meas II:ABB 7;13=Meas II:ABB 8;14=Meas II:ABB 9;15=Meas II:ABB 10;16=Meas II:ABB 11;17=Meas II:ABB 12	-	1	Rd/Wr	Retain	Measurement frame type
	Diagnostic index	507V7	Internal	Control setting	0..255	-	0	Write	Volatile	Diagnostic table index
	Diagnostic data	507V8	Internal	Control setting	0..255	-	0	Read	Volatile	Diagnostic data value
	Reset diagnostic	507V9	Internal	Control setting	0..255	-	0	Write	Volatile	Reset diagnostic counters
	RTD data frame	507V10	MMI,RST	IEC 103	0..1	-	0	Rd/Wr	Retain	RTD data frame is send to every second class 2 data poll.
	POD Checksum	507V700	Internal	Control setting	-	-	-	Rd/Wr	Retain	POD identification string
IEC_103_REF_PARAM / Rev A IEC_103_REF_PARAM IEC 103 REF specific parameters										
	Function type	507V3	MMI,RST	IEC 103	0,255	-	160	Rd/Wr	Retain	Unit function type
DNP_REF / Rev A DNP_REF DNP 3.0 for REF and REM										
	Unit Address	503V001	MMI,RST	General	0...65532	-	1	Rd/Wr	Retain	Address of the relay in the DNP network
	Master Address	503V002	MMI,RST	General	0...65532	-	2	Rd/Wr	Retain	Address of the master station (destination address for unsolicited responses)
	Link timeout	503V003	MMI,RST	General	100...10000	ms	300	Rd/Wr	Retain	This timeout is activated whenever the relay is sending data using service 3 (user data with confirmation)
	Link retrans cnt	503V004	MMI,RST	General	0...100	-	0	Rd/Wr	Retain	Number of retries of data link layer when unit is acting as a primary station
	Appl timeout	503V006	MMI,RST	General	1000...10000	ms	1000	Rd/Wr	Retain	This timeout is activated whenever the relay is acting as a primary station and sending APDU with confirmation bit set
	Appl retrans cnt	503V007	MMI,RST	General	0...100	-	0	Rd/Wr	Retain	Application Layer retransmission count. Number of retries of the application layer when CON bit is set.
	Link conf. type	503V008	MMI,RST	General	0..1 [0=Disabled; 1=Enabled]	-	0	Rd/Wr	Retain	Data link layer Confirmation type selector. Please refer to DNP 3.0 Tehnical Description
	Appl conf. type	503V009	MMI,RST	General	0..1 [0=Disabled; 1=Enabled]	-	0	Rd/Wr	Retain	Application layer Confirmation type selector. Please refer to DNP 3.0 Tehnical Description
	Binary input	503V010	MMI,RST	Def. variation	1...2	-	2	Rd/Wr	Retain	Default variation of binary input object
	Bin inp event	503V011	MMI,RST	Def. variation	1...3	-	2	Rd/Wr	Retain	Default variation of binary input change event object
	Binary output	503V012	MMI,RST	Def. variation	1...2	-	2	Rd/Wr	Retain	Default variation of binary output object
	Counter	503V013	MMI,RST	Def. variation	1...2	-	1	Rd/Wr	Retain	Default variation of counter object
	Counter event	503V014	MMI,RST	Def. variation	1...2	-	1	Rd/Wr	Retain	Default variation of counter event object

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Analog input	503V015	MMI,RST	Def. variation	1...2	-	1	Rd/Wr	Retain	Default variation of analogue input object
	Analog inp event	503V016	MMI,RST	Def. variation	1...2	-	1	Rd/Wr	Retain	Default variation of analogue input event object
	Analog outp stat	503V017	MMI,RST	Def. variation	1...2	-	2	Rd/Wr	Retain	Default variation of analogue output status object
	Class1 ev. delay	503V018	MMI,RST	Unsolicited	0...1000	s	1	Rd/Wr	Retain	Minimum delay for reporting spontaneously events from class 1
	Class1 ev. count	503V019	MMI,RST	Unsolicited	1...32	-	1	Rd/Wr	Retain	Minimum count of events for reporting spontaneously events from class 1
	Class2 ev. delay	503V020	MMI,RST	Unsolicited	0...1000	s	1	Rd/Wr	Retain	Minimum delay for reporting spontaneously events from class 2
	Class2 ev. count	503V021	MMI,RST	Unsolicited	1...32	-	1	Rd/Wr	Retain	Minimum count of events for reporting spontaneously events from class 2
	Class3 ev. delay	503V022	MMI,RST	Unsolicited	0...1000	s	1	Rd/Wr	Retain	Minimum delay for reporting spontaneously events from class 3
	Class3 ev. count	503V023	MMI,RST	Unsolicited	1...32	-	1	Rd/Wr	Retain	Minimum count of events for reporting spontaneously events from class 3
	Unsolicited rep.	503V024	MMI,RST	Unsolicited	0...3	-	0	Rd/Wr	Retain	Unsolicited messages reporting behavior. Please refer to DNP 3.0 Tehnical Description
	Timesync request	503V025	MMI,RST	General	0..2 [0=Never; 1=Startup; 2=Periodic]	-	2	Rd/Wr	Retain	Timesyncronisation request interval
	Baud rate	503V211	MMI,RST	General	0..6 [0=300; 1=600; 2=1200; 3=2400; 4=4800; 5=9600; 6=19200]	Bd	5	Rd/Wr	Retain	Communication speed of DNP protocol
	No of stop bits	503V212	MMI,RST	General	1..2	-	1	Rd/Wr	Retain	Number of stop bits
	Next char. TO	503V215	MMI,RST	General	0..65535	ms	0	Rd/Wr	Retain	Next character timeout
	End of frame TO	503V216	MMI,RST	General	2..65535	ms	10	Rd/Wr	Retain	End of frame timeout
	Parity	503V230	MMI,RST	General	0..2 [0=None; 1=Odd; 2=Even]	-	0	Rd/Wr	Retain	Parity setting
	Silent interval	503V232	MMI,RST	Collision det.	10...65535	ms	20	Rd/Wr	Retain	Collision detection: silent interval
	Time slot width	503V233	MMI,RST	Collision det.	10...65535	ms	10	Rd/Wr	Retain	Collision detection: time slot width
	Time slot count	503V234	MMI,RST	Collision det.	1...255	-	8	Rd/Wr	Retain	Collision detection: time slot count
	Collision detect	503V235	MMI,RST	Collision det.	0..1 [0=Disabled; 1=Enabled]	-	0	Rd/Wr	Retain	Collision detection
	POD tables	503M001	Internal	Control setting	-	-	-	Rd/Wr	Retain	DNP POD file
	POD entries max	503V060	Internal	Control setting	-	-	-	Read	Volatile	Total entries counter
	Entr. not used	503V061	Internal	Control setting	-	-	-	Read	Volatile	Entries not in use
	No INV entries	503V062	Internal	Control setting	-	-	-	Read	Volatile	Invalid entries
	No COR entries	503V063	Internal	Control setting	-	-	-	Read	Volatile	Corrected entries
	No NBL entries	503V064	Internal	Control setting	-	-	-	Read	Volatile	Entries from nonexistent block
	No NOB entries	503V065	Internal	Control setting	-	-	-	Read	Volatile	No object from existing block
	Entry to OP.POD	503V066	Internal	Control setting	-	-	-	Read	Volatile	Entries translated to operational POD
	POD ID string	503V700	Internal	Control setting	-	-	-	Rd/Wr	Retain	POD name
	Collision count	503V260	MMI,RST	Collision det.	0..65535	-	0	Read	Volatile	Collision detection: Collision counter
	Frame err cnt	503V261	Internal	Control setting	0..65535	-	0	Read	Volatile	Frame error counter
	Parity err cnt	503V262	Internal	Control setting	0..65535	-	0	Read	Volatile	Parity error counter
	Overrun err cnt	503V263	Internal	Control setting	0..65535	-	0	Read	Volatile	Overrun error counter
100028 / Rev A MMIWAKE										
	Event mask 1	28V101	MMI,RST	Control setting	0...2	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0...E1)
	Event mask 2	28V103	MMI,RST	Control setting	0...2	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0...E1)
	Event mask 3	28V105	MMI,RST	Control setting	0...2	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0...E1)
	Event mask 4	28V107	MMI,RST	Control setting	0...2	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0...E1)
100029 / Rev A INDRESET										
	Event mask 1	29V101	MMI,RST	Control setting	0...42	-	42	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E5)
	Event mask 2	29V103	MMI,RST	Control setting	0...42	-	42	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E5)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 3	29V105	MMI,RST	Control setting	0...42	-	42	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E5)
	Event mask 4	29V107	MMI,RST	Control setting	0...42	-	42	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E5)
100030/1 / Rev B SWGRP1										
	Checksum	30S1	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP1
	Checksum	30S41	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP1
	Checksum	30S71	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP1
	Group selection	30V1	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP1
100030/2 / Rev B SWGRP2										
	Checksum	30S2	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP2
	Checksum	30S42	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP2
	Checksum	30S72	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP2
	Group selection	30V2	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP2
100030/3 / Rev B SWGRP3										
	Checksum	30S3	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP3
	Checksum	30S43	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP3
	Checksum	30S73	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP3
	Group selection	30V3	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP3
100030/4 / Rev B SWGRP4										
	Checksum	30S4	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP4
	Checksum	30S44	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP4
	Checksum	30S74	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP4
	Group selection	30V4	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP4
100030/5 / Rev B SWGRP5										
	Checksum	30S5	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP5
	Checksum	30S45	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP5
	Checksum	30S75	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP5
	Group selection	30V5	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP5
100030/6 / Rev B SWGRP6										
	Checksum	30S6	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP6
	Checksum	30S46	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP6
	Checksum	30S76	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP6
	Group selection	30V6	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP6
100030/7 / Rev B SWGRP7										
	Checksum	30S7	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP7
	Checksum	30S47	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP7
	Checksum	30S77	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP7
	Group selection	30V7	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP7
100030/8 / Rev B SWGRP8										
	Checksum	30S8	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP8
	Checksum	30S48	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP8
	Checksum	30S78	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP8

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Group selection	30V8	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP8
100030/9 / Rev B SWGRP9										
	Checksum	30S9	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP9
	Checksum	30S49	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP9
	Checksum	30S79	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP9
	Group selection	30V9	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP9
100030/10 / Rev C SWGRP10										
	Checksum	30S10	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP10
	Checksum	30S50	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP10
	Checksum	30S80	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP10
	Group selection	30V10	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP10
100030/11 / Rev B SWGRP11										
	Checksum	30S11	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP11
	Checksum	30S51	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP11
	Checksum	30S81	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP11
	Group selection	30V11	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP11
100030/12 / Rev B SWGRP12										
	Checksum	30S12	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP12
	Checksum	30S52	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP12
	Checksum	30S82	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP12
	Group selection	30V12	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP12
100030/13 / Rev B SWGRP13										
	Checksum	30S13	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP13
	Checksum	30S53	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP13
	Checksum	30S83	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP13
	Group selection	30V13	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP13
100030/14 / Rev B SWGRP14										
	Checksum	30S14	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP14
	Checksum	30S54	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP14
	Checksum	30S84	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP14
	Group selection	30V14	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP14
100030/15 / Rev B SWGRP15										
	Checksum	30S15	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP15
	Checksum	30S55	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP15
	Checksum	30S85	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP15
	Group selection	30V15	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP15
100030/16 / Rev B SWGRP16										
	Checksum	30S16	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP16
	Checksum	30S56	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP16
	Checksum	30S86	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP16

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Group selection	30V16	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP16
100030/17 / Rev B SWGRP17										
	Checksum	30S17	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP17
	Checksum	30S57	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP17
	Checksum	30S87	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP17
	Group selection	30V17	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP17
100030/18 / Rev B SWGRP18										
	Checksum	30S18	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP18
	Checksum	30S58	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP18
	Checksum	30S88	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP18
	Group selection	30V18	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP18
100030/19 / Rev B SWGRP19										
	Checksum	30S19	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP19
	Checksum	30S59	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP19
	Checksum	30S89	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP19
	Group selection	30V19	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP19
100030/20 / Rev B SWGRP20										
	Checksum	30S20	MMI,RST	Actual setting	0...255	-	0	Read	Volatile	Ruling checksum of SWGRP20
	Checksum	30S60	MMI,RST	Setting group1	0...255	-	0	Rd/Wr	Retain	Checksum1 of switching group SWGRP20
	Checksum	30S90	MMI,RST	Setting group2	0...255	-	0	Rd/Wr	Retain	Checksum2 of switching group SWGRP20
	Group selection	30V20	MMI,RST	Control setting	0..2[0 = Checksum 1; 1 = Checksum 2; 2 = GROUP input]	-	2	Rd/Wr	Retain	Checksum selection of switching group SWGRP20
100031 / Rev D NOC3Low										
	Current IL1	31I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL1
	Current IL2	31I2	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL2
	Current IL3	31I3	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL3
	Input BS1	31I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	31I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	31I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	31I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input DOUBLE	31I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for doubling the set start current
	Input BSREG	31I9	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for blocking the recording function
	Input RESET	31I10	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of NOC3Low
	Output START	31O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	31O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output CBFP	31O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	31V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	31V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	31V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	31V204	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	31V205	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	31V206	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	31V207	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	31V208	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	IL3 peak	31V209	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	BS1	31V210	MMI,RST	Recorded data1	0..1[0 = Not active; 1=Active]	-	0	Read	Retain	Status of BS1 input
	BS2	31V211	MMI,RST	Recorded data1	0..1[0 = Not active; 1=Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	31V212	MMI,RST	Recorded data1	0..1[0 = Not active; 1=Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	31V213	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	31V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	31V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	31V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	31V304	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	31V305	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	31V306	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	31V307	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	31V308	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	31V309	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	BS1	31V310	MMI,RST	Recorded data2	0..1[0 = Not active; 1=Active]	-	0	Read	Retain	Status of BS1 input
	BS2	31V311	MMI,RST	Recorded data2	0..1[0 = Not active; 1=Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	31V312	MMI,RST	Recorded data2	0..1[0 = Not active; 1=Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	31V313	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	31V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	31V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	31V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	31V404	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	31V405	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	31V406	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	31V407	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	31V408	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	31V409	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	BS1	31V410	MMI,RST	Recorded data3	0..1[0 = Not active; 1=Active]	-	0	Read	Retain	Status of BS1 input
	BS2	31V411	MMI,RST	Recorded data3	0..1[0 = Not active; 1=Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	31V412	MMI,RST	Recorded data3	0..1[0 = Not active; 1=Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	31V413	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Operation mode	31S1	MMI,RST	Actual setting	0..15[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse; 8 = IEEE Ext. inv.; 9 = IEEE Very inv.; 10 = IEEE Inverse; 11 = IEEE S.T. inv.; 12 = IEEE S.T.E. inv; 13 = IEEE L.T.E. inv; 14 = IEEE L.T.V. inv; 15 = IEEE L.T. inv.]	-	1	Read	Volatile	Selection of operate mode and inverse time characteristic
	Start current	31S2	MMI,RST	Actual setting	0.10...5.00	x In	0.10	Read	Volatile	Start current
	Operate time	31S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DTmode
	Time multiplier	31S4	MMI,RST	Actual setting	0.05...1.00	-	0.05	Read	Volatile	Time multiplier at IDMT mode
	IEEE time dial	31S5	MMI,RST	Actual setting	0.5...15.0	-	0.5	Read	Volatile	IEEE time dial at IDMT mode
	Operation mode	31S41	MMI,RST	Setting group1	0..15[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse; 8 = IEEE Ext. inv.; 9 = IEEE Very inv.; 10 = IEEE Inverse; 11 = IEEE S.T. inv.; 12 = IEEE S.T.E. inv; 13 = IEEE L.T.E. inv; 14 = IEEE L.T.V. inv; 15 = IEEE L.T. inv.]	-	1	Rd/Wr	Retain	Selection of operate mode and inverse time characteristic at IDMT mode
	Start current	31S42	MMI,RST	Setting group1	0.10...5.00	x In	0.10	Rd/Wr	Retain	Start current
	Operate time	31S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Time multiplier	31S44	MMI,RST	Setting group1	0.05...1.00	-	0.05	Rd/Wr	Retain	Time multiplier at IDMT mode
	IEEE time dial	31S45	MMI,RST	Setting group1	0.5...15.0	-	0.5	Rd/Wr	Retain	IEEE time dial at IDMT mode
	Operation mode	31S71	MMI,RST	Setting group2	0...15[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse; 8 = IEEE Ext. inv.; 9 = IEEE Very inv.; 10 = IEEE Inverse; 11 = IEEE S.T. inv.; 12 = IEEE S.T.E. inv; 13 = IEEE L.T.E. inv; 14 = IEEE L.T.V. inv; 15 = IEEE L.T. inv.]	-	1	Rd/Wr	Retain	Selection of operate mode and inverse time characteristic at IDMT mode
	Start current	31S72	MMI,RST	Setting group2	0.10...5.00	x In	0.10	Rd/Wr	Retain	Start current
	Operate time	31S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Time multiplier	31S74	MMI,RST	Setting group2	0.05...1.00	-	0.05	Rd/Wr	Retain	Time multiplier at IDMT mode
	IEEE time dial	31S75	MMI,RST	Setting group2	0.5...15.0	-	0.5	Rd/Wr	Retain	IEEE time dial at IDMT mode
	Measuring mode	31V1	MMI,RST	Control setting	0..1[0 = Peak-to-peak; 1 = Fundam.freq.]	-	0	Rd/Wr	Retain	Selection of measuring mode
	Drop-off time	31V2	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Resetting time of the operate time counter at DT mode
	Group selection	31V3	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	31V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	31V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	31V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	31V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	Minimum time	31V8	MMI,RST	Control setting	0.03...10.00	s	0.03	Rd/Wr	Retain	Minimum operate time at IDMT mode
	CBFP time	31V9	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of the delayed trip CBFP
	Reset registers	31V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	31V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	31V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	31V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	31V101	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	31V103	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	31V105	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	31V107	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
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	Current IL1	32I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL1
	Current IL2	32I2	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL2
	Current IL3	32I3	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL3
	Input BS1	32I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	32I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	32I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	32I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input DOUBLE	32I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for doubling the set start current
	Input BSREG	32I9	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for blocking the recording function
	Input RESET	32I10	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of NOC3High
	Output BSOUT	32O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of BSOUT signal
	Output START	32O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	32O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output CBFP	32O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	32V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	32V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	32V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	32V204	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	IL2 mean	32V205	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	32V206	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	32V207	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	32V208	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	32V209	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	BS1	32V210	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	32V211	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	32V212	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	32V213	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	32V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	32V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	32V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	32V304	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	32V305	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	32V306	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	32V307	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	32V308	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	32V309	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	BS1	32V310	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	32V311	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	32V312	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	32V313	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	32V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	32V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	32V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	32V404	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	32V405	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	32V406	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	32V407	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	32V408	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	32V409	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	BS1	32V410	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	32V411	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	32V412	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	32V413	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Operation mode	32S1	MMI,RST	Actual setting	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Read	Volatile	Selection of operate mode
	Start current	32S2	MMI,RST	Actual setting	0.10...40.00	x In	0.10	Read	Volatile	Start current
	Operate time	32S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DTmode
	Operation mode	32S41	MMI,RST	Setting group1	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	32S42	MMI,RST	Setting group1	0.10...40.00	x In	0.10	Rd/Wr	Retain	Start current
	Operate time	32S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Operation mode	32S71	MMI,RST	Setting group2	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	32S72	MMI,RST	Setting group2	0.10...40.00	x In	0.10	Rd/Wr	Retain	Start current
	Operate time	32S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Measuring mode	32V1	MMI,RST	Control setting	0..1[0 = Peak-to-peak; 1 = Fundam.freq.]	-	0	Rd/Wr	Retain	Selection of measuringmode
	Drop-off time	32V2	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Resetting time of the operate time counter
	Group selection	32V3	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	32V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	32V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Trip signal	32V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	32V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	CBFP time	32V8	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of the delayed trip CBFP
	Reset registers	32V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	32V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	32V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	32V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	32V101	MMI,RST	Control setting	0...16383	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E13)
	Event mask 2	32V103	MMI,RST	Control setting	0...16383	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E13)
	Event mask 3	32V105	MMI,RST	Control setting	0...16383	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E13)
	Event mask 4	32V107	MMI,RST	Control setting	0...16383	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E13)
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	Operation mode	33S1	MMI,RST	Actual setting	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Read	Volatile	Selection of operation mode
	Start current	33S2	MMI,RST	Actual setting	0.10...40.00	x In	0.10	Read	Volatile	Start current
	Operate time	33S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DT mode
	Operation mode	33S41	MMI,RST	Setting group1	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	33S42	MMI,RST	Setting group1	0.10...40.00	x In	0.10	Rd/Wr	Retain	Start current
	Operate time	33S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Operation mode	33S71	MMI,RST	Setting group2	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	33S72	MMI,RST	Setting group2	0.10...40.00	x In	0.10	Rd/Wr	Retain	Start current
	Operate time	33S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Measuring mode	33V1	MMI,RST	Control setting	0..1[0 = Peak-to-peak; 1 = Fundam.freq.]	-	0	Rd/Wr	Retain	Selection of measuringmode
	Drop-off time	33V2	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Resetting time of the operate time counter
	Group selection	33V3	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	33V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	33V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	33V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	33V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	CBFP time	33V8	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of the delayed trip CBFP
	Reset registers	33V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	33V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	33V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	33V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	33V101	MMI,RST	Control setting	0...16383	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E13)
	Event mask 2	33V103	MMI,RST	Control setting	0...16383	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E13)
	Event mask 3	33V105	MMI,RST	Control setting	0...16383	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E13)
	Event mask 4	33V107	MMI,RST	Control setting	0...16383	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E13)
	Current IL1	33I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL1
	Current IL2	33I2	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL2
	Current IL3	33I3	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL3
	Input BS1	33I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	33I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	33I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	33I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input DOUBLE	33I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for doubling the set start current
	Input BSREG	33I9	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for blocking the recording function
	Input RESET	33I10	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of NOC3Inst
	Output BSOUT	33O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of BSOUT signal

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Output START	33O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	33O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output CBFP	33O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	33V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	33V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	33V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	33V204	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	33V205	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	33V206	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	33V207	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	33V208	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	33V209	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	BS1	33V210	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	33V211	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	33V212	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	33V213	MMI,RST	Recorded data1	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	33V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	33V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	33V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	33V304	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	33V305	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	33V306	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	33V307	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	33V308	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	33V309	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	BS1	33V310	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	33V311	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	33V312	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	33V313	MMI,RST	Recorded data2	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	33V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	33V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	33V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	33V404	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	33V405	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	33V406	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	33V407	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	33V408	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	33V409	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	BS1	33V410	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	33V411	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	33V412	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	33V413	MMI,RST	Recorded data3	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
100034 / Rev D Inrush3										
	Operation mode	34S1	MMI,RST	Actual setting	0..2[0 = Not in use; 1 = Inrush mode; 2 = Start-up mode]	-	1	Read	Volatile	Selection of operation mode
	Ratio I2f/I1f>	34S2	MMI,RST	Actual setting	5...50	%	15	Read	Volatile	Inrush blocking limit I2f/I1f
	Start current	34S3	MMI,RST	Actual setting	0.10...5.00	x In	0.10	Read	Volatile	Motor start current
	Operation mode	34S41	MMI,RST	Setting group1	0..2[0 = Not in use; 1 = Inrush mode; 2 = Start-up mode]	-	1	Rd/Wr	Retain	Selection of operation mode
	Ratio I2f/I1f>	34S42	MMI,RST	Setting group1	5...50	%	15	Rd/Wr	Retain	Inrush blocking limit I2f/I1f
	Start current	34S43	MMI,RST	Setting group1	0.10...5.00	x In	0.10	Rd/Wr	Retain	Motor start current

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Operation mode	34S71	MMI,RST	Setting group2	0..2[0 = Not in use; 1 = Inrush mode; 2 = Start-up mode]	-	1	Rd/Wr	Retain	Selection of operation mode
	Ratio I2f/I1f>	34S72	MMI,RST	Setting group2	5...50	%	15	Rd/Wr	Retain	Inrush blocking limit I2f/I1f
	Start current	34S73	MMI,RST	Setting group2	0.10...5.00	x In	0.10	Rd/Wr	Retain	Motor start current
	Rising time	34V1	MMI,RST	Control setting	20...60	ms	20	Rd/Wr	Retain	Rising time for phase currents (motor start-up mode)
	Group selection	34V2	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	34V3	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	34V4	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of signal START
	Reset registers	34V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of registers
	Test START	34V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Event mask 1	34V101	MMI,RST	Control setting	0...15	-	3	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	34V103	MMI,RST	Control setting	0...15	-	3	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	34V105	MMI,RST	Control setting	0...15	-	3	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	34V107	MMI,RST	Control setting	0...15	-	3	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
	Current IL1	34I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL1
	Current IL2	34I2	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL2
	Current IL3	34I3	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL3
	Input GROUP	34I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	34I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting registers
	Output START	34O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of signal START
	Date	34V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	34V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	34V203	MMI,RST	Recorded data1	0.0...60.0	s	0.0	Read	Retain	Duration of start situation
	Average IL1	34V204	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Average value of IL1
	Average IL2	34V205	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Average value of IL2
	Average IL3	34V206	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Average value of IL3
	Min. I2f/I1f L1	34V207	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Minimum I2f/I1f of IL1
	Min. I2f/I1f L2	34V208	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Minimum I2f/I1f of IL2
	Min. I2f/I1f L3	34V209	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Minimum I2f/I1f of IL3
	Active group	34V210	MMI,RST	Recorded data1	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	34V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	34V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	34V303	MMI,RST	Recorded data2	0.0...60.0	s	0.0	Read	Retain	Duration of start situation
	Average IL1	34V304	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Average value of IL1
	Average IL2	34V305	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Average value of IL2
	Average IL3	34V306	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Average value of IL3
	Min. I2f/I1f L1	34V307	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Minimum I2f/I1f of IL1
	Min. I2f/I1f L2	34V308	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Minimum I2f/I1f of IL2
	Min. I2f/I1f L3	34V309	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Minimum I2f/I1f of IL3
	Active group	34V310	MMI,RST	Recorded data2	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	34V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	34V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	34V403	MMI,RST	Recorded data3	0.0...60.0	s	0.0	Read	Retain	Duration of start situation
	Average IL1	34V404	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Average value of IL1
	Average IL2	34V405	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Average value of IL2
	Average IL3	34V406	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Average value of IL3
	Min. I2f/I1f L1	34V407	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Minimum I2f/I1f of IL1
	Min. I2f/I1f L2	34V408	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Minimum I2f/I1f of IL2
	Min. I2f/I1f L3	34V409	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Minimum I2f/I1f of IL3
	Active group	34V410	MMI,RST	Recorded data3	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
100035 / Rev F DOC6Low										
	Operation mode	35S1	MMI,RST	Actual setting	0..7[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse]	-	1	Read	Volatile	Selection of operation mode and inverse time characteristic at IDMT mode
	Start current	35S2	MMI,RST	Actual setting	0.05...40.00	x In	0.05	Read	Volatile	Start current
	Operate time	35S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DTmode
	Time multiplier	35S4	MMI,RST	Actual setting	0.05...1.00	-	0.05	Read	Volatile	Time multiplier at IDMT mode
	Basic angle ïb	35S5	MMI,RST	Actual setting	0...90	°	60	Read	Volatile	Basic angle jb for directional operation
	Oper. direction	35S6	MMI,RST	Actual setting	0..1[0 = Forward; 1 = Reverse]	-	0	Read	Volatile	Selection of forward/reverse operation
	Earth fault pr.	35S7	MMI,RST	Actual setting	0..1[0 = Disabled; 1 = Enabled]	-	0	Read	Volatile	Earth fault protection
	Operation mode	35S41	MMI,RST	Setting group1	0..7[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse]	-	1	Rd/Wr	Retain	Selection of operation mode and inverse time characteristic at IDMT mode
	Start current	35S42	MMI,RST	Setting group1	0.05...40.00	x In	0.05	Rd/Wr	Retain	Start current
	Operate time	35S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Time multiplier	35S44	MMI,RST	Setting group1	0.05...1.00	-	0.05	Rd/Wr	Retain	Time multiplier at IDMT mode
	Basic angle ïb	35S45	MMI,RST	Setting group1	0...90	°	60	Rd/Wr	Retain	Basic angle jb for directional operation
	Oper. direction	35S46	MMI,RST	Setting group1	0..1[0 = Forward; 1 = Reverse]	-	0	Rd/Wr	Retain	Selection of forward/reverse operation
	Earth fault pr.	35S47	MMI,RST	Setting group1	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Earth fault protection
	Operation mode	35S71	MMI,RST	Setting group2	0..7[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse]	-	1	Rd/Wr	Retain	Selection of operation mode and inverse time characteristic at IDMT mode
	Start current	35S72	MMI,RST	Setting group2	0.05...40.00	x In	0.05	Rd/Wr	Retain	Start current
	Operate time	35S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Time multiplier	35S74	MMI,RST	Setting group2	0.05...1.00	-	0.05	Rd/Wr	Retain	Time multiplier at IDMT mode
	Basic angle ïb	35S75	MMI,RST	Setting group2	0...90	°	60	Rd/Wr	Retain	Basic angle jb for directional operation
	Oper. direction	35S76	MMI,RST	Setting group2	0..1[0 = Forward; 1 = Reverse]	-	0	Rd/Wr	Retain	Selection of forward/reverse operation
	Earth fault pr.	35S77	MMI,RST	Setting group2	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Earth fault protection
	Measuring mode	35V1	MMI,RST	Control setting	0..3[0 = Mode 1; 1 = Mode 2; 2 = Mode 3; 3 = Mode 4]	-	0	Rd/Wr	Retain	Selection of measuring mode
	Drop-off time	35V2	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Resetting time of the operate time counter at DT mode
	Group selection	35V3	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	35V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	35V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	35V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	35V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	Minimum time	35V8	MMI,RST	Control setting	0.03...10.00	s	0.03	Rd/Wr	Retain	Minimum operate time at IDMT mode
	CBFP time	35V9	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of the delayed trip CBFP
	Reset registers	35V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	35V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	35V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	35V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	35V101	MMI,RST	Control setting	0...16383	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E13)
	Event mask 2	35V103	MMI,RST	Control setting	0...16383	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E13)
	Event mask 3	35V105	MMI,RST	Control setting	0...16383	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E13)
	Event mask 4	35V107	MMI,RST	Control setting	0...16383	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E13)
	Current IL1	35I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL1
	Current IL2	35I2	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL2
	Current IL3	35I3	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL3
	Voltage U12	35I4	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U12

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Voltage U23	35I5	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U23
	Voltage U31	35I6	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U31
	Voltage U1	35I7	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage U1
	Voltage U2	35I8	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage U2
	Voltage U3	35I9	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage U3
	Phase angle ï12	35I10	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï23	35I11	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï31	35I12	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï1	35I13	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase current)
	Phase angle ï2	35I14	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase current)
	Phase angle ï3	35I15	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase current)
	Input BS1	35I16	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	35I17	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	35I18	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	35I19	MMI,RST	Input data	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input DOUBLE	35I20	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for doubling the set start current
	Input BSREG	35I21	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for blocking the recording function
	Input RESET	35I22	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of DOC6Low
	Output DIRECTION	35O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Current direction information
	Output START	35O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	35O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output CBFP	35O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	35V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	35V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	35V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	35V204	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	35V205	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	35V206	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	35V207	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	35V208	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	35V209	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	Voltage U12	35V210	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage U23	35V211	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage U31	35V212	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	Voltage U1	35V213	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U1
	Voltage U2	35V214	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U2
	Voltage U3	35V215	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U3
	Phase angle ï12	35V216	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï23	35V217	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï31	35V218	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï1	35V219	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï2	35V220	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï3	35V221	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	DIRECTION	35V222	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DIRECTION output
	BS1	35V223	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	35V224	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	35V225	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	35V226	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Date	35V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	35V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	35V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	35V304	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	35V305	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	35V306	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	35V307	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	35V308	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	35V309	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	Voltage U12	35V310	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage U23	35V311	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage U31	35V312	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	Voltage U1	35V313	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U1
	Voltage U2	35V314	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U2
	Voltage U3	35V315	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U3
	Phase angle ï12	35V316	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï23	35V317	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï31	35V318	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï1	35V319	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï2	35V320	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï3	35V321	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	DIRECTION	35V322	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DIRECTION output
	BS1	35V323	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	35V324	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	35V325	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	35V326	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	35V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	35V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	35V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	35V404	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	35V405	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	35V406	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	35V407	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	35V408	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	35V409	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	Voltage U12	35V410	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage U23	35V411	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage U31	35V412	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	Voltage U1	35V413	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U1
	Voltage U2	35V414	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U2
	Voltage U3	35V415	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U3
	Phase angle ï12	35V416	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï23	35V417	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï31	35V418	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï1	35V419	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï2	35V420	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï3	35V421	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	DIRECTION	35V422	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DIRECTION output
	BS1	35V423	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	BS2	35V424	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	35V425	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	35V426	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
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	Current IL1	36I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL1
	Current IL2	36I2	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL2
	Current IL3	36I3	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL3
	Voltage U12	36I4	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U12
	Voltage U23	36I5	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U23
	Voltage U31	36I6	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U31
	Voltage U1	36I7	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage U1
	Voltage U2	36I8	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage U2
	Voltage U3	36I9	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage U3
	Phase angle ï12	36I10	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï23	36I11	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï31	36I12	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï1	36I13	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase current)
	Phase angle ï2	36I14	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase current)
	Phase angle ï3	36I15	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase current)
	Input BS1	36I16	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	36I17	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	36I18	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	36I19	MMI,RST	Input data	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input DOUBLE	36I20	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for doubling the set start current
	Input BSREG	36I21	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for blocking the recording function
	Input RESET	36I22	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of DOC6High
	Output DIRECTION	36O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Current direction information
	Output BSOUT	36O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of BSOUT signal
	Output START	36O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	36O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output CBFP	36O5	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	36V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	36V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	36V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	36V204	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	36V205	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	36V206	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	36V207	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	36V208	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	36V209	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	Voltage U12	36V210	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage U23	36V211	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage U31	36V212	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	Voltage U1	36V213	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U1
	Voltage U2	36V214	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U2
	Voltage U3	36V215	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U3
	Phase angle ï12	36V216	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï23	36V217	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Phase angle ï31	36V218	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï1	36V219	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï2	36V220	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï3	36V221	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Nondir. operat.	36V222	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of nondirectional operation
	BS1	36V223	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	36V224	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	36V225	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	36V226	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	36V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	36V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	36V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	36V304	MMI,RST	Recorded data2	0.00...60.0	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	36V305	MMI,RST	Recorded data2	0.00...60.0	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	36V306	MMI,RST	Recorded data2	0.00...60.0	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	36V307	MMI,RST	Recorded data2	0.00...60.0	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	36V308	MMI,RST	Recorded data2	0.00...60.0	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	36V309	MMI,RST	Recorded data2	0.00...60.0	x In	0.00	Read	Retain	Momentary peak of IL3
	Voltage U12	36V310	MMI,RST	Recorded data2	0.00...2.0	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage U23	36V311	MMI,RST	Recorded data2	0.00...2.0	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage U31	36V312	MMI,RST	Recorded data2	0.00...2.0	x Un	0.00	Read	Retain	Filtered value of U31
	Voltage U1	36V313	MMI,RST	Recorded data2	0.00...2.0	x Un	0.00	Read	Retain	Filtered value of U1
	Voltage U2	36V314	MMI,RST	Recorded data2	0.00...2.0	x Un	0.00	Read	Retain	Filtered value of U2
	Voltage U3	36V315	MMI,RST	Recorded data2	0.00...2.0	x Un	0.00	Read	Retain	Filtered value of U3
	Phase angle ï12	36V316	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï23	36V317	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï31	36V318	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï1	36V319	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï2	36V320	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï3	36V321	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Nondir. operat.	36V322	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of nondirectional operation
	BS1	36V323	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	36V324	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	36V325	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	36V326	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	36V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	36V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	36V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	36V404	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	36V405	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	36V406	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	36V407	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	36V408	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	36V409	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	Voltage U12	36V410	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage U23	36V411	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage U31	36V412	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	Voltage U1	36V413	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U1
	Voltage U2	36V414	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U2

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Voltage U3	36V415	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U3
	Phase angle ï12	36V416	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï23	36V417	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï31	36V418	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï1	36V419	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï2	36V420	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï3	36V421	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Nondir. operat.	36V422	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of nondirectional operation
	BS1	36V423	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	36V424	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	36V425	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	36V426	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Operation mode	36S1	MMI,RST	Actual setting	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Read	Volatile	Selection of operation mode
	Start current	36S2	MMI,RST	Actual setting	0.05...40.00	x In	0.05	Read	Volatile	Start current
	Operate time	36S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DTmode
	Basic angle ïb	36S4	MMI,RST	Actual setting	0...90	°	60	Read	Volatile	Basic angle jb for directional operation
	Oper. direction	36S5	MMI,RST	Actual setting	0..1[0 = Forward; 1 = Reverse]	-	0	Read	Volatile	Selection of forward/reverse operation
	Earth fault pr.	36S6	MMI,RST	Actual setting	0..1[0 = Disabled; 1 = Enabled]	-	0	Read	Volatile	Earth fault protection
	Nondir. operat.	36S7	MMI,RST	Actual setting	0..1[0 = Disabled; 1 = Enabled]	-	0	Read	Volatile	Nondirectional operation when direction cannot be determined
	Operation mode	36S41	MMI,RST	Setting group1	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	36S42	MMI,RST	Setting group1	0.05...40.00	x In	0.05	Rd/Wr	Retain	Start current
	Operate time	36S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DTmode
	Basic angle ïb	36S44	MMI,RST	Setting group1	0...90	°	60	Rd/Wr	Retain	Basic angle jb for directional operation
	Oper. direction	36S45	MMI,RST	Setting group1	0..1[0 = Forward; 1 = Reverse]	-	0	Rd/Wr	Retain	Selection of forward/reverse operation
	Earth fault pr.	36S46	MMI,RST	Setting group1	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Earth fault protection
	Nondir. operat.	36S47	MMI,RST	Setting group1	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Nondirectional operation when direction cannot be determined
	Operation mode	36S71	MMI,RST	Setting group2	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	36S72	MMI,RST	Setting group2	0.05...40.00	x In	0.05	Rd/Wr	Retain	Start current
	Operate time	36S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DTmode
	Basic angle ïb	36S74	MMI,RST	Setting group2	0...90	°	60	Rd/Wr	Retain	Basic angle jb for directional operation
	Oper. direction	36S75	MMI,RST	Setting group2	0..1[0 = Forward; 1 = Reverse]	-	0	Rd/Wr	Retain	Selection of forward/reverse operation
	Earth fault pr.	36S76	MMI,RST	Setting group2	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Earth fault protection
	Nondir. operat.	36S77	MMI,RST	Setting group2	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Nondirectional operation when direction cannot be determined
	Measuring mode	36V1	MMI,RST	Control setting	0..3[0 = Mode 1; 1 = Mode 2; 2 = Mode 3; 3 = Mode 4]	-	0	Rd/Wr	Retain	Selection of measuring mode
	Drop-off time	36V2	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Resetting time of the operate time counter at DT mode
	Group selection	36V3	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	36V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	36V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	36V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	36V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	CBFP time	36V8	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of the delayed trip CBFP
	Reset registers	36V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	36V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	36V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	36V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	36V101	MMI,RST	Control setting	0...65535	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E15)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 2	36V103	MMI,RST	Control setting	0...65535	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E15)
	Event mask 3	36V105	MMI,RST	Control setting	0...65535	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E15)
	Event mask 4	36V107	MMI,RST	Control setting	0...65535	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E15)
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	Operation mode	37S1	MMI,RST	Actual setting	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Read	Volatile	Selection of operation mode
	Start current	37S2	MMI,RST	Actual setting	0.05...40.00	x In	0.05	Read	Volatile	Start current
	Operate time	37S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DTmode
	Basic angle ïb	37S4	MMI,RST	Actual setting	0...90	°	60	Read	Volatile	Basic angle jb for directional operation
	Oper. direction	37S5	MMI,RST	Actual setting	0..1[0 = Forward; 1 = Reverse]	-	0	Read	Volatile	Selection of forward/reverse operation
	Earth fault pr.	37S6	MMI,RST	Actual setting	0..1[0 = Disabled; 1 = Enabled]	-	0	Read	Volatile	Earth fault protection
	Nondir. operat.	37S7	MMI,RST	Actual setting	0..1[0 = Disabled; 1 = Enabled]	-	0	Read	Volatile	Nondirectional operation when direction cannot be determined
	Operation mode	37S41	MMI,RST	Setting group1	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	37S42	MMI,RST	Setting group1	0.05...40.00	x In	0.05	Rd/Wr	Retain	Start current
	Operate time	37S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DTmode
	Basic angle ïb	37S44	MMI,RST	Setting group1	0...90	°	60	Rd/Wr	Retain	Basic angle jb for directional operation
	Oper. direction	37S45	MMI,RST	Setting group1	0..1[0 = Forward; 1 = Reverse]	-	0	Rd/Wr	Retain	Selection of forward/reverse operation
	Earth fault pr.	37S46	MMI,RST	Setting group1	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Earth fault protection
	Nondir. operat.	37S47	MMI,RST	Setting group1	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Nondirectional operation when direction cannot be determined
	Operation mode	37S71	MMI,RST	Setting group2	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	37S72	MMI,RST	Setting group2	0.05...40.00	x In	0.05	Rd/Wr	Retain	Start current
	Operate time	37S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DTmode
	Basic angle ïb	37S74	MMI,RST	Setting group2	0...90	°	60	Rd/Wr	Retain	Basic angle jb for directional operation
	Oper. direction	37S75	MMI,RST	Setting group2	0..1[0 = Forward; 1 = Reverse]	-	0	Rd/Wr	Retain	Selection of forward/reverse operation
	Earth fault pr.	37S76	MMI,RST	Setting group2	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Earth fault protection
	Nondir. operat.	37S77	MMI,RST	Setting group2	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Nondirectional operation when direction cannot be determined
	Measuring mode	37V1	MMI,RST	Control setting	0..3[0 = Mode 1; 1 = Mode 2; 2 = Mode 3; 3 = Mode 4]	-	0	Rd/Wr	Retain	Selection of measuring mode
	Drop-off time	37V2	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Resetting time of the operate time counter at DT mode
	Group selection	37V3	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	37V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	37V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	37V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	37V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	CBFP time	37V8	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of the delayed trip CBFP
	Reset registers	37V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	37V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	37V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	37V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	37V101	MMI,RST	Control setting	0...65535	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E15)
	Event mask 2	37V103	MMI,RST	Control setting	0...65535	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E15)
	Event mask 3	37V105	MMI,RST	Control setting	0...65535	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E15)
	Event mask 4	37V107	MMI,RST	Control setting	0...65535	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E15)
	Current IL1	37I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL1
	Current IL2	37I2	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL2
	Current IL3	37I3	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL3
	Voltage U12	37I4	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U12
	Voltage U23	37I5	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U23

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Voltage U31	37I6	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U31
	Voltage U1	37I7	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage U1
	Voltage U2	37I8	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage U2
	Voltage U3	37I9	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage U3
	Phase angle ï12	37I10	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï23	37I11	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï31	37I12	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï1	37I13	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase current)
	Phase angle ï2	37I14	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase current)
	Phase angle ï3	37I15	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase difference ïb - ï(phase current)
	Input BS1	37I16	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	37I17	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	37I18	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	37I19	MMI,RST	Input data	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input DOUBLE	37I20	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for doubling the set start current
	Input BSREG	37I21	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for blocking the recording function
	Input RESET	37I22	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of DOC6Inst
	Output DIRECTION	37O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Current direction information
	Output BSOUT	37O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of BSOUT signal
	Output START	37O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	37O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output CBFP	37O5	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	37V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	37V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	37V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	37V204	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	37V205	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	37V206	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	37V207	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	37V208	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	37V209	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	Voltage U12	37V210	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage U23	37V211	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage U31	37V212	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	Voltage U1	37V213	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U1
	Voltage U2	37V214	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U2
	Voltage U3	37V215	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U3
	Phase angle ï12	37V216	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï23	37V217	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï31	37V218	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï1	37V219	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï2	37V220	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï3	37V221	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Nondir. operat.	37V222	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of nondirectional operation
	BS1	37V223	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	37V224	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	37V225	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	37V226	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Date	37V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	37V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	37V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	37V304	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	37V305	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	37V306	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	37V307	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	37V308	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	37V309	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	Voltage U12	37V310	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage U23	37V311	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage U31	37V312	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	Voltage U1	37V313	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U1
	Voltage U2	37V314	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U2
	Voltage U3	37V315	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U3
	Phase angle ï12	37V316	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï23	37V317	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï31	37V318	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï1	37V319	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï2	37V320	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï3	37V321	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Nondir. operat.	37V322	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of nondirectional operation
	BS1	37V323	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	37V324	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	37V325	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	37V326	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	37V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	37V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	37V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	IL1 mean	37V404	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	IL2 mean	37V405	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	IL3 mean	37V406	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	IL1 peak	37V407	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL1
	IL2 peak	37V408	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL2
	IL3 peak	37V409	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of IL3
	Voltage U12	37V410	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage U23	37V411	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage U31	37V412	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	Voltage U1	37V413	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U1
	Voltage U2	37V414	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U2
	Voltage U3	37V415	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U3
	Phase angle ï12	37V416	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï23	37V417	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï31	37V418	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase-to-phase current)
	Phase angle ï1	37V419	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï2	37V420	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Phase angle ï3	37V421	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase difference ïb - ï(phase current)
	Nondir. operat.	37V422	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of nondirectional operation
	BS1	37V423	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	BS2	37V424	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	DOUBLE	37V425	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of DOUBLE input
	Active group	37V426	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
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	Operation mode	38S1	MMI,RST	Actual setting	0..15[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse; 8 = IEEE Ext. inv.; 9 = IEEE Very inv.; 10 = IEEE Inverse; 11 = IEEE S.T. inv.; 12 = IEEE S.T.E. inv; 13 = IEEE L.T.E. inv; 14 = IEEE L.T.V. inv; 15 = IEEE L.T. inv.]	-	1	Read	Volatile	Selection of operation mode and inverse time characteristic at IDMTmode
	Start current	38S2	MMI,RST	Actual setting	1.0...500.0	% In	1.0	Read	Volatile	Start current
	Operate time	38S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DT mode
	Time multiplier	38S4	MMI,RST	Actual setting	0.05...1.00	-	0.05	Read	Volatile	Time multiplier at IDMT mode
	IEEE time dial	38S5	MMI,RST	Actual setting	0.5...15.0	-	0.5	Read	Volatile	IEEE time dial at IDMT mode
	Operation mode	38S41	MMI,RST	Setting group1	0..15[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse; 8 = IEEE Ext. inv.; 9 = IEEE Very inv.; 10 = IEEE Inverse; 11 = IEEE S.T. inv.; 12 = IEEE S.T.E. inv; 13 = IEEE L.T.E. inv; 14 = IEEE L.T.V. inv; 15 = IEEE L.T. inv.]	-	1	Rd/Wr	Retain	Selection of operation mode and inverse time characteristic at IDMT mode
	Start current	38S42	MMI,RST	Setting group1	1.0...500.0	% In	1.0	Rd/Wr	Retain	Start current
	Operate time	38S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Time multiplier	38S44	MMI,RST	Setting group1	0.05...1.00	-	0.05	Rd/Wr	Retain	Time multiplier at IDMT mode
	IEEE time dial	38S45	MMI,RST	Setting group1	0.5...15.0	-	0.5	Rd/Wr	Retain	IEEE time dial at IDMT mode
	Operation mode	38S71	MMI,RST	Setting group2	0..15[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse; 8 = IEEE Ext. inv.; 9 = IEEE Very inv.; 10 = IEEE Inverse; 11 = IEEE S.T. inv.; 12 = IEEE S.T.E. inv; 13 = IEEE L.T.E. inv; 14 = IEEE L.T.V. inv; 15 = IEEE L.T. inv.]	-	1	Rd/Wr	Retain	Selection of operation mode and inverse time characteristic at IDMT mode
	Start current	38S72	MMI,RST	Setting group2	1.0...500.0	% In	1.0	Rd/Wr	Retain	Start current
	Operate time	38S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Time multiplier	38S74	MMI,RST	Setting group2	0.05...1.00	-	0.05	Rd/Wr	Retain	Time multiplier at IDMT mode
	IEEE time dial	38S75	MMI,RST	Setting group2	0.5...15.0	-	0.5	Rd/Wr	Retain	IEEE time dial
	Measuring mode	38V1	MMI,RST	Control setting	0..1[0 = Peak-to-peak; 1 = Fundam.freq.]	-	1	Rd/Wr	Retain	Selection of measuring mode
	Drop-off time	38V2	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Resetting time of the operate time counter at DMT mode
	Group selection	38V3	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	38V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	38V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	38V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	38V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	Minimum time	38V8	MMI,RST	Control setting	0.03...10.00	s	0.03	Rd/Wr	Retain	Minimum operate time at IDMT mode
	CBFP time	38V9	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of CBFP
	Reset registers	38V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	38V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	38V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	38V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	38V101	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	38V103	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 3	38V105	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	38V107	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
	Current Io	38I1	MMI,RST	Input data	0.0...2000.0	% In	0.0	Read	Volatile	Neutral current Io
	Input BS1	38I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	38I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	38I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	38I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input BSREG	38I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for blocking the recording function
	Input RESET	38I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting trip signal and registers NEF1Low
	Output START	38O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	38O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output CBFP	38O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	38V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	38V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	38V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	38V204	MMI,RST	Recorded data1	0.0...2000.0	% In	0.0	Read	Retain	Filtered value of Io
	Io peak	38V205	MMI,RST	Recorded data1	0.0...2000.0	% In	0.0	Read	Retain	Momentary peak of Io
	BS1	38V206	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	38V207	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	38V208	MMI,RST	Recorded data1	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	38V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	38V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	38V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	38V304	MMI,RST	Recorded data2	0.0...2000.0	% In	0.0	Read	Retain	Filtered value of Io
	Io peak	38V305	MMI,RST	Recorded data2	0.0...2000.0	% In	0.0	Read	Retain	Momentary peak of Io
	BS1	38V306	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	38V307	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	38V308	MMI,RST	Recorded data2	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	38V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	38V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	38V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	38V404	MMI,RST	Recorded data3	0.0...2000.0	% In	0.0	Read	Retain	Filtered value of Io
	Io peak	38V405	MMI,RST	Recorded data3	0.0...2000.0	% In	0.0	Read	Retain	Momentary peak of Io
	BS1	38V406	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	38V407	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	38V408	MMI,RST	Recorded data3	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
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	Operation mode	39S1	MMI,RST	Actual setting	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Read	Volatile	Selection of operation mode
	Start current	39S2	MMI,RST	Actual setting	0.10...12.00	x In	0.10	Read	Volatile	Start current
	Operate time	39S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DTmode
	Operation mode	39S41	MMI,RST	Setting group1	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	39S42	MMI,RST	Setting group1	0.10...12.00	x In	0.10	Rd/Wr	Retain	Start current
	Operate time	39S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Operation mode	39S71	MMI,RST	Setting group2	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	39S72	MMI,RST	Setting group2	0.10...12.00	x In	0.10	Rd/Wr	Retain	Start current
	Operate time	39S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Measuring mode	39V1	MMI,RST	Control setting	0..1[0 = Peak-to-peak; 1 = Fundam.freq.]	-	1	Rd/Wr	Retain	Selection of measuring mode
	Drop-off time	39V2	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Resetting time of the operate time counter
	Group selection	39V3	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Active group	39V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	39V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	39V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	39V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	CBFP time	39V8	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of CBFP
	Reset registers	39V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	39V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	39V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	39V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	39V101	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	39V103	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	39V105	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	39V107	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
	Current Io	39I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Neutral current Io
	Input BS1	39I2	MMI,RST	Input data	0..1[0=Not active; 1=Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	39I3	MMI,RST	Input data	0..1[0=Not active; 1=Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	39I4	MMI,RST	Input data	0..1[0=Not active; 1=Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	39I5	MMI,RST	Input data	0..1[0=Not active; 1=Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input BSREG	39I6	MMI,RST	Input data	0..1[0=Not active; 1=Active]	-	0	Read	Volatile	Signal for blocking the recording function
	Input RESET	39I7	MMI,RST	Input data	0..1[0=Not active; 1=Active]	-	0	Read	Volatile	Signal for resetting trip signal and registers NEF1High
	Output START	39O1	MMI,RST	Output data	0..1[0=Not active; 1=Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	39O2	MMI,RST	Output data	0..1[0=Not active; 1=Active]	-	0	Read	Volatile	Status of trip signal
	Output CBFP	39O3	MMI,RST	Output data	0..1[0=Not active; 1=Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	39V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	39V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	39V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	39V204	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of Io
	Io peak	39V205	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of Io
	BS1	39V206	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status os BS1 input
	BS2	39V207	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	39V208	MMI,RST	Recorded data1	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	39V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	39V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	39V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	39V304	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of Io
	Io peak	39V305	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of Io
	BS1	39V306	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status os BS1 input
	BS2	39V307	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	39V308	MMI,RST	Recorded data2	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	39V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	39V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	39V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	39V404	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of Io
	Io peak	39V405	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of Io
	BS1	39V406	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status os BS1 input
	BS2	39V407	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	39V408	MMI,RST	Recorded data3	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
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Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Operation mode	40S1	MMI,RST	Actual setting	0..5[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.]	-	1	Read	Volatile	Selection of operation mode and IDMT time characteristic
	Oper. criteria	40S2	MMI,RST	Actual setting	0..5[0 = BasicAng & Uo; 1 = BasicAng; 2 = IoSin/Cos & Uo; 3 = IoSin/Cos; 4 = Non-dir.Io; 5 = Non-dir. Uo]	-	0	Read	Volatile	Selection of operation criteria
	Oper. direction	40S3	MMI,RST	Actual setting	0..1[0 = Forward; 1 = Reverse]	-	0	Read	Volatile	Operation direction
	Basic angle ïb	40S11	MMI,RST	Actual setting	-90...60	°	-90	Read	Volatile	Basic angle
	Oper. charact.	40S5	MMI,RST	Actual setting	0..1[0 = IoSin(j); 1 = IoCos(j)]	-	0	Read	Volatile	Operation characteristic
	Start current	40S6	MMI,RST	Actual setting	1.0...500.0	% In	1.0	Read	Volatile	Start current
	Start voltage	40S7	MMI,RST	Actual setting	2.0...100.0	% Un	2.0	Read	Volatile	Start voltage
	Operate time	40S8	MMI,RST	Actual setting	0.1...300.0	s	0.1	Read	Volatile	Operate time at DT mode
	Time multiplier	40S9	MMI,RST	Actual setting	0.05...1.00	-	0.05	Read	Volatile	Time multiplier at IDMT mode
	Intermittent E/F	40S10	MMI,RST	Actual setting	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Selection of intermittent earthfault protection
	Operation mode	40S41	MMI,RST	Setting group1	0..5[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.]	-	1	Rd/Wr	Retain	Selection of operation mode and IDMT time characteristic
	Oper. criteria	40S42	MMI,RST	Setting group1	0..5[0 = BasicAng & Uo; 1 = BasicAng; 2 = IoSin/Cos & Uo; 3 = IoSin/Cos; 4 = Non-dir.Io; 5 = Non-dir. Uo]	-	0	Rd/Wr	Retain	Selection of operation criteria
	Oper. direction	40S43	MMI,RST	Setting group1	0..1[0 = Forward; 1 = Reverse]	-	0	Rd/Wr	Retain	Operation direction
	Basic angle ïb	40S51	MMI,RST	Setting group1	-90...60	°	-90	Rd/Wr	Retain	Basic angle
	Oper. charact.	40S45	MMI,RST	Setting group1	0..1[0 = IoSin(j); 1 = IoCos(j)]	-	0	Rd/Wr	Retain	Operation characteristic
	Start current	40S46	MMI,RST	Setting group1	1.0...500.0	% In	1.0	Rd/Wr	Retain	Start current
	Start voltage	40S47	MMI,RST	Setting group1	2.0...100.0	% Un	2.0	Rd/Wr	Retain	Start voltage
	Operate time	40S48	MMI,RST	Setting group1	0.1...300.0	s	0.1	Rd/Wr	Retain	Operate time at DT mode
	Time multiplier	40S49	MMI,RST	Setting group1	0.05...1.00	-	0.05	Rd/Wr	Retain	Time multiplier at IDMT mode
	Intermittent E/F	40S50	MMI,RST	Setting group1	0..1[0 = Not active; 1 = Active]	-	0	Rd/Wr	Retain	Selection of a intermittent E/F operation
	Operation mode	40S71	MMI,RST	Setting group2	0..5[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.]	-	1	Rd/Wr	Retain	Selection of operation mode and IDMT time characteristic
	Oper. criteria	40S72	MMI,RST	Setting group2	0..5[0 = BasicAng & Uo; 1 = BasicAng; 2 = IoSin/Cos & Uo; 3 = IoSin/Cos; 4 = Non-dir.Io; 5 = Non-dir. Uo]	-	0	Rd/Wr	Retain	Selection of operation criteria
	Oper. direction	40S73	MMI,RST	Setting group2	0..1[0 = Forward; 1 = Reverse]	-	0	Rd/Wr	Retain	Operation direction
	Basic angle ïb	40S81	MMI,RST	Setting group2	-90...60	°	-90	Rd/Wr	Retain	Basic angle
	Oper. charact.	40S75	MMI,RST	Setting group2	0..1[0 = IoSin(j); 1 = IoCos(j)]	-	0	Rd/Wr	Retain	Operation characteristic
	Start current	40S76	MMI,RST	Setting group2	1.0...500.0	% In	1.0	Rd/Wr	Retain	Start current
	Start voltage	40S77	MMI,RST	Setting group2	2.0...100.0	% Un	2.0	Rd/Wr	Retain	Start voltage
	Operate time	40S78	MMI,RST	Setting group2	0.1...300.0	s	0.1	Rd/Wr	Retain	Operate time at DT mode
	Time multiplier	40S79	MMI,RST	Setting group2	0.05...1.00	-	0.05	Rd/Wr	Retain	Time multiplier at IDMT mode
	Intermittent E/F	40S80	MMI,RST	Setting group2	0..1[0 = Not active; 1 = Active]	-	0	Rd/Wr	Retain	Selection of a intermittent E/F operation
	Measuring mode	40V1	MMI,RST	Control setting	0..1[0 = Peak-to-peak; 1 = Fundam.freq.]	-	1	Rd/Wr	Retain	Selection of measuring mode
	Drop-off time	40V2	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Resetting time of DT counter
	Group selection	40V3	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	40V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	40V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	40V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	40V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	Minimum time	40V8	MMI,RST	Control setting	0.03...10.00	s	0.03	Rd/Wr	Retain	Minimum operate time at IDMT mode
	CBFP time	40V9	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of CBFP
	Angle correction	40V10	MMI,RST	Control setting	0.0...10.0	°	2.0	Rd/Wr	Retain	Angle correction factor for Iosin(j) / Iocos(j)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Oper. sector	40V11	MMI,RST	Control setting	0..1[0 = 80ø; 1 = 88ø]	-	0	Rd/Wr	Retain	Operation sector
	Reset registers	40V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	40V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	40V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	40V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	40V101	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	40V103	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	40V105	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	40V107	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
	Current Io	40I1	MMI,RST	Input data	0.0...2000.0	% In	0.0	Read	Volatile	Neutral current Io
	Voltage Uo	40I2	MMI,RST	Input data	0.0...120.0	% Un	0.0	Read	Volatile	Residual voltage Uo
	Phase angle ï	40I3	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase angle j
	Angle ïb - ï	40I4	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase angle jb - j
	Input BS1	40I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	40I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input BACTRL	40I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input BACTRL
	Input TRIGG	40I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering he registers
	Input GROUP	40I9	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input BSREG	40I10	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for blocking the recording function
	Input RESET	40I11	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Resetting of trip signal and registers
	Output START	40O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	40O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output CBFP	40O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	40V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	40V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	40V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	40V204	MMI,RST	Recorded data1	0.0...2000.0	% In	0.0	Read	Retain	Io mean value
	Io peak	40V205	MMI,RST	Recorded data1	0.0...2000.0	% In	0.0	Read	Retain	Io peak value
	Voltage Uo	40V206	MMI,RST	Recorded data1	0.0...120.0	% Un	0.0	Read	Retain	Residual voltage Uo
	Angle ï	40V207	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Angle between Uo & Io
	Angle ïb - ï	40V208	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Angle between jb & j
	Intermittent E/F	40V209	MMI,RST	Recorded data1	0..1[0 = Not detected; 1 = Detected]	-	0	Read	Retain	Status of intermittent E/F
	BS1	40V210	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	40V211	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	BACTRL	40V212	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BACTRL input
	Active group	40V213	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Status of Active group
	Date	40V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	40V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	40V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	40V304	MMI,RST	Recorded data2	0.0...2000.0	% In	0.0	Read	Retain	Io mean value
	Io peak	40V305	MMI,RST	Recorded data2	0.0...2000.0	% In	0.0	Read	Retain	Io peak value
	Voltage Uo	40V306	MMI,RST	Recorded data2	0.0...120.0	% Un	0.0	Read	Retain	Residual voltage Uo
	Angle ï	40V307	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Angle between Uo & Io
	Angle ïb - ï	40V308	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Angle between jb & j
	Intermittent E/F	40V309	MMI,RST	Recorded data2	0..1[0 = Not detected; 1 = Detected]	-	0	Read	Retain	Status of intermittent E/F
	BS1	40V310	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	40V311	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	BACTRL	40V312	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BACTRL input
	Active group	40V313	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Status of Active group

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Date	40V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	40V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	40V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	40V404	MMI,RST	Recorded data3	0.0...2000.0	% In	0.0	Read	Retain	Io mean value
	Io peak	40V405	MMI,RST	Recorded data3	0.0...2000.0	% In	0.0	Read	Retain	Io peak value
	Voltage Uo	40V406	MMI,RST	Recorded data3	0.0...120.0	% Un	0.0	Read	Retain	Residual voltage Uo
	Angle ï	40V407	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Angle between Uo & Io
	Angle ïb - ï	40V408	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Angle between jb & j
	Intermittent E/F	40V409	MMI,RST	Recorded data3	0..1[0 = Not detected; 1 = Detected]	-	0	Read	Retain	Status of intermittent E/F
	BS1	40V410	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	40V411	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	BACTRL	40V412	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BACTRL input
	Active group	40V413	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Status of Active group
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	Operation mode	41S1	MMI,RST	Actual setting	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Read	Volatile	Selection of operation mode
	Oper. criteria	41S2	MMI,RST	Actual setting	0..5[0 = BasicAng & Uo; 1 = BasicAng; 2 = IoSin/Cos & Uo; 3 = IoSin/Cos; 4 = Non-dir.Io; 5 = Non-dir. Uo]	-	0	Read	Volatile	Selection of operation criteria
	Oper. direction	41S3	MMI,RST	Actual setting	0..1[0 = Forward; 1 = Reverse]	-	0	Read	Volatile	Operation direction
	Basic angle ïb	41S10	MMI,RST	Actual setting	-90...60	°	-90	Read	Volatile	Basic angle
	Oper. charact.	41S5	MMI,RST	Actual setting	0..1[0 = IoSin(j); 1 = IoCos(j)]	-	0	Read	Volatile	Operation characteristic
	Start current	41S6	MMI,RST	Actual setting	1.0...500.0	% In	1.0	Read	Volatile	Start current
	Start voltage	41S7	MMI,RST	Actual setting	2.0...100.0	% Un	2.0	Read	Volatile	Start voltage
	Operate time	41S8	MMI,RST	Actual setting	0.1...300.0	s	0.1	Read	Volatile	Operate time at DTmode
	Intermittent E/F	41S9	MMI,RST	Actual setting	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Selection of intermittent earthfault protection
	Operation mode	41S41	MMI,RST	Setting group1	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Oper. criteria	41S42	MMI,RST	Setting group1	0..5[0 = BasicAng & Uo; 1 = BasicAng; 2 = IoSin/Cos & Uo; 3 = IoSin/Cos; 4 = Non-dir.Io; 5 = Non-dir. Uo]	-	0	Rd/Wr	Retain	Selection of operation criteria
	Oper. direction	41S43	MMI,RST	Setting group1	0..1[0 = Forward; 1 = Reverse]	-	0	Rd/Wr	Retain	Operation direction
	Basic angle ïb	41S50	MMI,RST	Setting group1	-90...60	°	-90	Rd/Wr	Retain	Basic angle
	Oper. charact.	41S45	MMI,RST	Setting group1	0..1[0 = IoSin(j); 1 = IoCos(j)]	-	0	Rd/Wr	Retain	Operation characteristic
	Start current	41S46	MMI,RST	Setting group1	1.0...500.0	% In	1.0	Rd/Wr	Retain	Start current
	Start voltage	41S47	MMI,RST	Setting group1	2.0...100.0	% Un	2.0	Rd/Wr	Retain	Start voltage
	Operate time	41S48	MMI,RST	Setting group1	0.1...300.0	s	0.1	Rd/Wr	Retain	Operate time at DT mode
	Intermittent E/F	41S49	MMI,RST	Setting group1	0..1[0 = Not active; 1 = Active]	-	0	Rd/Wr	Retain	Selection of a intermittent E/F operation
	Operation mode	41S71	MMI,RST	Setting group2	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Oper. criteria	41S72	MMI,RST	Setting group2	0..5[0 = BasicAng & Uo; 1 = BasicAng; 2 = IoSin/Cos & Uo; 3 = IoSin/Cos; 4 = Non-dir.Io; 5 = Non-dir. Uo]	-	0	Rd/Wr	Retain	Selection of operation criteria
	Oper. direction	41S73	MMI,RST	Setting group2	0..1[0 = Forward; 1 = Reverse]	-	0	Rd/Wr	Retain	Operation direction
	Basic angle ïb	41S80	MMI,RST	Setting group2	-90...60	°	-90	Rd/Wr	Retain	Basic angle
	Oper. charact.	41S75	MMI,RST	Setting group2	0..1[0 = IoSin(j); 1 = IoCos(j)]	-	0	Rd/Wr	Retain	Operation characteristic
	Start current	41S76	MMI,RST	Setting group2	1.0...500.0	% In	1.0	Rd/Wr	Retain	Start current
	Start voltage	41S77	MMI,RST	Setting group2	2.0...100.0	% Un	2.0	Rd/Wr	Retain	Start voltage
	Operate time	41S78	MMI,RST	Setting group2	0.1...300.0	s	0.1	Rd/Wr	Retain	Operate time at DT mode
	Intermittent E/F	41S79	MMI,RST	Setting group2	0..1[0 = Not active; 1 = Active]	-	0	Rd/Wr	Retain	Selection of a intermittent E/F operation
	Measuring mode	41V1	MMI,RST	Control setting	0..1[0 = Peak-to-peak; 1 = Fundam.freq.]	-	1	Rd/Wr	Retain	Selection of measuring mode
	Drop-off time	41V2	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Resetting time of DT counter
	Group selection	41V3	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	41V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	41V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Trip signal	41V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	41V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	CBFP time	41V8	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of CBFP
	Angle correction	41V9	MMI,RST	Control setting	0.0...10.0	°	2.0	Rd/Wr	Retain	Angle correction factor for Iosin(j) / Iocos(j)
	Oper. sector	41V10	MMI,RST	Control setting	0..1[0 = 80ø; 1 = 88ø]	-	0	Rd/Wr	Retain	Operation sector
	Reset registers	41V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	41V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	41V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	41V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	41V101	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	41V103	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	41V105	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	41V107	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
	Current Io	41I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Neutral current Io
	Voltage Uo	41I2	MMI,RST	Input data	0.0...120.0	% Un	0.0	Read	Volatile	Residual voltage Uo
	Phase angle ï	41I3	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase angle j
	Angle ïb - ï	41I4	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase angle jb - j
	Input BS1	41I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	41I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input BACTRL	41I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input BACTRL
	Input TRIGG	41I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	41I9	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input BSREG	41I10	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for blocking the recording function
	Input RESET	41I11	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Resetting of trip signal and registers
	Output START	41O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	41O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output CBFP	41O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	41V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	41V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	41V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	41V204	MMI,RST	Recorded data1	0.0...2000.0	% In	0.0	Read	Retain	Io mean value
	Io peak	41V205	MMI,RST	Recorded data1	0.0...2000.0	% In	0.0	Read	Retain	Io peak value
	Voltage Uo	41V206	MMI,RST	Recorded data1	0.0...120.0	% Un	0.0	Read	Retain	Residual voltage Uo
	Angle ï	41V207	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Angle between Uo & Io
	Angle ïb - ï	41V208	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Angle between jb & j
	Intermittent E/F	41V209	MMI,RST	Recorded data1	0..1[0 = Not detected; 1 = Detected]	-	0	Read	Retain	Status of intermittent E/F
	BS1	41V210	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	41V211	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	BACTRL	41V212	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BACTRL input
	Active group	41V213	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Status of Active group
	Date	41V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	41V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	41V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	41V304	MMI,RST	Recorded data2	0.0...2000.0	% In	0.0	Read	Retain	Io mean value
	Io peak	41V305	MMI,RST	Recorded data2	0.0...2000.0	% In	0.0	Read	Retain	Io peak value
	Voltage Uo	41V306	MMI,RST	Recorded data2	0.0...120.0	% Un	0.0	Read	Retain	Residual voltage Uo
	Angle ï	41V307	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Angle between Uo & Io
	Angle ïb - ï	41V308	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Angle between jb & j
	Intermittent E/F	41V309	MMI,RST	Recorded data2	0..1[0 = Not detected; 1 = Detected]	-	0	Read	Retain	Status of intermittent E/F

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	BS1	41V310	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	41V311	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	BACTRL	41V312	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BACTRL input
	Active group	41V313	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Status of Active group
	Date	41V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	41V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	41V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	41V404	MMI,RST	Recorded data3	0.0...2000.0	% In	0.0	Read	Retain	Io mean value
	Io peak	41V405	MMI,RST	Recorded data3	0.0...2000.0	% In	0.0	Read	Retain	Io peak value
	Voltage Uo	41V406	MMI,RST	Recorded data3	0.0...120.0	% Un	0.0	Read	Retain	Residual voltage Uo
	Angle ï	41V407	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Angle between Uo & Io
	Angle ïb - ï	41V408	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Angle between jb & j
	Intermittent E/F	41V409	MMI,RST	Recorded data3	0..1[0 = Not detected; 1 = Detected]	-	0	Read	Retain	Status of intermittent E/F
	BS1	41V410	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	41V411	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	BACTRL	41V412	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BACTRL input
	Active group	41V413	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Status of Active group
100042 / Rev E DEF2Inst										
	Operation mode	42S1	MMI,RST	Actual setting	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Read	Volatile	Selection of operation mode
	Oper. criteria	42S2	MMI,RST	Actual setting	0..5[0 = BasicAng & Uo; 1 = BasicAng; 2 = IoSin/Cos & Uo; 3 = IoSin/Cos; 4 = Non-dir.Io; 5 = Non-dir. Uo]	-	0	Read	Volatile	Selection of operation criteria
	Oper. direction	42S3	MMI,RST	Actual setting	0..1[0 = Forward; 1 = Reverse]	-	0	Read	Volatile	Operation direction
	Basic angle ïb	42S10	MMI,RST	Actual setting	-90...60	°	-90	Read	Volatile	Basic angle
	Oper. charact.	42S5	MMI,RST	Actual setting	0..1[0 = IoSin(j); 1 = IoCos(j)]	-	0	Read	Volatile	Operation characteristic
	Start current	42S6	MMI,RST	Actual setting	1.0...500.0	% In	1.0	Read	Volatile	Start current
	Start voltage	42S7	MMI,RST	Actual setting	2.0...100.0	% Un	2.0	Read	Volatile	Start voltage
	Operate time	42S8	MMI,RST	Actual setting	0.1...300.0	s	0.1	Read	Volatile	Operate time at DTmode
	Intermittent E/F	42S9	MMI,RST	Actual setting	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Selection of intermittent earthfault protection
	Operation mode	42S41	MMI,RST	Setting group1	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Oper. criteria	42S42	MMI,RST	Setting group1	0..5[0 = BasicAng & Uo; 1 = BasicAng; 2 = IoSin/Cos & Uo; 3 = IoSin/Cos; 4 = Non-dir.Io; 5 = Non-dir. Uo]	-	0	Rd/Wr	Retain	Selection of operation criteria
	Oper. direction	42S43	MMI,RST	Setting group1	0..1[0 = Forward; 1 = Reverse]	-	0	Rd/Wr	Retain	Operation direction
	Basic angle ïb	42S50	MMI,RST	Setting group1	-90...60	°	-90	Rd/Wr	Retain	Basic angle
	Oper. charact.	42S45	MMI,RST	Setting group1	0..1[0 = IoSin(j); 1 = IoCos(j)]	-	0	Rd/Wr	Retain	Operation characteristic
	Start current	42S46	MMI,RST	Setting group1	1.0...500.0	% In	1.0	Rd/Wr	Retain	Start current
	Start voltage	42S47	MMI,RST	Setting group1	2.0...100.0	% Un	2.0	Rd/Wr	Retain	Start voltage
	Operate time	42S48	MMI,RST	Setting group1	0.1...300.0	s	0.1	Rd/Wr	Retain	Operate time at DT mode
	Intermittent E/F	42S49	MMI,RST	Setting group1	0..1[0 = Not active; 1 = Active]	-	0	Rd/Wr	Retain	Selection of a intermittent E/F operation
	Operation mode	42S71	MMI,RST	Setting group2	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Oper. criteria	42S72	MMI,RST	Setting group2	0..5[0 = BasicAng & Uo; 1 = BasicAng; 2 = IoSin/Cos & Uo; 3 = IoSin/Cos; 4 = Non-dir.Io; 5 = Non-dir. Uo]	-	0	Rd/Wr	Retain	Selection of operation criteria
	Oper. direction	42S73	MMI,RST	Setting group2	0..1[0 = Forward; 1 = Reverse]	-	0	Rd/Wr	Retain	Operation direction
	Basic angle ïb	42S80	MMI,RST	Setting group2	-90...60	°	-90	Rd/Wr	Retain	Basic angle
	Oper. charact.	42S75	MMI,RST	Setting group2	0..1[0 = IoSin(j); 1 = IoCos(j)]	-	0	Rd/Wr	Retain	Operation characteristic
	Start current	42S76	MMI,RST	Setting group2	1.0...500.0	% In	1.0	Rd/Wr	Retain	Start current
	Start voltage	42S77	MMI,RST	Setting group2	2.0...100.0	% Un	2.0	Rd/Wr	Retain	Start voltage
	Operate time	42S78	MMI,RST	Setting group2	0.1...300.0	s	0.1	Rd/Wr	Retain	Operate time at DT mode
	Intermittent E/F	42S79	MMI,RST	Setting group2	0..1[0 = Not active; 1 = Active]	-	0	Rd/Wr	Retain	Selection of a intermittent E/F operation
	Measuring mode	42V1	MMI,RST	Control setting	0..1[0 = Peak-to-peak; 1 = Fundam.freq.]	-	1	Rd/Wr	Retain	Selection of measuring mode

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Drop-off time	42V2	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Resetting time of DT counter
	Group selection	42V3	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	42V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	42V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	42V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	42V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	CBFP time	42V8	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of CBFP
	Angle correction	42V9	MMI,RST	Control setting	0.0...10.0	°	2.0	Rd/Wr	Retain	Angle correction factor for Iosin(j) / Iocos(j)
	Oper. sector	42V10	MMI,RST	Control setting	0..1[0 = 80ø; 1 = 88ø]	-	0	Rd/Wr	Retain	Operation sector
	Reset registers	42V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	42V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	42V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	42V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	42V101	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	42V103	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	42V105	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	42V107	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
	Current Io	42I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Neutral current Io
	Voltage Uo	42I2	MMI,RST	Input data	0.0...120.0	% Un	0.0	Read	Volatile	Residual voltage Uo
	Phase angle ï	42I3	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase angle j
	Angle ïb - ï	42I4	MMI,RST	Input data	-180...+180	°	0	Read	Volatile	Phase angle jb - j
	Input BS1	42I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	42I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input BACTRL	42I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input BACTRL
	Input TRIGG	42I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering he registers
	Input GROUP	42I9	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input BSREG	42I10	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for blocking the recording function
	Input RESET	42I11	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Resetting of trip signal and registers
	Output START	42O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	42O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output CBFP	42O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	42V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	42V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	42V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	42V204	MMI,RST	Recorded data1	0.0...2000.0	% In	0.0	Read	Retain	Io mean value
	Io peak	42V205	MMI,RST	Recorded data1	0.0...2000.0	% In	0.0	Read	Retain	Io peak value
	Voltage Uo	42V206	MMI,RST	Recorded data1	0.0...120.0	% Un	0.0	Read	Retain	Residual voltage Uo
	Angle ï	42V207	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Angle between Uo & Io
	Angle ïb - ï	42V208	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Angle between jb & j
	Intermittent E/F	42V209	MMI,RST	Recorded data1	0..1[0 = Not detected; 1 = Detected]	-	0	Read	Retain	Status of intermittent E/F
	BS1	42V210	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	42V211	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	BACTRL	42V212	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BACTRL input
	Active group	42V213	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Status of Active group
	Date	42V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	42V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	42V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	42V304	MMI,RST	Recorded data2	0.0...2000.0	% In	0.0	Read	Retain	Io mean value
	Io peak	42V305	MMI,RST	Recorded data2	0.0...2000.0	% In	0.0	Read	Retain	Io peak value

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Voltage Uo	42V306	MMI,RST	Recorded data2	0.0...120.0	% Un	0.0	Read	Retain	Residual voltage Uo
	Angle ï	42V307	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Angle between Uo & Io
	Angle ïb - ï	42V308	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Angle between jb & j
	Intermittent E/F	42V309	MMI,RST	Recorded data2	0..1[0 = Not detected; 1 = Detected]	-	0	Read	Retain	Status of intermittent E/F
	BS1	42V310	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	42V311	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	BACTRL	42V312	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BACTRL input
	Active group	42V313	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Status of Active group
	Date	42V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	42V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	42V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	42V404	MMI,RST	Recorded data3	0.0...2000.0	% In	0.0	Read	Retain	Io mean value
	Io peak	42V405	MMI,RST	Recorded data3	0.0...2000.0	% In	0.0	Read	Retain	Io peak value
	Voltage Uo	42V406	MMI,RST	Recorded data3	0.0...120.0	% Un	0.0	Read	Retain	Residual voltage Uo
	Angle ï	42V407	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Angle between Uo & Io
	Angle ïb - ï	42V408	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Angle between jb & j
	Intermittent E/F	42V409	MMI,RST	Recorded data3	0..1[0 = Not detected; 1 = Detected]	-	0	Read	Retain	Status of intermittent E/F
	BS1	42V410	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	42V411	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	BACTRL	42V412	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BACTRL input
	Active group	42V413	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Status of Active group
100044 / Rev D ROV1Low										
	Operation mode	44S1	MMI,RST	Actual setting	0..1[0 = Not in use; 1 = Definite time]	-	1	Read	Volatile	Selection of operation mode
	Start voltage	44S2	MMI,RST	Actual setting	2.0...100.0	% Un	2.0	Read	Volatile	Start voltage
	Operate time	44S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DTmode
	Operation mode	44S41	MMI,RST	Setting group1	0..1[0 = Not in use; 1 = Definite time]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start voltage	44S42	MMI,RST	Setting group1	2.0...100.0	% Un	2.0	Rd/Wr	Retain	Start voltage
	Operate time	44S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Operation mode	44S71	MMI,RST	Setting group2	0..1[0 = Not in use; 1 = Definite time]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start voltage	44S72	MMI,RST	Setting group2	2.0...100.0	% Un	2.0	Rd/Wr	Retain	Start voltage
	Operate time	44S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Measuring mode	44V1	MMI,RST	Control setting	0..1[0 = Peak-to-peak; 1 = Fundam.freq.]	-	1	Rd/Wr	Retain	Selection of measuring mode
	Group selection	44V2	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	44V3	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	44V4	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	44V5	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	44V6	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP
	Reset registers	44V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	44V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	44V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Event mask 1	44V101	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	44V103	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	44V105	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	44V107	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
	Voltage Uo	44I1	MMI,RST	Input data	0.0...120.0	% Un	0.0	Read	Volatile	Residual voltage Uo
	Input BS1	44I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	44I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	44I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	44I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Input RESET	44I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting trip signal and registers ROV1Low
	Output START	44O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	44O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Date	44V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	44V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	44V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage Uo	44V204	MMI,RST	Recorded data1	0.0...120.0	% Un	0.0	Read	Retain	Filtered value of Uo
	BS1	44V205	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	44V206	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	44V207	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	44V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	44V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	44V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage Uo	44V304	MMI,RST	Recorded data2	0.0...120.0	% Un	0.0	Read	Retain	Filtered value of Uo
	BS1	44V305	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	44V306	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	44V307	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	44V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	44V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	44V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage Uo	44V404	MMI,RST	Recorded data3	0.0...120.0	% Un	0.0	Read	Retain	Filtered value of Uo
	BS1	44V405	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	44V406	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	44V407	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
100045 / Rev D	ROV1High									
	Operation mode	45S1	MMI,RST	Actual setting	0..1[0 = Not in use; 1 = Definite time]	-	1	Read	Volatile	Selection of operation mode
	Start voltage	45S2	MMI,RST	Actual setting	2.0...100.0	% Un	2.0	Read	Volatile	Start voltage
	Operate time	45S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DT mode
	Operation mode	45S41	MMI,RST	Setting group1	0..1[0 = Not in use; 1 = Definite time]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start voltage	45S42	MMI,RST	Setting group1	2.0...100.0	% Un	2.0	Rd/Wr	Retain	Start voltage
	Operate time	45S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Operation mode	45S71	MMI,RST	Setting group2	0..1[0 = Not in use; 1 = Definite time]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start voltage	45S72	MMI,RST	Setting group2	2.0...100.0	% Un	2.0	Rd/Wr	Retain	Start voltage
	Operate time	45S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Measuring mode	45V1	MMI,RST	Control setting	0..1[0 = Peak-to-peak; 1 = Fundam.freq.]	-	1	Rd/Wr	Retain	Selection of measuring mode
	Group selection	45V2	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	45V3	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	45V4	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	45V5	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	45V6	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP
	Reset registers	45V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	45V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	45V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Event mask 1	45V101	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	45V103	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	45V105	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	45V107	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
	Voltage Uo	45I1	MMI,RST	Input data	0.0...120.0	% Un	0.0	Read	Volatile	Residual voltage Uo
	Input BS1	45I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Input BS2	45I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	45I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	45I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	45I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting trip signal and registers ROV1High
	Output START	45O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	45O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Date	45V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	45V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	45V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage Uo	45V204	MMI,RST	Recorded data1	0.0...120.0	% Un	0.0	Read	Retain	Filtered value of Uo
	BS1	45V205	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	45V206	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	45V207	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	45V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	45V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	45V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage Uo	45V304	MMI,RST	Recorded data2	0.0...120.0	% Un	0.0	Read	Retain	Filtered value of Uo
	BS1	45V305	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	45V306	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	45V307	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	45V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	45V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	45V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage Uo	45V404	MMI,RST	Recorded data3	0.0...120.0	% Un	0.0	Read	Retain	Filtered value of Uo
	BS1	45V405	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	45V406	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	45V407	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
100046 / Rev D ROV1Inst										
	Voltage Uo	46I1	MMI,RST	Input data	0.0...120.0	% Un	0.0	Read	Volatile	Residual voltage Uo
	Input BS1	46I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	46I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	46I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	46I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	46I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting trip signal and registers ROV1Inst
	Output START	46O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	46O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Date	46V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	46V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	46V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage Uo	46V204	MMI,RST	Recorded data1	0.0...120.0	% Un	0.0	Read	Retain	Filtered value of Uo
	BS1	46V205	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	46V206	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	46V207	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	46V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	46V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	46V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage Uo	46V304	MMI,RST	Recorded data2	0.0...120.0	% Un	0.0	Read	Retain	Filtered value of Uo
	BS1	46V305	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	46V306	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Active group	46V307	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	46V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	46V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	46V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage Uo	46V404	MMI,RST	Recorded data3	0.0...120.0	% Un	0.0	Read	Retain	Filtered value of Uo
	BS1	46V405	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	46V406	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	46V407	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Operation mode	46S1	MMI,RST	Actual setting	0..1[0 = Not in use; 1 = Definite time]	-	1	Read	Volatile	Selection of operation mode
	Start voltage	46S2	MMI,RST	Actual setting	2.0...100.0	% Un	2.0	Read	Volatile	Start voltage
	Operate time	46S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DT mode
	Operation mode	46S41	MMI,RST	Setting group1	0..1[0 = Not in use; 1 = Definite time]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start voltage	46S42	MMI,RST	Setting group1	2.0...100.0	% Un	2.0	Rd/Wr	Retain	Start voltage
	Operate time	46S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Operation mode	46S71	MMI,RST	Setting group2	0..1[0 = Not in use; 1 = Definite time]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start voltage	46S72	MMI,RST	Setting group2	2.0...100.0	% Un	2.0	Rd/Wr	Retain	Start voltage
	Operate time	46S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Measuring mode	46V1	MMI,RST	Control setting	0..1[0 = Peak-to-peak; 1 = Fundam.freq.]	-	1	Rd/Wr	Retain	Selection of measuring mode
	Group selection	46V2	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	46V3	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	46V4	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	46V5	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	46V6	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP
	Reset registers	46V13	RST	Control setting	0..1[0 = 0; 1= Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	46V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	46V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Event mask 1	46V101	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	46V103	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	46V105	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	46V107	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
100047 / Rev E TOL3Cab										
	Current IL1	47I1	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Phase current IL1
	Current IL2	47I2	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Phase current IL2
	Current IL3	47I3	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Phase current IL3
	IL1 (%)	47I4	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	Phase current IL1 in percents
	IL2 (%)	47I5	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	Phase current IL2 in percents
	IL3 (%)	47I6	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	Phase current IL3 in percents
	Temp SENSOR1	47I7	MMI,RST	Input data	-50.0...100.0	°C	0.0	Read	Volatile	Temperature value from sensor 1
	Temp SENSOR2	47I8	MMI,RST	Input data	-50.0...100.0	°C	0.0	Read	Volatile	Temperature value from sensor 2
	Input SENS_IV	47I9	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Signal indicating sensor fault
	Input BLOCK	47I10	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Blocking signal
	Input TRIGG	47I11	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	47I12	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	47I13	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of TOL3Cab
	Output START	47O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	47O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output CU_ALARM	47O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CURRENT_ALARM signal
	Output COND_TEMP	47O4	MMI,RST	Output data	-100.0...300.0	°C	0.0	Read	Volatile	Calculated temperature of the conductor

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Output TEMP(%)	47O5	MMI,RST	Output data	0.0...1000.0	%	0.0	Read	Volatile	Per cent value of the calculated temperature of the conductor
	Output COOL_TIME	47O6	MMI,RST	Output data	0...99999	min	0	Read	Volatile	Waiting time for the successful reclosure
	Output TRIP_TIME	47O7	MMI,RST	Output data	0...99999	min	0	Read	Volatile	Predicted time for the trip in the overload situation
	Output SENSERR	47O8	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of sensor error signal
	Date	47V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	47V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Output TRIP	47V203	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP output
	Input TRIGG	47V204	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG input
	Trip delay	47V205	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Elapsed trip delay
	Primary current	47V206	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	RMS current value (maximum of IL1,IL2 & IL3)
	Output COND_TEMP	47V207	MMI,RST	Recorded data1	-100.0...300.0	°C	0.0	Read	Retain	Calculated temperature of the conductor
	Ambient temp	47V208	MMI,RST	Recorded data1	-50.0...100.0	°C	0.0	Read	Retain	The ambient temperature used for the calculation of the thermal load
	Date	47V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	47V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Output TRIP	47V303	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP output
	Input TRIGG	47V304	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG input
	Trip delay	47V305	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Elapsed trip delay
	Primary current	47V306	MMI,RST	Recorded data2	0.0...20000.0	A	0.0	Read	Retain	RMS current value (maximum of IL1,IL2 & IL3)
	Output COND_TEMP	47V307	MMI,RST	Recorded data2	-100.0...300.0	°C	0.0	Read	Retain	Calculated temperature of the conductor
	Ambient temp	47V308	MMI,RST	Recorded data2	-50.0...100.0	°C	0.0	Read	Retain	The ambient temperature used for the calculation of the thermal load
	Date	47V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	47V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Output TRIP	47V403	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP output
	Input TRIGG	47V404	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG input
	Trip delay	47V405	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Elapsed trip delay
	Primary current	47V406	MMI,RST	Recorded data3	0.0...20000.0	A	0.0	Read	Retain	RMS current value (maximum of IL1,IL2 & IL3)
	Output COND_TEMP	47V407	MMI,RST	Recorded data3	-100.0...300.0	°C	0.0	Read	Retain	Calculated temperature of the conductor
	Ambient temp	47V408	MMI,RST	Recorded data3	-50.0...100.0	°C	0.0	Read	Retain	The ambient temperature used for the calculation of the thermal load
	Time constant	47S1	MMI,RST	Actual setting	1...999	min	45	Read	Volatile	Heating / cooling time constant for the cable
	Rated current	47S2	MMI,RST	Actual setting	1.0...5000.0	A	300.0	Read	Volatile	Maximum load current for the protected cable
	Maximum temp	47S3	MMI,RST	Actual setting	40.0...150.0	°C	90.0	Read	Volatile	Maximum temperature permitted for the conductor
	Reference temp	47S4	MMI,RST	Actual setting	-50.0...100.0	°C	20.0	Read	Volatile	Ambient temperature for the determination of the maximum load current
	Trip temperature	47S5	MMI,RST	Actual setting	80.0...120.0	%	100.0	Read	Volatile	Tripping temperature Qtrip, per cent value from the Maximum temp
	Prior alarm	47S6	MMI,RST	Actual setting	40.0...100.0	%	90.0	Read	Volatile	Prior alarm temperature, per cent value
	Reclosure temp	47S7	MMI,RST	Actual setting	40.0...100.0	%	80.0	Read	Volatile	Temperature value which enables reclosing
	Ambient temp	47S8	MMI,RST	Actual setting	-50.0...100.0	°C	40.0	Read	Volatile	Setting value for ambient temperature
	Time constant	47S41	MMI,RST	Setting group1	1...999	min	45	Rd/Wr	Retain	Heating / cooling time constant for the cable
	Rated current	47S42	MMI,RST	Setting group1	1.0...5000.0	A	300.0	Rd/Wr	Retain	Maximum load current for the protected cable
	Maximum temp	47S43	MMI,RST	Setting group1	40.0...150.0	°C	90.0	Rd/Wr	Retain	Maximum temperature permitted for the conductor
	Reference temp	47S44	MMI,RST	Setting group1	-50.0...100.0	°C	20.0	Rd/Wr	Retain	Ambient temperature for the determination of the maximum load current
	Trip temperature	47S45	MMI,RST	Setting group1	80.0...120.0	%	100.0	Rd/Wr	Retain	Tripping temperature Qtrip, per cent value
	Prior alarm	47S46	MMI,RST	Setting group1	40.0...100.0	%	90.0	Rd/Wr	Retain	Prior alarm temperature, per cent value

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Reclosure temp	47S47	MMI,RST	Setting group1	40.0...100.0	%	80.0	Rd/Wr	Retain	Temperature value which enables reclosing
	Ambient temp	47S48	MMI,RST	Setting group1	-50.0...100.0	°C	40.0	Rd/Wr	Retain	Setting value for ambient temperature
	Time constant	47S71	MMI,RST	Setting group2	1...999	min	45	Rd/Wr	Retain	Heating / cooling time constant for the cable
	Rated current	47S72	MMI,RST	Setting group2	1.0...5000.0	A	300.0	Rd/Wr	Retain	Maximum load current for the protected cable
	Maximum temp	47S73	MMI,RST	Setting group2	40.0...150.0	°C	90.0	Rd/Wr	Retain	Maximum temperature permitted for the conductor
	Reference temp	47S74	MMI,RST	Setting group2	-50.0...100.0	°C	20.0	Rd/Wr	Retain	Ambient temperature for the determination of the maximum load current
	Trip temperature	47S75	MMI,RST	Setting group2	80.0...120.0	%	100.0	Rd/Wr	Retain	Tripping temperature Qtrip, per cent value.
	Prior alarm	47S76	MMI,RST	Setting group2	40.0...100.0	%	90.0	Rd/Wr	Retain	Prior alarm temperature, per cent value
	Reclosure temp	47S77	MMI,RST	Setting group2	40.0...100.0	%	80.0	Rd/Wr	Retain	Temperature value which enables reclosing
	Ambient temp	47S78	MMI,RST	Setting group2	-50.0...100.0	°C	40.0	Rd/Wr	Retain	Setting value for ambient temperature
	Operation mode	47V1	MMI,RST	Control setting	0..3[0 = Not in use; 1 = ON: no sensors; 2 = Sensor 1; 3 = Sensors 1&2]	-	1	Rd/Wr	Retain	Selection of operate mode
	Ambient temp	47V2	MMI,RST	Control setting	-50.0...100.0	°C	0.0	Read	Volatile	Ambient temperature value
	Group selection	47V3	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	47V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Trip signal	47V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	47V7	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	Trip delay	47V8	MMI,RST	Control setting	0...60000	min	0	Rd/Wr	Retain	Operate time of the delayed trip
	CBFP time	47V9	MMI,RST	Control setting	0.00...100.00	s	0.00	Rd/Wr	Retain	Operate time of the Circuit Breaker Failure Protection CBFP
	Trip & Start	47V10	MMI,RST	Control setting	0..1[0 = Disabled; 1 = Enabled]	-	1	Rd/Wr	Retain	Tells if the start and trip are enabled or not
	Reset registers	47V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal, sensor error signal and registers
	Test START	47V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	47V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	47V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	47V101	MMI,RST	Control setting	0...131071	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E16)
	Event mask 2	47V103	MMI,RST	Control setting	0...131071	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E16)
	Event mask 3	47V105	MMI,RST	Control setting	0...131071	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E16)
	Event mask 4	47V107	MMI,RST	Control setting	0...131071	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E16)
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	S: ç1	48S1	MMI,RST	Actual setting	0.1...999.0	min	14.0	Read	Volatile	Short timeconstant for the stator
	S: ç2	48S2	MMI,RST	Actual setting	0.1...999.0	min	69.0	Read	Volatile	Long timeconstant for the stator
	S: p-factor	48S3	MMI,RST	Actual setting	0.00...1.00	-	0.50	Read	Volatile	Weighting factor of the S:ð1
	S: Rise(øC),I=In	48S4	MMI,RST	Actual setting	50.0...350.0	°C	90.0	Read	Volatile	Temperature rise of the stator when loaded by the rated current
	S: Maximum temp	48S5	MMI,RST	Actual setting	50.0...350.0	°C	155.0	Read	Volatile	Maximum temperature allowed for the stator
	R: ç1	48S6	MMI,RST	Actual setting	0.1...999.0	min	4.0	Read	Volatile	Short timeconstant for the rotor
	R: ç2	48S7	MMI,RST	Actual setting	0.1...999.0	min	69.0	Read	Volatile	Long timeconstant for the rotor
	R: p-factor	48S8	MMI,RST	Actual setting	0.00...1.00	-	0.25	Read	Volatile	Weighting factor of the R:ð1
	R: Rise(øC),I=In	48S9	MMI,RST	Actual setting	50.0...350.0	°C	100.0	Read	Volatile	Temperature rise of the rotor when loaded by the rated current
	R: Maximum temp	48S10	MMI,RST	Actual setting	50.0...350.0	°C	200.0	Read	Volatile	Maximum temperature allowed for the rotor
	Starting current	48S41	MMI,RST	Basic setting	0.10...10.00	x In	6.00	Rd/Wr	Retain	Starting current of the motor setted as a multiple of the rated current
	Starting time	48S42	MMI,RST	Basic setting	0.1...120.0	s	12.0	Rd/Wr	Retain	Maximum starting time permitted for the motor
	No of starts	48S43	MMI,RST	Basic setting	1...3	-	2	Rd/Wr	Retain	Number of the allowed starts from the cold state

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Device type	48S44	MMI,RST	Basic setting	0..6[0 = MOTOR I; 1 = MOTOR II; 2 = MOTOR III; 3 = MOTOR IV; 4 = GENERATOR I; 5 = GENERATOR II; 6 = TRANSFORMER]	-	0	Rd/Wr	Retain	Type of the device to be protected
	Trip temperature	48S45	MMI,RST	Basic setting	80.0...120.0	%	100.0	Rd/Wr	Retain	Tripping temperature, per cent value
	Prior alarm	48S46	MMI,RST	Basic setting	40.0...100.0	%	90.0	Rd/Wr	Retain	Prior alarm temperature, per cent value
	Restart inhibit	48S47	MMI,RST	Basic setting	40.0...100.0	%	60.0	Rd/Wr	Retain	Temperature limit for the successful restarting
	Ambient temp	48S48	MMI,RST	Basic setting	-50.0...100.0	°C	40.0	Rd/Wr	Retain	Setting value for ambient temperature
	Cooling ç	48S49	MMI,RST	Basic setting	1.0...10.0	x ð	4.0	Rd/Wr	Retain	Cooling timeconstant
	Gen&Trafo ç	48S50	MMI,RST	Basic setting	1...999	min	20	Rd/Wr	Retain	Heating timeconstant for generator or transformer
	S: ç1	48V71	MMI,RST	Advanced sett.	0.0...999.0	min	0.0	Rd/Wr	Retain	Short timeconstant for the stator
	S: ç2	48V72	MMI,RST	Advanced sett.	0.0...999.0	min	0.0	Rd/Wr	Retain	Long timeconstant for the stator
	S: p-factor	48V73	MMI,RST	Advanced sett.	0.00...1.00	-	0.00	Rd/Wr	Retain	Weighting factor of the S:ð1
	S: Rise(øC),I=In	48V74	MMI,RST	Advanced sett.	0.0...350.0	°C	0.0	Rd/Wr	Retain	Temperature rise of the stator when loaded by the rated current
	S: Maximum temp	48V75	MMI,RST	Advanced sett.	0.0...350.0	°C	0.0	Rd/Wr	Retain	Maximum temperature allowed for the stator
	R: ç1	48V76	MMI,RST	Advanced sett.	0.0...999.0	min	0.0	Rd/Wr	Retain	Short timeconstant for the rotor
	R: ç2	48V77	MMI,RST	Advanced sett.	0.0...999.0	min	0.0	Rd/Wr	Retain	Long timeconstant for the rotor
	R: p-factor	48V78	MMI,RST	Advanced sett.	0.00...1.00	-	0.00	Rd/Wr	Retain	Weighting factor of the R:ð1
	R: Rise(øC),I=In	48V79	MMI,RST	Advanced sett.	0.0...350.0	°C	0.0	Rd/Wr	Retain	Temperature rise of the rotor when loaded by the rated current
	R: Maximum temp	48V80	MMI,RST	Advanced sett.	0.0...350.0	°C	0.0	Rd/Wr	Retain	Maximum temperature allowed for the rotor
	Operation mode	48V1	MMI,RST	Control setting	0..3[0 = Not in use; 1 = ON: no sensors; 2 = ON: Sensor 1; 3 = ON: Sensors 1&2]	-	1	Rd/Wr	Retain	Selection of operate mode
	Ambient temp	48V2	MMI,RST	Control setting	-50.0...100.0	°C	0.0	Read	Volatile	Ambient temperature value
	Trip signal	48V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	1	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	48V7	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	Trip delay	48V8	MMI,RST	Control setting	0...60000	min	0	Rd/Wr	Retain	Operate time of the delayed trip
	CBFP time	48V9	MMI,RST	Control setting	0.00...100.00	s	0.00	Rd/Wr	Retain	Operate time of the Circuit Breaker Failure Protection CBFP
	Trip & Start	48V10	MMI,RST	Control setting	0..1[0 = Disabled; 1 = Enabled]	-	1	Rd/Wr	Retain	Tells if the start and the trip are enabled or not
	Reset registers	48V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	48V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	48V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	48V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	48V101	MMI,RST	Control setting	0...8388607	-	4177983	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E22)
	Event mask 2	48V103	MMI,RST	Control setting	0...8388607	-	4177983	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E22)
	Event mask 3	48V105	MMI,RST	Control setting	0...8388607	-	4177983	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E22)
	Event mask 4	48V107	MMI,RST	Control setting	0...8388607	-	4177983	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E22)
	Current IL1	48I1	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Phase current IL1
	Current IL2	48I2	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Phase current IL2
	Current IL3	48I3	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Phase current IL3
	IL1 (%)	48I4	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	Phase current IL1 in percents
	IL2 (%)	48I5	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	Phase current IL2 in percents
	IL3 (%)	48I6	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	Phase current IL3 in percents
	Temp SENSOR1	48I7	MMI,RST	Input data	-50.0...100.0	°C	0.0	Read	Volatile	Temperature value from sensor 1
	Temp SENSOR2	48I8	MMI,RST	Input data	-50.0...100.0	°C	0.0	Read	Volatile	Temperature value from sensor 2
	Input SENS_IV	48I9	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Signal indicating sensor fault
	Input BLOCK	48I10	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Blocking signal
	Input TRIGG	48I11	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Input RESET	48I12	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of TOL3Dev
	Output START	48O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal (prior alarm)
	Output TRIP	48O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output TEMP(%)	48O3	MMI,RST	Output data	0000.0...1000.0	%	0000.0	Read	Volatile	Calculated temperature of the device, maximum from the stator and the rotor
	Output ROTOR(%)	48O4	MMI,RST	Output data	0000.0...1000.0	%	0000.0	Read	Volatile	Temperature of the rotor, per cent value from the maximum temp of the rotor
	Output STATOR(%)	48O5	MMI,RST	Output data	0000.0...1000.0	%	0000.0	Read	Volatile	Temperature of the stator, per cent value from the maximum temp of the stator
	Output COOL_TIME	48O6	MMI,RST	Output data	0...99999	s	0	Read	Volatile	Waiting time for the successful restart
	Output TRIP_TIME	48O7	MMI,RST	Output data	0...99999	s	0	Read	Volatile	Predicted time to the trip
	Output RESTART	48O8	MMI,RST	Output data	0..1[0 = Disabled; 1 = Enabled]	-	0	Read	Volatile	Restart enable signal
	Output SENSERR	48O9	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of sensor error signal
	Date	48V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	48V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Output TRIP	48V203	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP output
	Input TRIGG	48V204	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG input
	Trip delay	48V205	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Elapsed Trip delay in per cents
	Primary current	48V206	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	RMS current value (maximum of IL1,IL2 & IL3)
	Output ROTOR(%)	48V207	MMI,RST	Recorded data1	0.0...1000.0	%	0.0	Read	Retain	Temperature of the rotor, per cent value from the maximum temp of the rotor
	Output STATOR(%)	48V208	MMI,RST	Recorded data1	0.0...1000.0	%	0.0	Read	Retain	Temperature of the stator, per cent value from the maximum temp of the stator
	Ambient temp	48V209	MMI,RST	Recorded data1	-50.0...100.0	°C	0.0	Read	Retain	The ambient temperature used for the calculation of the thermal load
	Date	48V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	48V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Output TRIP	48V303	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP output
	Input TRIGG	48V304	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG input
	Trip delay	48V305	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Elapsed Trip delay in per cents
	Primary current	48V306	MMI,RST	Recorded data2	0.0...20000.0	A	0.0	Read	Retain	RMS current value (maximum of IL1,IL2 & IL3)
	Output ROTOR(%)	48V307	MMI,RST	Recorded data2	0.0...1000.0	%	0.0	Read	Retain	Temperature of the rotor, per cent value from the maximum temp of the rotor
	Output STATOR(%)	48V308	MMI,RST	Recorded data2	0.0...1000.0	%	0.0	Read	Retain	Temperature of the stator, per cent value from the maximum temp of the stator
	Ambient temp	48V309	MMI,RST	Recorded data2	-50.0...100.0	°C	0.0	Read	Retain	The ambient temperature used for the calculation of the thermal load
	Date	48V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	48V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Output TRIP	48V403	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP output
	Input TRIGG	48V404	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG input
	Trip delay	48V405	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Elapsed Trip delay in per cents
	Primary current	48V406	MMI,RST	Recorded data3	0.0...20000.0	A	0.0	Read	Retain	RMS current value (maximum of IL1,IL2 & IL3)
	Output ROTOR(%)	48V407	MMI,RST	Recorded data3	0.0...1000.0	%	0.0	Read	Retain	Temperature of the rotor, per cent value from the maximum temp of the rotor
	Output STATOR(%)	48V408	MMI,RST	Recorded data3	0.0...1000.0	%	0.0	Read	Retain	Temperature of the stator, per cent value from the maximum temp of the stator

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Ambient temp	48V409	MMI,RST	Recorded data3	-50.0...100.0	°C	0.0	Read	Retain	The ambient temperature used for the calculation of the thermal load
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	Operation mode	51S1	MMI,RST	Actual setting	0..1[0 = Not in use; 1 = Definite time]	-	1	Read	Volatile	Selection of operation mode
	Start unbalance	51S2	MMI,RST	Actual setting	10.0...95.0	%	60.0	Read	Volatile	Start unbalance
	Operate time	51S3	MMI,RST	Actual setting	1.0...300.0	s	1.0	Read	Volatile	Operate time at DT mode
	Operation mode	51S41	MMI,RST	Setting group1	0..1[0 = Not in use; 1 = Definite time]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start unbalance	51S42	MMI,RST	Setting group1	10.0...95.0	%	60.0	Rd/Wr	Retain	Start unbalance
	Operate time	51S43	MMI,RST	Setting group1	1.0...300.0	s	1.0	Rd/Wr	Retain	Operate time at DT mode
	Operation mode	51S71	MMI,RST	Setting group2	0..1[0 = Not in use; 1 = Definite time]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start unbalance	51S72	MMI,RST	Setting group2	10.0...95.0	%	60.0	Rd/Wr	Retain	Start unbalance
	Operate time	51S73	MMI,RST	Setting group2	1.0...300.0	s	1.0	Rd/Wr	Retain	Operate time at DT mode
	CBFP time	51V1	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of the delayed trip CBFP
	Group selection	51V2	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	51V3	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	51V4	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	51V5	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	51V6	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	Reset registers	51V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	51V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	51V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	51V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	51V101	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	51V103	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	51V105	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	51V107	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
	Current IL1	51I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL1
	Current IL2	51I2	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL2
	Current IL3	51I3	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL3
	Curr. unbalance	51I4	MMI,RST	Input data	0.0...100.0	%	0.0	Read	Volatile	Current unbalance
	Input BS1	51I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	51I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	51I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	51I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	51I9	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of CUB3Low
	Output START	51O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	51O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output CBFP	51O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	51V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	51V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	51V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Current IL1	51V204	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	Current IL2	51V205	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	Current IL3	51V206	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	Curr. unbalance	51V207	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Current unbalance
	BS1	51V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	51V209	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	51V210	MMI,RST	Recorded data1	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Date	51V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	51V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	51V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Current IL1	51V304	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	Current IL2	51V305	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	Current IL3	51V306	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	Curr. unbalance	51V307	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Current unbalance
	BS1	51V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	51V309	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	51V310	MMI,RST	Recorded data2	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	51V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	51V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	51V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Current IL1	51V404	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL1
	Current IL2	51V405	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL2
	Current IL3	51V406	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of IL3
	Curr. unbalance	51V407	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Current unbalance
	BS1	51V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	51V409	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	51V410	MMI,RST	Recorded data3	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
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	Current IL1	52I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL1
	Current dI1	52I2	MMI,RST	Input data	0.0...2000.0	%dIn	0.0	Read	Volatile	Unbalance current dI1
	Phase angle ïdI1	52I3	MMI,RST	Input data	-180...+180	°	0.0	Read	Volatile	Phase angle of unbalance current dI1
	Current dI2	52I4	MMI,RST	Input data	0.0...2000.0	%dIn	0.0	Read	Volatile	Unbalance current dI2
	Phase angle ïdI2	52I5	MMI,RST	Input data	-180...+180	°	0.0	Read	Volatile	Phase angle of unbalance current dI2
	Current dI3	52I6	MMI,RST	Input data	0.0...2000.0	%dIn	0.0	Read	Volatile	Unbalance current dI3
	Phase angle ïdI3	52I7	MMI,RST	Input data	-180...+180	°	0.0	Read	Volatile	Phase angle of unbalance current dI3
	Input BS1	52I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Blocking signal 1
	Input BS2	52I9	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Blocking signal 2
	Input TRIGG	52I10	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	52I11	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between the groups 1 and 2
	Input RESET	52I12	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read		Signal for resetting the output signals and registers of CUB3Cap
	Output START	52O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of START signal
	Output TRIP	52O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of TRIP signal
	Output CBFP	52O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Output ST_ALARM	52O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of ST_ALARM signal
	Output ALARM	52O5	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of ALARM signal
	Date	52V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	52V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration St1	52V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the tripping stage St1
	Duration St2	52V204	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the alarm stage St2
	Current IL1	52V205	MMI,RST	Recorded data1	0.0...60.0	x In	0.00	Read	Retain	Phase current IL1, Filtered value
	Current dI1	52V206	MMI,RST	Recorded data1	0.0...2000.0	%dIn	0.0	Read	Retain	Unbalance current dI1, compensated value
	Phase angle ïdI1	52V207	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase angle of unbalance current dI1
	Current dI2	52V208	MMI,RST	Recorded data1	0.0...2000.0	%dIn	0.0	Read	Retain	Unbalance current dI2, compensated value
	Phase angle ïdI2	52V209	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase angle of unbalance current dI2
	Current dI3	52V210	MMI,RST	Recorded data1	0.0...2000.0	%dIn	0.0	Read	Retain	Unbalance current dI3, compensated value

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Phase angle ïdI3	52V211	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase angle of unbalance current dI3
	BS1	52V212	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 signal
	BS2	52V213	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 signal
	Active group	52V214	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	52V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	52V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration St1	52V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the tripping stage St1
	Duration St2	52V304	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the alarm stage St2
	Current IL1	52V305	MMI,RST	Recorded data2	0.0...60.0	x In	0.00	Read	Retain	Phase current IL1, Filtered value
	Current dI1	52V306	MMI,RST	Recorded data2	0.0...2000.0	%dIn	0.0	Read	Retain	Unbalance current dI1, compensated value
	Phase angle ïdI1	52V307	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase angle of unbalance current dI1
	Current dI2	52V308	MMI,RST	Recorded data2	0.0...2000.0	%dIn	0.0	Read	Retain	Unbalance current dI2, compensated value
	Phase angle ïdI2	52V309	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase angle of unbalance current dI2
	Current dI3	52V310	MMI,RST	Recorded data2	0.0...2000.0	%dIn	0.0	Read	Retain	Unbalance current dI3, compensated value
	Phase angle ïdI3	52V311	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase angle of unbalance current dI3
	BS1	52V312	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 signal
	BS2	52V313	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 signal
	Active group	52V314	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	52V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	52V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration St1	52V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the tripping stage St1
	Duration St2	52V404	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the alarm stage St2
	Current IL1	52V405	MMI,RST	Recorded data3	0.0...60.0	x In	0.00	Read	Retain	Phase current IL1, Filtered value
	Current dI1	52V406	MMI,RST	Recorded data3	0.0...2000.0	%dIn	0.0	Read	Retain	Unbalance current dI1, compensated value
	Phase angle ïdI1	52V407	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase angle of unbalance current dI1
	Current dI2	52V408	MMI,RST	Recorded data3	0.0...2000.0	%dIn	0.0	Read	Retain	Unbalance current dI2, compensated value
	Phase angle ïdI2	52V409	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase angle of unbalance current dI2
	Current dI3	52V410	MMI,RST	Recorded data3	0.0...2000.0	%dIn	0.0	Read	Retain	Unbalance current dI3, compensated value
	Phase angle ïdI3	52V411	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase angle of unbalance current dI3
	BS1	52V412	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 signal
	BS2	52V413	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 signal
	Active group	52V414	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Rec real dI1	52V501	Internal	Recorded data3	-	-	0.0	Read	Retain	Recorded real part of the phasor the natural unbalance current dI1
	Rec imag dI1	52V502	Internal	Recorded data3	-	-	0.0	Read	Retain	Recorded imaginary part of the phasor the natural unbalance current dI1
	Rec real dI2	52V503	Internal	Recorded data3	-	-	0.0	Read	Retain	Recorded real part of the phasor the natural unbalance current dI2
	Rec imag dI2	52V504	Internal	Recorded data3	-	-	0.0	Read	Retain	Recorded imaginary part of the phasor the natural unbalance current dI2
	Rec real dI3	52V505	Internal	Recorded data3	-	-	0.0	Read	Retain	Recorded real part of the phasor the natural unbalance current dI3
	Rec imag dI3	52V506	Internal	Recorded data3	-	-	0.0	Read	Retain	Recorded imaginary part of the phasor the natural unbalance current dI3
	Operation mode	52S1	MMI,RST	Actual setting	0..7[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse]	-	4	Read	Volatile	Selection of operation mode
	Start St1	52S2	MMI,RST	Actual setting	1.0...100.0	%dIn	10.0	Read	Volatile	Start current of the tripping stage
	Operate time St1	52S3	MMI,RST	Actual setting	0.1...300.0	s	5.0	Read	Volatile	Operate time of the tripping stage in DT mode

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Time multiplier	52S4	MMI,RST	Actual setting	0.05...2.00	-	1.00	Read	Volatile	Time multiplier k for the tripping stage in IDMT mode
	Start St2	52S5	MMI,RST	Actual setting	1.0...100.0	%dIn	5.0	Read	Volatile	Start current of the alarm stage
	Operate time St2	52S6	MMI,RST	Actual setting	0.1...300.0	s	300.0	Read	Volatile	Operate time of the alarm stage
	Operation mode	52S41	MMI,RST	Setting group1	0..7[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse]	-	4	Rd/Wr	Retain	Selection of operation mode
	Start St1	52S42	MMI,RST	Setting group1	1.0...100.0	%dIn	10.0	Rd/Wr	Retain	Start current of the tripping stage
	Operate time St1	52S43	MMI,RST	Setting group1	0.1...300.0	s	5.0	Rd/Wr	Retain	Operate time of the tripping stage in DT mode
	Time multiplier	52S44	MMI,RST	Setting group1	0.05...2.00	-	1.00	Rd/Wr	Retain	Time multiplier k for the tripping stage in IDMT mode
	Start St2	52S45	MMI,RST	Setting group1	1.0...100.0	%dIn	5.0	Rd/Wr	Retain	Start current of the alarm stage
	Operate time St2	52S46	MMI,RST	Setting group1	0.1...300.0	s	300.0	Rd/Wr	Retain	Operate time of the alarm stage
	Operation mode	52S71	MMI,RST	Setting group2	0..7[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse]	-	4	Rd/Wr	Retain	Selection of operation mode
	Start St1	52S72	MMI,RST	Setting group2	1.0...100.0	%dIn	10.0	Rd/Wr	Retain	Start current of the tripping stage
	Operate time St1	52S73	MMI,RST	Setting group2	0.1...300.0	s	5.0	Rd/Wr	Retain	Operate time of the tripping stage in DT mode
	Time multiplier	52S74	MMI,RST	Setting group2	0.05...2.00	-	1.00	Rd/Wr	Retain	Time multiplier k for the tripping stage in IDMT mode
	Start St2	52S75	MMI,RST	Setting group2	1.0...100.0	%dIn	5.0	Rd/Wr	Retain	Start current of the alarm stage
	Operate time St2	52S76	MMI,RST	Setting group2	0.1...300.0	s	300.0	Rd/Wr	Retain	Operate time of the alarm stage
	Group selection	52V1	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	52V2	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	52V3	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse width of START and ST_ALARM signals
	Trip signal	52V4	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of latching feature for TRIP and ALARM
	Trip pulse	52V5	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse width of TRIP, ALARM and CBFP
	CBFP time	52V6	MMI,RST	Control setting	100...1000	ms	200	Rd/Wr	Retain	Operate time of the delayed trip CBFP
	Comp natural dI1	52V7	MMI,RST	Control setting	0.0...20.0	%dIn	0.0	Rd/Wr	Retain	Level of natural unbalance compensation dI1
	Comp natural dI2	52V8	MMI,RST	Control setting	0.0...20.0	%dIn	0.0	Rd/Wr	Retain	Level of natural unbalance compensation dI2
	Comp natural dI3	52V9	MMI,RST	Control setting	0.0...20.0	%dIn	0.0	Rd/Wr	Retain	Level of natural unbalance compensation dI3
	Rec natural dI	52V10	MMI,RST	Control setting	0..4[0 = Do not activate; 1 = Rec all phasors; 2 = Rec phasor dI1; 3 = Rec phasor dI2; 4 = Rec phasor dI3]	-	0	Rd/Wr	Volatile	Recording of the natural unbalance phasor(s)
	Reset registers	52V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signals and registers
	Test START	52V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	52V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	52V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Test ST_ALARM	52V34	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of ST_ALARM
	Test ALARM	52V35	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of ALARM
	Event mask 1	52V101	MMI,RST	Control setting	0...65535	-	831	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E15)
	Event mask 2	52V103	MMI,RST	Control setting	0...65535	-	831	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E15)
	Event mask 3	52V105	MMI,RST	Control setting	0...65535	-	831	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E15)
	Event mask 4	52V107	MMI,RST	Control setting	0...65535	-	831	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E15)
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	Current IL1	54I1	MMI,RST	Input data	0.0...60.0	x In	0.0	Read	Volatile	Phase current IL1
	Current IL2	54I2	MMI,RST	Input data	0.0...60.0	x In	0.0	Read	Volatile	Phase current IL2
	Current IL3	54I3	MMI,RST	Input data	0.0...60.0	x In	0.0	Read	Volatile	Phase current IL3
	Input GROUP	54I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input STALL	54I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for motor stalling indication
	Input RESET	54I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of MotStart
	Output START	54O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	54O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Output STALL	54O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of stall signal
	Output RESTART	54O4	MMI,RST	Output data	0..1[0 = Disabled; 1 = Enabled]	-	0	Read	Volatile	Restart enable signal
	Date	54V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	54V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start time	54V203	MMI,RST	Recorded data1	0.0...300.0	s	0.0	Read	Retain	Duration of start-up situation in seconds
	Duration(IIT)	54V204	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start-up situation (IIT)
	Duration(STALL)	54V205	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start-up situation (STALL)
	Average IL1	54V206	MMI,RST	Recorded data1	0.0...60.0	x In	0.0	Read	Retain	Filtered value of IL1
	Average IL2	54V207	MMI,RST	Recorded data1	0.0...60.0	x In	0.0	Read	Retain	Filtered value of IL2
	Average IL3	54V208	MMI,RST	Recorded data1	0.0...60.0	x In	0.0	Read	Retain	Filtered value of IL3
	Active group	54V209	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	54V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	54V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start time	54V303	MMI,RST	Recorded data2	0.0...300.0	s	0.0	Read	Retain	Duration of start-up situation in seconds
	Duration(IIT)	54V304	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start-up situation (IIT)
	Duration(STALL)	54V305	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start-up situation (STALL)
	Average IL1	54V306	MMI,RST	Recorded data2	0.0...60.0	x In	0.0	Read	Retain	Filtered value of IL1
	Average IL2	54V307	MMI,RST	Recorded data2	0.0...60.0	x In	0.0	Read	Retain	Filtered value of IL2
	Average IL3	54V308	MMI,RST	Recorded data2	0.0...60.0	x In	0.0	Read	Retain	Filtered value of IL3
	Active group	54V309	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	54V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	54V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start time	54V403	MMI,RST	Recorded data3	0.0...300.0	s	0.0	Read	Retain	Duration of start-up situation in seconds
	Duration(IIT)	54V404	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start-up situation (IIT)
	Duration(STALL)	54V405	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start-up situation (STALL)
	Average IL1	54V406	MMI,RST	Recorded data3	0.0...60.0	x In	0.0	Read	Retain	Filtered value of IL1
	Average IL2	54V407	MMI,RST	Recorded data3	0.0...60.0	x In	0.0	Read	Retain	Filtered value of IL2
	Average IL3	54V408	MMI,RST	Recorded data3	0.0...60.0	x In	0.0	Read	Retain	Filtered value of IL3
	Active group	54V409	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Operation mode	54S1	MMI,RST	Actual setting	0..2[0 = Not in use; 1 = IIt; 2 = IIt & Stall]	-	1	Read	Volatile	Selection of operation mode
	Start current	54S2	MMI,RST	Actual setting	1.0...10.0	x In	2.0	Read	Volatile	Starting current for motor
	Start time	54S3	MMI,RST	Actual setting	0.3...250.0	s	5.0	Read	Volatile	Starting time for motor
	Time limit	54S4	MMI,RST	Actual setting	1.0...500.0	s	10.0	Read	Volatile	Time-based restart inhibit limit
	Countdown rate	54S5	MMI,RST	Actual setting	2.0...250.0	s/h	60.0	Read	Volatile	Countdown rate for the time counter
	Stall time	54S6	MMI,RST	Actual setting	2.0...120.0	s	10.0	Read	Volatile	Permitted stalling time for rotor
	Operation mode	54S41	MMI,RST	Setting group1	0..2[0 = Not in use; 1 = IIt; 2 = IIt & Stall]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	54S42	MMI,RST	Setting group1	1.0...10.0	x In	2.0	Rd/Wr	Retain	Starting current for motor
	Start time	54S43	MMI,RST	Setting group1	0.3...250.0	s	5.0	Rd/Wr	Retain	Starting time for motor
	Time limit	54S44	MMI,RST	Setting group1	1.0...500.0	s	10.0	Rd/Wr	Retain	Time-based restart inhibit limit
	Countdown rate	54S45	MMI,RST	Setting group1	2.0...250.0	s/h	60.0	Rd/Wr	Retain	Countdown rate for the time counter
	Stall time	54S46	MMI,RST	Setting group1	2.0...120.0	s	10.0	Rd/Wr	Retain	Permitted stall time for rotor
	Operation mode	54S71	MMI,RST	Setting group2	0..2[0 = Not in use; 1 = IIt; 2 = IIt & Stall]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	54S72	MMI,RST	Setting group2	1.0...10.0	x In	2.0	Rd/Wr	Retain	Starting current for motor
	Start time	54S73	MMI,RST	Setting group2	0.3...250.0	s	5.0	Rd/Wr	Retain	Starting time for motor
	Time limit	54S74	MMI,RST	Setting group2	1.0...500.0	s	10.0	Rd/Wr	Retain	Time-based restart inhibit limit
	Countdown rate	54S75	MMI,RST	Setting group2	2.0...250.0	s/h	60.0	Rd/Wr	Retain	Countdown rate for the time counter
	Stall time	54S76	MMI,RST	Setting group2	2.0...120.0	s	10.0	Rd/Wr	Retain	Permitted stall time for rotor
	Group selection	54V1	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	54V2	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Start pulse	54V3	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	54V4	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP and STALL output
	Trip pulse	54V5	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and STALL
	Start counter	54V6	MMI,RST	Control setting	0...99999	-	0	Read	Volatile	Start counter
	Time to restart	54V7	MMI,RST	Control setting	0...99999	min	0	Read	Volatile	Time to restart enable
	Reset registers	54V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	54V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	54V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test STALL	54V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of STALL
	Event mask 1	54V101	MMI,RST	Control setting	0...255	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E7)
	Event mask 2	54V103	MMI,RST	Control setting	0...255	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E7)
	Event mask 3	54V105	MMI,RST	Control setting	0...255	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E7)
	Event mask 4	54V107	MMI,RST	Control setting	0...255	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E7)
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	R1A	58S1	MMI,RST	Actual setting	0.000...999.999	ohm/pu	1.000	Read	Volatile	Positive sequence line resistance, line section A
	X1A	58S2	MMI,RST	Actual setting	0.000...999.999	ohm/pu	1.000	Read	Volatile	Positive sequence line reactance, line section A
	R0A	58S3	MMI,RST	Actual setting	0.000...999.999	ohm/pu	4.000	Read	Volatile	Zero sequence line resistance, line section A
	X0A	58S4	MMI,RST	Actual setting	0.000...999.999	ohm/pu	4.000	Read	Volatile	Zero sequence line reactance, line section A
	Length A	58S5	MMI,RST	Actual setting	0.000...999.999	pu	1.000	Read	Volatile	Line length, section A
	R1B	58S6	MMI,RST	Actual setting	0.000...999.999	ohm/pu	1.000	Read	Volatile	Positive sequence line resistance, line section B
	X1B	58S7	MMI,RST	Actual setting	0.000...999.999	ohm/pu	1.000	Read	Volatile	Positive sequence line reactance, line section B
	R0B	58S8	MMI,RST	Actual setting	0.000...999.999	ohm/pu	4.000	Read	Volatile	Zero sequence line resistance, line section B
	X0B	58S9	MMI,RST	Actual setting	0.000...999.999	ohm/pu	4.000	Read	Volatile	Zero sequence line reactance, line section B
	Length B	58S10	MMI,RST	Actual setting	0.000...999.999	pu	1.000	Read	Volatile	Line length, section B
	R1C	58S11	MMI,RST	Actual setting	0.000...999.999	ohm/pu	1.000	Read	Volatile	Positive sequence line resistance, line section C
	X1C	58S12	MMI,RST	Actual setting	0.000...999.999	ohm/pu	1.000	Read	Volatile	Positive sequence line reactance, line section C
	R0C	58S13	MMI,RST	Actual setting	0.000...999.999	ohm/pu	4.000	Read	Volatile	Zero sequence line resistance, line section C
	X0C	58S14	MMI,RST	Actual setting	0.000...999.999	ohm/pu	4.000	Read	Volatile	Zero sequence line reactance, line section C
	Length C	58S15	MMI,RST	Actual setting	0.000...999.999	pu	1.000	Read	Volatile	Line length, section C
	RL0F	58S16	MMI,RST	Actual setting	1.0...9999999.9	ohm	700000.0	Read	Volatile	Leakage resistance of line
	XC0F	58S17	MMI,RST	Actual setting	0.1...99999.9	ohm	7000.0	Read	Volatile	Phase-to-earth capacitance of line in terms of reactance
	Adaptive XC0F	58S18	MMI,RST	Actual setting	0..1[0 = Disabled; 1 = Enabled]	-	0	Read	Volatile	Enable automatic calculation of RLOF and XCOF
	Line sections	58S19	MMI,RST	Actual setting	0...3	-	0	Read	Volatile	Number of line sections
	Z max. load	58S20	MMI,RST	Actual setting	0.000...9999.999	ohm	400.000	Read	Volatile	Impedance corresponding to maximum three-phase loading
	R1A	58S41	MMI,RST	Setting group1	0.001...999.999	ohm/pu	1.000	Rd/Wr	Retain	Positive sequence line resistance, line section A
	X1A	58S42	MMI,RST	Setting group1	0.001...999.999	ohm/pu	1.000	Rd/Wr	Retain	Positive sequence line reactance, line section A
	R0A	58S43	MMI,RST	Setting group1	0.001...999.999	ohm/pu	4.000	Rd/Wr	Retain	Zero sequence line resistance, line section A
	X0A	58S44	MMI,RST	Setting group1	0.001...999.999	ohm/pu	4.000	Rd/Wr	Retain	Zero sequence line reactance, line section A
	Length A	58S45	MMI,RST	Setting group1	0.001...999.999	pu	1.000	Rd/Wr	Retain	Line length, section A
	R1B	58S46	MMI,RST	Setting group1	0.001...999.999	ohm/pu	1.000	Rd/Wr	Retain	Positive sequence line resistance, line section B
	X1B	58S47	MMI,RST	Setting group1	0.001...999.999	ohm/pu	1.000	Rd/Wr	Retain	Positive sequence line reactance, line section B
	R0B	58S48	MMI,RST	Setting group1	0.001...999.999	ohm/pu	4.000	Rd/Wr	Retain	Zero sequence line resistance, line section B
	X0B	58S49	MMI,RST	Setting group1	0.001...999.999	ohm/pu	4.000	Rd/Wr	Retain	Zero sequence line reactance, line section B
	Length B	58S50	MMI,RST	Setting group1	0.001...999.999	pu	1.000	Rd/Wr	Retain	Line length, section B
	R1C	58S51	MMI,RST	Setting group1	0.001...999.999	ohm/pu	1.000	Rd/Wr	Retain	Positive sequence line resistance, line section C
	X1C	58S52	MMI,RST	Setting group1	0.001...999.999	ohm/pu	1.000	Rd/Wr	Retain	Positive sequence line reactance, line section C
	R0C	58S53	MMI,RST	Setting group1	0.001...999.999	ohm/pu	4.000	Rd/Wr	Retain	Zero sequence line resistance, line section C
	X0C	58S54	MMI,RST	Setting group1	0.001...999.999	ohm/pu	4.000	Rd/Wr	Retain	Zero sequence line reactance, line section C

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Length C	58S55	MMI,RST	Setting group1	0.001...999.999	pu	1.000	Rd/Wr	Retain	Line length, section C
	RL0F	58S56	MMI,RST	Setting group1	1.0...9999999.9	ohm	700000.0	Rd/Wr	Retain	Leakage resistance of line
	XC0F	58S57	MMI,RST	Setting group1	0.1...99999.9	ohm	7000.0	Rd/Wr	Retain	Phase-to-earth capacitance of line in terms of reactance
	Adaptive XC0F	58S58	MMI,RST	Setting group1	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Enable automatic calculation of RLOF and XCOF
	Line sections	58S59	MMI,RST	Setting group1	0...3	-	0	Rd/Wr	Retain	Number of line sections
	Z max. load	58S60	MMI,RST	Setting group1	0.001...9999.999	ohm	400.000	Rd/Wr	Retain	Impedance corresponding to maximum three-phase loading
	R1A	58S71	MMI,RST	Setting group2	0.001...999.999	ohm/pu	1.000	Rd/Wr	Retain	Positive sequence line resistance, line section A
	X1A	58S72	MMI,RST	Setting group2	0.001...999.999	ohm/pu	1.000	Rd/Wr	Retain	Positive sequence line reactance, line section A
	R0A	58S73	MMI,RST	Setting group2	0.001...999.999	ohm/pu	4.000	Rd/Wr	Retain	Zero sequence line resistance, line section A
	X0A	58S74	MMI,RST	Setting group2	0.001...999.999	ohm/pu	4.000	Rd/Wr	Retain	Zero sequence line reactance, line section A
	Length A	58S75	MMI,RST	Setting group2	0.001...999.999	pu	1.000	Rd/Wr	Retain	Line length, section A
	R1B	58S76	MMI,RST	Setting group2	0.001...999.999	ohm/pu	1.000	Rd/Wr	Retain	Positive sequence line resistance, line section B
	X1B	58S77	MMI,RST	Setting group2	0.001...999.999	ohm/pu	1.000	Rd/Wr	Retain	Positive sequence line reactance, line section B
	R0B	58S78	MMI,RST	Setting group2	0.001...999.999	ohm/pu	4.000	Rd/Wr	Retain	Zero sequence line resistance, line section B
	X0B	58S79	MMI,RST	Setting group2	0.001...999.999	ohm/pu	4.000	Rd/Wr	Retain	Zero sequence line reactance, line section B
	Length B	58S80	MMI,RST	Setting group2	0.001...999.999	pu	1.000	Rd/Wr	Retain	Line length, section B
	R1C	58S81	MMI,RST	Setting group2	0.001...999.999	ohm/pu	1.000	Rd/Wr	Retain	Positive sequence line resistance, line section C
	X1C	58S82	MMI,RST	Setting group2	0.001...999.999	ohm/pu	1.000	Rd/Wr	Retain	Positive sequence line reactance, line section C
	R0C	58S83	MMI,RST	Setting group2	0.001...999.999	ohm/pu	4.000	Rd/Wr	Retain	Zero sequence line resistance, line section C
	X0C	58S84	MMI,RST	Setting group2	0.001...999.999	ohm/pu	4.000	Rd/Wr	Retain	Zero sequence line reactance, line section C
	Length C	58S85	MMI,RST	Setting group2	0.001...999.999	pu	1.000	Rd/Wr	Retain	Line length, section C
	RL0F	58S86	MMI,RST	Setting group2	1.0...9999999.9	ohm	700000.0	Rd/Wr	Retain	Leakage resistance of line
	XC0F	58S87	MMI,RST	Setting group2	0.1...99999.9	ohm	7000.0	Rd/Wr	Retain	Phase-to-earth capacitance of line in terms of reactance
	Adaptive XC0F	58S88	MMI,RST	Setting group2	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Enable automatic calculation of RLOF and XCOF
	Line sections	58S89	MMI,RST	Setting group2	0...3	-	0	Rd/Wr	Retain	Number of line sections
	Z max. load	58S90	MMI,RST	Setting group2	0.001...9999.999	ohm	400.000	Rd/Wr	Retain	Impedance corresponding to maximum three-phase loading
	Operation mode	58V1	MMI,RST	Control setting	0..1[0 = Not in use; 1 = In use]	-	1	Rd/Wr	Retain	Operation mode
	Group selection	58V2	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	58V3	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group indication
	Delay time	58V4	MMI,RST	Control setting	0.10...300.00	s	1.00	Rd/Wr	Retain	Delay time for healthy values for phase current and voltages before fault
	Trigger mode	58V5	MMI,RST	Control setting	0..2[0 = External; 1 = Internal; 2 = Continuous]	-	0	Rd/Wr	Retain	Trigger mode
	High limit	58V6	MMI,RST	Control setting	0.001...999.999	pu	999.999	Rd/Wr	Retain	High alarm limit for calculated distance
	Low limit	58V7	MMI,RST	Control setting	0.001...999.999	pu	0.001	Rd/Wr	Retain	Low alarm limit for calculated distance
	Reset registers	58V8	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of outputs and registers
	Event mask 1	58V101	MMI,RST	Control setting	0...255	-	42	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E7)
	Event mask 2	58V103	MMI,RST	Control setting	0...255	-	42	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E7)
	Event mask 3	58V105	MMI,RST	Control setting	0...255	-	42	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E7)
	Event mask 4	58V107	MMI,RST	Control setting	0...255	-	42	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E7)
	Voltage UL1	58I1	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Phase voltage UL1
	Voltage UL2	58I2	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Phase voltage UL2
	Voltage UL3	58I3	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Phase voltage UL3
	Current IL1	58I4	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Phase current IL1
	Current IL2	58I5	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Phase current IL2
	Current IL3	58I6	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Phase current IL3
	Input BLOCK	58I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of BLOCK input
	Input GROUP	58I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of GROUP input

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Input TRIGG1	58I9	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of TRIGG1 input
	Input TRIGG2	58I10	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of TRIGG2 input
	Input RESET	58I11	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of RESET input
	Fault loop	58O1	MMI,RST	Output data	0...123	-	0	Read	Volatile	Fault impedance measurement loop
	Fault resistance	58O2	MMI,RST	Output data	0.000...9999.999	ohm	0.000	Read	Volatile	Fault resistance in primary ohms
	Fault loop R	58O3	MMI,RST	Output data	0.000...9999.999	ohm	0.000	Read	Volatile	Fault loop resistance in primary ohms
	Fault loop X	58O4	MMI,RST	Output data	0.000...9999.999	ohm	0.000	Read	Volatile	Fault loop reactance in primary ohms
	Fault distance	58O5	MMI,RST	Output data	0.000...999.999	pu	0.000	Read	Volatile	Fault distance
	VALIDITY	58O6	MMI,RST	Output data	0..3[0 = N/A; 1 = High; 2 = Moderate; 3 = Poor]	-	0	Read	Volatile	Result validity indicator for earth faults in ungrounded networks
	Date	58V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	58V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Fault loop	58V203	MMI,RST	Recorded data1	0...123	-	0	Read	Retain	Fault impedance measurement loop
	Fault resistance	58V204	MMI,RST	Recorded data1	0.000...9999.999	ohm	0.000	Read	Retain	Fault resistance in primary ohms
	Fault loop R	58V205	MMI,RST	Recorded data1	0.000...9999.999	ohm	0.000	Read	Retain	Fault loop resistance in primary ohms
	Fault loop X	58V206	MMI,RST	Recorded data1	0.000...9999.999	ohm	0.000	Read	Retain	Fault loop reactance in primary ohms
	Fault distance	58V207	MMI,RST	Recorded data1	0.000...999.999	pu	0.000	Read	Retain	Fault distance
	VALIDITY	58V208	MMI,RST	Recorded data1	0..3[0 = N/A; 1 = High; 2 = Moderate; 3 = Poor]	-	0	Read	Retain	Result validity indicator for earth faults in ungrounded networks
	Output ALARM	58V209	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Alarm signal indicating that fault is located between set limits
	Active group	58V210	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 Group 2]	-	0	Read	Retain	Active setting group
	UL1 fault	58V211	MMI,RST	Recorded data1	0.00...999.99	kV	0.00	Read	Retain	Phase voltage UL1 during fault
	UL2 fault	58V212	MMI,RST	Recorded data1	0.00...999.99	kV	0.00	Read	Retain	Phase voltage UL2 during fault
	UL3 fault	58V213	MMI,RST	Recorded data1	0.00...999.99	kV	0.00	Read	Retain	Phase voltage UL3 during fault
	IL1 fault	58V214	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Phase current IL1 during fault
	IL2 fault	58V215	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Phase current IL2 during fault
	IL3 fault	58V216	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Phase current IL3 during fault
	UL1 pre-fault	58V217	MMI,RST	Recorded data1	0.00...999.99	kV	0.00	Read	Retain	Pre-fault phase voltage UL1
	UL2 pre-fault	58V218	MMI,RST	Recorded data1	0.00...999.99	kV	0.00	Read	Retain	Pre-fault phase voltage UL2
	UL3 pre-fault	58V219	MMI,RST	Recorded data1	0.00...999.99	kV	0.00	Read	Retain	Pre-fault phase voltage UL3
	IL1 pre-fault	58V220	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Pre-fault phase current IL1
	IL2 pre-fault	58V221	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Pre-fault phase current IL2
	IL3 pre-fault	58V222	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Pre-fault phase current IL3
	Angle UL1 fault	58V223	RST	Recorded data1	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL1 during fault
	Angle UL2 fault	58V224	RST	Recorded data1	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL2 during fault
	Angle UL3 fault	58V225	RST	Recorded data1	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL3 during fault
	Angle IL1 fault	58V226	RST	Recorded data1	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL1 during fault
	Angle IL2 fault	58V227	RST	Recorded data1	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL2 during fault
	Angle IL3 fault	58V228	RST	Recorded data1	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL3 during fault
	Angle UL1 preflt	58V229	RST	Recorded data1	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL1 pre-fault
	Angle UL2 preflt	58V230	RST	Recorded data1	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL2 pre-fault
	Angle UL3 preflt	58V231	RST	Recorded data1	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL3 pre-fault
	Angle IL1 preflt	58V232	RST	Recorded data1	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL1 pre-fault
	Angle IL2 preflt	58V233	RST	Recorded data1	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL2 pre-fault
	Angle IL3 preflt	58V234	RST	Recorded data1	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL3 pre-fault
	Date	58V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	58V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Fault loop	58V303	MMI,RST	Recorded data2	0...123	-	0	Read	Retain	Fault impedance measurement loop

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Fault resistance	58V304	MMI,RST	Recorded data2	0.000...9999.999	ohm	0.000	Read	Retain	Fault resistance in primary ohms
	Fault loop R	58V305	MMI,RST	Recorded data2	0.000...9999.999	ohm	0.000	Read	Retain	Fault loop resistance in primary ohms
	Fault loop X	58V306	MMI,RST	Recorded data2	0.000...9999.999	ohm	0.000	Read	Retain	Fault loop reactance in primary ohms
	Fault distance	58V307	MMI,RST	Recorded data2	0.000...999.999	pu	0.000	Read	Retain	Fault distance
	VALIDITY	58V308	MMI,RST	Recorded data2	0..3[0 = N/A; 1 = High; 2 = Moderate; 3 = Poor]	-	0	Read	Retain	Result validity indicator for earth faults in ungrounded networks
	Output ALARM	58V309	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Alarm signal indicating that fault is located between set limits
	Active group	58V310	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 Group 2]	-	0	Read	Retain	Active setting group
	UL1 fault	58V311	MMI,RST	Recorded data2	0.00...999.99	kV	0.00	Read	Retain	Phase voltage UL1 during fault
	UL2 fault	58V312	MMI,RST	Recorded data2	0.00...999.99	kV	0.00	Read	Retain	Phase voltage UL2 during fault
	UL3 fault	58V313	MMI,RST	Recorded data2	0.00...999.99	kV	0.00	Read	Retain	Phase voltage UL3 during fault
	IL1 fault	58V314	MMI,RST	Recorded data2	0.0...20000.0	A	0.0	Read	Retain	Phase current IL1 during fault
	IL2 fault	58V315	MMI,RST	Recorded data2	0.0...20000.0	A	0.0	Read	Retain	Phase current IL2 during fault
	IL3 fault	58V316	MMI,RST	Recorded data2	0.0...20000.0	A	0.0	Read	Retain	Phase current IL3 during fault
	UL1 pre-fault	58V317	MMI,RST	Recorded data2	0.00...999.99	kV	0.00	Read	Retain	Pre-fault phase voltage UL1
	UL2 pre-fault	58V318	MMI,RST	Recorded data2	0.00...999.99	kV	0.00	Read	Retain	Pre-fault phase voltage UL2
	UL3 pre-fault	58V319	MMI,RST	Recorded data2	0.00...999.99	kV	0.00	Read	Retain	Pre-fault phase voltage UL3
	IL1 pre-fault	58V320	MMI,RST	Recorded data2	0.0...20000.0	A	0.0	Read	Retain	Pre-fault phase current IL1
	IL2 pre-fault	58V321	MMI,RST	Recorded data2	0.0...20000.0	A	0.0	Read	Retain	Pre-fault phase current IL2
	IL3 pre-fault	58V322	MMI,RST	Recorded data2	0.0...20000.0	A	0.0	Read	Retain	Pre-fault phase current IL3
	Angle UL1 fault	58V323	RST	Recorded data2	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL1 during fault
	Angle UL2 fault	58V324	RST	Recorded data2	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL2 during fault
	Angle UL3 fault	58V325	RST	Recorded data2	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL3 during fault
	Angle IL1 fault	58V326	RST	Recorded data2	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL1 during fault
	Angle IL2 fault	58V327	RST	Recorded data2	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL2 during fault
	Angle IL3 fault	58V328	RST	Recorded data2	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL3 during fault
	Angle UL1 preflt	58V329	RST	Recorded data2	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL1 pre-fault
	Angle UL2 preflt	58V330	RST	Recorded data2	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL2 pre-fault
	Angle UL3 preflt	58V331	RST	Recorded data2	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL3 pre-fault
	Angle IL1 preflt	58V332	RST	Recorded data2	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL1 pre-fault
	Angle IL2 preflt	58V333	RST	Recorded data2	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL2 pre-fault
	Angle IL3 preflt	58V334	RST	Recorded data2	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL3 pre-fault
	Date	58V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	58V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Fault loop	58V403	MMI,RST	Recorded data3	0...123	-	0	Read	Retain	Fault impedance measurement loop
	Fault resistance	58V404	MMI,RST	Recorded data3	0.000...9999.999	ohm	0.000	Read	Retain	Fault resistance in primary ohms
	Fault loop R	58V405	MMI,RST	Recorded data3	0.000...9999.999	ohm	0.000	Read	Retain	Fault loop resistance in primary ohms
	Fault loop X	58V406	MMI,RST	Recorded data3	0.000...9999.999	ohm	0.000	Read	Retain	Fault loop reactance in primary ohms
	Fault distance	58V407	MMI,RST	Recorded data3	0.000...999.999	pu	0.000	Read	Retain	Fault distance
	VALIDITY	58V408	MMI,RST	Recorded data3	0..3[0 = N/A; 1 = High; 2 = Moderate; 3 = Poor]	-	0	Read	Retain	Result validity indicator for earth faults in ungrounded networks
	Output ALARM	58V409	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Alarm signal indicating that fault is located between set limits
	Active group	58V410	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 Group 2]	-	0	Read	Retain	Active setting group
	UL1 fault	58V411	MMI,RST	Recorded data3	0.00...999.99	kV	0.00	Read	Retain	Phase voltage UL1 during fault
	UL2 fault	58V412	MMI,RST	Recorded data3	0.00...999.99	kV	0.00	Read	Retain	Phase voltage UL2 during fault
	UL3 fault	58V413	MMI,RST	Recorded data3	0.00...999.99	kV	0.00	Read	Retain	Phase voltage UL3 during fault
	IL1 fault	58V414	MMI,RST	Recorded data3	0.0...20000.0	A	0.0	Read	Retain	Phase current IL1 during fault

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	IL2 fault	58V415	MMI,RST	Recorded data3	0.0...20000.0	A	0.0	Read	Retain	Phase current IL2 during fault
	IL3 fault	58V416	MMI,RST	Recorded data3	0.0...20000.0	A	0.0	Read	Retain	Phase current IL3 during fault
	UL1 pre-fault	58V417	MMI,RST	Recorded data3	0.00...999.99	kV	0.00	Read	Retain	Pre-fault phase voltage UL1
	UL2 pre-fault	58V418	MMI,RST	Recorded data3	0.00...999.99	kV	0.00	Read	Retain	Pre-fault phase voltage UL2
	UL3 pre-fault	58V419	MMI,RST	Recorded data3	0.00...999.99	kV	0.00	Read	Retain	Pre-fault phase voltage UL3
	IL1 pre-fault	58V420	MMI,RST	Recorded data3	0.0...20000.0	A	0.0	Read	Retain	Pre-fault phase current IL1
	IL2 pre-fault	58V421	MMI,RST	Recorded data3	0.0...20000.0	A	0.0	Read	Retain	Pre-fault phase current IL2
	IL3 pre-fault	58V422	MMI,RST	Recorded data3	0.0...20000.0	A	0.0	Read	Retain	Pre-fault phase current IL3
	Angle UL1 fault	58V423	RST	Recorded data3	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL1 during fault
	Angle UL2 fault	58V424	RST	Recorded data3	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL2 during fault
	Angle UL3 fault	58V425	RST	Recorded data3	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL3 during fault
	Angle IL1 fault	58V426	RST	Recorded data3	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL1 during fault
	Angle IL2 fault	58V427	RST	Recorded data3	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL2 during fault
	Angle IL3 fault	58V428	RST	Recorded data3	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL3 during fault
	Angle UL1 preflt	58V429	RST	Recorded data3	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL1 pre-fault
	Angle UL2 preflt	58V430	RST	Recorded data3	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL2 pre-fault
	Angle UL3 preflt	58V431	RST	Recorded data3	-180.0...180.0	°	0.0	Read	Retain	Phase angle of voltage UL3 pre-fault
	Angle IL1 preflt	58V432	RST	Recorded data3	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL1 pre-fault
	Angle IL2 preflt	58V433	RST	Recorded data3	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL2 pre-fault
	Angle IL3 preflt	58V434	RST	Recorded data3	-180.0...180.0	°	0.0	Read	Retain	Phase angle of current IL3 pre-fault
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	Voltage UL1_U12	62I1	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U12 or phase-to-earth voltage UL1
	Voltage UL2_U23	62I2	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U23 or phase-to-earth voltage UL2
	Voltage UL3_U31	62I3	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U31 or phase-to-earth voltage UL3
	Input BS1	62I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	62I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	62I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	62I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	62I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of OV3Low
	Output START	62O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	62O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Date	62V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	62V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	62V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage UL1_U12	62V204	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage UL2_U23	62V205	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage UL3_U31	62V206	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	BS1	62V207	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	62V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	62V209	MMI,RST	Recorded data1	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	62V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	62V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	62V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage UL1_U12	62V304	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage UL2_U23	62V305	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage UL3_U31	62V306	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	BS1	62V307	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	62V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	62V309	MMI,RST	Recorded data2	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	62V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	62V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	62V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage UL1_U12	62V404	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage UL2_U23	62V405	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage UL3_U31	62V406	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	BS1	62V407	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	62V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	62V409	MMI,RST	Recorded data3	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Operation mode	62S1	MMI,RST	Actual setting	0..3[0 = Not in use; 1 = Definite time; 2 = A curve; 3 = B curve]	-	1	Read	Volatile	Selection of operation mode and inverse time characteristic at IDMT mode
	Start voltage	62S2	MMI,RST	Actual setting	0.10...1.60	x Un	1.loka	Read	Volatile	Start voltage
	Operate time	62S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DT mode
	Time multiplier	62S4	MMI,RST	Actual setting	0.05...1.00	-	0.05	Read	Volatile	Time multiplier at IDMT mode
	Operation mode	62S41	MMI,RST	Setting group1	0..3[0 = Not in use; 1 = Definite time; 2 = A curve; 3 = B curve]	-	1	Rd/Wr	Retain	Selection of operation mode and inverse time characteristic at IDMT mode
	Start voltage	62S42	MMI,RST	Setting group1	0.10...1.60	x Un	1.loka	Rd/Wr	Retain	Start voltage
	Operate time	62S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Time multiplier	62S44	MMI,RST	Setting group1	0.05...1.00	-	0.05	Rd/Wr	Retain	Time multiplier at IDMT mode
	Operation mode	62S71	MMI,RST	Setting group2	0..3[0 = Not in use; 1 = Definite time; 2 = A curve; 3 = B curve]	-	1	Rd/Wr	Retain	Selection of operation mode and inverse time characteristic at IDMT mode
	Start voltage	62S72	MMI,RST	Setting group2	0.10...1.60	x Un	1.loka	Rd/Wr	Retain	Start voltage
	Operate time	62S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Time multiplier	62S74	MMI,RST	Setting group2	0.05...1.00	-	0.05	Rd/Wr	Retain	Time multiplier at IDMT mode
	Measuring mode	62V1	MMI,RST	Control setting	0..2[0 = Mode 1; 1 = Mode 2; 2 = Mode 3]	-	0	Rd/Wr	Retain	Selection of measuring mode
	Group selection	62V2	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	62V3	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	62V4	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	62V5	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	62V6	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP
	Oper. hysteresis	62V7	MMI,RST	Control setting	1.0...5.0	%	4.0	Rd/Wr	Retain	Operation hysteresis
	Reset registers	62V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	62V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	62V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Event mask 1	62V101	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	62V103	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	62V105	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	62V107	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
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	Voltage UL1_U12	63I1	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage UL1 or phase-to-phase voltage U12
	Voltage UL2_U23	63I2	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage UL2 or phase-to-phase voltage U23
	Voltage UL3_U31	63I3	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage UL3 or phase-to-phase voltage U31
	Input BS1	63I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Input BS2	63I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	63I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	63I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	63I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of OV3High
	Output START	63O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	63O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Date	63V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	63V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	63V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage UL1_U12	63V204	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage UL2_U23	63V205	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage UL3_U31	63V206	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	BS1	63V207	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	63V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	63V209	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	63V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	63V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	63V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage UL1_U12	63V304	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage UL2_U23	63V305	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage UL3_U31	63V306	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	BS1	63V307	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	63V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	63V309	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	63V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	63V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	63V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage UL1_U12	63V404	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage UL2_U23	63V405	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage UL3_U31	63V406	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	BS1	63V407	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	63V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	63V409	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Operation mode	63S1	MMI,RST	Actual setting	0..1[0 = Not in use; 1 = Definite time]	-	1	Read	Volatile	Selection of operation mode
	Start voltage	63S2	MMI,RST	Actual setting	0.10...1.60	x Un	1.loka	Read	Volatile	Start voltage
	Operate time	63S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time at DT mode
	Operation mode	63S41	MMI,RST	Setting group1	0..1[0 = Not in use; 1 = Definite time]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start voltage	63S42	MMI,RST	Setting group1	0.10...1.60	x Un	1.loka	Rd/Wr	Retain	Start voltage
	Operate time	63S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Operation mode	63S71	MMI,RST	Setting group2	0..1[0 = Not in use; 1 = Definite time]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start voltage	63S72	MMI,RST	Setting group2	0.10...1.60	x Un	1.loka	Rd/Wr	Retain	Start voltage
	Operate time	63S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time at DT mode
	Measuring mode	63V1	MMI,RST	Control setting	0..2[0 = Mode 1; 1 = Mode 2; 2 = Mode 3]	-	0	Rd/Wr	Retain	Selection of measuring mode
	Group selection	63V2	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	63V3	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	63V4	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	63V5	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	63V6	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Oper. hysteresis	63V7	MMI,RST	Control setting	1.0...5.0	%	4.0	Rd/Wr	Retain	Operation hysteresis
	Reset registers	63V13	RST	Control setting	0..1[0 = 0; 1= Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	63V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	63V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Event mask 1	63V101	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	63V103	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	63V105	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	63V107	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
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	Voltage UL1_U12	64I1	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U12 or phase-to-earth voltage UL1
	Voltage UL2_U23	64I2	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U23 or phase-to-earth voltage UL2
	Voltage UL3_U31	64I3	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U31 or phase-to-earth voltage UL3
	Input BS1	64I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	64I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	64I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	64I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	64I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of UV3Low
	Output START	64O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	64O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Date	64V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	64V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	64V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage UL1_U12	64V204	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage UL2_U23	64V205	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage UL3_U31	64V206	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	BS1	64V207	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	64V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	64V209	MMI,RST	Recorded data1	0..1[0=Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	64V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	64V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	64V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage UL1_U12	64V304	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage UL2_U23	64V305	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage UL3_U31	64V306	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	BS1	64V307	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	64V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	64V309	MMI,RST	Recorded data2	0..1[0=Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	64V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	64V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	64V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage UL1_U12	64V404	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage UL2_U23	64V405	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage UL3_U31	64V406	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	BS1	64V407	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	64V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	64V409	MMI,RST	Recorded data3	0..1[0=Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Operation mode	64S1	MMI,RST	Actual setting	0..2[0 = Not in use; 1 = Definite time; 2 = C curve]	-	1	Read	Volatile	Selection of operation mode and inverse time curve at IDMT mode
	Start voltage	64S2	MMI,RST	Actual setting	0.10...1.20	x Un	0.90	Read	Volatile	Start voltage
	Operate time	64S3	MMI,RST	Actual setting	0.1...300.0	s	0.1	Read	Volatile	Operate time at DT mode
	Time multiplier	64S4	MMI,RST	Actual setting	0.1...1.0	-	0.1	Read	Volatile	Time multiplier at IDMTmode
	Operation mode	64S41	MMI,RST	Setting group1	0..2[0 = Not in use; 1 = Definite time; 2 = C curve]	-	1	Rd/Wr	Retain	Selection of operation mode and inverse time curve at IDMT mode
	Start voltage	64S42	MMI,RST	Setting group1	0.10...1.20	x Un	0.90	Rd/Wr	Retain	Start voltage
	Operate time	64S43	MMI,RST	Setting group1	0.1...300.0	s	0.1	Rd/Wr	Retain	Operate time at DT mode
	Time multiplier	64S44	MMI,RST	Setting group1	0.1...1.0	-	0.1	Rd/Wr	Retain	Time multiplier at IDMT mode
	Operation mode	64S71	MMI,RST	Setting group2	0..2[0 = Not in use; 1 = Definite time; 2 = C curve]	-	1	Rd/Wr	Retain	Selection of operation mode and inverse time curve at IDMT mode
	Start voltage	64S72	MMI,RST	Setting group2	0.10...1.20	x Un	0.90	Rd/Wr	Retain	Start voltage
	Operate time	64S73	MMI,RST	Setting group2	0.1...300.0	s	0.1	Rd/Wr	Retain	Operate time at DT mode
	Time multiplier	64S74	MMI,RST	Setting group2	0.1...1.0	-	0.1	Rd/Wr	Retain	Time multiplier at IDMT mode
	Measuring mode	64V1	MMI,RST	Control setting	0..2[0 = Mode 1; 1 = Mode 2; 2 = Mode 3]	-	0	Rd/Wr	Retain	Selection of measuring mode
	Voltage select.	64V2	MMI,RST	Control setting	1..7[1 = U12; 2 = U23; 3 = U12 & U23; 4 = U31; 5 = U12 & U31; 6 = U23 & U31; 7 = U12 & U23 & U31]	-	7	Rd/Wr	Retain	Selection of voltages
	Group selection	64V3	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	64V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	64V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	64V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	64V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP
	Intern. blocking	64V8	MMI,RST	Control setting	0..1[0 = Disabled; 1 = Enabled]	-	1	Rd/Wr	Retain	Enabling of internal undervoltage blocking
	Oper. hysteresis	64V9	MMI,RST	Control setting	1.0...5.0	%	4.0	Rd/Wr	Retain	Operation hysteresis
	Reset registers	64V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	64V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	64V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Event mask 1	64V101	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	64V103	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	64V105	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	64V107	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
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	Operation mode	65S1	MMI,RST	Actual setting	0..1[0 = Not in use; 1 = Definite time]	-	1	Read	Volatile	Selection of operation mode
	Start voltage	65S2	MMI,RST	Actual setting	0.10...1.20	x Un	0.90	Read	Volatile	Start voltage
	Operate time	65S3	MMI,RST	Actual setting	0.1...300.0	s	0.1	Read	Volatile	Operate time at DT mode
	Operation mode	65S41	MMI,RST	Setting group1	0..1[0 = Not in use; 1 = Definite time]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start voltage	65S42	MMI,RST	Setting group1	0.10...1.20	x Un	0.90	Rd/Wr	Retain	Start voltage
	Operate time	65S43	MMI,RST	Setting group1	0.1...300.0	s	0.1	Rd/Wr	Retain	Operate time at DT mode
	Operation mode	65S71	MMI,RST	Setting group2	0..1[0 = Not in use; 1 = Definite time]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start voltage	65S72	MMI,RST	Setting group2	0.10...1.20	x Un	0.90	Rd/Wr	Retain	Start voltage
	Operate time	65S73	MMI,RST	Setting group2	0.1...300.0	s	0.1	Rd/Wr	Retain	Operate time at DT mode
	Measuring mode	65V1	MMI,RST	Control setting	0..2[0 = Mode 1; 1 = Mode 2; 2 = Mode 3]	-	0	Rd/Wr	Retain	Selection of measuring mode
	Voltage select.	65V2	MMI,RST	Control setting	1..7[1 = U12; 2 = U23; 3 = U12 & U23; 4 = U31; 5 = U12 & U31; 6 = U23 & U31; 7 = U12 & U23 & U31]	-	7	Rd/Wr	Retain	Selection of voltages
	Group selection	65V3	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	65V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	65V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	65V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Trip pulse	65V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP
	Intern. blocking	65V8	MMI,RST	Control setting	0..1[0 = Disabled; 1 = Enabled]	-	1	Rd/Wr	Retain	Enabling of internal undervoltage blocking
	Oper. hysteresis	65V9	MMI,RST	Control setting	1.0...5.0	%	4.0	Rd/Wr	Retain	Operation hysteresis
	Reset registers	65V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	65V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	65V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Event mask 1	65V101	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	65V103	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	65V105	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	65V107	MMI,RST	Control setting	0...1023	-	15	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
	Voltage UL1_U12	65I1	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U12 or phase-to-earth voltage UL1
	Voltage UL2_U23	65I2	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U23 or phase-to-earth voltage UL2
	Voltage UL3_U31	65I3	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-phase voltage U31 or phase-to-earth voltage UL3
	Input BS1	65I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	65I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	65I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	65I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	65I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of UV3High
	Output START	65O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	65O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Date	65V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	65V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	65V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage UL1_U12	65V204	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage UL2_U23	65V205	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage UL3_U31	65V206	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	BS1	65V207	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	65V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	65V209	MMI,RST	Recorded data1	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	65V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	65V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	65V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage UL1_U12	65V304	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage UL2_U23	65V305	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage UL3_U31	65V306	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	BS1	65V307	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	65V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	65V309	MMI,RST	Recorded data2	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
	Date	65V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	65V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	65V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Voltage UL1_U12	65V404	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U12
	Voltage UL2_U23	65V405	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U23
	Voltage UL3_U31	65V406	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Filtered value of U31
	BS1	65V407	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	BS2	65V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	65V409	MMI,RST	Recorded data3	0..1[0 = Group 1; 1=Group 2]	-	0	Read	Retain	Active setting group
100070 / Rev K SCVCSt1										
	Umax	70S1	MMI,RST	Actual Setting	0.50...1.00	x Un	1.00	Read	Volatile	Upper threshold voltage
	Umin	70S2	MMI,RST	Actual Setting	0.10...0.80	x Un	0.10	Read	Volatile	Lower threshold voltage
	dU	70S3	MMI,RST	Actual Setting	0.02...0.60	x Un	0.02	Read	Volatile	Voltage difference
	dphase	70S4	MMI,RST	Actual Setting	5...90	°	5	Read	Volatile	Phase angle difference
	df	70S5	MMI,RST	Actual Setting	0.02...5.00	Hz	0.02	Read	Volatile	Frequency differense
	Umax	70S41	MMI,RST	Setting group1	0.50...1.00	x Un	1.00	Rd/Wr	Retain	Upper threshold voltage
	Umin	70S42	MMI,RST	Setting group1	0.10...0.80	x Un	0.10	Rd/Wr	Retain	Lower threshold voltage
	dU	70S43	MMI,RST	Setting group1	0.02...0.60	x Un	0.02	Rd/Wr	Retain	Voltage difference
	dphase	70S44	MMI,RST	Setting group1	5...90	°	5	Rd/Wr	Retain	Phase angle difference
	df	70S45	MMI,RST	Setting group1	0.02...5.00	Hz	0.02	Rd/Wr	Retain	Frequency differense
	Umax	70S71	MMI,RST	Setting group2	0.50...1.00	x Un	1.00	Rd/Wr	Retain	Upper threshold voltage
	Umin	70S72	MMI,RST	Setting group2	0.10...0.80	x Un	0.10	Rd/Wr	Retain	Lower threshold voltage
	dU	70S73	MMI,RST	Setting group2	0.02...0.60	x Un	0.02	Rd/Wr	Retain	Voltage difference
	dphase	70S74	MMI,RST	Setting group2	5...90	°	5	Rd/Wr	Retain	Phase angle difference
	df	70S75	MMI,RST	Setting group2	0.02...5.00	Hz	0.02	Rd/Wr	Retain	Frequency differense
	Energizing mode	70V1	MMI,RST	Control setting	0..4[0 = Not in use; 1 = U1->U2, U2->U1; 2 = U1->U2; 3 = U2->U1; 4 = U1>U2,U2>U1,0>0]	-	1	Rd/Wr	Retain	Selection of energizing mode
	Operation mode	70V2	MMI,RST	Control setting	0..1[0 = Command mode; 1 = Continuous mode]	-	0	Rd/Wr	Retain	Selection of operation mode
	Synchro mode	70V3	MMI,RST	Control setting	0..2[0 = Not in use; 1 = Asynchr. mode; 2 = Synchr. mode]	-	1	Rd/Wr	Retain	Selection of synchro mode
	Operate time	70V4	MMI,RST	Control setting	0.1...20.0	s	0.1	Rd/Wr	Retain	Operate time (dead time)
	Check time	70V5	MMI,RST	Control setting	0.05...300.00	s	0.05	Rd/Wr	Retain	Check time in command mode operation
	Close pulse	70V6	MMI,RST	Control setting	0.2...20.0	s	0.2	Rd/Wr	Retain	Closing signal length (command mode only)
	Oper.time of CB	70V7	MMI,RST	Control setting	0.00...0.25	s	0.05	Rd/Wr	Retain	Operate time of circuit breaker
	Basic angle	70V8	MMI,RST	Control setting	-90...90	°	0	Rd/Wr	Retain	Basic angle setting
	Group selection	70V9	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	70V10	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Reset registers	70V11	RST	Control setting	0..1[0 = 0; 1= Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Voltage combine	70V12	MMI,RST	Control setting	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Enabling of voltage combining
	Event mask 1	70V101	MMI,RST	Control setting	0...255	-	255	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E7)
	Event mask 2	70V103	MMI,RST	Control setting	0...255	-	255	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E7)
	Event mask 3	70V105	MMI,RST	Control setting	0...255	-	255	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E7)
	Event mask 4	70V107	MMI,RST	Control setting	0...255	-	255	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E7)
	U1	70I1	MMI,RST	Input data	0.00...1.30	x Un	0.00	Read	Volatile	Measurement value U1
	U2	70I2	MMI,RST	Input data	0.00...1.30	x Un	0.00	Read	Volatile	Measurement value U2
	dU	70I3	MMI,RST	Input data	-1.30...1.30	x Un	0.00	Read	Volatile	Measurement delta value (U1-U2)
	f1	70I4	MMI,RST	Input data	45.00...65.00	Hz	0.00	Read	Volatile	Measurement value f1
	f2	70I5	MMI,RST	Input data	45.00...65.00	Hz	0.00	Read	Volatile	Measurement value f2
	df	70I6	MMI,RST	Input data	-20.00...20.00	Hz	0.00	Read	Volatile	Measurement delta value (f1-f2)
	phi1	70I7	MMI,RST	Input data	-180...180	°	0	Read	Volatile	Measurement value phi1
	phi2	70I8	MMI,RST	Input data	-180...180	°	0	Read	Volatile	Measurement value phi2
	dphi	70I9	MMI,RST	Input data	-180...180	°	0	Read	Volatile	Measurement delta value (phi1-phi2)
	Input Command	70I10	MMI,RST	Input data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of Command singnal
	Input BLOCK	70I11	MMI,RST	Input data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of BLOCK singnal
	Input GROUP	70I12	MMI,RST	Input data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of GROUP singnal
	Input RESET	70I13	MMI,RST	Input data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of RESET singnal

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	SC_DUE	70O1	MMI,RST	Output data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of SC_DUE signal
	SC_OK	70O2	MMI,RST	Output data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of SC_OK signal
	ALARM_NC	70O3	MMI,RST	Output data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of ALARM_NS signal
	ALARM_CO	70O4	MMI,RST	Output data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of ALARM_CO signal
	Date	70V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	0	Read	Retain	Registration Date
	Time	70V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	0	Read	Retain	Registration Time
	U1	70V203	MMI,RST	Recorded data1	0.00...1.30	x Un	0.00	Read	Retain	Voltage 1 value
	U2	70V204	MMI,RST	Recorded data1	0.00...1.30	x Un	0.00	Read	Retain	Voltage 2 value
	dU	70V205	MMI,RST	Recorded data1	-1.30...1.30	x Un	0.00	Read	Retain	Voltage difference
	f1	70V206	MMI,RST	Recorded data1	45.00...65.00	Hz	0.00	Read	Retain	Frequency f1
	f2	70V207	MMI,RST	Recorded data1	45.00...65.00	Hz	0.00	Read	Retain	Frequency f2
	df	70V208	MMI,RST	Recorded data1	-20.00...20.00	Hz	0.00	Read	Retain	Frequency difference
	phi1	70V209	MMI,RST	Recorded data1	-180...180	°	0	Read	Retain	Phase 1
	phi2	70V210	MMI,RST	Recorded data1	-180...180	°	0	Read	Retain	Phase 2
	dphase	70V211	MMI,RST	Recorded data1	-180...180	°	0	Read	Retain	Phase difference
	Active group	70V212	MMI,RST	Recorded data1	0..1[0 = Setting group 1; 1 = Setting group 2]	-	0	Read	Retain	Active setting group
	Date	70V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	0	Read	Retain	Registration Date
	Time	70V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	0	Read	Retain	Registration Time
	U1	70V303	MMI,RST	Recorded data2	0.00...1.30	x Un	0.00	Read	Retain	Voltage 1 value
	U2	70V304	MMI,RST	Recorded data2	0.00...1.30	x Un	0.00	Read	Retain	Voltage 2 value
	dU	70V305	MMI,RST	Recorded data2	-1.30...1.30	x Un	0.00	Read	Retain	Voltage difference
	f1	70V306	MMI,RST	Recorded data2	45.00...65.00	Hz	0.00	Read	Retain	Frequency f1
	f2	70V307	MMI,RST	Recorded data2	45.00...65.00	Hz	0.00	Read	Retain	Frequency f2
	df	70V308	MMI,RST	Recorded data2	-20.00...20.00	Hz	0.00	Read	Retain	Frequency difference
	phi1	70V309	MMI,RST	Recorded data2	-180...180	°	0	Read	Retain	Phase 1
	phi2	70V310	MMI,RST	Recorded data2	-180...180	°	0	Read	Retain	Phase 2
	dphase	70V311	MMI,RST	Recorded data2	-180...180	°	0	Read	Retain	Phase difference
	Active group	70V312	MMI,RST	Recorded data2	0..1[0 = Setting group 1; 1 = Setting group 2]	-	0	Read	Retain	Active setting group
	Date	70V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	0	Read	Retain	Registration Date
	Time	70V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	0	Read	Retain	Registration Time
	U1	70V403	MMI,RST	Recorded data3	0.00...1.30	x Un	0.00	Read	Retain	Voltage 1 value
	U2	70V404	MMI,RST	Recorded data3	0.00...1.30	x Un	0.00	Read	Retain	Voltage 2 value
	dU	70V405	MMI,RST	Recorded data3	-1.30...1.30	x Un	0.00	Read	Retain	Voltage difference
	f1	70V406	MMI,RST	Recorded data3	45.00...65.00	Hz	0.00	Read	Retain	Frequency f1
	f2	70V407	MMI,RST	Recorded data3	45.00...65.00	Hz	0.00	Read	Retain	Frequency f2
	df	70V408	MMI,RST	Recorded data3	-20.00...20.00	Hz	0.00	Read	Retain	Frequency difference
	phi1	70V409	MMI,RST	Recorded data3	-180...180	°	0	Read	Retain	Phase 1
	phi2	70V410	MMI,RST	Recorded data3	-180...180	°	0	Read	Retain	Phase 2
	dphase	70V411	MMI,RST	Recorded data3	-180...180	°	0	Read	Retain	Phase difference
	Active group	70V412	MMI,RST	Recorded data3	0..1[0 = Setting group 1; 1 = Setting group 2]	-	0	Read	Retain	Active setting group
100071 / Rev H SCVCSt2										
	Umax	71S1	MMI,RST	Actual Setting	0.50...1.00	x Un	1.00	Read	Volatile	Upper threshold voltage
	Umin	71S2	MMI,RST	Actual Setting	0.10...0.80	x Un	0.10	Read	Volatile	Lower threshold voltage
	dU	71S3	MMI,RST	Actual Setting	0.02...0.60	x Un	0.02	Read	Volatile	Voltage difference
	dphase	71S4	MMI,RST	Actual Setting	5...90	°	5	Read	Volatile	Phase angle difference
	df	71S5	MMI,RST	Actual Setting	0.02...5.00	Hz	0.02	Read	Volatile	Frequency differense
	Umax	71S41	MMI,RST	Setting group1	0.50...1.00	x Un	1.00	Rd/Wr	Retain	Upper threshold voltage
	Umin	71S42	MMI,RST	Setting group1	0.10...0.80	x Un	0.10	Rd/Wr	Retain	Lower threshold voltage
	dU	71S43	MMI,RST	Setting group1	0.02...0.60	x Un	0.02	Rd/Wr	Retain	Voltage difference

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	dphase	71S44	MMI,RST	Setting group1	5...90	°	5	Rd/Wr	Retain	Phase angle difference
	df	71S45	MMI,RST	Setting group1	0.02...5.00	Hz	0.02	Rd/Wr	Retain	Frequency difference
	Umax	71S71	MMI,RST	Setting group2	0.50...1.00	x Un	1.00	Rd/Wr	Retain	Upper threshold voltage
	Umin	71S72	MMI,RST	Setting group2	0.10...0.80	x Un	0.10	Rd/Wr	Retain	Lower threshold voltage
	dU	71S73	MMI,RST	Setting group2	0.02...0.60	x Un	0.02	Rd/Wr	Retain	Voltage difference
	dphase	71S74	MMI,RST	Setting group2	5...90	°	5	Rd/Wr	Retain	Phase angle difference
	df	71S75	MMI,RST	Setting group2	0.02...5.00	Hz	0.02	Rd/Wr	Retain	Frequency difference
	Energizing mode	71V1	MMI,RST	Control setting	0..4[0 = Not in use; 1 = U1->U2, U2->U1; 2 = U1->U2; 3 = U2->U1; 4 = U1>U2,U2>U1,0>0]	-	1	Rd/Wr	Retain	Selection of energizing mode
	Operation mode	71V2	MMI,RST	Control setting	0..1[0 = Command mode; 1 = Continuous mode]	-	0	Rd/Wr	Retain	Selection of operation mode
	Synchro mode	71V3	MMI,RST	Control setting	0..2[0 = Not in use; 1 = Asynchr. mode; 2 = Synchr. mode]	-	1	Rd/Wr	Retain	Selection of synchro mode
	Operate time	71V4	MMI,RST	Control setting	0.1...20.0	s	0.1	Rd/Wr	Retain	Operate time (dead time)
	Check time	71V5	MMI,RST	Control setting	0.05...300.00	s	0.05	Rd/Wr	Retain	Check time in command mode operation
	Close pulse	71V6	MMI,RST	Control setting	0.2...20.0	s	0.2	Rd/Wr	Retain	Closing signal length (command mode only)
	Oper.time of CB	71V7	MMI,RST	Control setting	0.00...0.25	s	0.05	Rd/Wr	Retain	Operate time of circuit breaker
	Basic angle	71V8	MMI,RST	Control setting	-90...90	°	0	Rd/Wr	Retain	Basic angle setting
	Group selection	71V9	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	71V10	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Reset registers	71V11	RST	Control setting	0..1[0 = 0; 1= Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Voltage combine	71V12	MMI,RST	Control setting	0..1[0 = Disabled; 1 = Enabled]	-	0	Rd/Wr	Retain	Enabling of voltage combining
	Event mask 1	71V101	MMI,RST	Control setting	0...255	-	255	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E7)
	Event mask 2	71V103	MMI,RST	Control setting	0...255	-	255	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E7)
	Event mask 3	71V105	MMI,RST	Control setting	0...255	-	255	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E7)
	Event mask 4	71V107	MMI,RST	Control setting	0...255	-	255	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E7)
	U1	71I1	MMI,RST	Input data	0.00...1.30	x Un	0.00	Read	Volatile	Measurement value U1
	U2	71I2	MMI,RST	Input data	0.00...1.30	x Un	0.00	Read	Volatile	Measurement value U2
	dU	71I3	MMI,RST	Input data	-1.30...1.30	x Un	0.00	Read	Volatile	Measurement delta value (U1-U2)
	f1	71I4	MMI,RST	Input data	45.00...65.00	Hz	0.00	Read	Volatile	Measurement value f1
	f2	71I5	MMI,RST	Input data	45.00...65.00	Hz	0.00	Read	Volatile	Measurement value f2
	df	71I6	MMI,RST	Input data	-20.00...20.00	Hz	0.00	Read	Volatile	Measurement delta value (f1-f2)
	phi1	71I7	MMI,RST	Input data	-180...180	°	0	Read	Volatile	Measurement value phi1
	phi2	71I8	MMI,RST	Input data	-180...180	°	0	Read	Volatile	Measurement value phi2
	dphi	71I9	MMI,RST	Input data	-180...180	°	0	Read	Volatile	Measurement delta value (phi1-phi2)
	Input Command	71I10	MMI,RST	Input data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of Command singnal
	Input BLOCK	71I11	MMI,RST	Input data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of BLOCK singnal
	Input GROUP	71I12	MMI,RST	Input data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of GROUP singnal
	Input RESET	71I13	MMI,RST	Input data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of RESET singnal
	SC_DUE	71O1	MMI,RST	Output data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of SC_DUE signal
	SC_OK	71O2	MMI,RST	Output data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of SC_OK signal
	ALARM_NC	71O3	MMI,RST	Output data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of ALARM_NS signal
	ALARM_CO	71O4	MMI,RST	Output data	0..1[0 = Not Active; 1= Active]	-	0	Read	Volatile	Status of ALARM_CO signal
	Date	71V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	0	Read	Retain	Registration Date
	Time	71V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	0	Read	Retain	Registration Time
	U1	71V203	MMI,RST	Recorded data1	0.00...1.30	x Un	0.00	Read	Retain	Voltage 1 value
	U2	71V204	MMI,RST	Recorded data1	0.00...1.30	x Un	0.00	Read	Retain	Voltage 2 value
	dU	71V205	MMI,RST	Recorded data1	-1.30...1.30	x Un	0.00	Read	Retain	Voltage difference
	f1	71V206	MMI,RST	Recorded data1	45.00...65.00	Hz	0.00	Read	Retain	Frequency f1
	f2	71V207	MMI,RST	Recorded data1	45.00...65.00	Hz	0.00	Read	Retain	Frequency f2

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	df	71V208	MMI,RST	Recorded data1	-20.00...20.00	Hz	0.00	Read	Retain	Frequency difference
	phi1	71V209	MMI,RST	Recorded data1	-180...180	°	0	Read	Retain	Phase 1
	phi2	71V210	MMI,RST	Recorded data1	-180...180	°	0	Read	Retain	Phase 2
	dphase	71V211	MMI,RST	Recorded data1	-180...180	°	0	Read	Retain	Phase difference
	Active group	71V212	MMI,RST	Recorded data1	0..1[0 = Setting group 1; 1 = Setting group 2]	-	0	Read	Retain	Active setting group
	Date	71V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	0	Read	Retain	Registration Date
	Time	71V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	0	Read	Retain	Registration Time
	U1	71V303	MMI,RST	Recorded data2	0.00...1.30	x Un	0.00	Read	Retain	Voltage 1 value
	U2	71V304	MMI,RST	Recorded data2	0.00...1.30	x Un	0.00	Read	Retain	Voltage 2 value
	dU	71V305	MMI,RST	Recorded data2	-1.30...1.30	x Un	0.00	Read	Retain	Voltage difference
	f1	71V306	MMI,RST	Recorded data2	45.00...65.00	Hz	0.00	Read	Retain	Frequency f1
	f2	71V307	MMI,RST	Recorded data2	45.00...65.00	Hz	0.00	Read	Retain	Frequency f2
	df	71V308	MMI,RST	Recorded data2	-20.00...20.00	Hz	0.00	Read	Retain	Frequency difference
	phi1	71V309	MMI,RST	Recorded data2	-180...180	°	0	Read	Retain	Phase 1
	phi2	71V310	MMI,RST	Recorded data2	-180...180	°	0	Read	Retain	Phase 2
	dphase	71V311	MMI,RST	Recorded data2	-180...180	°	0	Read	Retain	Phase difference
	Active group	71V312	MMI,RST	Recorded data2	0..1[0 = Setting group 1; 1 = Setting group 2]	-	0	Read	Retain	Active setting group
	Date	71V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	0	Read	Retain	Registration Date
	Time	71V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	0	Read	Retain	Registration Time
	U1	71V403	MMI,RST	Recorded data3	0.00...1.30	x Un	0.00	Read	Retain	Voltage 1 value
	U2	71V404	MMI,RST	Recorded data3	0.00...1.30	x Un	0.00	Read	Retain	Voltage 2 value
	dU	71V405	MMI,RST	Recorded data3	-1.30...1.30	x Un	0.00	Read	Retain	Voltage difference
	f1	71V406	MMI,RST	Recorded data3	45.00...65.00	Hz	0.00	Read	Retain	Frequency f1
	f2	71V407	MMI,RST	Recorded data3	45.00...65.00	Hz	0.00	Read	Retain	Frequency f2
	df	71V408	MMI,RST	Recorded data3	-20.00...20.00	Hz	0.00	Read	Retain	Frequency difference
	phi1	71V409	MMI,RST	Recorded data3	-180...180	°	0	Read	Retain	Phase 1
	phi2	71V410	MMI,RST	Recorded data3	-180...180	°	0	Read	Retain	Phase 2
	dphase	71V411	MMI,RST	Recorded data3	-180...180	°	0	Read	Retain	Phase difference
	Active group	71V412	MMI,RST	Recorded data3	0..1[0 = Setting group 1; 1 = Setting group 2]	-	0	Read	Retain	Active setting group
100072 / Rev G Freq1St1										
	Operation mode	72S1	MMI,RST	Actual setting	0..6[0 = Not in use; 1 = f</f> 1 timer; 2 = f</f> 2 timers; 3 = f</f> OR df/dt>; 4 = f</f>AND df/dt>; 5 = f</f> OR df/dt<; 6 = f</f>AND df/dt<]	-	1	Read	Volatile	Operation mode for frequency protection
	Voltage limit	72S2	MMI,RST	Actual setting	0.30...0.90	x Un	0.30	Read	Volatile	Undervoltage limit for blocking
	Start frequency	72S3	MMI,RST	Actual setting	25.00...75.00	Hz	48.70	Read	Volatile	Start value for U/O frequency protection
	Operate time 1	72S4	MMI,RST	Actual setting	0.10...300.00	s	20.00	Read	Volatile	Operate time for U/O frequency protection
	Start df/dt	72S5	MMI,RST	Actual setting	0.2...10.0	Hz/s	10.0	Read	Volatile	Start value for frequency rate of change prot.
	Operate time 2	72S6	MMI,RST	Actual setting	0.12...300.00	s	20.00	Read	Volatile	Timer for df/dt prot. or U/O frequency prot.
	Operation mode	72S41	MMI,RST	Setting group1	0..6[0 = Not in use; 1 = f</f> 1 timer; 2 = f</f> 2 timers; 3 = f</f> OR df/dt>; 4 = f</f>AND df/dt>; 5 = f</f> OR df/dt<; 6 = f</f>AND df/dt<]	-	1	Rd/Wr	Retain	Operation mode for frequency protection
	Voltage limit	72S42	MMI,RST	Setting group1	0.30...0.90	x Un	0.30	Rd/Wr	Retain	Undervoltage limit for blocking
	Start frequency	72S43	MMI,RST	Setting group1	25.00...75.00	Hz	48.70	Rd/Wr	Retain	Start value for U/O frequency protection
	Operate time 1	72S44	MMI,RST	Setting group1	0.10...300.00	s	20.00	Rd/Wr	Retain	Operate time for U/O frequency protection
	Start df/dt	72S45	MMI,RST	Setting group1	0.2...10.0	Hz/s	10.0	Rd/Wr	Retain	Start value for frequency rate of change prot.
	Operate time 2	72S46	MMI,RST	Setting group1	0.12...300.00	s	20.00	Rd/Wr	Retain	Timer for df/dt prot. or U/O frequency prot.
	Operation mode	72S71	MMI,RST	Setting group2	0..6[0 = Not in use; 1 = f</f> 1 timer; 2 = f</f> 2 timers; 3 = f</f> OR df/dt>; 4 = f</f>AND df/dt>; 5 = f</f> OR df/dt<; 6 = f</f>AND df/dt<]	-	1	Rd/Wr	Retain	Operation mode for frequency protection

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Voltage limit	72S72	MMI,RST	Setting group2	0.30...0.90	x Un	0.30	Rd/Wr	Retain	Undervoltage limit for blocking
	Start frequency	72S73	MMI,RST	Setting group2	25.00...75.00	Hz	48.70	Rd/Wr	Retain	Start value for U/O frequency protection
	Operate time 1	72S74	MMI,RST	Setting group2	0.10...300.00	s	20.00	Rd/Wr	Retain	Operate time for U/O frequency protection
	Start df/dt	72S75	MMI,RST	Setting group2	0.2...10.0	Hz/s	10.0	Rd/Wr	Retain	Start value for frequency rate of change prot.
	Operate time 2	72S76	MMI,RST	Setting group2	0.12...300.00	s	20.00	Rd/Wr	Retain	Timer for df/dt prot. or U/O frequency prot.
	Group selection	72V1	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	72V2	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	72V3	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signals
	Trip signal	72V4	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP outputs
	Trip pulse	72V5	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	Reset registers	72V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START1	72V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START1
	Test TRIP1	72V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP1
	Test START2	72V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START2
	Test TRIP2	72V34	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP2
	Event mask 1	72V101	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E13)
	Event mask 2	72V103	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E13)
	Event mask 3	72V105	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E13)
	Event mask 4	72V107	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E13)
	Frequency	72I1	MMI,RST	Input data	20.00...80.00	Hz	0.0	Read	Volatile	System frequency
	Rate of change	72I2	MMI,RST	Input data	-15.0...+15.0	Hz/s	0.0	Read	Volatile	Freq. rate of change
	Voltage U	72I3	MMI,RST	Input data	0.0...2.0	x Un	0.0	Read	Volatile	Voltage U
	Input BS1	72I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	72I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	72I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	72I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	72I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of Freq1St1
	Output START1	72O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal 1
	Output TRIP1	72O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal 1
	Output START2	72O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal 2
	Output TRIP2	72O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal 2
	Date	72V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	72V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	72V203	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	72V204	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	72V205	MMI,RST	Recorded data1	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	72V206	MMI,RST	Recorded data1	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	72V207	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	72V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	72V209	MMI,RST	Recorded data1	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	72V210	MMI,RST	Recorded data1	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	72V211	MMI,RST	Recorded data1	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	72V212	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	72V213	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	72V214	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	72V215	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	72V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	72V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	72V303	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Start2	72V304	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	72V305	MMI,RST	Recorded data2	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	72V306	MMI,RST	Recorded data2	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	72V307	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	72V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	72V309	MMI,RST	Recorded data2	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	72V310	MMI,RST	Recorded data2	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	72V311	MMI,RST	Recorded data2	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	72V312	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	72V313	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	72V314	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	72V315	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	72V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	72V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	72V403	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	72V404	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	72V405	MMI,RST	Recorded data3	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	72V406	MMI,RST	Recorded data3	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	72V407	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	72V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	72V409	MMI,RST	Recorded data3	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	72V410	MMI,RST	Recorded data3	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	72V411	MMI,RST	Recorded data3	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	72V412	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	72V413	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	72V414	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	72V415	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
100073 / Rev G Freq1St2										
	Operation mode	73S1	MMI,RST	Actual setting	0..6[0 = Not in use; 1 = f</f> 1 timer; 2 = f</f> 2 timers; 3 = f</f> OR df/dt>; 4 = f</f>AND df/dt>; 5 = f</f> OR df/dt<; 6 = f</f>AND df/dt<]	-	1	Read	Volatile	Operation mode for frequency protection
	Voltage limit	73S2	MMI,RST	Actual setting	0.30...0.90	x Un	0.30	Read	Volatile	Undervoltage limit for blocking
	Start frequency	73S3	MMI,RST	Actual setting	25.00...75.00	Hz	48.70	Read	Volatile	Start value for U/O frequency protection
	Operate time 1	73S4	MMI,RST	Actual setting	0.10...300.00	s	20.00	Read	Volatile	Operate time for U/O frequency protection
	Start df/dt	73S5	MMI,RST	Actual setting	0.2...10.0	Hz/s	10.0	Read	Volatile	Start value for frequency rate of change prot.
	Operate time 2	73S6	MMI,RST	Actual setting	0.12...300.00	s	20.00	Read	Volatile	Timer for df/dt prot. or U/O frequency prot.
	Operation mode	73S41	MMI,RST	Setting group1	0..6[0 = Not in use; 1 = f</f> 1 timer; 2 = f</f> 2 timers; 3 = f</f> OR df/dt>; 4 = f</f>AND df/dt>; 5 = f</f> OR df/dt<; 6 = f</f>AND df/dt<]	-	1	Rd/Wr	Retain	Operation mode for frequency protection
	Voltage limit	73S42	MMI,RST	Setting group1	0.30...0.90	x Un	0.30	Rd/Wr	Retain	Undervoltage limit for blocking
	Start frequency	73S43	MMI,RST	Setting group1	25.00...75.00	Hz	48.70	Rd/Wr	Retain	Start value for U/O frequency protection
	Operate time 1	73S44	MMI,RST	Setting group1	0.10...300.00	s	20.00	Rd/Wr	Retain	Operate time for U/O frequency protection
	Start df/dt	73S45	MMI,RST	Setting group1	0.2...10.0	Hz/s	10.0	Rd/Wr	Retain	Start value for frequency rate of change prot.
	Operate time 2	73S46	MMI,RST	Setting group1	0.12...300.00	s	20.00	Rd/Wr	Retain	Timer for df/dt prot. or U/O frequency prot.
	Operation mode	73S71	MMI,RST	Setting group2	0..6[0 = Not in use; 1 = f</f> 1 timer; 2 = f</f> 2 timers; 3 = f</f> OR df/dt>; 4 = f</f>AND df/dt>; 5 = f</f> OR df/dt<; 6 = f</f>AND df/dt<]	-	1	Rd/Wr	Retain	Operation mode for frequency protection
	Voltage limit	73S72	MMI,RST	Setting group2	0.30...0.90	x Un	0.30	Rd/Wr	Retain	Undervoltage limit for blocking
	Start frequency	73S73	MMI,RST	Setting group2	25.00...75.00	Hz	48.70	Rd/Wr	Retain	Start value for U/O frequency protection

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Operate time 1	73S74	MMI,RST	Setting group2	0.10...300.00	s	20.00	Rd/Wr	Retain	Operate time for U/O frequency protection
	Start df/dt	73S75	MMI,RST	Setting group2	0.2...10.0	Hz/s	10.0	Rd/Wr	Retain	Start value for frequency rate of change prot.
	Operate time 2	73S76	MMI,RST	Setting group2	0.12...300.00	s	20.00	Rd/Wr	Retain	Timer for df/dt prot. or U/O frequency prot.
	Group selection	73V1	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	73V2	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	73V3	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signals
	Trip signal	73V4	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP outputs
	Trip pulse	73V5	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	Reset registers	73V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START1	73V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START1
	Test TRIP1	73V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP1
	Test START2	73V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START2
	Test TRIP2	73V34	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP2
	Event mask 1	73V101	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E13)
	Event mask 2	73V103	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E13)
	Event mask 3	73V105	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E13)
	Event mask 4	73V107	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E13)
	Frequency	73I1	MMI,RST	Input data	20.00...80.00	Hz	0.0	Read	Volatile	System frequency
	Rate of change	73I2	MMI,RST	Input data	-15.0...+15.0	Hz/s	0.0	Read	Volatile	Freq. rate of change
	Voltage U	73I3	MMI,RST	Input data	0.0...2.0	x Un	0.0	Read	Volatile	Voltage U
	Input BS1	73I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	73I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	73I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	73I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	73I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of Freq1St12
	Output START1	73O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal 1
	Output TRIP1	73O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal 1
	Output START2	73O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal 2
	Output TRIP2	73O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal 2
	Date	73V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	73V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	73V203	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	73V204	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	73V205	MMI,RST	Recorded data1	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	73V206	MMI,RST	Recorded data1	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	73V207	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	73V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	73V209	MMI,RST	Recorded data1	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	73V210	MMI,RST	Recorded data1	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	73V211	MMI,RST	Recorded data1	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	73V212	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	73V213	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	73V214	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	73V215	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	73V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	73V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	73V303	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	73V304	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Duration1	73V305	MMI,RST	Recorded data2	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	73V306	MMI,RST	Recorded data2	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	73V307	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	73V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	73V309	MMI,RST	Recorded data2	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	73V310	MMI,RST	Recorded data2	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	73V311	MMI,RST	Recorded data2	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	73V312	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	73V313	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	73V314	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	73V315	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	73V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	73V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	73V403	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	73V404	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	73V405	MMI,RST	Recorded data3	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	73V406	MMI,RST	Recorded data3	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	73V407	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	73V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	73V409	MMI,RST	Recorded data3	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	73V410	MMI,RST	Recorded data3	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	73V411	MMI,RST	Recorded data3	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	73V412	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	73V413	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	73V414	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	73V415	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
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	Frequency	74I1	MMI,RST	Input data	20.00...80.00	Hz	0.0	Read	Volatile	System frequency
	Rate of change	74I2	MMI,RST	Input data	-15.0...+15.0	Hz/s	0.0	Read	Volatile	Freq. rate of change
	Voltage U	74I3	MMI,RST	Input data	0.0...2.0	x Un	0.0	Read	Volatile	Voltage U
	Input BS1	74I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	74I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	74I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	74I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	74I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of Freq1St4
	Output START1	74O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal 1
	Output TRIP1	74O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal 1
	Output START2	74O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal 2
	Output TRIP2	74O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal 2
	Date	74V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	74V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	74V203	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	74V204	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	74V205	MMI,RST	Recorded data1	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	74V206	MMI,RST	Recorded data1	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	74V207	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	74V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	74V209	MMI,RST	Recorded data1	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	74V210	MMI,RST	Recorded data1	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Voltage U	74V211	MMI,RST	Recorded data1	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	74V212	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	74V213	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	74V214	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	74V215	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	74V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	74V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	74V303	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	74V304	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	74V305	MMI,RST	Recorded data2	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	74V306	MMI,RST	Recorded data2	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	74V307	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	74V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	74V309	MMI,RST	Recorded data2	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	74V310	MMI,RST	Recorded data2	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	74V311	MMI,RST	Recorded data2	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	74V312	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	74V313	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	74V314	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	74V315	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	74V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	74V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	74V403	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	74V404	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	74V405	MMI,RST	Recorded data3	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	74V406	MMI,RST	Recorded data3	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	74V407	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	74V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	74V409	MMI,RST	Recorded data3	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	74V410	MMI,RST	Recorded data3	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	74V411	MMI,RST	Recorded data3	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	74V412	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	74V413	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	74V414	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	74V415	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Operation mode	74S1	MMI,RST	Actual setting	0..6[0 = Not in use; 1 = f</f> 1 timer; 2 = f</f> 2 timers; 3 = f</f> OR df/dt>; 4 = f</f>AND df/dt>; 5 = f</f> OR df/dt<; 6 = f</f>AND df/dt<]	-	1	Read	Volatile	Operation mode for frequency protection
	Voltage limit	74S2	MMI,RST	Actual setting	0.30...0.90	x Un	0.30	Read	Volatile	Undervoltage limit for blocking
	Start frequency	74S3	MMI,RST	Actual setting	25.00...75.00	Hz	48.70	Read	Volatile	Start value for U/O frequency protection
	Operate time 1	74S4	MMI,RST	Actual setting	0.10...300.00	s	20.00	Read	Volatile	Operate time for U/O frequency protection
	Start df/dt	74S5	MMI,RST	Actual setting	0.2...10.0	Hz/s	10.0	Read	Volatile	Start value for frequency rate of change prot.
	Operate time 2	74S6	MMI,RST	Actual setting	0.12...300.00	s	20.00	Read	Volatile	Timer for df/dt prot. or U/O frequency prot.
	Operation mode	74S41	MMI,RST	Setting group1	0..6[0 = Not in use; 1 = f</f> 1 timer; 2 = f</f> 2 timers; 3 = f</f> OR df/dt>; 4 = f</f>AND df/dt>; 5 = f</f> OR df/dt<; 6 = f</f>AND df/dt<]	-	1	Rd/Wr	Retain	Operation mode for frequency protection
	Voltage limit	74S42	MMI,RST	Setting group1	0.30...0.90	x Un	0.30	Rd/Wr	Retain	Undervoltage limit for blocking
	Start frequency	74S43	MMI,RST	Setting group1	25.00...75.00	Hz	48.70	Rd/Wr	Retain	Start value for U/O frequency protection
	Operate time 1	74S44	MMI,RST	Setting group1	0.10...300.00	s	20.00	Rd/Wr	Retain	Operate time for U/O frequency protection

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Start df/dt	74S45	MMI,RST	Setting group1	0.2...10.0	Hz/s	10.0	Rd/Wr	Retain	Start value for frequency rate of change prot.
	Operate time 2	74S46	MMI,RST	Setting group1	0.12...300.00	s	20.00	Rd/Wr	Retain	Timer for df/dt prot. or U/O frequency prot.
	Operation mode	74S71	MMI,RST	Setting group2	0..6[0 = Not in use; 1 = f$</$f$>$ 1 timer; 2 = f$</$f$>$ 2 timers; 3 = f$</$f$>$ OR df/dt$>$; 4 = f$</$f$>$AND df/dt$>$; 5 = f$</$f$>$ OR df/dt$<$; 6 = f$</$f$>$AND df/dt$<$]	-	1	Rd/Wr	Retain	Operation mode for frequency protection
	Voltage limit	74S72	MMI,RST	Setting group2	0.30...0.90	x Un	0.30	Rd/Wr	Retain	Undervoltage limit for blocking
	Start frequency	74S73	MMI,RST	Setting group2	25.00...75.00	Hz	48.70	Rd/Wr	Retain	Start value for U/O frequency protection
	Operate time 1	74S74	MMI,RST	Setting group2	0.10...300.00	s	20.00	Rd/Wr	Retain	Operate time for U/O frequency protection
	Start df/dt	74S75	MMI,RST	Setting group2	0.2...10.0	Hz/s	10.0	Rd/Wr	Retain	Start value for frequency rate of change prot.
	Operate time 2	74S76	MMI,RST	Setting group2	0.12...300.00	s	20.00	Rd/Wr	Retain	Timer for df/dt prot. or U/O frequency prot.
	Group selection	74V1	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	74V2	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	74V3	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signals
	Trip signal	74V4	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP outputs
	Trip pulse	74V5	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	Reset registers	74V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START1	74V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START1
	Test TRIP1	74V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP1
	Test START2	74V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START2
	Test TRIP2	74V34	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP2
	Event mask 1	74V101	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E13)
	Event mask 2	74V103	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E13)
	Event mask 3	74V105	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E13)
	Event mask 4	74V107	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E13)
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	Operation mode	75S1	MMI,RST	Actual setting	0..6[0 = Not in use; 1 = f$</$f$>$ 1 timer; 2 = f$</$f$>$ 2 timers; 3 = f$</$f$>$ OR df/dt$>$; 4 = f$</$f$>$AND df/dt$>$; 5 = f$</$f$>$ OR df/dt$<$; 6 = f$</$f$>$AND df/dt$<$]	-	1	Read	Volatile	Operation mode for frequency protection
	Voltage limit	75S2	MMI,RST	Actual setting	0.30...0.90	x Un	0.30	Read	Volatile	Undervoltage limit for blocking
	Start frequency	75S3	MMI,RST	Actual setting	25.00...75.00	Hz	48.70	Read	Volatile	Start value for U/O frequency protection
	Operate time 1	75S4	MMI,RST	Actual setting	0.10...300.00	s	20.00	Read	Volatile	Operate time for U/O frequency protection
	Start df/dt	75S5	MMI,RST	Actual setting	0.2...10.0	Hz/s	10.0	Read	Volatile	Start value for frequency rate of change prot.
	Operate time 2	75S6	MMI,RST	Actual setting	0.12...300.00	s	20.00	Read	Volatile	Timer for df/dt prot. or U/O frequency prot.
	Operation mode	75S41	MMI,RST	Setting group1	0..6[0 = Not in use; 1 = f$</$f$>$ 1 timer; 2 = f$</$f$>$ 2 timers; 3 = f$</$f$>$ OR df/dt$>$; 4 = f$</$f$>$AND df/dt$>$; 5 = f$</$f$>$ OR df/dt$<$; 6 = f$</$f$>$AND df/dt$<$]	-	1	Rd/Wr	Retain	Operation mode for frequency protection
	Voltage limit	75S42	MMI,RST	Setting group1	0.30...0.90	x Un	0.30	Rd/Wr	Retain	Undervoltage limit for blocking
	Start frequency	75S43	MMI,RST	Setting group1	25.00...75.00	Hz	48.70	Rd/Wr	Retain	Start value for U/O frequency protection
	Operate time 1	75S44	MMI,RST	Setting group1	0.10...300.00	s	20.00	Rd/Wr	Retain	Operate time for U/O frequency protection
	Start df/dt	75S45	MMI,RST	Setting group1	0.2...10.0	Hz/s	10.0	Rd/Wr	Retain	Start value for frequency rate of change prot.
	Operate time 2	75S46	MMI,RST	Setting group1	0.12...300.00	s	20.00	Rd/Wr	Retain	Timer for df/dt prot. or U/O frequency prot.
	Operation mode	75S71	MMI,RST	Setting group2	0..6[0 = Not in use; 1 = f$</$f$>$ 1 timer; 2 = f$</$f$>$ 2 timers; 3 = f$</$f$>$ OR df/dt$>$; 4 = f$</$f$>$AND df/dt$>$; 5 = f$</$f$>$ OR df/dt$<$; 6 = f$</$f$>$AND df/dt$<$]	-	1	Rd/Wr	Retain	Operation mode for frequency protection
	Voltage limit	75S72	MMI,RST	Setting group2	0.30...0.90	x Un	0.30	Rd/Wr	Retain	Undervoltage limit for blocking
	Start frequency	75S73	MMI,RST	Setting group2	25.00...75.00	Hz	48.70	Rd/Wr	Retain	Start value for U/O frequency protection
	Operate time 1	75S74	MMI,RST	Setting group2	0.10...300.00	s	20.00	Rd/Wr	Retain	Operate time for U/O frequency protection
	Start df/dt	75S75	MMI,RST	Setting group2	0.2...10.0	Hz/s	10.0	Rd/Wr	Retain	Start value for frequency rate of change prot.
	Operate time 2	75S76	MMI,RST	Setting group2	0.12...300.00	s	20.00	Rd/Wr	Retain	Timer for df/dt prot. or U/O frequency prot.

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Group selection	75V1	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	75V2	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	75V3	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signals
	Trip signal	75V4	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP outputs
	Trip pulse	75V5	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	Reset registers	75V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START1	75V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START1
	Test TRIP1	75V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP1
	Test START2	75V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START2
	Test TRIP2	75V34	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP2
	Event mask 1	75V101	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E13)
	Event mask 2	75V103	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E13)
	Event mask 3	75V105	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E13)
	Event mask 4	75V107	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E13)
	Frequency	75I1	MMI,RST	Input data	20.00...80.00	Hz	0.0	Read	Volatile	System frequency
	Rate of change	75I2	MMI,RST	Input data	-15.0...+15.0	Hz/s	0.0	Read	Volatile	Freq. rate of change
	Voltage U	75I3	MMI,RST	Input data	0.0...2.0	x Un	0.0	Read	Volatile	Voltage U
	Input BS1	75I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	75I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	75I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	75I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	75I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of Freq1St4
	Output START1	75O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal 1
	Output TRIP1	75O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal 1
	Output START2	75O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal 2
	Output TRIP2	75O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal 2
	Date	75V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	75V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	75V203	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	75V204	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	75V205	MMI,RST	Recorded data1	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	75V206	MMI,RST	Recorded data1	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	75V207	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	75V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	75V209	MMI,RST	Recorded data1	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	75V210	MMI,RST	Recorded data1	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	75V211	MMI,RST	Recorded data1	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	75V212	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	75V213	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	75V214	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	75V215	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	75V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	75V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	75V303	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	75V304	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	75V305	MMI,RST	Recorded data2	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	75V306	MMI,RST	Recorded data2	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	75V307	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	75V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Frequency	75V309	MMI,RST	Recorded data2	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	75V310	MMI,RST	Recorded data2	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	75V311	MMI,RST	Recorded data2	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	75V312	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	75V313	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	75V314	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	75V315	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	75V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	75V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	75V403	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	75V404	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	75V405	MMI,RST	Recorded data3	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	75V406	MMI,RST	Recorded data3	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	75V407	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	75V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	75V409	MMI,RST	Recorded data3	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	75V410	MMI,RST	Recorded data3	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	75V411	MMI,RST	Recorded data3	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	75V412	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	75V413	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	75V414	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	75V415	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
100076 / Rev G Freq1St5										
	Frequency	76I1	MMI,RST	Input data	20.00...80.00	Hz	0.0	Read	Volatile	System frequency
	Rate of change	76I2	MMI,RST	Input data	-15.0...+15.0	Hz/s	0.0	Read	Volatile	Freq. rate of change
	Voltage U	76I3	MMI,RST	Input data	0.0...2.0	x Un	0.0	Read	Volatile	Voltage U
	Input BS1	76I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	76I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	76I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	76I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	76I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of Freq1St5
	Output START1	76O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal 1
	Output TRIP1	76O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal 1
	Output START2	76O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal 2
	Output TRIP2	76O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal 2
	Date	76V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	76V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	76V203	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	76V204	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	76V205	MMI,RST	Recorded data1	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	76V206	MMI,RST	Recorded data1	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	76V207	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	76V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	76V209	MMI,RST	Recorded data1	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	76V210	MMI,RST	Recorded data1	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	76V211	MMI,RST	Recorded data1	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	76V212	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	76V213	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	76V214	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Active group	76V215	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	76V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	76V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	76V303	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	76V304	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	76V305	MMI,RST	Recorded data2	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	76V306	MMI,RST	Recorded data2	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	76V307	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	76V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	76V309	MMI,RST	Recorded data2	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	76V310	MMI,RST	Recorded data2	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	76V311	MMI,RST	Recorded data2	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	76V312	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	76V313	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	76V314	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	76V315	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	76V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	76V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Start1	76V403	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START1
	Start2	76V404	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of START2
	Duration1	76V405	MMI,RST	Recorded data3	0...100	%	0.0	Read	Retain	Duration of start situation
	Duration2	76V406	MMI,RST	Recorded data3	0...100	%	0.0	Read	Retain	Duration of start situation
	Trip1	76V407	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP1
	Trip2	76V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIP2
	Frequency	76V409	MMI,RST	Recorded data3	20.00...80.00	Hz	0.0	Read	Retain	Meas. system frequency
	Rate of change	76V410	MMI,RST	Recorded data3	-15.0...+15.0	Hz/s	0.0	Read	Retain	Freq. rate of change
	Voltage U	76V411	MMI,RST	Recorded data3	0.0...2.0	x Un	0.0	Read	Retain	Meas. voltage
	BS1	76V412	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1
	BS2	76V413	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2
	TRIGG	76V414	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of TRIGG
	Active group	76V415	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Operation mode	76S1	MMI,RST	Actual setting	0..6[0 = Not in use; 1 = f</f> 1 timer; 2 = f</f> 2 timers; 3 = f</f> OR df/dt>; 4 = f</f>AND df/dt>; 5 = f</f> OR df/dt<; 6 = f</f>AND df/dt<]	-	1	Read	Volatile	Operation mode for frequency protection
	Voltage limit	76S2	MMI,RST	Actual setting	0.30...0.90	x Un	0.30	Read	Volatile	Undervoltage limit for blocking
	Start frequency	76S3	MMI,RST	Actual setting	25.00...75.00	Hz	48.70	Read	Volatile	Start value for U/O frequency protection
	Operate time 1	76S4	MMI,RST	Actual setting	0.10...300.00	s	20.00	Read	Volatile	Operate time for U/O frequency protection
	Start df/dt	76S5	MMI,RST	Actual setting	0.2...10.0	Hz/s	10.0	Read	Volatile	Start value for frequency rate of change prot.
	Operate time 2	76S6	MMI,RST	Actual setting	0.12...300.00	s	20.00	Read	Volatile	Timer for df/dt prot. or U/O frequency prot.
	Operation mode	76S41	MMI,RST	Setting group1	0..6[0 = Not in use; 1 = f</f> 1 timer; 2 = f</f> 2 timers; 3 = f</f> OR df/dt>; 4 = f</f>AND df/dt>; 5 = f</f> OR df/dt<; 6 = f</f>AND df/dt<]	-	1	Rd/Wr	Retain	Operation mode for frequency protection
	Voltage limit	76S42	MMI,RST	Setting group1	0.30...0.90	x Un	0.30	Rd/Wr	Retain	Undervoltage limit for blocking
	Start frequency	76S43	MMI,RST	Setting group1	25.00...75.00	Hz	48.70	Rd/Wr	Retain	Start value for U/O frequency protection
	Operate time 1	76S44	MMI,RST	Setting group1	0.10...300.00	s	20.00	Rd/Wr	Retain	Operate time for U/O frequency protection
	Start df/dt	76S45	MMI,RST	Setting group1	0.2...10.0	Hz/s	10.0	Rd/Wr	Retain	Start value for frequency rate of change prot.
	Operate time 2	76S46	MMI,RST	Setting group1	0.12...300.00	s	20.00	Rd/Wr	Retain	Timer for df/dt prot. or U/O frequency prot.

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Operation mode	76S71	MMI,RST	Setting group2	0..6[0 = Not in use; 1 = f</f> 1 timer; 2 = f</f> 2 timers; 3 = f</f> OR df/dt>; 4 = f</f>AND df/dt>; 5 = f</f> OR df/dt<; 6 = f</f>AND df/dt<]	-	1	Rd/Wr	Retain	Operation mode for frequency protection
	Voltage limit	76S72	MMI,RST	Setting group2	0.30...0.90	x Un	0.30	Rd/Wr	Retain	Undervoltage limit for blocking
	Start frequency	76S73	MMI,RST	Setting group2	25.00...75.00	Hz	48.70	Rd/Wr	Retain	Start value for U/O frequency protection
	Operate time 1	76S74	MMI,RST	Setting group2	0.10...300.00	s	20.00	Rd/Wr	Retain	Operate time for U/O frequency protection
	Start df/dt	76S75	MMI,RST	Setting group2	0.2...10.0	Hz/s	10.0	Rd/Wr	Retain	Start value for frequency rate of change prot.
	Operate time 2	76S76	MMI,RST	Setting group2	0.12...300.00	s	20.00	Rd/Wr	Retain	Timer for df/dt prot. or U/O frequency prot.
	Group selection	76V1	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	76V2	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	76V3	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signals
	Trip signal	76V4	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP outputs
	Trip pulse	76V5	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	Reset registers	76V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START1	76V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START1
	Test TRIP1	76V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP1
	Test START2	76V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START2
	Test TRIP2	76V34	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP2
	Event mask 1	76V101	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E13)
	Event mask 2	76V103	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E13)
	Event mask 3	76V105	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E13)
	Event mask 4	76V107	MMI,RST	Control setting	0...16383	-	255	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E13)
100080 / Rev D AR5Func										
	AR1 init mode	86S2	MMI,RST	F. Trip setting	0..1[0 = No operation; 1 = Init Final Trip]	-	0	Rd/Wr	Retain	AR1 initiation mode for final trip
	AR2 init mode	86S3	MMI,RST	F. Trip setting	0..1[0 = No operation; 1 = Init Final Trip]	-	0	Rd/Wr	Retain	AR2 initiation mode for final trip
	AR3 init mode	86S4	MMI,RST	F. Trip setting	0..1[0 = No operation; 1 = Init Final Trip]	-	0	Rd/Wr	Retain	AR3 initiation mode for final trip
	AR4 init mode	86S5	MMI,RST	F. Trip setting	0..1[0 = No operation; 1 = Init Final Trip]	-	0	Rd/Wr	Retain	AR4 initiation mode for final trip
	AR1 trip delay	86S6	MMI,RST	F. Trip setting	0.00...5.00	s	0.00	Rd/Wr	Retain	Final trip delay, when initiated by AR1
	AR2 trip delay	86S7	MMI,RST	F. Trip setting	0.00...5.00	s	0.00	Rd/Wr	Retain	Final trip delay, when initiated by AR2
	AR3 trip delay	86S8	MMI,RST	F. Trip setting	0.00...5.00	s	0.00	Rd/Wr	Retain	Final trip delay, when initiated by AR3
	AR4 trip delay	86S9	MMI,RST	F. Trip setting	0.00...5.00	s	0.00	Rd/Wr	Retain	Final trip delay, when initiated by AR4
	Event mask 1	86V101	MMI,RST	F. Trip control	0...31	-	1	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E4)
	Event mask 2	86V103	MMI,RST	F. Trip control	0...31	-	1	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E4)
	Event mask 3	86V105	MMI,RST	F. Trip control	0...31	-	1	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E4)
	Event mask 4	86V107	MMI,RST	F. Trip control	0...31	-	1	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E4)
100080 / Rev D AR5Func										
	Initiation mode	81S1	MMI,RST	Shot1 setting	0..1[0 = Trip; 1 = Start]	-	0	Rd/Wr	Retain	Shot 1 initiation mode
	AR1 oper. mode	81S2	MMI,RST	Shot1 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR1 operation mode for shot 1
	AR2 oper. mode	81S3	MMI,RST	Shot1 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR2 operation mode for shot 1
	AR3 oper. mode	81S4	MMI,RST	Shot1 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR3 operation mode for shot 1
	AR4 oper. mode	81S5	MMI,RST	Shot1 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR4 operation mode for shot 1
	AR1 start delay	81S6	MMI,RST	Shot1 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR1 signal
	AR2 start delay	81S7	MMI,RST	Shot1 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR2 signal
	AR3 start delay	81S8	MMI,RST	Shot1 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR3 signal
	AR4 start delay	81S9	MMI,RST	Shot1 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR4 signal
	Dead time	81S10	MMI,RST	Shot1 setting	0.20...300.00	s	5.00	Rd/Wr	Retain	Dead time for AR shot 1
	Synchrocheck	81S11	MMI,RST	Shot1 setting	0..1[0 = Not in use; 1 = ARSYNC in use]	-	0	Rd/Wr	Retain	Use of synchrocheck for AR shot 1
	Discr. time td	81S12	MMI,RST	Shot1 setting	0.00...30.00	s	0.00	Rd/Wr	Retain	Discriminating time for AR shot 1
	Event mask 1	81V101	MMI,RST	Shot1 control	0...127	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E6)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 2	81V103	MMI,RST	Shot1 control	0...127	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E6)
	Event mask 3	81V105	MMI,RST	Shot1 control	0...127	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E6)
	Event mask 4	81V107	MMI,RST	Shot1 control	0...127	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E6)
	Num shots AR1	81V2	MMI,RST	Shot1 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR1
	Num shots AR2	81V3	MMI,RST	Shot1 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR2
	Num shots AR3	81V4	MMI,RST	Shot1 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR3
	Num shots AR4	81V5	MMI,RST	Shot1 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR4
	Successful AR1	81V6	MMI,RST	Shot1 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR1
	Successful AR2	81V7	MMI,RST	Shot1 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR2
	Successful AR3	81V8	MMI,RST	Shot1 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR3
	Successful AR4	81V9	MMI,RST	Shot1 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR4
100080 / Rev D AR5Func										
	Reclaim time tr	80S1	MMI,RST	General setting	0.20...300.00	s	10.00	Rd/Wr	Retain	Reclaim time of AR-function
	AR operations	80S3	MMI,RST	General setting	0..2[0 = OFF; 1 = ON; 2 = ON input select]	-	0	Rd/Wr	Retain	Operation mode of AR-function
	AR oper. status	80S4	MMI,RST	General setting	0..1[0 = OFF; 1 = ON]	-	0	Read	Volatile	AR-function currently in use or not
	Lock-out mode	80S5	MMI,RST	General setting	0..1[0 = Automatic; 1 = Manual]	-	0	Rd/Wr	Retain	Lock-out reset mode: Automatic, Manual
	Shot alarm level	80S6	MMI,RST	General setting	0...4	-	0	Rd/Wr	Retain	Number of shots required in AR sequence to activate the SHOT_ALARM output
	Man. close inh.	80S7	MMI,RST	General setting	0..2[0 = Shots and FT; 1 = Shots only; 2 = Nothing]	-	0	Rd/Wr	Retain	Function at manual CB closing
	Shots enabled	80S9	MMI,RST	General setting	0..1[0 = All Shots; 1 = Next Shot only]	-	0	Rd/Wr	Retain	Enable all shots or only the next one
	Frequent op. cnt	80S17	MMI,RST	General setting	0...100	-	0	Rd/Wr	Retain	Frequent Operation Counter: current value in shots
	Freq. op. limit	80S18	MMI,RST	General setting	0..100(0=Frequent Operation Counter disabled; 1...100=Number of shots)	-	0	Rd/Wr	Retain	Lock-out limit of the Frequent Operation Counter in shots
	Freq. op. leak	80S19	MMI,RST	General setting	1...50	-	1	Rd/Wr	Retain	Leakage of the Frequent Operation Counter in shots per half an hour
	At stress cnt 0	80S20	MMI,RST	General setting	0..1[0 = Alarm only; 1 = Inh. closing]	-	0	Rd/Wr	Retain	Operation of CB maintenance monitor when 0
	Manual stress	80S21	MMI,RST	General setting	0...50	-	0	Rd/Wr	Retain	Stress factor, when CB opened manually
	AR1 stress	80S22	MMI,RST	General setting	0...50	-	0	Rd/Wr	Retain	Stress factor, when CB opened via AR1
	AR2 stress	80S23	MMI,RST	General setting	0...50	-	0	Rd/Wr	Retain	Stress factor, when CB opened via AR2
	AR3 stress	80S24	MMI,RST	General setting	0...50	-	0	Rd/Wr	Retain	Stress factor, when CB opened via AR3
	AR4 stress	80S25	MMI,RST	General setting	0...50	-	0	Rd/Wr	Retain	Stress factor, when CB opened via AR4
	Stress pre-alarm	80S26	MMI,RST	General setting	0...50	-	0	Rd/Wr	Retain	Pre-alarm level of CB maintenance monitor
	Stress counter	80S27	MMI,RST	General setting	0...999	-	999	Rd/Wr	Retain	Value of CB maintenance monitor
	Close pulse	80S28	MMI,RST	General setting	0.10...7.00	s	0.20	Rd/Wr	Retain	Length of closing pulse
	Open pulse	80S29	MMI,RST	General setting	0.10...7.00	s	0.20	Rd/Wr	Retain	Length of opening pulse
	AR in progress	80V1	MMI,RST	Control setting	0..5[0 = Not in progress; 1 = Shot 1; 2 = Shot 2; 3 = Shot 3; 4 = Shot 4; 5 = Shot 5]	-	0	Read	Volatile	AR5Func status
	Shot Pointer	80V2	MMI,RST	Control setting	1...7	-	1	Read	Volatile	Current value of Shot Pointer
	CB position	80V3	MMI,RST	Control setting	0..2[0 = Unknown; 1 = Closed; 2 = Open]	-	0	Read	Volatile	Circuit Breaker status as seen by AR5Func
	Open select	80V6	Internal	Control setting	0..1[0 = 0; 1 = Open select]	-	0	Write	Volatile	Open operation selection of the secured control
	Close select	80V7	Internal	Control setting	0..1[0 = 0; 1 = Close select]	-	0	Write	Volatile	Close operation selection of the secured control
	Deselect	80V10	Internal	Control setting	0..1[0 = 0; 1 = Deselect]	-	0	Write	Volatile	Deselection of the secured control
	Execute	80V11	Internal	Control setting	0..1[0 = 0; 1 = Execute]	-	0	Write	Volatile	Execution of the secured control
	Reset registers	80V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Parameter for register reset Note: Same effect as RESET input signal of AR5Func
	CB pos. inputs	80V90	Internal	Control setting	0..1[0 = 0; 1 = Disconnect]	-	0	Write	Volatile	Enter test mode
	Event mask 1A	80V101	MMI,RST	Control setting	0...4294967295	-	4231790787	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E32)
	Event mask 1B	80V102	MMI,RST	Control setting	0...16383	-	127	Rd/Wr	Retain	Event mask 1 for event transmission (E32 ... E45)
	Event mask 2A	80V103	MMI,RST	Control setting	0...4294967295	-	4231790787	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E32)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 2B	80V104	MMI,RST	Control setting	0...16383	-	127	Rd/Wr	Retain	Event mask 2 for event transmission (E32 ... E45)
	Event mask 3A	80V105	MMI,RST	Control setting	0...4294967295	-	4231790787	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E32)
	Event mask 3B	80V106	MMI,RST	Control setting	0...16383	-	127	Rd/Wr	Retain	Event mask 3 for event transmission (E32 ... E45)
	Event mask 4A	80V107	MMI,RST	Control setting	0...4294967295	-	4231790787	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E32)
	Event mask 4B	80V108	MMI,RST	Control setting	0...16383	-	127	Rd/Wr	Retain	Event mask 4 for event transmission (E32 ... E45)
	In AR1	80I1	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal AR1
	In AR2	80I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal AR2
	In AR3	80I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal AR3
	In AR4	80I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal AR4
	In ARINH	80I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal ARINH
	In ARSYNC	80I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal ARSYNC
	In CBOPEN	80I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal CBOPEN
	In CBCLOSE	80I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal CBCLOSE
	In CINH	80I9	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal CINH
	In ON	80I10	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal ON
	In RESET	80I11	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal RESET
	In LOCKOUT_RES	80I12	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal LOCKOUT_RES
	In SHOT_INC	80I13	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input signal SHOT_INC
	Out OPEN	80O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of OPEN signal
	Out CLOSE	80O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CLOSE signal
	Out SHOT1	80O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of AR shot 1 due signal SHOT1
	Out SHOT2	80O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of AR shot 2 due signal SHOT2
	Out SHOT3	80O5	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of AR shot 3 due signal SHOT3
	Out SHOT4	80O6	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of AR shot 4 due signal SHOT4
	Out SHOT5	80O7	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of AR shot 5 due signal SHOT5
	Out AR1TRIP	80O8	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of DEF.TRIP alarm signal AR1TRIP
	Out AR2TRIP	80O9	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of DEF.TRIP alarm signal AR2TRIP
	Out AR3TRIP	80O10	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of DEF.TRIP alarm signal AR3TRIP
	Out AR4TRIP	80O11	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of DEF.TRIP alarm signal AR4TRIP
	Out CBFAIL	80O12	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFAIL signal
	Out DEFTRIP	80O13	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of DEFTRIP signal
	Out LOCKOUT	80O14	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of LOCKOUT signal
	Out TRDUE	80O15	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of TRDUE signal
	Out TDDUE	80O16	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of TDDUE signal
	Out ACTIVE	80O17	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of ACTIVE signal
	Out SHOT_ALARM	80O18	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of SHOT_ALARM signal
	Num DEF.TRIP AR1	80V22	MMI,RST	General control	0...255	-	0	Rd/Wr	Retain	Number of DEF.TRIP alarms initiated by AR1
	Num DEF.TRIP AR2	80V23	MMI,RST	General control	0...255	-	0	Rd/Wr	Retain	Number of DEF.TRIP alarms initiated by AR2
	Num DEF.TRIP AR3	80V24	MMI,RST	General control	0...255	-	0	Rd/Wr	Retain	Number of DEF.TRIP alarms initiated by AR3
	Num DEF.TRIP AR4	80V25	MMI,RST	General control	0...255	-	0	Rd/Wr	Retain	Number of DEF.TRIP alarms initiated by AR4
	Num shots last	80V31	MMI,RST	General control	0..11[0 = Not registered; 1 = 1 Shot; 2 = 2 Shots; 3 = 3 Shots; 4 = 4 Shots; 5 = 5 Shots; 6 = Final Trip only; 7 = 1 Shot +FT; 8 = 2 Shots +FT; 9 = 3 Shots +FT; 10 = 4 Shots +FT; 11 = 5 Shots +FT]	-	0	Rd/Wr	Retain	Shots / last AR sequence
	Num shots 2nd	80V32	MMI,RST	General control	0..11[0 = Not registered; 1 = 1 Shot; 2 = 2 Shots; 3 = 3 Shots; 4 = 4 Shots; 5 = 5 Shots; 6 = Final Trip only; 7 = 1 Shot +FT; 8 = 2 Shots +FT; 9 = 3 Shots +FT; 10 = 4 Shots +FT; 11 = 5 Shots +FT]	-	0	Rd/Wr	Retain	Shots / second last AR sequence

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Num shots 3rd	80V33	MMI,RST	General control	0..11[0 = Not registered; 1 = 1 Shot; 2 = 2 Shots; 3 = 3 Shots; 4 = 4 Shots; 5 = 5 Shots; 6 = Final Trip only; 7 = 1 Shot +FT; 8 = 2 Shots +FT; 9 = 3 Shots +FT; 10 = 4 Shots +FT; 11 = 5 Shots +FT]	-	0	Rd/Wr	Retain	Shots / third last AR sequence
	Num shots 4th	80V34	MMI,RST	General control	0..11[0 = Not registered; 1 = 1 Shot; 2 = 2 Shots; 3 = 3 Shots; 4 = 4 Shots; 5 = 5 Shots; 6 = Final Trip only; 7 = 1 Shot +FT; 8 = 2 Shots +FT; 9 = 3 Shots +FT; 10 = 4 Shots +FT; 11 = 5 Shots +FT]	-	0	Rd/Wr	Retain	Shots / fourth last AR sequence
	Num shots 5th	80V35	MMI,RST	General control	0..11[0 = Not registered; 1 = 1 Shot; 2 = 2 Shots; 3 = 3 Shots; 4 = 4 Shots; 5 = 5 Shots; 6 = Final Trip only; 7 = 1 Shot +FT; 8 = 2 Shots +FT; 9 = 3 Shots +FT; 10 = 4 Shots +FT; 11 = 5 Shots +FT]	-	0	Rd/Wr	Retain	Shots / fifth last AR sequence
100080 / Rev D AR5Func										
	Num shots AR1	83V2	MMI,RST	Shot3 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR1
	Num shots AR2	83V3	MMI,RST	Shot3 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR2
	Num shots AR3	83V4	MMI,RST	Shot3 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR3
	Num shots AR4	83V5	MMI,RST	Shot3 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR4
	Successful AR1	83V6	MMI,RST	Shot3 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR1
	Successful AR2	83V7	MMI,RST	Shot3 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR2
	Successful AR3	83V8	MMI,RST	Shot3 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR3
	Successful AR4	83V9	MMI,RST	Shot3 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR4
	Initiation mode	83S1	MMI,RST	Shot3 setting	0..1[0 = Trip; 1 = Start]	-	0	Rd/Wr	Retain	Shot 3 initiation mode
	AR1 oper. mode	83S2	MMI,RST	Shot3 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR1 operation mode for shot 3
	AR2 oper. mode	83S3	MMI,RST	Shot3 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR2 operation mode for shot 3
	AR3 oper. mode	83S4	MMI,RST	Shot3 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR3 operation mode for shot 3
	AR4 oper. mode	83S5	MMI,RST	Shot3 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR4 operation mode for shot 3
	AR1 start delay	83S6	MMI,RST	Shot3 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR1 signal
	AR2 start delay	83S7	MMI,RST	Shot3 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR2 signal
	AR3 start delay	83S8	MMI,RST	Shot3 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR3 signal
	AR4 start delay	83S9	MMI,RST	Shot3 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR4 signal
	Dead time	83S10	MMI,RST	Shot3 setting	0.20...300.00	s	5.00	Rd/Wr	Retain	Dead time for AR shot 3
	Synchrocheck	83S11	MMI,RST	Shot3 setting	0..1[0 = Not in use; 1 = ARSYNC in use]	-	0	Rd/Wr	Retain	Use of synchrocheck for AR shot 3
	Discr. time td	83S12	MMI,RST	Shot3 setting	0.00...30.00	s	0.00	Rd/Wr	Retain	Discriminating time for AR shot 3
	Event mask 1	83V101	MMI,RST	Shot3 control	0...127	-	2	Rd/Wr	Retain	Event mask for event transmission
	Event mask 2	83V103	MMI,RST	Shot3 control	0...127	-	2	Rd/Wr	Retain	Event mask for event transmission
	Event mask 3	83V105	MMI,RST	Shot3 control	0...127	-	2	Rd/Wr	Retain	Event mask for event transmission
	Event mask 4	83V107	MMI,RST	Shot3 control	0...127	-	2	Rd/Wr	Retain	Event mask for event transmission
100080 / Rev D AR5Func										
	Initiation mode	85S1	MMI,RST	Shot5 setting	0..1[0 = Trip; 1 = Start]	-	0	Rd/Wr	Retain	Shot 5 initiation mode
	AR1 oper. mode	85S2	MMI,RST	Shot5 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR1 operation mode for shot 5
	AR2 oper. mode	85S3	MMI,RST	Shot5 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR2 operation mode for shot 5
	AR3 oper. mode	85S4	MMI,RST	Shot5 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR3 operation mode for shot 5
	AR4 oper. mode	85S5	MMI,RST	Shot5 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR4 operation mode for shot 5
	AR1 start delay	85S6	MMI,RST	Shot5 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR1 signal
	AR2 start delay	85S7	MMI,RST	Shot5 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR2 signal
	AR3 start delay	85S8	MMI,RST	Shot5 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR3 signal
	AR4 start delay	85S9	MMI,RST	Shot5 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR4 signal
	Dead time	85S10	MMI,RST	Shot5 setting	0.20...300.00	s	5.00	Rd/Wr	Retain	Dead time for AR shot 5
	Synchrocheck	85S11	MMI,RST	Shot5 setting	0..1[0 = Not in use; 1 = ARSYNC in use]	-	0	Rd/Wr	Retain	Use of synchrocheck for AR shot 5

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Discr. time td	85S12	MMI,RST	Shot5 setting	0.00...30.00	s	0.00	Rd/Wr	Retain	Discriminating time for AR shot 5
	Event mask 1	85V101	MMI,RST	Shot5 control	0...127	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E6)
	Event mask 2	85V103	MMI,RST	Shot5 control	0...127	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E6)
	Event mask 3	85V105	MMI,RST	Shot5 control	0...127	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E6)
	Event mask 4	85V107	MMI,RST	Shot5 control	0...127	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E6)
	Num shots AR1	85V2	MMI,RST	Shot5 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR1
	Num shots AR2	85V3	MMI,RST	Shot5 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR2
	Num shots AR3	85V4	MMI,RST	Shot5 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR3
	Num shots AR4	85V5	MMI,RST	Shot5 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR4
	Successful AR1	85V6	MMI,RST	Shot5 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR1
	Successful AR2	85V7	MMI,RST	Shot5 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR2
	Successful AR3	85V8	MMI,RST	Shot5 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR3
	Successful AR4	85V9	MMI,RST	Shot5 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR4
100080 / Rev D AR5Func										
	Initiation mode	82S1	MMI,RST	Shot2 setting	0..1[0 = Trip; 1 = Start]	-	0	Rd/Wr	Retain	Shot 2 initiation mode
	AR1 oper. mode	82S2	MMI,RST	Shot2 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR1 operation mode for shot 2
	AR2 oper. mode	82S3	MMI,RST	Shot2 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR2 operation mode for shot 2
	AR3 oper. mode	82S4	MMI,RST	Shot2 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR3 operation mode for shot 2
	AR4 oper. mode	82S5	MMI,RST	Shot2 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR4 operation mode for shot 2
	AR1 start delay	82S6	MMI,RST	Shot2 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR1 signal
	AR2 start delay	82S7	MMI,RST	Shot2 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR2 signal
	AR3 start delay	82S8	MMI,RST	Shot2 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR3 signal
	AR4 start delay	82S9	MMI,RST	Shot2 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR4 signal
	Dead time	82S10	MMI,RST	Shot2 setting	0.20...300.00	s	5.00	Rd/Wr	Retain	Dead time for AR shot 2
	Synchrocheck	82S11	MMI,RST	Shot2 setting	0..1[0 = Not in use; 1 = ARSYNC in use]	-	0	Rd/Wr	Retain	Use of synchrocheck for AR shot 2
	Discr. time td	82S12	MMI,RST	Shot2 setting	0.00...30.00	s	0.00	Rd/Wr	Retain	Discriminating time for AR shot 2
	Event mask 1	82V101	MMI,RST	Shot2 control	0...127	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E6)
	Event mask 2	82V103	MMI,RST	Shot2 control	0...127	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E6)
	Event mask 3	82V105	MMI,RST	Shot2 control	0...127	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E6)
	Event mask 4	82V107	MMI,RST	Shot2 control	0...127	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E6)
	Num shots AR1	82V2	MMI,RST	Shot2 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR1
	Num shots AR2	82V3	MMI,RST	Shot2 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR2
	Num shots AR3	82V4	MMI,RST	Shot2 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR3
	Num shots AR4	82V5	MMI,RST	Shot2 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR4
	Successful AR1	82V6	MMI,RST	Shot2 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR1
	Successful AR2	82V7	MMI,RST	Shot2 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR2
	Successful AR3	82V8	MMI,RST	Shot2 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR3
	Successful AR4	82V9	MMI,RST	Shot2 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR4
100080 / Rev D AR5Func										
	Num shots AR1	84V2	MMI,RST	Shot4 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR1
	Num shots AR2	84V3	MMI,RST	Shot4 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR2
	Num shots AR3	84V4	MMI,RST	Shot4 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR3
	Num shots AR4	84V5	MMI,RST	Shot4 control	0...255	-	0	Rd/Wr	Retain	Number of shots initiated by AR4
	Successful AR1	84V6	MMI,RST	Shot4 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR1
	Successful AR2	84V7	MMI,RST	Shot4 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR2
	Successful AR3	84V8	MMI,RST	Shot4 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR3
	Successful AR4	84V9	MMI,RST	Shot4 control	0...255	-	0	Rd/Wr	Retain	Number of successful shots initiated by AR4
	Initiation mode	84S1	MMI,RST	Shot4 setting	0..1[0 = Trip; 1 = Start]	-	0	Rd/Wr	Retain	Shot 4 initiation mode
	AR1 oper. mode	84S2	MMI,RST	Shot4 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR1 operation mode for shot 4

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	AR2 oper. mode	84S3	MMI,RST	Shot4 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR2 operation mode for shot 4
	AR3 oper. mode	84S4	MMI,RST	Shot4 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR3 operation mode for shot 4
	AR4 oper. mode	84S5	MMI,RST	Shot4 setting	0..2[0 = No operation; 1 = Init Shot; 2 = Block Shot]	-	0	Rd/Wr	Retain	AR4 operation mode for shot 4
	AR1 start delay	84S6	MMI,RST	Shot4 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR1 signal
	AR2 start delay	84S7	MMI,RST	Shot4 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR2 signal
	AR3 start delay	84S8	MMI,RST	Shot4 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR3 signal
	AR4 start delay	84S9	MMI,RST	Shot4 setting	0.00...10.00	s	0.00	Rd/Wr	Retain	Start delay of AR4 signal
	Dead time	84S10	MMI,RST	Shot4 setting	0.20...300.00	s	5.00	Rd/Wr	Retain	Dead time for AR shot 4
	Synchrocheck	84S11	MMI,RST	Shot4 setting	0..1[0 = Not in use; 1 = ARSYNC in use]	-	0	Rd/Wr	Retain	Use of synchrocheck for AR shot 4
	Discr. time td	84S12	MMI,RST	Shot4 setting	0.00...30.00	s	0.00	Rd/Wr	Retain	Discriminating time for AR shot 4
	Event mask 1	84V101	MMI,RST	Shot4 control	0...127	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E6)
	Event mask 2	84V103	MMI,RST	Shot4 control	0...127	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E6)
	Event mask 3	84V105	MMI,RST	Shot4 control	0...127	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E6)
	Event mask 4	84V107	MMI,RST	Shot4 control	0...127	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E6)
100090 / Rev D NEF1Inst										
	Operation mode	90S1	MMI,RST	Actual setting	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Read	Volatile	Selection of operation mode
	Start current	90S2	MMI,RST	Actual setting	0.10...12.00	x In	0.10	Read	Volatile	Start current
	Operate time	90S3	MMI,RST	Actual setting	0.05...300.00	s	0.05	Read	Volatile	Operate time
	Operation mode	90S41	MMI,RST	Setting group1	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	90S42	MMI,RST	Setting group1	0.10...12.00	x In	0.10	Rd/Wr	Retain	Start current
	Operate time	90S43	MMI,RST	Setting group1	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time
	Operation mode	90S71	MMI,RST	Setting group2	0..2[0 = Not in use; 1 = Definite time; 2 = Instantaneous]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current	90S72	MMI,RST	Setting group2	0.10...12.00	x In	0.10	Rd/Wr	Retain	Start current
	Operate time	90S73	MMI,RST	Setting group2	0.05...300.00	s	0.05	Rd/Wr	Retain	Operate time
	Measuring mode	90V1	MMI,RST	Control setting	0..1[0 = Peak-to-peak; 1 = Fundam.freq.]	-	1	Rd/Wr	Retain	Selection of measuring mode
	Drop-off time	90V2	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Resetting time of the operate time counter
	Group selection	90V3	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	90V4	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	90V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	90V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	90V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP and CBFP
	CBFP time	90V8	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of CBFP
	Reset registers	90V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	90V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	90V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	90V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Event mask 1	90V101	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	90V103	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	90V105	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	90V107	MMI,RST	Control setting	0...4095	-	63	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
	Current Io	90I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Neutral current Io
	Input BS1	90I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS1
	Input BS2	90I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Block signal BS2
	Input TRIGG	90I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	90I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input BSREG	90I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for blocking the recording function
	Input RESET	90I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting trip signal and registers NEF1Inst
	Output START	90O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	90O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Output CBFP	90O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Date	90V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	90V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	90V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	90V204	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Filtered value of Io
	Io peak	90V205	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of Io
	BS1	90V206	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	90V207	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	90V208	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	90V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	90V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	90V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	90V304	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Filtered value of Io
	Io peak	90V305	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of Io
	BS1	90V306	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	90V307	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	90V308	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	90V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	90V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration	90V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation
	Io mean	90V404	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Filtered value of Io
	Io peak	90V405	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Momentary peak of Io
	BS1	90V406	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 input
	BS2	90V407	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 input
	Active group	90V408	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
100112 / Rev D PSV3St1										
	Pos. seq. volt.	112I1	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Positive phase sequence voltage
	Neg. seq. volt.	112I2	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Negative phase sequence voltage
	Input ROT_DIR	112I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between forward and reverse rotation
	Input BLOCK	112I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input for blocking he function
	Input GROUP	112I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	112I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of PSV3St1
	Output START	112O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	112O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output ERR	112O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of error output signal
	Date	112V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	112V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration U2>	112V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U2> stage
	Duration U1<	112V204	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U1< stage
	Duration U1>	112V205	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U1> stage
	Pos. seq. volt.	112V206	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Positive sequence voltage
	Neg. seq. volt.	112V207	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Negative sequence voltage
	BLOCK	112V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BLOCK input
	Active group	112V209	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	112V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	112V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration U2>	112V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U2> stage
	Duration U1<	112V304	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U1< stage
	Duration U1>	112V305	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U1> stage

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Pos. seq. volt.	112V306	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Positive sequence voltage
	Neg. seq. volt.	112V307	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Negative sequence voltage
	BLOCK	112V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BLOCK input
	Active group	112V309	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	112V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	112V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration U2>	112V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U2> stage
	Duration U1<	112V404	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U1< stage
	Duration U1>	112V405	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U1> stage
	Pos. seq. volt.	112V406	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Positive sequence voltage
	Neg. seq. volt.	112V407	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Negative sequence voltage
	BLOCK	112V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BLOCK input
	Active group	112V409	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Operation mode	112S1	MMI,RST	Actual setting	0..7[0 = Not in use; 1 = U1< & U2> & U1>; 2 = U1< & U2>; 3 = U2> & U1>; 4 = U1< & U1>; 5 = U2>; 6 = U1<; 7 = U1>]	-	1	Read	Volatile	Selection of operation mode
	Start value U2>	112S2	MMI,RST	Actual setting	0.01...1.00	x Un	0.03	Read	Volatile	Start voltage of negative phase sequence overvoltage operation
	Start value U1<	112S3	MMI,RST	Actual setting	0.01...1.20	x Un	0.90	Read	Volatile	Start voltage of positive phase sequence undervoltage operation
	Start value U1>	112S4	MMI,RST	Actual setting	0.80...1.60	x Un	1.loka	Read	Volatile	Start voltage of positive phase sequence overvoltage operation
	Operate time U2>	112S5	MMI,RST	Actual setting	0.04...60.00	s	0.04	Read	Volatile	Operate time of negative phase sequence overvoltage operation
	Operate time U1<	112S6	MMI,RST	Actual setting	0.04...60.00	s	0.04	Read	Volatile	Operate time of positive phase sequence undervoltage operation
	Operate time U1>	112S7	MMI,RST	Actual setting	0.04...60.00	s	0.04	Read	Volatile	Operate time of positive phase sequence overvoltage operation
	Operation mode	112S41	MMI,RST	Setting group1	0..7[0 = Not in use; 1 = U1< & U2> & U1>; 2 = U1< & U2>; 3 = U2> & U1>; 4 = U1< & U1>; 5 = U2>; 6 = U1<; 7 = U1>]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start value U2>	112S42	MMI,RST	Setting group1	0.01...1.00	x Un	0.03	Rd/Wr	Retain	Start voltage of negative phase sequence overvoltage operation
	Start value U1<	112S43	MMI,RST	Setting group1	0.01...1.20	x Un	0.90	Rd/Wr	Retain	Start voltage of positive phase sequence undervoltage operation
	Start value U1>	112S44	MMI,RST	Setting group1	0.80...1.60	x Un	1.loka	Rd/Wr	Retain	Start voltage of positive phase sequence overvoltage operation
	Operate time U2>	112S45	MMI,RST	Setting group1	0.04...60.00	s	0.04	Rd/Wr	Retain	Operate time of negative phase sequence overvoltage operation
	Operate time U1<	112S46	MMI,RST	Setting group1	0.04...60.00	s	0.04	Rd/Wr	Retain	Operate time of positive phase sequence undervoltage operation
	Operate time U1>	112S47	MMI,RST	Setting group1	0.04...60.00	s	0.04	Rd/Wr	Retain	Operate time of positive phase sequence overvoltage operation
	Operation mode	112S71	MMI,RST	Setting group2	0..7[0 = Not in use; 1 = U1< & U2> & U1>; 2 = U1< & U2>; 3 = U2> & U1>; 4 = U1< & U1>; 5 = U2>; 6 = U1<; 7 = U1>]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start value U2>	112S72	MMI,RST	Setting group2	0.01...1.00	x Un	0.03	Rd/Wr	Retain	Start voltage of negative phase sequence overvoltage operation

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Start value U1<	112S73	MMI,RST	Setting group2	0.01...1.20	x Un	0.90	Rd/Wr	Retain	Start voltage of positive phase sequence undervoltage operation
	Start value U1>	112S74	MMI,RST	Setting group2	0.80...1.60	x Un	1.loka	Rd/Wr	Retain	Start voltage of positive phase sequence overvoltage operation
	Operate time U2>	112S75	MMI,RST	Setting group2	0.04...60.00	s	0.04	Rd/Wr	Retain	Operate time of negative phase sequence overvoltage operation
	Operate time U1<	112S76	MMI,RST	Setting group2	0.04...60.00	s	0.04	Rd/Wr	Retain	Operate time of positive phase sequence undervoltage operation
	Operate time U1>	112S77	MMI,RST	Setting group2	0.04...60.00	s	0.04	Rd/Wr	Retain	Operate time of positive phase sequence overvoltage operation
	Group selection	112V1	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	112V2	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Dir. selection	112V3	MMI,RST	Control setting	0..2[0 = Forward; 1 = Reverse; 2 = Input ROT_DIR]	-	0	Rd/Wr	Retain	Selection of rotation direction
	Rotation dir.	112V4	MMI,RST	Control setting	0..1[0 = Forward; 1 = Reverse]	-	0	Read	Volatile	Rotation direction
	Start pulse	112V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	112V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	112V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP
	Intern. blocking	112V8	MMI,RST	Control setting	0..1[0 = Disabled; 1 = Enabled]	-	1	Rd/Wr	Retain	Enabling of internal positive phase sequence undervoltage blocking
	Reset registers	112V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	112V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Retain	Testing of START
	Test TRIP	112V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Retain	Testing of TRIP
	Event mask 1	112V101	MMI,RST	Control setting	0...65535	-	4095	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E15)
	Event mask 2	112V103	MMI,RST	Control setting	0...65535	-	4095	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E15)
	Event mask 3	112V105	MMI,RST	Control setting	0...65535	-	4095	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E15)
	Event mask 4	112V107	MMI,RST	Control setting	0...65535	-	4095	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E15)
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	Operation mode	113S1	MMI,RST	Actual setting	0..7[0 = Not in use; 1 = U1< & U2> & U1>; 2 = U1< & U2>; 3 = U2> & U1>; 4 = U1< & U1>; 5 = U2>; 6 = U1<; 7 = U1>]	-	1	Read	Volatile	Selection of operation mode
	Start value U2>	113S2	MMI,RST	Actual setting	0.01...1.00	x Un	0.03	Read	Volatile	Start voltage of negative phase sequence overvoltage operation
	Start value U1<	113S3	MMI,RST	Actual setting	0.01...1.20	x Un	0.90	Read	Volatile	Start voltage of positive phase sequence undervoltage operation
	Start value U1>	113S4	MMI,RST	Actual setting	0.80...1.60	x Un	1.loka	Read	Volatile	Start voltage of positive phase sequence overvoltage operation
	Operate time U2>	113S5	MMI,RST	Actual setting	0.04...60.00	s	0.04	Read	Volatile	Operate time of negative phase sequence overvoltage operation
	Operate time U1<	113S6	MMI,RST	Actual setting	0.04...60.00	s	0.04	Read	Volatile	Operate time of positive phase sequence undervoltage operation
	Operate time U1>	113S7	MMI,RST	Actual setting	0.04...60.00	s	0.04	Read	Volatile	Operate time of positive phase sequence overvoltage operation
	Operation mode	113S41	MMI,RST	Setting group1	0..7[0 = Not in use; 1 = U1< & U2> & U1>; 2 = U1< & U2>; 3 = U2> & U1>; 4 = U1< & U1>; 5 = U2>; 6 = U1<; 7 = U1>]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start value U2>	113S42	MMI,RST	Setting group1	0.01...1.00	x Un	0.03	Rd/Wr	Retain	Start voltage of negative phase sequence overvoltage operation
	Start value U1<	113S43	MMI,RST	Setting group1	0.01...1.20	x Un	0.90	Rd/Wr	Retain	Start voltage of positive phase sequence undervoltage operation

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Start value U1>	113S44	MMI,RST	Setting group1	0.80...1.60	x Un	1.loka	Rd/Wr	Retain	Start voltage of positive phase sequence overvoltage operation
	Operate time U2>	113S45	MMI,RST	Setting group1	0.04...60.00	s	0.04	Rd/Wr	Retain	Operate time of negative phase sequence overvoltage operation
	Operate time U1<	113S46	MMI,RST	Setting group1	0.04...60.00	s	0.04	Rd/Wr	Retain	Operate time of positive phase sequence undervoltage operation
	Operate time U1>	113S47	MMI,RST	Setting group1	0.04...60.00	s	0.04	Rd/Wr	Retain	Operate time of positive phase sequence overvoltage operation
	Operation mode	113S71	MMI,RST	Setting group2	0..7[0 = Not in use; 1 = U1< & U2> & U1>; 2 = U1< & U2>; 3 = U2> & U1>; 4 = U1< & U1>; 5 = U2>; 6 = U1<; 7 = U1>]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start value U2>	113S72	MMI,RST	Setting group2	0.01...1.00	x Un	0.03	Rd/Wr	Retain	Start voltage of negative phase sequence overvoltage operation
	Start value U1<	113S73	MMI,RST	Setting group2	0.01...1.20	x Un	0.90	Rd/Wr	Retain	Start voltage of positive phase sequence undervoltage operation
	Start value U1>	113S74	MMI,RST	Setting group2	0.80...1.60	x Un	1.loka	Rd/Wr	Retain	Start voltage of positive phase sequence overvoltage operation
	Operate time U2>	113S75	MMI,RST	Setting group2	0.04...60.00	s	0.04	Rd/Wr	Retain	Operate time of negative phase sequence overvoltage operation
	Operate time U1<	113S76	MMI,RST	Setting group2	0.04...60.00	s	0.04	Rd/Wr	Retain	Operate time of positive phase sequence undervoltage operation
	Operate time U1>	113S77	MMI,RST	Setting group2	0.04...60.00	s	0.04	Rd/Wr	Retain	Operate time of positive phase sequence overvoltage operation
	Group selection	113V1	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	113V2	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Dir. selection	113V3	MMI,RST	Control setting	0..2[0 = Forward; 1 = Reverse; 2 = Input ROT_DIR]	-	0	Rd/Wr	Retain	Selection of rotation direction
	Rotation dir.	113V4	MMI,RST	Control setting	0..1[0 = Forward; 1 = Reverse]	-	0	Read	Volatile	Rotation direction
	Start pulse	113V5	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse length of START signal
	Trip signal	113V6	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of self-holding for TRIP output
	Trip pulse	113V7	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse length of TRIP
	Intern. blocking	113V8	MMI,RST	Control setting	0..1[0 = Disabled; 1 = Enabled]	-	1	Rd/Wr	Retain	Enabling of internal positive phase sequence undervoltage blocking
	Reset registers	113V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signal and registers
	Test START	113V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Retain	Testing of START
	Test TRIP	113V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Retain	Testing of TRIP
	Event mask 1	113V101	MMI,RST	Control setting	0...65535	-	4095	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E15)
	Event mask 2	113V103	MMI,RST	Control setting	0...65535	-	4095	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E15)
	Event mask 3	113V105	MMI,RST	Control setting	0...65535	-	4095	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E15)
	Event mask 4	113V107	MMI,RST	Control setting	0...65535	-	4095	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E15)
	Pos. seq. volt.	113I1	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Positive phase sequence voltage
	Neg. seq. volt.	113I2	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Negative phase sequence voltage
	Input ROT_DIR	113I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between forward and reverse rotation
	Input BLOCK	113I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input for blocking he function
	Input GROUP	113I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between group 1 and 2
	Input RESET	113I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting output signals and registers of PSV3St2
	Output START	113O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of start signal
	Output TRIP	113O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of trip signal
	Output ERR	113O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of error output signal
	Date	113V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Time	113V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration U2>	113V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U2> stage
	Duration U1<	113V204	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U1< stage
	Duration U1>	113V205	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U1> stage
	Pos. seq. volt.	113V206	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Positive sequence voltage
	Neg. seq. volt.	113V207	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Negative sequence voltage
	BLOCK	113V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BLOCK input
	Active group	113V209	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	113V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	113V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration U2>	113V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U2> stage
	Duration U1<	113V304	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U1< stage
	Duration U1>	113V305	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U1> stage
	Pos. seq. volt.	113V306	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Positive sequence voltage
	Neg. seq. volt.	113V307	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Negative sequence voltage
	BLOCK	113V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BLOCK input
	Active group	113V309	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	113V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	113V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration U2>	113V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U2> stage
	Duration U1<	113V404	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U1< stage
	Duration U1>	113V405	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of start situation of U1> stage
	Pos. seq. volt.	113V406	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Positive sequence voltage
	Neg. seq. volt.	113V407	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Negative sequence voltage
	BLOCK	113V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BLOCK input
	Active group	113V409	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
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	Current IL1	116I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL1
	Current IL2	116I2	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL2
	Current IL3	116I3	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL3
	Input BS1	116I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Blocking signal 1
	Input BS2	116I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Blocking signal 2
	Input TRIGG	116I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	116I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between the groups 1 and 2
	Input RESET	116I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read		Signal for resetting the output signals and registers of OL3Cap
	Output ST_Ib	116O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of ST_Ib signal
	Output TRIP_Ib	116O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of TRIP_Ib signal
	Output CBFP	116O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Output ST_Ia	116O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of ST_Ia signal
	Output ALARM	116O5	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of ALARM signal
	Output ST_Imin	116O6	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of ST_Imin signal
	Output TRIP_Imin	116O7	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of TRIP_Imin signal
	Output AR_INH	116O8	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	1	Read	Volatile	Status of AR_INH signal
	Date	116V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	116V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration Ib	116V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the stage Ib
	Duration Ia	116V204	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the stage Ia
	Duration Imin	116V205	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the stage I<

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	IL1 peak	116V206	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Phase current IL1, Filtered value
	IL2 peak	116V207	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Phase current IL2, Filtered value
	IL3 peak	116V208	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Phase current IL3, Filtered value
	BS1	116V209	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 signal
	BS2	116V210	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 signal
	Active group	116V211	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	116V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	116V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration Ib	116V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the stage Ib
	Duration Ia	116V304	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the stage Ia
	Duration Imin	116V305	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the stage I<
	IL1 peak	116V306	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Phase current IL1, Filtered value
	IL2 peak	116V307	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Phase current IL2, Filtered value
	IL3 peak	116V308	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Phase current IL3, Filtered value
	BS1	116V309	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 signal
	BS2	116V310	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 signal
	Active group	116V311	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	116V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	116V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration Ib	116V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the stage Ib
	Duration Ia	116V404	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the stage Ia
	Duration Imin	116V405	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the stage I<
	IL1 peak	116V406	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Phase current IL1, Filtered value
	IL2 peak	116V407	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Phase current IL2, Filtered value
	IL3 peak	116V408	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Phase current IL3, Filtered value
	BS1	116V409	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 signal
	BS2	116V410	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 signal
	Active group	116V411	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Operation mode	116S1	MMI,RST	Actual setting	0..1[0 = Not in use; 1 = In use]	-	1	Read	Volatile	Selection of operation mode
	Start current Ib	116S2	MMI,RST	Actual setting	0.30...1.50	x In	1.00	Read	Volatile	Start current of Ib> stage
	Time multiplier	116S3	MMI,RST	Actual setting	0.05...2.00	-	1.00	Read	Volatile	Time multiplier k for stage Ib>
	Start current Ia	116S4	MMI,RST	Actual setting	0.80...1.20	x Ib	1.touko	Read	Volatile	Start current of Ia> stage
	Operate time Ia	116S5	MMI,RST	Actual setting	0.5...6000.0	s	300	Read	Volatile	Operate time of Ia> stage
	Start current I<	116S6	MMI,RST	Actual setting	0.10...0.70	x Ib	0.50	Read	Volatile	Start current of I< stage
	Operate time I<	116S7	MMI,RST	Actual setting	0.1...120	s	1.0	Read	Volatile	Operate time of I< stage
	Reconn. inhibit	116S8	MMI,RST	Actual setting	0.5...6000	s	60	Read	Volatile	Setting of reconnection inhibit time trec
	Operation mode	116S41	MMI,RST	Setting group1	0..1[0 = Not in use; 1 = In use]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current Ib	116S42	MMI,RST	Setting group1	0.30...1.50	x In	1.00	Rd/Wr	Retain	Start current of Ib> stage
	Time multiplier	116S43	MMI,RST	Setting group1	0.05...2.00	-	1.00	Rd/Wr	Retain	Time multiplier k for stage Ib>
	Start current Ia	116S44	MMI,RST	Setting group1	0.80...1.20	x Ib	1.touko	Rd/Wr	Retain	Start current of Ia> stage
	Operate time Ia	116S45	MMI,RST	Setting group1	0.5...6000.0	s	300	Rd/Wr	Retain	Operate time of Ia> stage
	Start current I<	116S46	MMI,RST	Setting group1	0.10...0.70	x Ib	0.50	Rd/Wr	Retain	Start current of I< stage
	Operate time I<	116S47	MMI,RST	Setting group1	0.1...120	s	1.0	Rd/Wr	Retain	Operate time of I< stage
	Reconn. inhibit	116S48	MMI,RST	Setting group1	0.5...6000	s	60	Rd/Wr	Retain	Setting of reconnection inhibit time trec
	Operation mode	116S71	MMI,RST	Setting group2	0..1[0 = Not in use; 1 = In use]	-	1	Rd/Wr	Retain	Selection of operation mode
	Start current Ib	116S72	MMI,RST	Setting group2	0.30...1.50	x In	1.00	Rd/Wr	Retain	Start current of Ib> stage
	Time multiplier	116S73	MMI,RST	Setting group2	0.05...2.00	-	1.00	Rd/Wr	Retain	Time multiplier k for stage Ib>
	Start current Ia	116S74	MMI,RST	Setting group2	0.80...1.20	x Ib	1.touko	Rd/Wr	Retain	Start current of Ia> stage
	Operate time Ia	116S75	MMI,RST	Setting group2	0.5...6000.0	s	300	Rd/Wr	Retain	Operate time of Ia> stage

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Start current I<	116S76	MMI,RST	Setting group2	0.10...0.70	x Ib	0.50	Rd/Wr	Retain	Start current of I< stage
	Operate time I<	116S77	MMI,RST	Setting group2	0.1...120	s	1.0	Rd/Wr	Retain	Operate time of I< stage
	Reconn. inhibit	116S78	MMI,RST	Setting group2	0.5...6000	s	60	Rd/Wr	Retain	Setting of reconnection inhibit time trec
	Group selection	116V1	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	116V2	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	116V3	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse width of ST_Ib, ST_Ia and ST_Imin signals
	Trip signal	116V4	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of latching feature for TRIP_Ib, ALARM and TRIP_Imin outputs
	Trip pulse	116V5	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse width of TRIP_Ib, ALARM, TRIP_Imin and CBFP
	CBFP time	116V6	MMI,RST	Control setting	100...1000	ms	100	Rd/Wr	Retain	Operate time of the delayed trip CBFP
	Register I<	116V7	MMI,RST	Control setting	0..1[0 = OFF; 1 = ON]	-	0	Rd/Wr	Retain	Enable the registering caused by an undercurrent situation
	Block I<	116V8	MMI,RST	Control setting	0..1[0 = OFF; 1 = ON]	-	0	Rd/Wr	Retain	No undercurrent tripping => no events/indications.
	Reset registers	116V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signals and registers
	Test ST_Ib	116V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of ST_Ib
	Test TRIP_Ib	116V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP_Ib
	Test CBFP	116V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Test ST_Ia	116V34	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of ST_Ia
	Test ALARM	116V35	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of ALARM
	Test ST_Imin	116V36	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of ST_Imin
	Test TRIP_Imin	116V37	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP_Imin
	Event mask 1	116V101	MMI,RST	Control setting	0...4194303	-	49983	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E21)
	Event mask 2	116V103	MMI,RST	Control setting	0...4194303	-	49983	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E21)
	Event mask 3	116V105	MMI,RST	Control setting	0...4194303	-	49983	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E21)
	Event mask 4	116V107	MMI,RST	Control setting	0...4194303	-	49983	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E21)
100117 / Rev C CUB1Cap										
	Operation mode	117S1	MMI,RST	Actual setting	0..7[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse]	-	4	Read	Volatile	Selection of operation mode
	Alarm mode	117S2	MMI,RST	Actual setting	0..1[0 = Normal mode; 1 = Element counter]	-	0	Read	Volatile	Selection of alarm mode
	Start dI1	117S3	MMI,RST	Actual setting	1.0...100.0	%dIn	10.0	Read	Volatile	Start current of the tripping stage
	Operate time dI1	117S4	MMI,RST	Actual setting	0.1...300.0	s	5.0	Read	Volatile	Operate time of the tripping stage in DT mode
	Time multiplier	117S5	MMI,RST	Actual setting	0.05...2.00	-	1.00	Read	Volatile	Time multiplier k for the tripping stage in IDMT mode
	Start dI2	117S6	MMI,RST	Actual setting	1.0...100.0	%dIn	5.0	Read	Volatile	Start current of the alarm stage
	Operate time dI2	117S7	MMI,RST	Actual setting	0.1...300.0	s	300.0	Read	Volatile	Operate time of the alarm stage
	Faulty elements	117S8	MMI,RST	Actual setting	1...100	-	3	Read	Volatile	Disallowed number of faulty elements
	Operation mode	117S41	MMI,RST	Setting group1	0..7[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse]	-	4	Rd/Wr	Retain	Selection of operation mode
	Alarm mode	117S42	MMI,RST	Setting group1	0..1[0 = Normal mode; 1 = Element counter]	-	0	Rd/Wr	Retain	Selection of alarm mode
	Start dI1	117S43	MMI,RST	Setting group1	1.0...100.0	%dIn	10.0	Rd/Wr	Retain	Start current of the tripping stage
	Operate time dI1	117S44	MMI,RST	Setting group1	0.1...300.0	s	5.0	Rd/Wr	Retain	Operate time of the tripping stage in DT mode
	Time multiplier	117S45	MMI,RST	Setting group1	0.05...2.00	-	1.00	Rd/Wr	Retain	Time multiplier k for the tripping stage in IDMT mode
	Start dI2	117S46	MMI,RST	Setting group1	1.0...100.0	%dIn	5.0	Rd/Wr	Retain	Start current of the alarm stage
	Operate time dI2	117S47	MMI,RST	Setting group1	0.1...300.0	s	300.0	Rd/Wr	Retain	Operate time of the alarm stage
	Faulty elements	117S48	MMI,RST	Setting group1	1...100	-	3	Rd/Wr	Retain	Disallowed number of elements

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Operation mode	117S71	MMI,RST	Setting group2	0..7[0 = Not in use; 1 = Definite time; 2 = Extremely inv.; 3 = Very inverse; 4 = Normal inverse; 5 = Long-time inv.; 6 = RI-type inverse; 7 = RD-type inverse]	-	4	Rd/Wr	Retain	Selection of operation mode
	Alarm mode	117S72	MMI,RST	Setting group2	0..1[0 = Normal mode; 1 = Element counter]	-	0	Rd/Wr	Retain	Selection of alarm mode
	Start dI1	117S73	MMI,RST	Setting group2	1.0...100.0	%dIn	10.0	Rd/Wr	Retain	Start current of the tripping stage
	Operate time dI1	117S74	MMI,RST	Setting group2	0.1...300.0	s	5.0	Rd/Wr	Retain	Operate time of the tripping stage in DT mode
	Time multiplier	117S75	MMI,RST	Setting group2	0.05...2.00	-	1.00	Rd/Wr	Retain	Time multiplier k for the tripping stage in IDMT mode
	Start dI2	117S76	MMI,RST	Setting group2	1.0...100.0	%dIn	5.0	Rd/Wr	Retain	Start current of the alarm stage
	Operate time dI2	117S77	MMI,RST	Setting group2	0.1...300.0	s	300.0	Rd/Wr	Retain	Operate time of the alarm stage
	Faulty elements	117S78	MMI,RST	Setting group2	1...100	-	3	Rd/Wr	Retain	Disallowed number of faulty elements
	Group selection	117V1	MMI,RST	Control setting	0..2[0 = Group 1; 1 = Group 2; 2 = GROUP input]	-	0	Rd/Wr	Retain	Selection of the active setting group
	Active group	117V2	MMI,RST	Control setting	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Volatile	Active setting group
	Start pulse	117V3	MMI,RST	Control setting	0...1000	ms	0	Rd/Wr	Retain	Minimum pulse width of START and ST_ALARM signals
	Trip signal	117V4	MMI,RST	Control setting	0..1[0 = Non-latching; 1 = Latching]	-	0	Rd/Wr	Retain	Selection of latching feature for TRIP and ALARM
	Trip pulse	117V5	MMI,RST	Control setting	40...1000	ms	40	Rd/Wr	Retain	Minimum pulse width of TRIP, ALARM and CBFP
	CBFP time	117V6	MMI,RST	Control setting	100...1000	ms	200	Rd/Wr	Retain	Operate time of the delayed trip CBFP
	Comp natural dI	117V7	MMI,RST	Control setting	0.0...20.0	%dIn	0.0	Rd/Wr	Retain	Level of natural unbalance compensation
	Rec natural dI	117V8	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Recording of the natural unbalance phasor
	Fuse location	117V9	MMI,RST	Control setting	0..1[0 = External; 1 = Internal]	-	0	Rd/Wr	Retain	Location of capacitor fuses
	Reset registers	117V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of latched trip signals and registers
	Test START	117V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of START
	Test TRIP	117V32	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of TRIP
	Test CBFP	117V33	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of CBFP
	Test ST_ALARM	117V34	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of ST_ALARM
	Test ALARM	117V35	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of ALARM
	Event mask 1	117V101	MMI,RST	Control setting	0...65535	-	831	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E15)
	Event mask 2	117V103	MMI,RST	Control setting	0...65535	-	831	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E15)
	Event mask 3	117V105	MMI,RST	Control setting	0...65535	-	831	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E15)
	Event mask 4	117V107	MMI,RST	Control setting	0...65535	-	831	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E15)
	Current IL1	117I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL1
	Current dI	117I2	MMI,RST	Input data	0.0...2000.0	%dIn	0.0	Read	Volatile	Unbalance current dI
	Phase angle ïdI	117I3	MMI,RST	Input data	-180...+180	°	0.0	Read	Volatile	Phase angle of unbalance current dI
	Input BS1	117I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Blocking signal 1
	Input BS2	117I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Blocking signal 2
	Input TRIGG	117I6	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for triggering the registers
	Input GROUP	117I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for switching between the groups 1 and 2
	Input RESET	117I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting the output signals and registers of CUB1Cap
	Output START	117O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of START signal
	Output TRIP	117O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of TRIP signal
	Output CBFP	117O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of CBFP signal
	Output ST_ALARM	117O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of ST_ALARM signal
	Output ALARM	117O5	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of ALARM signal
	Date	117V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	117V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration dI1	117V203	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the tripping stage dI1
	Duration dI2	117V204	MMI,RST	Recorded data1	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the alarm stage dI2
	Current IL1	117V205	MMI,RST	Recorded data1	0.0...60.0	x In	0.00	Read	Retain	Phase current IL1, Filtered value
	Current dI	117V206	MMI,RST	Recorded data1	0.0...2000.0	%dIn	0.0	Read	Retain	Unbalance current dI, compensated value

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Phase angle ïdI	117V207	MMI,RST	Recorded data1	-180...+180	°	0	Read	Retain	Phase angle of unbalance current dI
	BS1	117V208	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 signal
	BS2	117V209	MMI,RST	Recorded data1	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 signal
	Active group	117V210	MMI,RST	Recorded data1	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	117V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	117V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration dI1	117V303	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the tripping stage dI1
	Duration dI2	117V304	MMI,RST	Recorded data2	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the alarm stage dI2
	Current IL1	117V305	MMI,RST	Recorded data2	0.0...60.0	x In	0.00	Read	Retain	Phase current IL1, Filtered value
	Current dI	117V306	MMI,RST	Recorded data2	0.0...2000.0	%dIn	0.0	Read	Retain	Unbalance current dI, compensated value
	Phase angle ïdI	117V307	MMI,RST	Recorded data2	-180...+180	°	0	Read	Retain	Phase angle of unbalance current dI
	BS1	117V308	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 signal
	BS2	117V309	MMI,RST	Recorded data2	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 signal
	Active group	117V310	MMI,RST	Recorded data2	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Date	117V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	117V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Duration dI1	117V403	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the tripping stage dI1
	Duration dI2	117V404	MMI,RST	Recorded data3	0.0...100.0	%	0.0	Read	Retain	Duration of the starting situation of the alarm stage dI2
	Current IL1	117V405	MMI,RST	Recorded data3	0.0...60.0	x In	0.00	Read	Retain	Phase current IL1, Filtered value
	Current dI	117V406	MMI,RST	Recorded data3	0.0...2000.0	%dIn	0.0	Read	Retain	Unbalance current dI, compensated value
	Phase angle ïdI	117V407	MMI,RST	Recorded data3	-180...+180	°	0	Read	Retain	Phase angle of unbalance current dI
	BS1	117V408	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS1 signal
	BS2	117V409	MMI,RST	Recorded data3	0..1[0 = Not active; 1 = Active]	-	0	Read	Retain	Status of BS2 signal
	Active group	117V410	MMI,RST	Recorded data3	0..1[0 = Group 1; 1 = Group 2]	-	0	Read	Retain	Active setting group
	Counters	117V501	MMI,RST	Faulty elements	0..1[0 = Not in use; 1 = In use]	-	0	Read	Retain	Status of faulty elements counters
	IL1, branch 1	117V502	MMI,RST	Faulty elements	0...100	-	0	Read	Retain	Amount of faulty elements in branch 1 of phase IL1
	IL1, branch 2	117V503	MMI,RST	Faulty elements	0...100	-	0	Read	Retain	Amount of faulty elements in branch 2 of phase IL1
	IL2, branch 1	117V504	MMI,RST	Faulty elements	0...100	-	0	Read	Retain	Amount of faulty elements in branch 1 of phase IL2
	IL2, branch 2	117V505	MMI,RST	Faulty elements	0...100	-	0	Read	Retain	Amount of faulty elements in branch 2 of phase IL2
	IL3, branch 1	117V506	MMI,RST	Faulty elements	0...100	-	0	Read	Retain	Amount of faulty elements in branch 1 of phase IL3
	IL3, branch 2	117V507	MMI,RST	Faulty elements	0...100	-	0	Read	Retain	Amount of faulty elements in branch 2 of phase IL3
	dIcompreal	117V510	Internal	Recorded data3	-	-	0.0	Read	Retain	Real part of the unbalance current recorded during the last change
	dIcompimag	117V511	Internal	Recorded data3	-	-	0.0	Read	Retain	Imaginary part of the unbalance current recorded during the last change
	Rec real part	117V508	Internal	Recorded data3	-	-	0.0	Read	Retain	Recorded real part of the phasor the natural unbalance current dI
	Rec imag part	117V509	Internal	Recorded data3	-	-	0.0	Read	Retain	Recorded imaginary part of the phasor the natural unbalance current dI
100118 / Rev D FuseFail										
	Input BLOCK	118I1	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of signal for blocking the function block
	Input MCB	118I2	MMI,RST	Input data	0..1[0 = Open; 1 = Closed]	-	1	Read	Volatile	Position of the miniature circuit breaker contacts
	Output BSOUT	118O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of blocking signal for protection functions
	Output ERR	118O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of configuration error signal
	Ratio U2/U1 >	118S41	MMI,RST	Settings	10...50	%	25	Rd/Wr	Retain	Minimum ratio of negative sequence voltage to positive sequence voltage to allow blocking
	Ratio I2/I1 <	118S42	MMI,RST	Settings	10...50	%	20	Rd/Wr	Retain	Maximum ratio of negative sequence current to positive sequence current to allow blocking
	FuseFail	118V1	MMI,RST	Control setting	0..1[0 = Not in use; 1 = In use]	-	0	Rd/Wr	Retain	Function block in use or not in use

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Test BSOUT	118V2	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing BSOUT
	Event mask 1	118V101	MMI,RST	Control setting	0...255	-	15	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E7)
	Event mask 2	118V103	MMI,RST	Control setting	0...255	-	15	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E7)
	Event mask 3	118V105	MMI,RST	Control setting	0...255	-	15	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E7)
	Event mask 4	118V107	MMI,RST	Control setting	0...255	-	15	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E7)
100120 / Rev C COCB1										
	Open alarm	120O3	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Opening time alarm status
	Close alarm	120O4	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Closing time alarm status
	Inactive alarm	120O5	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Inactive time alarm status
	Cycle alarm	120O6	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Cycle count alarm status
	Fixed pulse	120S1	MMI,RST	Actual setting	0..1[0 = Variable pulse; 1 = Fixed pulse]	-	0	Rd/Wr	Retain	Selection of fixed pulse length
	Forced pulse	120S2	MMI,RST	Actual setting	0..1[0 = Single pulse; 1 = Forced pulse]	-	1	Rd/Wr	Retain	Execution of control command regardless the recent state (repeated command)
	Event delay	120S3	MMI,RST	Actual setting	0.000...60.000	s	0.200	Rd/Wr	Retain	Event delay for undefined state
	Open pulse	120S6	MMI,RST	Actual setting	0.04...100.000	s	0.100	Rd/Wr	Retain	Opening time pulse length
	Open alarm	120S7	MMI,RST	Actual setting	0.00...100.000	s	0.100	Rd/Wr	Retain	Opening time alarm limit
	Close pulse	120S8	MMI,RST	Actual setting	0.04...100.000	s	0.100	Rd/Wr	Retain	Closing time pulse length
	Close alarm	120S9	MMI,RST	Actual setting	0.00...100.000	s	0.100	Rd/Wr	Retain	Closing time alarm limit
	Inactive alarm	120S10	MMI,RST	Actual setting	0...1825	days	1825	Rd/Wr	Retain	Inactive time alarm limit
	Cycle alarm	120S11	MMI,RST	Actual setting	0...30000	-	5000	Rd/Wr	Retain	Cycle count alarm limit
	Open compens	120S12	MMI,RST	Actual setting	0.000...0.020	s	0.007	Rd/Wr	Retain	Output relay delay compensation parameter for opening time measurements
	Close compens	120S13	MMI,RST	Actual setting	0.000...0.020	s	0.007	Rd/Wr	Retain	Output relay delay compensation parameter for closing time measurements
	Object state	120V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit value of the object state
	Interlock close	120V30	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Close command interlocking
	Interlock open	120V31	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Open command interlocking
	Direct open	120V4	Internal	Control setting	0..1[0 = 0; 1 = Direct open]	-	0	Write	Volatile	Direct open command
	Direct close	120V5	Internal	Control setting	0..1[0 = 0; 1 = Direct close]	-	0	Write	Volatile	Direct close command
	Open select	120V6	Internal	Control setting	0..1[0 = 0; 1 = Open select]	-	0	Write	Volatile	Open operation selection of the secured control
	Close select	120V7	Internal	Control setting	0..1[0 = 0; 1 = Close select]	-	0	Write	Volatile	Close operation selection of the secured control
	Cancel	120V10	Internal	Control setting	0..1[0 = 0; 1 = Cancel]	-	0	Write	Volatile	Cancel of the secured command
	Execute	120V11	Internal	Control setting	0..1[0 = 0; 1 = Execute]	-	0	Write	Volatile	Execute of the secured command
	Cycle count	120V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	Inactive time	120V13	MMI,RST	Control setting	0...3650	days	0	Rd/Wr	Retain	Inactive time
	Alarm time	120V40	MMI,RST	Control setting	0.00...23.59	-	8.00	Rd/Wr	Retain	Inactive time alarm time setting
	Last open	120V14	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last opening time
	Max open	120V15	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum opening time
	Last close	120V17	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last closing time
	Max close	120V18	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum closing time
	IV state	120V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state validitity from IV-signal
	Block state	120V35	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Object block signal state
	Summarized stat	120V50	RST	Input data	0..1023[B0=BINCLOSE; B1=BINOPEN; B3=IV; B4=CLOSEENA; B5=OPENENA; B8=BLOCK; B9=reserved]	-	0	Read	Volatile	Summarized status of the object
	Regist clear	120V98	MMI,RST	Control setting	0..1[0 = 0; 1 = Clear]	-	0	Write	Volatile	Clear internal registrations (last and maximum)
	Alarm ack	120V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarms
	Event mask 1	120V101	MMI,RST	Control setting	0...536870911	-	145403647	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E28)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 2	120V103	MMI,RST	Control setting	0...536870911	-	145403647	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E28)
	Event mask 3	120V105	MMI,RST	Control setting	0...536870911	-	145403647	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E28)
	Event mask 4	120V107	MMI,RST	Control setting	0...536870911	-	145403647	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E28)
	Last change	120V41	Internal	Control setting	0...2000000000	-	2000000000	Read	Retain	Object state change time (internally used)
100121 / Rev C COCB2										
	Fixed pulse	121S1	MMI,RST	Actual setting	0..1[0 = Variable pulse; 1 = Fixed pulse]	-	0	Rd/Wr	Retain	Selection of fixed pulse length
	Forced pulse	121S2	MMI,RST	Actual setting	0..1[0 = Single pulse; 1 = Forced pulse]	-	1	Rd/Wr	Retain	Execution of control command regardless the recent state (repeated command)
	Event delay	121S3	MMI,RST	Actual setting	0.000...60.000	s	0.200	Rd/Wr	Retain	Event delay for undefined state
	Open pulse	121S6	MMI,RST	Actual setting	0.04...100.000	s	0.100	Rd/Wr	Retain	Opening time pulse length
	Open alarm	121S7	MMI,RST	Actual setting	0.00...100.000	s	0.100	Rd/Wr	Retain	Opening time alarm limit
	Close pulse	121S8	MMI,RST	Actual setting	0.04...100.000	s	0.100	Rd/Wr	Retain	Closing time pulse length
	Close alarm	121S9	MMI,RST	Actual setting	0.00...100.000	s	0.100	Rd/Wr	Retain	Closing time alarm limit
	Inactive alarm	121S10	MMI,RST	Actual setting	0...1825	days	1825	Rd/Wr	Retain	Inactive time alarm limit
	Cycle alarm	121S11	MMI,RST	Actual setting	0...30000	-	5000	Rd/Wr	Retain	Cycle count alarm limit
	Open compens	121S12	MMI,RST	Actual setting	0.000...0.020	s	0.007	Rd/Wr	Retain	Output relay delay compensation parameter for opening time measurements
	Close compens	121S13	MMI,RST	Actual setting	0.000...0.020	s	0.007	Rd/Wr	Retain	Output relay delay compensation parameter for closing time measurements
	Object state	121V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit value of the object state
	Interlock close	121V30	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Close command interlocking
	Interlock open	121V31	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Open command interlocking
	Direct open	121V4	Internal	Control setting	0..1[0 = 0; 1 = Direct open]	-	0	Write	Volatile	Direct open command
	Direct close	121V5	Internal	Control setting	0..1[0 = 0; 1 = Direct close]	-	0	Write	Volatile	Direct close command
	Open select	121V6	Internal	Control setting	0..1[0 = 0; 1 = Open select]	-	0	Write	Volatile	Open operation selection of the secured control
	Close select	121V7	Internal	Control setting	0..1[0 = 0; 1 = Close select]	-	0	Write	Volatile	Close operation selection of the secured control
	Cancel	121V10	Internal	Control setting	0..1[0 = 0; 1 = Cancel]	-	0	Write	Volatile	Cancel of the secured command
	Execute	121V11	Internal	Control setting	0..1[0 = 0; 1 = Execute]	-	0	Write	Volatile	Execute of the secured command
	Cycle count	121V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	Inactive time	121V13	MMI,RST	Control setting	0...3650	days	0	Rd/Wr	Retain	Inactive time
	Alarm time	121V40	MMI,RST	Control setting	0.00...23.59	-	8.00	Rd/Wr	Retain	Inactive time alarm time setting
	Last open	121V14	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last opening time
	Max open	121V15	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum opening time
	Last close	121V17	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last closing time
	Max close	121V18	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum closing time
	IV state	121V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state valididty from IV-signal
	Block state	121V35	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Object block signal state
	Summarized stat	121V50	RST	Input data	0..827[B0(1)=BINCLOSE; B1(2)=BINOPEN; B3(8)=IV; B4(16)=CLOSEENA; B5(32)=OPENENA; B8(256)=BLOCK; B9(512)=reserved]	-	0	Read	Volatile	Summarized status of the object
	Regist clear	121V98	MMI,RST	Control setting	0..1[0 = 0; 1 = Clear]	-	0	Write	Volatile	Clear internal registrations (last and maximum)
	Alarm ack	121V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarms
	Event mask 1	121V101	MMI,RST	Control setting	0...536870911	-	145403647	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E28)
	Event mask 2	121V103	MMI,RST	Control setting	0...536870911	-	145403647	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E28)
	Event mask 3	121V105	MMI,RST	Control setting	0...536870911	-	145403647	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E28)
	Event mask 4	121V107	MMI,RST	Control setting	0...536870911	-	145403647	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E28)
	Last change	121V41	Internal	Control setting	0...2000000000	-	2000000000	Read	Retain	Object state change time (internally used)
	Open alarm	121O3	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Opening time alarm status

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Close alarm	121O4	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Closing time alarm status
	Inactive alarm	121O5	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Inactive time alarm status
	Cycle alarm	121O6	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Cycle count alarm status
100122 / Rev C CODC1										
	Fixed pulse	122S1	MMI,RST	Actual setting	0..1[0 = Variable pulse; 1 = Fixed pulse]	-	0	Rd/Wr	Retain	Selection of fixed pulse length
	Forced pulse	122S2	MMI,RST	Actual setting	0..1[0 = Single pulse; 1 = Forced pulse]	-	1	Rd/Wr	Retain	Execution of control command regardless the recent state (repeated command)
	Event delay	122S3	MMI,RST	Actual setting	0.000...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Open pulse	122S6	MMI,RST	Actual setting	0.04...100.00	s	0.100	Rd/Wr	Retain	Opening time pulse length
	Open alarm	122S7	MMI,RST	Actual setting	0.000...100.000	s	10.000	Rd/Wr	Retain	Opening time alarm limit
	Close pulse	122S8	MMI,RST	Actual setting	0.04...100.00	s	0.100	Rd/Wr	Retain	Closing time pulse length
	Close alarm	122S9	MMI,RST	Actual setting	0.000...100.000	s	10.000	Rd/Wr	Retain	Closing time alarm limit
	Object state	122V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Interlock close	122V30	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Close command interlocking
	Interlock open	122V31	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Open command interlocking
	Direct open	122V4	Internal	Control setting	0..1[0 = 0; 1 = Direct open]	-	0	Write	Volatile	Direct open command
	Direct close	122V5	Internal	Control setting	0..1[0 = 0; 1 = Direct close]	-	0	Write	Volatile	Direct close command
	Open select	122V6	Internal	Control setting	0..1[0 = 0; 1 = Open select]	-	0	Write	Volatile	Open operation selection of the secured control
	Close select	122V7	Internal	Control setting	0..1[0 = 0; 1 = Close select]	-	0	Write	Volatile	Close operation selection of the secured control
	Cancel	122V10	Internal	Control setting	0..1[0 = 0; 1 = Cancel]	-	0	Write	Volatile	Deselection of the secured control
	Execute	122V11	Internal	Control setting	0..1[0 = 0; 1 = Execute]	-	0	Write	Volatile	Execution of the secured control
	Cycle count	122V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	Last open	122V14	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last opening time
	Max open	122V15	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum opening time
	Last close	122V17	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last closing time
	Max close	122V18	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum closing time
	IV state	122V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state validitity from IV-signal
	Block state	122V35	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Object block signal state
	Summarized stat	122V50	RST	Input data	0..1023[B0=BINCLOSE; B1=BINOPEN; B3=IV; B4=CLOSEENA; B5=OPENENA; B8=BLOCK; B9=reserved]	-	0	Read	Volatile	Summarized status of the object
	Regist clear	122V98	MMI,RST	Control setting	0..1[0 = 0; 1 = Clear]	-	0	Write	Volatile	Clear internal registrations (last maximum)
	Alarm ack	122V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1	122V101	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E28)
	Event mask 2	122V103	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E28)
	Event mask 3	122V105	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E28)
	Event mask 4	122V107	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E28)
	Open alarm	122O3	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Opening time alarm status
	Close alarm	122O4	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Closing time alarm status
100123 / Rev C CODC2										
	Open alarm	123O3	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Opening time alarm status
	Close alarm	123O4	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Closing time alarm status
	Fixed pulse	123S1	MMI,RST	Actual setting	0..1[0 = Variable pulse; 1 = Fixed pulse]	-	0	Rd/Wr	Retain	Selection of fixed pulse length
	Forced pulse	123S2	MMI,RST	Actual setting	0..1[0 = Single pulse; 1 = Forced pulse]	-	1	Rd/Wr	Retain	Execution of control command regardless the recent state (repeated command)
	Event delay	123S3	MMI,RST	Actual setting	0.000...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Open pulse	123S6	MMI,RST	Actual setting	0.04...100.00	s	0.100	Rd/Wr	Retain	Opening time pulse length
	Open alarm	123S7	MMI,RST	Actual setting	0.00...100.000	s	10.000	Rd/Wr	Retain	Opening time alarm limit

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Close pulse	123S8	MMI,RST	Actual setting	0.04...100.00	s	0.100	Rd/Wr	Retain	Closing time pulse length
	Close alarm	123S9	MMI,RST	Actual setting	0.00...100.000	s	10.000	Rd/Wr	Retain	Closing time alarm limit
	Object state	123V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Interlock close	123V30	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Close command interlocking
	Interlock open	123V31	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Open command interlocking
	Direct open	123V4	Internal	Control setting	0..1[0 = 0; 1 = Direct open]	-	0	Write	Volatile	Direct open command
	Direct close	123V5	Internal	Control setting	0..1[0 = 0; 1 = Direct close]	-	0	Write	Volatile	Direct close command
	Open select	123V6	Internal	Control setting	0..1[0 = 0; 1 = Open select]	-	0	Write	Volatile	Open operation selection of the secured control
	Close select	123V7	Internal	Control setting	0..1[0 = 0; 1 = Close select]	-	0	Write	Volatile	Close operation selection of the secured control
	Cancel	123V10	Internal	Control setting	0..1[0 = 0; 1 = Cancel]	-	0	Write	Volatile	Deselection of the secured control
	Execute	123V11	Internal	Control setting	0..1[0 = 0; 1 = Execute]	-	0	Write	Volatile	Execution of the secured control
	Cycle count	123V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	Last open	123V14	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last opening time
	Max open	123V15	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum opening time
	Last close	123V17	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last closing time
	Max close	123V18	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum closing time
	IV state	123V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state validitity from IV-signal
	Block state	123V35	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Object block signal state
	Summarized stat	123V50	RST	Input data	0..1023[B0=BINCLOSE; B1=BINOPEN; B3=IV; B4=CLOSEENA; B5=OPENENA; B8=BLOCK; B9=reserved]	-	0	Read	Volatile	Summarized status of the object
	Regist clear	123V98	MMI,RST	Control setting	0..1[0 = 0; 1 = Clear]	-	0	Write	Volatile	Clear internal registrations (last maximum)
	Alarm ack	123V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1	123V101	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E28)
	Event mask 2	123V103	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E28)
	Event mask 3	123V105	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E28)
	Event mask 4	123V107	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E28)
100124 / Rev C CODC3										
	Fixed pulse	124S1	MMI,RST	Actual setting	0..1[0 = Variable pulse; 1 = Fixed pulse]	-	0	Rd/Wr	Retain	Selection of fixed pulse length
	Forced pulse	124S2	MMI,RST	Actual setting	0..1[0 = Single pulse; 1 = Forced pulse]	-	1	Rd/Wr	Retain	Execution of control command regardless the recent state (repeated command)
	Event delay	124S3	MMI,RST	Actual setting	0.000...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Open pulse	124S6	MMI,RST	Actual setting	0.04...100.00	s	0.100	Rd/Wr	Retain	Opening time pulse length
	Open alarm	124S7	MMI,RST	Actual setting	0.00...100.000	s	10.000	Rd/Wr	Retain	Opening time alarm limit
	Close pulse	124S8	MMI,RST	Actual setting	0.04...100.00	s	0.100	Rd/Wr	Retain	Closing time pulse length
	Close alarm	124S9	MMI,RST	Actual setting	0.00...100.000	s	10.000	Rd/Wr	Retain	Closing time alarm limit
	Object state	124V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Interlock close	124V30	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Close command interlocking
	Interlock open	124V31	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Open command interlocking
	Direct open	124V4	Internal	Control setting	0..1[0 = 0; 1 = Direct open]	-	0	Write	Volatile	Direct open command
	Direct close	124V5	Internal	Control setting	0..1[0 = 0; 1 = Direct close]	-	0	Write	Volatile	Direct close command
	Open select	124V6	Internal	Control setting	0..1[0 = 0; 1 = Open select]	-	0	Write	Volatile	Open operation selection of the secured control
	Close select	124V7	Internal	Control setting	0..1[0 = 0; 1 = Close select]	-	0	Write	Volatile	Close operation selection of the secured control
	Cancel	124V10	Internal	Control setting	0..1[0 = 0; 1 = Cancel]	-	0	Write	Volatile	Deselection of the secured control
	Execute	124V11	Internal	Control setting	0..1[0 = 0; 1 = Execute]	-	0	Write	Volatile	Execution of the secured control
	Cycle count	124V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	Last open	124V14	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last opening time

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Max open	124V15	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum opening time
	Last close	124V17	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last closing time
	Max close	124V18	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum closing time
	IV state	124V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state validity from IV-signal
	Block state	124V35	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Object block signal state
	Summarized stat	124V50	RST	Input data	0..1023[B0=BINCLOSE; B1=BINOPEN; B3=IV; B4=CLOSEENA; B5=OPENENA; B8=BLOCK; B9=reserved]	-	0	Read	Volatile	Summarized status of the object
	Regist clear	124V98	MMI,RST	Control setting	0..1[0 = 0; 1 = Clear]	-	0	Write	Volatile	Clear internal registrations (last maximum)
	Alarm ack	124V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1	124V101	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E28)
	Event mask 2	124V103	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E28)
	Event mask 3	124V105	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E28)
	Event mask 4	124V107	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E28)
	Open alarm	124O3	MMI,RST	Output data	0=Inactive; 1=Active	-	0	Read	Volatile	Opening time alarm status
	Close alarm	124O4	MMI,RST	Output data	0=Inactive; 1=Active	-	0	Read	Volatile	Closing time alarm status
100125 / Rev C CODC4										
	Open alarm	125O3	MMI,RST	Output data	0=Inactive; 1=Active	-	0	Read	Volatile	Opening time alarm status
	Close alarm	125O4	MMI,RST	Output data	0=Inactive; 1=Active	-	0	Read	Volatile	Closing time alarm status
	Fixed pulse	125S1	MMI,RST	Actual setting	0..1[0 = Variable pulse; 1 = Fixed pulse]	-	0	Rd/Wr	Retain	Selection of fixed pulse length
	Forced pulse	125S2	MMI,RST	Actual setting	0..1[0 = Single pulse; 1 = Forced pulse]	-	1	Rd/Wr	Retain	Execution of control command regardless the recent state (repeated command)
	Event delay	125S3	MMI,RST	Actual setting	0.000...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Open pulse	125S6	MMI,RST	Actual setting	0.04...100.00	s	0.100	Rd/Wr	Retain	Opening time pulse length
	Open alarm	125S7	MMI,RST	Actual setting	0.00...100.000	s	10.000	Rd/Wr	Retain	Opening time alarm limit
	Close pulse	125S8	MMI,RST	Actual setting	0.04...100.00	s	0.100	Rd/Wr	Retain	Closing time pulse length
	Close alarm	125S9	MMI,RST	Actual setting	0.00...100.000	s	10.000	Rd/Wr	Retain	Closing time alarm limit
	Object state	125V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Interlock close	125V30	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Close command interlocking
	Interlock open	125V31	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Open command interlocking
	Direct open	125V4	Internal	Control setting	0..1[0 = 0; 1 = Direct open]	-	0	Write	Volatile	Direct open command
	Direct close	125V5	Internal	Control setting	0..1[0 = 0; 1 = Direct close]	-	0	Write	Volatile	Direct close command
	Open select	125V6	Internal	Control setting	0..1[0 = 0; 1 = Open select]	-	0	Write	Volatile	Open operation selection of the secured control
	Close select	125V7	Internal	Control setting	0..1[0 = 0; 1 = Close select]	-	0	Write	Volatile	Close operation selection of the secured control
	Cancel	125V10	Internal	Control setting	0..1[0 = 0; 1 = Cancel]	-	0	Write	Volatile	Deselection of the secured control
	Execute	125V11	Internal	Control setting	0..1[0 = 0; 1 = Execute]	-	0	Write	Volatile	Execution of the secured control
	Cycle count	125V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	Last open	125V14	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last opening time
	Max open	125V15	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum opening time
	Last close	125V17	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last closing time
	Max close	125V18	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum closing time
	IV state	125V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state validity from IV-signal
	Block state	125V35	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Object block signal state
	Summarized stat	125V50	RST	Input data	0..1023[B0=BINCLOSE; B1=BINOPEN; B3=IV; B4=CLOSEENA; B5=OPENENA; B8=BLOCK; B9=reserved]	-	0	Read	Volatile	Summarized status of the object
	Regist clear	125V98	MMI,RST	Control setting	0..1[0 = 0; 1 = Clear]	-	0	Write	Volatile	Clear internal registrations (last maximum)
	Alarm ack	125V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 1	125V101	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E28)
	Event mask 2	125V103	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E28)
	Event mask 3	125V105	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E28)
	Event mask 4	125V107	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E28)
100126 / Rev C CODC5										
	Open alarm	126O3	MMI,RST	Output data	0=Inactive; 1=Active	-	0	Read	Volatile	Opening time alarm status
	Close alarm	126O4	MMI,RST	Output data	0=Inactive; 1=Active	-	0	Read	Volatile	Closing time alarm status
	Fixed pulse	126S1	MMI,RST	Actual setting	0..1[0 = Variable pulse; 1 = Fixed pulse]	-	0	Rd/Wr	Retain	Selection of fixed pulse length
	Forced pulse	126S2	MMI,RST	Actual setting	0..1[0 = Single pulse; 1 = Forced pulse]	-	1	Rd/Wr	Retain	Execution of control command regardless the recent state (repeated command)
	Event delay	126S3	MMI,RST	Actual setting	0.000...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Open pulse	126S6	MMI,RST	Actual setting	0.04...100.00	s	0.100	Rd/Wr	Retain	Opening time pulse length
	Open alarm	126S7	MMI,RST	Actual setting	0.00...100.000	s	10.000	Rd/Wr	Retain	Opening time alarm limit
	Close pulse	126S8	MMI,RST	Actual setting	0.04...100.00	s	0.100	Rd/Wr	Retain	Closing time pulse length
	Close alarm	126S9	MMI,RST	Actual setting	0.00...100.000	s	10.000	Rd/Wr	Retain	Closing time alarm limit
	Object state	126V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Interlock close	126V30	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Close command interlocking
	Interlock open	126V31	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Open command interlocking
	Direct open	126V4	Internal	Control setting	0..1[0 = 0; 1 = Direct open]	-	0	Write	Volatile	Direct open command
	Direct close	126V5	Internal	Control setting	0..1[0 = 0; 1 = Direct close]	-	0	Write	Volatile	Direct close command
	Open select	126V6	Internal	Control setting	0..1[0 = 0; 1 = Open select]	-	0	Write	Volatile	Open operation selection of the secured control
	Close select	126V7	Internal	Control setting	0..1[0 = 0; 1 = Close select]	-	0	Write	Volatile	Close operation selection of the secured control
	Cancel	126V10	Internal	Control setting	0..1[0 = 0; 1 = Cancel]	-	0	Write	Volatile	Deselection of the secured control
	Execute	126V11	Internal	Control setting	0..1[0 = 0; 1 = Execute]	-	0	Write	Volatile	Execution of the secured control
	Cycle count	126V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	Last open	126V14	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last opening time
	Max open	126V15	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum opening time
	Last close	126V17	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last closing time
	Max close	126V18	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum closing time
	IV state	126V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state validitity from IV-signal
	Block state	126V35	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Object block signal state
	Summarized stat	126V50	RST	Input data	0..1023[B0=BINCLOSE; B1=BINOPEN; B3=IV; B4=CLOSEENA; B5=OPENENA; B8=BLOCK; B9=reserved]	-	0	Read	Volatile	Summarized status of the object
	Regist clear	126V98	MMI,RST	Control setting	0..1[0 = 0; 1 = Clear]	-	0	Write	Volatile	Clear internal registrations (last maximum)
	Alarm ack	126V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1	126V101	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E28)
	Event mask 2	126V103	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E28)
	Event mask 3	126V105	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E28)
	Event mask 4	126V107	MMI,RST	Control setting	0...521142271	-	134917887	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E28)
100127 / Rev C COIND1										
	Event delay	127S3	MMI,RST	Actual setting	0.0...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Object state	127V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Cycle count	127V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	IV state	127V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state validitity from IV-signal
	Summarized stat	127V50	RST	Input data	0..65535[B0=BINCLOSE; B1=BINOPEN; B3=IV]	-	0	Read	Volatile	Summarized status of the object
	Event mask 1	127V101	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 2	127V103	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	127V105	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	127V107	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
100128 / Rev C COIND2										
	Event delay	128S3	MMI,RST	Actual setting	0.0...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Object state	128V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Cycle count	128V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	IV state	128V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state valididity from IV-signal
	Summarized stat	128V50	RST	Input data	0..65535[B0=BINCLOSE; B1=BINOPEN; B3=IV]	-	0	Read	Volatile	Summarized status of the object
	Event mask 1	128V101	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	128V103	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	128V105	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	128V107	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
100129 / Rev C COIND3										
	Event delay	129S3	MMI,RST	Actual setting	0.0...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Object state	129V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Cycle count	129V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	IV state	129V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state valididity from IV-signal
	Summarized stat	129V50	RST	Input data	0..65535[B0=BINCLOSE; B1=BINOPEN; B3=IV]	-	0	Read	Volatile	Summarized status of the object
	Event mask 1	129V101	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	129V103	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	129V105	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	129V107	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
100130 / Rev C COIND4										
	Event delay	130S3	MMI,RST	Actual setting	0.0...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Object state	130V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Cycle count	130V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	IV state	130V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state valididity from IV-signal
	Summarized stat	130V50	RST	Input data	0..65535[B0=BINCLOSE; B1=BINOPEN; B3=IV]	-	0	Read	Volatile	Summarized status of the object
	Event mask 1	130V101	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	130V103	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	130V105	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	130V107	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
100131 / Rev C COIND5										
	Event delay	131S3	MMI,RST	Actual setting	0.0...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Object state	131V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Cycle count	131V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	IV state	131V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state valididity from IV-signal
	Summarized stat	131V50	RST	Input data	0..65535[B0=BINCLOSE; B1=BINOPEN; B3=IV]	-	0	Read	Volatile	Summarized status of the object
	Event mask 1	131V101	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	131V103	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	131V105	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	131V107	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
100132 / Rev C COIND6										
	Event delay	132S3	MMI,RST	Actual setting	0.0...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Object state	132V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Cycle count	132V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	IV state	132V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state valididty from IV-signal
	Summarized stat	132V50	RST	Input data	0..65535[B0=BINCLOSE; B1=BINOPEN; B3=IV]	-	0	Read	Volatile	Summarized status of the object
	Event mask 1	132V101	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	132V103	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	132V105	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	132V107	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
100133 / Rev C COIND7										
	Event delay	133S3	MMI,RST	Actual setting	0.0...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Object state	133V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Cycle count	133V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	IV state	133V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state valididty from IV-signal
	Summarized stat	133V50	RST	Input data	0..65535[B0=BINCLOSE; B1=BINOPEN; B3=IV]	-	0	Read	Volatile	Summarized status of the object
	Event mask 1	133V101	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	133V103	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	133V105	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	133V107	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
100134 / Rev C COIND8										
	Event delay	134S3	MMI,RST	Actual setting	0.0...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Object state	134V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	2-bit state of the object
	Cycle count	134V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value
	IV state	134V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state valididty from IV-signal
	Summarized stat	134V50	RST	Input data	0..65535[B0=BINCLOSE; B1=BINOPEN; B3=IV]	-	0	Read	Volatile	Summarized status of the object
	Event mask 1	134V101	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	134V103	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	134V105	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	134V107	MMI,RST	Control setting	0...783	-	527	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
100135 / Rev B COSW1										
	Nonvolatile	135S1	MMI,RST	Actual setting	0..1[0 = Inactive; 1 = Active]	-	1	Rd/Wr	Retain	Setting will be stored in a non-volatile memory
	ON state	135V1	MMI,RST	Control setting	0..1[0 = Inactive; 1 = Active]	-	0	Rd/Wr	Volatile	Object output state
	Event mask 1	135V101	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E1)
	Event mask 2	135V103	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E1)
	Event mask 3	135V105	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E1)
	Event mask 4	135V107	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E1)
100136 / Rev B COSW2										
	Nonvolatile	136S1	MMI,RST	Actual setting	0..1[0 = Inactive; 1 = Active]	-	1	Rd/Wr	Retain	Setting will be stored in a non-volatile memory
	ON state	136V1	MMI,RST	Control setting	0..1[0 = Inactive; 1 = Active]	-	0	Rd/Wr	Volatile	Object output state
	Event mask 1	136V101	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E1)
	Event mask 2	136V103	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E1)
	Event mask 3	136V105	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E1)
	Event mask 4	136V107	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E1)
100137 / Rev B COSW3										
	Nonvolatile	137S1	MMI,RST	Actual setting	0..1[0 = Inactive; 1 = Active]	-	1	Rd/Wr	Retain	Setting will be stored in a non-volatile memory
	ON state	137V1	MMI,RST	Control setting	0..1[0 = Inactive; 1 = Active]	-	0	Rd/Wr	Volatile	Object output state
	Event mask 1	137V101	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E1)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 2	137V103	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E1)
	Event mask 3	137V105	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E1)
	Event mask 4	137V107	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E1)
100138 / Rev B COSW4										
	Nonvolatile	138S1	MMI,RST	Actual setting	0..1[0 = Inactive; 1 = Active]	-	1	Rd/Wr	Retain	Setting will be stored in a non-volatile memory
	ON state	138V1	MMI,RST	Control setting	0..1[0 = Inactive; 1 = Active]	-	0	Rd/Wr	Volatile	Object output state
	Event mask 1	138V101	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E1)
	Event mask 2	138V103	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E1)
	Event mask 3	138V105	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E1)
	Event mask 4	138V107	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E1)
100139 / Rev C CO3DC1										
	Open alarm	139O5	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Opening time alarm status
	Close alarm	139O6	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Closing time alarm status
	Earth alarm	139O7	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Earthing time alarm status
	Free alarm	139O8	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Freeing time alarm status
	Fixed pulse	139S1	MMI,RST	Actual setting	0..1[0 = Variable pulse; 1 = Fixed pulse]	-	0	Rd/Wr	Retain	Selection of fixed pulse length
	Forced pulse	139S2	MMI,RST	Actual setting	0..1[0 = Single pulse; 1 = Forced pulse]	-	1	Rd/Wr	Retain	Execution of control command regardless the recent state (repeated command)
	Event delay	139S3	MMI,RST	Actual setting	0.000...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Open pulse	139S6	MMI,RST	Actual setting	0.040...100.000	s	0.100	Rd/Wr	Retain	Opening time pulse length
	Open alarm	139S7	MMI,RST	Actual setting	0.000...100.000	s	10.000	Rd/Wr	Retain	Opening time alarm limit
	Close pulse	139S8	MMI,RST	Actual setting	0.040...100.000	s	0.100	Rd/Wr	Retain	Closing time pulse length
	Close alarm	139S9	MMI,RST	Actual setting	0.000...100.000	s	10.000	Rd/Wr	Retain	Closing time alarm limit
	Earth pulse	139S20	MMI,RST	Actual setting	0.040...100.000	s	0.100	Rd/Wr	Retain	Earthing time pulse length
	Earth alarm	139S21	MMI,RST	Actual setting	0.000...100.000	s	10.000	Rd/Wr	Retain	Earthing time alarm limit
	Free pulse	139S22	MMI,RST	Actual setting	0.040...100.000	s	0.100	Rd/Wr	Retain	Freeing time pulse length
	Free alarm	139S23	MMI,RST	Actual setting	0.000...100.000	s	10.000	Rd/Wr	Retain	Freeing time alarm limit
	Object state oc	139V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1= Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	Open/Close state of the object
	Object state fe	139V2	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Earth(01); 2 = Free(10); 3 = Undefined(11)]	-	0	Read	Volatile	Free/Earth state of the object
	Interlock close	139V30	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Close command interlocking
	Interlock open	139V31	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Open command interlocking
	Interlock earth	139V32	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Earth command interloocking
	Interlock free	139V33	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Free command interlocking
	Direct open	139V4	Internal	Control setting	0..1[0 = 0; 1 = Direct open]	-	0	Write	Volatile	Direct open command
	Direct close	139V5	Internal	Control setting	0..1[0 = 0; 1 = Direct close]	-	0	Write	Volatile	Direct close command
	Direct earth	139V20	Internal	Control setting	0..1[0 = 0; 1 = Direct earth]	-	0	Write	Volatile	Direct earth command
	Direct free	139V21	Internal	Control setting	0..1[0 = 0; 1 = Direct free]	-	0	Write	Volatile	Direct free command
	Open select	139V6	Internal	Control setting	0..1[0 = 0; 1 = Open select]	-	0	Write	Volatile	Open operation selection of the secured control
	Close select	139V7	Internal	Control setting	0..1[0 = 0; 1 = Close select]	-	0	Write	Volatile	Close operation selection of the secured control
	Earth select	139V22	Internal	Control setting	0..1[0 = 0; 1 = Earth select]	-	0	Write	Volatile	Earth operation selection of the secured control
	Free select	139V23	Internal	Control setting	0..1[0 = 0; 1 = Free select]	-	0	Write	Volatile	Free operation selection of the secured control
	Cancel	139V10	Internal	Control setting	0..1[0 = 0; 1 = Cancel]	-	0	Write	Volatile	Deselection of the secured control
	Execute	139V11	Internal	Control setting	0..1[0 = 0; 1 = Execute]	-	0	Write	Volatile	Execution of the secured control
	Open cycles	139V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value between opening and closing
	Last open	139V14	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last opening time
	Max open	139V15	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum opening time
	Last close	139V17	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last closing time

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Max close	139V18	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum closing time
	Last earth	139V24	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last earthing time
	Max earth	139V25	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum earthing time
	Last free	139V26	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last freeing time
	Max free	139V27	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum freeing time
	Earth cycles	139V28	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value between earth and free state
	IV state	139V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state validitity from IV-signal
	Block state	139V35	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Object block signal state
	Summarized stat	139V50	RST	Input data	0..1023[B0 = BINCLOSE; B1 = BINOPEN; B2 = BINEARTH; B3 = IV; B4 = CLOSEENA; B5 = OPENENA; B6 = EARTHENA; B7 = FREEENA; B8 = BLOCK; B9 = reserved]	-	0	Read	Volatile	Summarized status of the object
	Regist clear	139V98	MMI,RST	Control setting	0..1[0 = 0; 1 = Clear]	-	0	Write	Volatile	Clear internal registrations (last maximum)
	Alarm ack	139V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1A	139V101	MMI,RST	Control setting	0...3742367743	-	2282401535	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E31)
	Event mask 1B	139V102	MMI,RST	Control setting	0...16383	-	16362	Rd/Wr	Retain	Event mask 1 for event transmission (E32 ... E45)
	Event mask 2A	139V103	MMI,RST	Control setting	0...3742367743	-	2282401535	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E31)
	Event mask 2B	139V104	MMI,RST	Control setting	0...16383	-	16362	Rd/Wr	Retain	Event mask 2 for event transmission (E32 ... E45)
	Event mask 3A	139V105	MMI,RST	Control setting	0...3742367743	-	2282401535	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E31)
	Event mask 3B	139V106	MMI,RST	Control setting	0...16383	-	16362	Rd/Wr	Retain	Event mask 3 for event transmission (E32 ... E45)
	Event mask 4A	139V107	MMI,RST	Control setting	0...3742367743	-	2282401535	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E31)
	Event mask 4B	139V108	MMI,RST	Control setting	0...16383	-	16362	Rd/Wr	Retain	Event mask 4 for event transmission (E32 ... E45)
100140 / Rev C CO3DC2										
	Open alarm	140O5	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Opening time alarm status
	Close alarm	140O6	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Closing time alarm status
	Earth alarm	140O7	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Earthing time alarm status
	Free alarm	140O8	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Freeing time alarm status
	Fixed pulse	140S1	MMI,RST	Actual setting	0..1[0 = Variable pulse; 1 = Fixed pulse]	-	0	Rd/Wr	Retain	Selection of fixed pulse length
	Forced pulse	140S2	MMI,RST	Actual setting	0..1[0 = Single pulse; 1 = Forced pulse]	-	1	Rd/Wr	Retain	Execution of control command regardless the recent state (repeated command)
	Event delay	140S3	MMI,RST	Actual setting	0.000...60.000	s	0.100	Rd/Wr	Retain	Event delay for undefined state
	Open pulse	140S6	MMI,RST	Actual setting	0.040...100.000	s	0.100	Rd/Wr	Retain	Opening time pulse length
	Open alarm	140S7	MMI,RST	Actual setting	0.000...100.000	s	10.000	Rd/Wr	Retain	Opening time alarm limit
	Close pulse	140S8	MMI,RST	Actual setting	0.040...100.000	s	0.100	Rd/Wr	Retain	Closing time pulse length
	Close alarm	140S9	MMI,RST	Actual setting	0.000...100.000	s	10.000	Rd/Wr	Retain	Closing time alarm limit
	Earth pulse	140S20	MMI,RST	Actual setting	0.040...100.000	s	0.100	Rd/Wr	Retain	Earthing time pulse length
	Earth alarm	140S21	MMI,RST	Actual setting	0.000...100.000	s	10.000	Rd/Wr	Retain	Earthing time alarm limit
	Free pulse	140S22	MMI,RST	Actual setting	0.040...100.000	s	0.100	Rd/Wr	Retain	Freeing time pulse length
	Free alarm	140S23	MMI,RST	Actual setting	0.000...100.000	s	10.000	Rd/Wr	Retain	Freeing time alarm limit
	Object state oc	140V1	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Close(01); 2 = Open(10); 3 = Undefined(11)]	-	0	Read	Volatile	Open/Close state of the object
	Object state fe	140V2	MMI,RST	Input data	0..3[0 = Undefined(00); 1 = Earth(01); 2 = Free(10); 3 = Undefined(11)]	-	0	Read	Volatile	Free/Earth state of the object
	Interlock close	140V30	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Close command interlocking
	Interlock open	140V31	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Open command interlocking
	Interlock earth	140V32	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Earth command interloocking
	Interlock free	140V33	MMI,RST	Input data	0..1[0 = Enabled; 1 = Interlocked]	-	1	Read	Volatile	Free command interlocking
	Direct open	140V4	Internal	Control setting	0..1[0 = 0; 1 = Direct open]	-	0	Write	Volatile	Direct open command
	Direct close	140V5	Internal	Control setting	0..1[0 = 0; 1 = Direct close]	-	0	Write	Volatile	Direct close command

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Direct earth	140V20	Internal	Control setting	0..1[0 = 0; 1 = Direct earth]	-	0	Write	Volatile	Direct earth command
	Direct free	140V21	Internal	Control setting	0..1[0 = 0; 1 = Direct free]	-	0	Write	Volatile	Direct free command
	Open select	140V6	Internal	Control setting	0..1[0 = 0; 1 = Open select]	-	0	Write	Volatile	Open operation selection of the secured control
	Close select	140V7	Internal	Control setting	0..1[0 = 0; 1 = Close select]	-	0	Write	Volatile	Close operation selection of the secured control
	Earth select	140V22	Internal	Control setting	0..1[0 = 0; 1 = Earth select]	-	0	Write	Volatile	Earth operation selection of the secured control
	Free select	140V23	Internal	Control setting	0..1[0 = 0; 1 = Free select]	-	0	Write	Volatile	Free operation selection of the secured control
	Cancel	140V10	Internal	Control setting	0..1[0 = 0; 1 = Cancel]	-	0	Write	Volatile	Deselection of the secured control
	Execute	140V11	Internal	Control setting	0..1[0 = 0; 1 = Execute]	-	0	Write	Volatile	Execution of the secured control
	Open cycles	140V12	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value between opening and closing
	Last open	140V14	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last opening time
	Max open	140V15	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum opening time
	Last close	140V17	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last closing time
	Max close	140V18	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum closing time
	Last earth	140V24	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last earthing time
	Max earth	140V25	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum earthing time
	Last free	140V26	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Last freeing time
	Max free	140V27	MMI,RST	Recorded data1	0.000...100.000	s	0.000	Read	Retain	Maximum freeing time
	Earth cycles	140V28	MMI,RST	Control setting	0...30000	-	0	Rd/Wr	Retain	Cycle count process value between earth and free state
	IV state	140V34	MMI,RST	Input data	0..1[0 = Valid; 1 = Invalid]	-	0	Read	Volatile	Object state validitity from IV-signal
	Block state	140V35	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Object block signal state
	Summarized stat	140V50	RST	Input data	0..1023[B0(1)=BINCLOSE; B1(2)=BINOPEN; B2(4)=BINEARTH; B3(8)=IV; B4(16)=CLOSEENA; B5(32)=OPENENA; B6(64)=EARTHENA; B7(128)=FREEENA; B8(256)=BLOCK; B9(512)=reserved]	-	0	Read	Volatile	Summarized status of the object
	Regist clear	140V98	MMI,RST	Control setting		-	0	Write	Volatile	Clear internal registrations (last maximum)
	Alarm ack	140V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Clear]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1A	140V101	MMI,RST	Control setting	0...3742367743	-	2282401535	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E31)
	Event mask 1B	140V102	MMI,RST	Control setting	0...16383	-	16362	Rd/Wr	Retain	Event mask 1 for event transmission (E32 ... E45)
	Event mask 2A	140V103	MMI,RST	Control setting	0...3742367743	-	2282401535	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E31)
	Event mask 2B	140V104	MMI,RST	Control setting	0...16383	-	16362	Rd/Wr	Retain	Event mask 2 for event transmission (E32 ... E45)
	Event mask 3A	140V105	MMI,RST	Control setting	0...3742367743	-	2282401535	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E31)
	Event mask 3B	140V106	MMI,RST	Control setting	0...16383	-	16362	Rd/Wr	Retain	Event mask 3 for event transmission (E32 ... E45)
	Event mask 4A	140V107	MMI,RST	Control setting	0...3742367743	-	2282401535	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E31)
	Event mask 4B	140V108	MMI,RST	Control setting	0...16383	-	16362	Rd/Wr	Retain	Event mask 4 for event transmission (E32 ... E45)
100141 / Rev C COCBDIR										
	Pulse width	141S1	MMI,RST	Actual setting	0.1...300.0	s	0.1	Rd/Wr	Retain	Output pulse width
	Output pulse	141V1	RST	Control setting	0..1[0 = 0; 1 = Activate]	-	0	Write	Volatile	Remote trigger for output pulse
	Event mask 1	141V101	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E1)
	Event mask 2	141V103	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E1)
	Event mask 3	141V105	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E1)
	Event mask 4	141V107	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E1)
100142 / Rev B COLOCAT										
	Logic setting	142V1	RST	Control setting	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Reset logic position setting
	Binary position	142V2	RST	Control setting	0..2[0 = Disable state; 1 = Local state; 2 = Remote state]	-	0	Read	Volatile	Recent binary input position (to be validated by the system software)
	Event mask 1	142V101	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E1)
	Event mask 2	142V103	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E1)
	Event mask 3	142V105	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E1)
	Event mask 4	142V107	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E1)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
100143 / Rev F COPFC										
	Number of banks	143S41	MMI,RST	Setting group1	1...4	-	1	Rd/Wr	Retain	The number of capacitor banks to be controlled
	Type of seq	143S42	MMI,RST	Setting group1	0..7[0 = 1:1:1:1 linear; 1 = 1:1:1:1 circul.; 2 = 1:1:2:2 circul.; 3 = 1:2:2:2 linear; 4 = 1:2:2:2 circul.; 5 = 1:2:4:4 linear; 6 = 1:2:4:4 circul.; 7 = 1:2:4:8]	-	0	Rd/Wr	Retain	The relational step sizes and the type of the switching sequence
	Size of 1.step	143S43	MMI,RST	Setting group1	10.0...50000.0	kvar	100.0	Rd/Wr	Retain	Size of the first capacitor bank (should be the smallest)
	Target day PF	143S44	MMI,RST	Setting group1	0.70...1.00	-	0.95	Rd/Wr	Retain	Target value for daily cos phi
	Day unit	143S45	MMI,RST	Setting group1	0..1[0 = Inductive; 1 = Capacitive]	-	0	Rd/Wr	Retain	Unit that indicates whether the daily target is in the capacitive or inductive side
	Target night PF	143S46	MMI,RST	Setting group1	0.70...1.00	-	0.95	Rd/Wr	Retain	Target value for night cos phi
	Night unit	143S47	MMI,RST	Setting group1	0..1[0 = Inductive; 1 = Capacitive]	-	0	Rd/Wr	Retain	Unit that indicates whether the night target is in the capacitive or inductive side
	Reconn. inhibit	143S48	MMI,RST	Setting group1	0.5...6000.0	s	60	Rd/Wr	Retain	Setting the reconnection inhibit time (discharge time)
	Sensitivity Ind	143S49	MMI,RST	Setting group1	60.0...200.0	%	70.0	Rd/Wr	Retain	Sensitivity in the inductive side
	Sensitivity Cap	143S50	MMI,RST	Setting group1	0.0...100.0	%	60.0	Rd/Wr	Retain	Sensitivity in the capacitive side
	Maximum Q limit	143S51	MMI,RST	Setting group1	0.1...100.0	Mvar	100.0	Rd/Wr	Retain	Alarm limit for the maximum reactive power
	Minimum Q limit	143S52	MMI,RST	Setting group1	-100.0...0.0	Mvar	-100.0	Rd/Wr	Retain	Alarm limit for the minimum reactive power
	Overvolt. limit	143S53	MMI,RST	Setting group1	0.80...1.60	x Un	1.touko	Rd/Wr	Retain	Overvoltage limit when the switching in is inhibited
	Operation mode	143V1	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Automatic mode; 2 = Manual mode; 3 = Testing mode]	-	1	Rd/Wr	Retain	Operation mode of the function block
	Automatic test	143V2	MMI,RST	Control setting	0..1[0 = Not activated; 1 = Start]	-	0	Rd/Wr	Volatile	Starting the automatic testing sequence
	Calc. method	143V3	MMI,RST	Control setting	0..1[0 = Normal; 1 = Integral]	-	0	Rd/Wr	Retain	Calculation method (normal or integral)
	Cont. principle	143V4	MMI,RST	Control setting	0..1[0 = Progressive; 1 = Direct]	-	0	Rd/Wr	Retain	Defining how the target is reached: step by step or directly
	Duration demand	143V5	MMI,RST	Control setting	0.5...6000.0	s	30.0	Rd/Wr	Retain	Time for which the demand should be valid before switching in or out is done
	Manual command	143V6	MMI,RST	Manual command	0..3[0 = Not activated; 1 = Remove one step; 2 = Add one step; 3 = Disconnect all]	-	0	Rd/Wr	Retain	Giving switching commands in the manual mode
	Day&night switch	143V7	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Binary input; 2 = Internal clock; 3 = By setting]	-	0	Rd/Wr	Retain	Different options for switching between the day and night target PF
	D&n command	143V8	MMI,RST	Control setting	0..2[0 = Not activated; 1 = Day target PF; 2 = Night target PF]	-	0	Rd/Wr	Retain	Day and night target switching
	Night starts	143V9	MMI,RST	Control setting	0...23	h	22	Rd/Wr	Retain	If the day/night target switching is by internal clock, the night starts according to this parameter
	Night ends	143V10	MMI,RST	Control setting	0...23	h	6	Rd/Wr	Retain	If the day/night target switching is by internal clock, the night ends according to this parameter
	Switches / day	143V11	MMI,RST	Recorded data1	0...65535	-	0	Read	Retain	Number of swtiching operations per day
	Switches / week	143V12	MMI,RST	Recorded data1	0...65535	-	0	Read	Retain	Number of switching operations per week
	Reset registers	143V13	RST	Control setting	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting active alarms and the recorded data values
	Measuring mode	143V14	MMI,RST	Control setting	0..13[0 = Not in use; 1 = U1,U2,U3 &...; 2 = U12,U23,U0 &...; 3 = U23,U31,U0 &...; 4 = U12,U31,U0 &...; 5 = U12,U23 &...; 6 = U23,U31 &...; 7 = U12,U31 &...; 8 = U1 & I1; 9 = U2 & I2; 10 = U3 & I3; 11 = U12 & I3; 12 = U23 & I1; 13 = U31 & I2]	-	0	Read	Volatile	Power measurement mode
	Commands	143V15	MMI,RST	Manual command	0..1[0 = Disabled; 1 = Enabled]	-	0	Read	Volatile	Indicates whether the manual commands are allowed or not
	Event mask 1	143V101	MMI,RST	Control setting	0...61603839	-	61357311	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E25)
	Event mask 2	143V103	MMI,RST	Control setting	0...61603839	-	61357311	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E25)
	Event mask 3	143V105	MMI,RST	Control setting	0...61603839	-	61357311	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E25)
	Event mask 4	143V107	MMI,RST	Control setting	0...61603839	-	61357311	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E25)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Testing result	143V739	Internal	Control setting	-	-	0	Rd/Wr	Retain	NOTE! Only for internal use. When TRUE => also failed testing overwrites '1. step size'
	Multiple ON time	143V740	Internal	Control setting	-	-	12000	Rd/Wr	Retain	NOTE! Only for internal use. Delay (ms) between sequential ON switchings
	P3 (kW)	143I1	MMI,RST	Input data	-999999...999999	kW	0.0	Read	Volatile	Three-phase active power (fundamental component, no harmonics included)
	Q3 (kvar)	143I2	MMI,RST	Input data	-999999...999999	kvar	0.0	Read	Volatile	Three-phase reactive power (fundamental component, no harmonics included)
	Power factor DPF	143I3	MMI,RST	Input data	0.00...1.00	-	0.0	Read	Volatile	Displacement power factor cos phi
	Connected banks	143I4	MMI,RST	Input data	0...65535	-	0	Read	Volatile	Banks that are on, e.g 14 means that the 1. and 4. banks are connected
	Input BLOCK	143I5	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input for blocking the automatic and manual operations of COPFC
	Input DN_COSPHI	143I6	MMI,RST	Input data	0..1[0 = Day target PF; 1 = Night target PF]	-	0	Read	Volatile	Control input for switching between the Target day cos phi and the Target night cos phi
	Input DISCONNECT	143I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Control input for immediately disconnecting all the capacitor banks simultaneously
	Input RESET	143I8	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting the alarm signals and recorded data of COPFC
	Output REQ_UP	143O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Duration demand time - the timer has been started to add step(s)
	Output REQ_DOWN	143O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Duration demand time - the timer has been started to remove step(s)
	Output CONT_FAIL	143O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	A control operation has been failed
	Output ALAR_Q	143O4	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	The maximum or minimum reactive power limit has been exceeded
	Output ALAR_PUMP	143O5	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	A pumping situation has been detected
	Output TESTING	143O6	MMI,RST	Output data	0..1[0 = Not active; 1 = In progress]	-	0	Read	Volatile	Indicates whether the automatic testing sequence is in progress
100157 / Rev A MMIDATA1										
	Data value	157V1	RST	Control setting	-999.9...9999.9	-	0	Read	Volatile	Dynamic data point value
	Data visibility	157V2	RST	Control setting	1=Visible, 0=Invisible	-	0	Read	Volatile	Dynamic data point visibility
100158 / Rev A MMIDATA2										
	Data value	158V1	RST	Control setting	-999.9...9999.9	-	0	Read	Volatile	Dynamic data point value
	Data visibility	158V2	RST	Control setting	1=Visible, 0=Invisible	-	0	Read	Volatile	Dynamic data point visibility
100159 / Rev A MMIDATA3										
	Data value	159V1	RST	Control setting	-999.9...9999.9	-	0	Read	Volatile	Dynamic data point value
	Data visibility	159V2	RST	Control setting	1=Visible, 0=Invisible	-	0	Read	Volatile	Dynamic data point visibility
100160 / Rev A MMIDATA4										
	Data value	160V1	RST	Control setting	-999.9...9999.9	-	0	Read	Volatile	Dynamic data point value
	Data visibility	160V2	RST	Control setting	1=Visible, 0=Invisible	-	0	Read	Volatile	Dynamic data point visibility
100161 / Rev A MMIDATA5										
	Data value	161V1	RST	Control setting	-999.9...9999.9	-	0	Read	Volatile	Dynamic data point value
	Data visibility	161V2	RST	Control setting	1=Visible, 0=Invisible	-	0	Read	Volatile	Dynamic data point visibility
100162 / Rev C MMIALAR1										
	Object mode	162V1	MMI,RST	Control setting	0..3[0 = Nonlatched; 1 = Latched; 2 = Latched blink; 3 = Uninitialized]	-	3	Read	Retain	Object mode from mimic file
	Object status	162V2	RST	Control setting	0..7[B0 = ON-signal state; B1 = Alarm latched; B2 = Alarm or state (non-latched) acknowledged]	-	0	Read	Volatile	Object status

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Alarm ack	162V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1	162V101	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	162V103	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	162V105	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	162V107	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
	ON-state	162I1	RST	Input data	0..1[0 = OFF; 1 = ON]	-	0	Read	Volatile	ON-signals state
100163 / Rev C MMIALAR2										
	ON-state	163I1	RST	Input data	0..1[0 = OFF; 1 = ON]	-	0	Read	Volatile	ON-signals state
	Object mode	163V1	MMI,RST	Control setting	0..3[0 = Nonlatched; 1 = Latched; 2 = Latched blink; 3 = Uninitialized]	-	3	Read	Retain	Object mode from mimic file
	Object status	163V2	RST	Control setting	0..7[B0 = ON-signal state; B1 = Alarm latched; B2 = Alarm or state (non-latched) acknowledged]	-	0	Read	Volatile	Object status
	Alarm ack	163V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1	163V101	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	163V103	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	163V105	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	163V107	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
100164 / Rev C MMIALAR3										
	Object mode	164V1	MMI,RST	Control setting	0..3[0 = Nonlatched; 1 = Latched; 2 = Latched blink; 3 = Uninitialized]	-	3	Read	Retain	Object mode from mimic file
	Object status	164V2	RST	Control setting	0..7[B0 = ON-signal state; B1 = Alarm latched; B2 = Alarm or state (non-latched) acknowledged]	-	0	Read	Volatile	Object status
	Alarm ack	164V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1	164V101	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	164V103	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	164V105	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	164V107	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
	ON-state	164I1	RST	Input data	0..1[0 = OFF; 1 = ON]	-	0	Read	Volatile	ON-signals state
100165 / Rev C MMIALAR4										
	Object mode	165V1	MMI,RST	Control setting	0..3[0 = Nonlatched; 1 = Latched; 2 = Latched blink; 3 = Uninitialized]	-	3	Read	Retain	Object mode from mimic file
	Object status	165V2	RST	Control setting	0..7[B0 = ON-signal state; B1 = Alarm latched; B2 = Alarm or state (non-latched) acknowledged]	-	0	Read	Volatile	Object status
	Alarm ack	165V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1	165V101	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	165V103	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	165V105	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	165V107	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
	ON-state	165I1	RST	Input data	0..1[0 = OFF; 1 = ON]	-	0	Read	Volatile	ON-signals state
100166 / Rev C MMIALAR5										
	Object mode	166V1	MMI,RST	Control setting	0..3[0 = Nonlatched; 1 = Latched; 2 = Latched blink; 3 = Uninitialized]	-	3	Read	Retain	Object mode from mimic file
	Object status	166V2	RST	Control setting	0..7[B0 = ON-signal state; B1 = Alarm latched; B2 = Alarm or state (non-latched) acknowledged]	-	0	Read	Volatile	Object status
	Alarm ack	166V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1	166V101	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	166V103	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	166V105	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	166V107	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	ON-state	166I1	RST	Input data	0..1[0 = OFF; 1 = ON]	-	0	Read	Volatile	ON-signals state
100167 / Rev C MMIALAR6										
	Object mode	167V1	MMI,RST	Control setting	0..3[0 = Nonlatched; 1 = Latched; 2 = Latched blink; 3 = Uninitialized]	-	3	Read	Retain	Object mode from mimic file
	Object status	167V2	RST	Control setting	0..7[B0 = ON-signal state; B1 = Alarm latched; B2 = Alarm or state (non-latched) acknowledged]	-	0	Read	Volatile	Object status
	Alarm ack	167V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1	167V101	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	167V103	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	167V105	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	167V107	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
	ON-state	167I1	RST	Input data	0..1[0 = OFF; 1 = ON]	-	0	Read	Volatile	ON-signals state
100168 / Rev C MMIALAR7										
	Object mode	168V1	MMI,RST	Control setting	0..3[0 = Nonlatched; 1 = Latched; 2 = Latched blink; 3 = Uninitialized]	-	3	Read	Retain	Object mode from mimic file
	Object status	168V2	RST	Control setting	0..7[B0 = ON-signal state; B1 = Alarm latched; B2 = Alarm or state (non-latched) acknowledged]	-	0	Read	Volatile	Object status
	Alarm ack	168V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1	168V101	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	168V103	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	168V105	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	168V107	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
	ON-state	168I1	RST	Input data	0..1[0 = OFF; 1 = ON]	-	0	Read	Volatile	ON-signals state
100169 / Rev C MMIALAR8										
	Object mode	169V1	MMI,RST	Control setting	0..3[0 = Nonlatched; 1 = Latched; 2 = Latched blink; 3 = Uninitialized]	-	3	Read	Retain	Object mode from mimic file
	Object status	169V2	RST	Control setting	0..7[B0 = ON-signal state; B1 = Alarm latched; B2 = Alarm or state (non-latched) acknowledged]	-	0	Read	Volatile	Object status
	Alarm ack	169V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowlege alarm
	Event mask 1	169V101	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	169V103	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	169V105	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	169V107	MMI,RST	Control setting	0...11	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
	ON-state	169I1	RST	Input data	0..1[0 = OFF; 1 = ON]	-	0	Read	Volatile	ON-signals state
100181 / Rev C CMCU3										
	Current IL1	181I1	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL1
	Current IL2	181I2	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL2
	Current IL3	181I3	MMI,RST	Input data	0.00...60.00	x In	0.00	Read	Volatile	Phase current IL3
	Output ALARM	181O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of alarm signal
	Date	181V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	181V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Current IL1	181V203	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Value of current IL1
	Current IL2	181V204	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Value of current IL2
	Current IL3	181V205	MMI,RST	Recorded data1	0.00...60.00	x In	0.00	Read	Retain	Value of current IL3
	Date	181V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	181V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Current IL1	181V303	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Value of current IL1
	Current IL2	181V304	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Value of current IL2
	Current IL3	181V305	MMI,RST	Recorded data2	0.00...60.00	x In	0.00	Read	Retain	Value of current IL3

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Date	181V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	181V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Current IL1	181V403	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Value of current IL1
	Current IL2	181V404	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Value of current IL2
	Current IL3	181V405	MMI,RST	Recorded data3	0.00...60.00	x In	0.00	Read	Retain	Value of current IL3
	Operation mode	181V1	MMI,RST	Control setting	0..1[0 = Not in use; 1 = In use]	-	1	Rd/Wr	Retain	Switching between the modes: 'In use' and 'Not in use'
	Current select.	181V2	MMI,RST	Control setting	1..4[1 = L1 & L2 & L3; 2 = L1 & L2; 3 = L1 & L3; 4 = L2 & L3]	-	1	Rd/Wr	Retain	Selection of phase currents used for supervision
	High limit	181V3	MMI,RST	Control setting	10...20	% In	12	Rd/Wr	Retain	Set high limit for phase current supervision
	Low limit	181V4	MMI,RST	Control setting	2...8	% In	6	Rd/Wr	Retain	Set low limit for phase current supervision
	Alarm delay	181V5	MMI,RST	Control setting	3.00...60.00	s	15.00	Rd/Wr	Retain	Set alarm operate time delay
	Test ALARM	181V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of alarm output
	Event mask 1	181V101	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E1)
	Event mask 2	181V103	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E1)
	Event mask 3	181V105	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E1)
	Event mask 4	181V107	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E1)
100182 / Rev D CMVO3										
	Voltage UL1_U12	182I1	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Voltage UL1 / U12
	Voltage UL2_U23	182I2	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Voltage UL2 / U23
	Voltage UL3_U31	182I3	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Voltage UL3 / U31
	Output ALARM	182O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of alarm signal
	Date	182V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	182V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Voltage U1_12	182V203	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Voltage U1
	Voltage U2_23	182V204	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Voltage U2
	Voltage U3_31	182V205	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Voltage U3
	Date	182V301	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	182V302	MMI,RST	Recorded data2	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Voltage U1_12	182V303	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Voltage U1
	Voltage U2_23	182V304	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Voltage U2
	Voltage U3_31	182V305	MMI,RST	Recorded data2	0.00...2.00	x Un	0.00	Read	Retain	Voltage U3
	Date	182V401	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Recording date
	Time	182V402	MMI,RST	Recorded data3	hh:mm:ss.000	-	-	Read	Retain	Recording time
	Voltage U1_12	182V403	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Voltage U1
	Voltage U2_23	182V404	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Voltage U2
	Voltage U3_31	182V405	MMI,RST	Recorded data3	0.00...2.00	x Un	0.00	Read	Retain	Voltage U3
	Operation mode	182V1	MMI,RST	Control setting	0..1[0 = Not in use; 1 = In use]	-	1	Rd/Wr	Retain	Switching between the modes: 'In use' and 'Not in use'
	Voltage select.	182V2	MMI,RST	Control setting	1..4[1 = L1 & L2 & L3; 2 = L1 & L2; 3 = L1 & L3; 4 = L2 & L3]	-	1	Rd/Wr	Retain	Selection of voltages used for supervision
	High limit	182V3	MMI,RST	Control setting	10...110	% Un	12	Rd/Wr	Retain	Set high limit for voltage supervision
	Low limit	182V4	MMI,RST	Control setting	2...90	% Un	6	Rd/Wr	Retain	Set low limit for voltage supervision
	Alarm delay	182V5	MMI,RST	Control setting	3...60	s	15	Rd/Wr	Retain	Set alarm operate time delay
	Test ALARM	182V31	MMI,RST	Control setting	0..1[0 = Do not activate; 1 = Activate]	-	0	Rd/Wr	Volatile	Testing of alarm output
	Event mask 1	182V101	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E1)
	Event mask 2	182V103	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E1)
	Event mask 3	182V105	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E1)
	Event mask 4	182V107	MMI,RST	Control setting	0...3	-	3	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E1)
100184 / Rev B CMTIME1										
	BININP state	184I1	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Binary input state

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Alarm state	184O1	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Alarm state
	Max hours	184S1	MMI,RST	Actual setting	0...87600	hours	0	Rd/Wr	Retain	Maximum accumulated time alarm limit hours
	Max mins	184S2	MMI,RST	Actual setting	0...59	min	0	Rd/Wr	Retain	Maximum accumulated time alarm limit minutes
	Accum. hours	184V1	MMI,RST	Control setting	0...87600	hours	0	Rd/Wr	Retain	Accumulated time hours
	Accum. min	184V2	MMI,RST	Control setting	0...59	min	0	Rd/Wr	Retain	Accumulated time minutes
	Alarm ack	184V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowledge alarm
	Event mask 1	184V101	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	184V103	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	184V105	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	184V107	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
100185 / Rev B CMTIME2										
	BININP state	185I1	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Binary input state
	Alarm state	185O1	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Alarm state
	Max hours	185S1	MMI,RST	Actual setting	0...87600	hours	0	Rd/Wr	Retain	Maximum accumulated time alarm limit hours
	Max mins	185S2	MMI,RST	Actual setting	0...59	min	0	Rd/Wr	Retain	Maximum accumulated time alarm limit minutes
	Accum. hours	185V1	MMI,RST	Control setting	0...87600	hours	0	Rd/Wr	Retain	Accumulated time hours
	Accum. min	185V2	MMI,RST	Control setting	0...59	min	0	Rd/Wr	Retain	Accumulated time minutes
	Alarm ack	185V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowledge alarm
	Event mask 1	185V101	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	185V103	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	185V105	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	185V107	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
100186 / Rev B CMGAS1										
	Alarm delay	186S1	MMI,RST	Actual setting	0.000...300.000	s	0.000	Rd/Wr	Retain	Alarm delay
	Alarm ack	186V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowledge alarm
	Event mask 1	186V101	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	186V103	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	186V105	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	186V107	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
	Gas pressure	186I1	MMI,RST	Input data	0..1[0 = Invalid; 1 = Valid]	-	0	Read	Volatile	Indication of valid gas pressure
	Alarm state	186O1	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Alarm state
100187 / Rev C CMBWEAR1										
	Alarm limit	187S1	MMI,RST	Actual setting	1.00...30000.00	-	5000.00	Rd/Wr	Retain	Breaker wear alarm limit for accumulated breaker wear
	Wear L1	187V1	MMI,RST	Control setting	0.00...30000.00	-	0.00	Rd/Wr	Retain	Accumulated breaker wear at pole 1
	Wear L2	187V2	MMI,RST	Control setting	0.00...30000.00	-	0.00	Rd/Wr	Retain	Accumulated breaker wear at pole 2
	Wear L3	187V3	MMI,RST	Control setting	0.00...30000.00	-	0.00	Rd/Wr	Retain	Accumulated breaker wear at pole 3
	Alarm ack	187V99	MMI,RST	Control setting	0..1[0 = 0; 1=Acknowledge]	-	0	Write	Volatile	Acknowledge alarm
	Event mask 1	187V101	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E1)
	Event mask 2	187V103	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E1)
	Event mask 3	187V105	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E1)
	Event mask 4	187V107	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E1)
	Current 1/16	187V13	RST	Control setting	0.00...1000.00	kA	0.00	Rd/Wr	Retain	Current value in breaker wear table (1/16)
	Wear 1/16	187V14	RST	Control setting	0.00...10000.00	-	0.00	Rd/Wr	Retain	Wear value in breaker wear table (1/16)
	Current 2/16	187V15	RST	Control setting	0.00...1000.00	kA	4.00	Rd/Wr	Retain	Current value in breaker wear table (2/16)
	Wear 2/16	187V16	RST	Control setting	0.00...10000.00	-	4.00	Rd/Wr	Retain	Wear value in breaker wear table (2/16)
	Current 3/16	187V17	RST	Control setting	0.00...1000.00	kA	8.00	Rd/Wr	Retain	Current value in breaker wear table (3/16)
	Wear 3/16	187V18	RST	Control setting	0.00...10000.00	-	33.00	Rd/Wr	Retain	Wear value in breaker wear table (3/16)
	Current 4/16	187V19	RST	Control setting	0.00...1000.00	kA	12.00	Rd/Wr	Retain	Current value in breaker wear table (4/16)
	Wear 4/16	187V20	RST	Control setting	0.00...10000.00	-	92.00	Rd/Wr	Retain	Wear value in breaker wear table (4/16)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Current 5/16	187V21	RST	Control setting	0.00...1000.00	kA	16.00	Rd/Wr	Retain	Current value in breaker wear table (5/16)
	Wear 5/16	187V22	RST	Control setting	0.00...10000.00	-	164.00	Rd/Wr	Retain	Wear value in breaker wear table (5/16)
	Current 6/16	187V23	RST	Control setting	0.00...1000.00	kA	20.00	Rd/Wr	Retain	Current value in breaker wear table (6/16)
	Wear 6/16	187V24	RST	Control setting	0.00...10000.00	-	256.00	Rd/Wr	Retain	Wear value in breaker wear table (6/16)
	Current 7/16	187V25	RST	Control setting	0.00...1000.00	kA	24.00	Rd/Wr	Retain	Current value in breakerwear table (7/16)
	Wear 7/16	187V26	RST	Control setting	0.00...10000.00	-	369.00	Rd/Wr	Retain	Wear value in breaker wear table (7/16)
	Current 8/16	187V27	RST	Control setting	0.00...1000.00	kA	28.00	Rd/Wr	Retain	Current value in breaker wear table (8/16)
	Wear 8/16	187V28	RST	Control setting	0.00...10000.00	-	502.00	Rd/Wr	Retain	Wear value in breaker wear table (8/16)
	Current 9/16	187V29	RST	Control setting	0.00...1000.00	kA	32.00	Rd/Wr	Retain	Current value in breaker wear table (9/16)
	Wear 9/16	187V30	RST	Control setting	0.00...10000.00	-	655.00	Rd/Wr	Retain	Wear value in breaker wear table (9/16)
	Current 10/16	187V31	RST	Control setting	0.00...1000.00	kA	36.00	Rd/Wr	Retain	Current value in breaker wear table (10/16)
	Wear 10/16	187V32	RST	Control setting	0.00...10000.00	-	829.00	Rd/Wr	Retain	Wear value in breaker wear table (10/16)
	Current 11/16	187V33	RST	Control setting	0.00...1000.00	kA	40.00	Rd/Wr	Retain	Current value in breaker wear table (11/16)
	Wear 11/16	187V34	RST	Control setting	0.00...10000.00	-	1024.00	Rd/Wr	Retain	Wear value in breaker wear table (11/16)
	Current 12/16	187V35	RST	Control setting	0.00...1000.00	kA	44.00	Rd/Wr	Retain	Current value in breaker wear table (12/16)
	Wear 12/16	187V36	RST	Control setting	0.00...10000.00	-	1239.00	Rd/Wr	Retain	Wear value in breaker wear table (12/16)
	Current 13/16	187V37	RST	Control setting	0.00...1000.00	kA	48.00	Rd/Wr	Retain	Current value in breaker wear table (13/16)
	Wear 13/16	187V38	RST	Control setting	0.00...10000.00	-	1475.00	Rd/Wr	Retain	Wear value in breaker wear table (13/16)
	Current 14/16	187V39	RST	Control setting	0.00...1000.00	kA	52.00	Rd/Wr	Retain	Current value in breaker wear table (14/16)
	Wear 14/16	187V40	RST	Control setting	0.00...10000.00	-	1731.00	Rd/Wr	Retain	Wear value in breaker wear table (14/16)
	Current 15/16	187V41	RST	Control setting	0.00...1000.00	kA	56.00	Rd/Wr	Retain	Current value in breaker wear table (15/16)
	Wear 15/16	187V42	RST	Control setting	0.00...10000.00	-	2007.00	Rd/Wr	Retain	Wear value in breaker wear table (15/16)
	Current 16/16	187V43	RST	Control setting	0.00...1000.00	kA	60.00	Rd/Wr	Retain	Current value in breaker wear table (16/16)
	Wear 16/16	187V44	RST	Control setting	0.00...10000.00	-	2304.00	Rd/Wr	Retain	Wear value in breaker wear table (16/16)
	Alarm state	187O1	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Breaker wear alarm state
100188 / Rev C CMBWEAR2										
	Alarm state	188O1	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Breaker wear alarm state
	Alarm limit	188S1	MMI,RST	Actual setting	1.00...30000.00	-	5000.00	Rd/Wr	Retain	Breaker wear alarm limit for accumulated breaker wear
	Wear L1	188V1	MMI,RST	Control setting	0.00...30000.00	-	0.00	Rd/Wr	Retain	Accumulated breaker wear at pole 1
	Wear L2	188V2	MMI,RST	Control setting	0.00...30000.00	-	0.00	Rd/Wr	Retain	Accumulated breaker wear at pole 2
	Wear L3	188V3	MMI,RST	Control setting	0.00...30000.00	-	0.00	Rd/Wr	Retain	Accumulated breaker wear at pole 3
	Alarm ack	188V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowledge alarm
	Event mask 1	188V101	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E1)
	Event mask 2	188V103	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E1)
	Event mask 3	188V105	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E1)
	Event mask 4	188V107	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E1)
	Current 1/16	188V13	RST	Control setting	0.00...1000.00	kA	0.00	Rd/Wr	Retain	Current value in breaker wear table (1/16)
	Wear 1/16	188V14	RST	Control setting	0.00...10000.00	-	0.00	Rd/Wr	Retain	Wear value in breaker wear table (1/16)
	Current 2/16	188V15	RST	Control setting	0.00...1000.00	kA	4.00	Rd/Wr	Retain	Current value in breaker wear table (2/16)
	Wear 2/16	188V16	RST	Control setting	0.00...10000.00	-	4.00	Rd/Wr	Retain	Wear value in breaker wear table (2/16)
	Current 3/16	188V17	RST	Control setting	0.00...1000.00	kA	8.00	Rd/Wr	Retain	Current value in breaker wear table (3/16)
	Wear 3/16	188V18	RST	Control setting	0.00...10000.00	-	33.00	Rd/Wr	Retain	Wear value in breaker wear table (3/16)
	Current 4/16	188V19	RST	Control setting	0.00...1000.00	kA	12.00	Rd/Wr	Retain	Current value in breaker wear table (4/16)
	Wear 4/16	188V20	RST	Control setting	0.00...10000.00	-	92.00	Rd/Wr	Retain	Wear value in breaker wear table (4/16)
	Current 5/16	188V21	RST	Control setting	0.00...1000.00	kA	16.00	Rd/Wr	Retain	Current value in breaker wear table (5/16)
	Wear 5/16	188V22	RST	Control setting	0.00...10000.00	-	164.00	Rd/Wr	Retain	Wear value in breaker wear table (5/16)
	Current 6/16	188V23	RST	Control setting	0.00...1000.00	kA	20.00	Rd/Wr	Retain	Current value in breaker wear table (6/16)
	Wear 6/16	188V24	RST	Control setting	0.00...10000.00	-	256.00	Rd/Wr	Retain	Wear value in breaker wear table (6/16)
	Current 7/16	188V25	RST	Control setting	0.00...1000.00	kA	24.00	Rd/Wr	Retain	Current value in breakerwear table (7/16)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Wear 7/16	188V26	RST	Control setting	0.00...10000.00	-	369.00	Rd/Wr	Retain	Wear value in breaker wear table (7/16)
	Current 8/16	188V27	RST	Control setting	0.00...1000.00	kA	28.00	Rd/Wr	Retain	Current value in breaker wear table (8/16)
	Wear 8/16	188V28	RST	Control setting	0.00...10000.00	-	502.00	Rd/Wr	Retain	Wear value in breaker wear table (8/16)
	Current 9/16	188V29	RST	Control setting	0.00...1000.00	kA	32.00	Rd/Wr	Retain	Current value in breaker wear table (9/16)
	Wear 9/16	188V30	RST	Control setting	0.00...10000.00	-	655.00	Rd/Wr	Retain	Wear value in breaker wear table (9/16)
	Current 10/16	188V31	RST	Control setting	0.00...1000.00	kA	36.00	Rd/Wr	Retain	Current value in breaker wear table (10/16)
	Wear 10/16	188V32	RST	Control setting	0.00...10000.00	-	829.00	Rd/Wr	Retain	Wear value in breaker wear table (10/16)
	Current 11/16	188V33	RST	Control setting	0.00...1000.00	kA	40.00	Rd/Wr	Retain	Current value in breaker wear table (11/16)
	Wear 11/16	188V34	RST	Control setting	0.00...10000.00	-	1024.00	Rd/Wr	Retain	Wear value in breaker wear table (11/16)
	Current 12/16	188V35	RST	Control setting	0.00...1000.00	kA	44.00	Rd/Wr	Retain	Current value in breaker wear table (12/16)
	Wear 12/16	188V36	RST	Control setting	0.00...10000.00	-	1239.00	Rd/Wr	Retain	Wear value in breaker wear table (12/16)
	Current 13/16	188V37	RST	Control setting	0.00...1000.00	kA	48.00	Rd/Wr	Retain	Current value in breaker wear table (13/16)
	Wear 13/16	188V38	RST	Control setting	0.00...10000.00	-	1475.00	Rd/Wr	Retain	Wear value in breaker wear table (13/16)
	Current 14/16	188V39	RST	Control setting	0.00...1000.00	kA	52.00	Rd/Wr	Retain	Current value in breaker wear table (14/16)
	Wear 14/16	188V40	RST	Control setting	0.00...10000.00	-	1731.00	Rd/Wr	Retain	Wear value in breaker wear table (14/16)
	Current 15/16	188V41	RST	Control setting	0.00...1000.00	kA	56.00	Rd/Wr	Retain	Current value in breaker wear table (15/16)
	Wear 15/16	188V42	RST	Control setting	0.00...10000.00	-	2007.00	Rd/Wr	Retain	Wear value in breaker wear table (15/16)
	Current 16/16	188V43	RST	Control setting	0.00...1000.00	kA	60.00	Rd/Wr	Retain	Current value in breaker wear table (16/16)
	Wear 16/16	188V44	RST	Control setting	0.00...10000.00	-	2304.00	Rd/Wr	Retain	Wear value in breaker wear table (16/16)
100189 / Rev C CMSCHED										
	Alarm interval	189S1	MMI,RST	Actual setting	1...3650	days	1825	Rd/Wr	Retain	Interrupt interval at days
	Alarm time	189S2	MMI,RST	Actual setting	00.00...23.59	hh.mm	08.00	Rd/Wr	Retain	Interrupt clock time at format hh.mm
	Elapsed time	189V1	MMI,RST	Control setting	0...3650	days	0	Read	Retain	Elapsed time at days
	Alarm ack	189V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowledge alarm
	Event mask 1	189V101	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E1)
	Event mask 2	189V103	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E1)
	Event mask 3	189V105	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E1)
	Event mask 4	189V107	MMI,RST	Control setting	0...3	-	2	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E1)
	Start time	189V2	Internal	Control setting	-	-	0	Read	Retain	Internal variable
	Alarm state	189O1	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Scheduled maintenance alarm state
100190 / Rev B CMSPRC1										
	Charge status	190I2	MMI,RST	Input data	0..1[0 = Uncharged; 1 = Charged]	-	0	Read	Volatile	Spring charge status
	Alarm max	190O2	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Alarm status of maximum alarm pulse
	Alarm min	190O3	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Alarm status of minumum alarm pulse
	Fixed pulse	190S1	MMI,RST	Actual setting	0..1[0 = Fixed pulse; 1 = Variable pulse]	-	0	Rd/Wr	Retain	Selection of fixed pulse length or variable pulse length
	Charge time	190S2	MMI,RST	Actual setting	0.00...100.00	s	20	Rd/Wr	Retain	Spring charging time
	Charge max	190S3	MMI,RST	Actual setting	0.00...100.00	s	20	Rd/Wr	Retain	Spring charging maximum alarm limit
	Charge min	190S4	MMI,RST	Actual setting	0.00...100.00	s	5	Rd/Wr	Retain	Spring charging minimum alarm limit
	Last charge	190V1	MMI,RST	Control setting	0.00...100.00	s	0	Read	Retain	Last charging time
	Regist clear	190V98	MMI,RST	Control setting	0..1[0 = 0; 1 = Clear]	-	0	Write	Volatile	Clear internal registrations
	Alarm ack	190V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowledge alarm
	Event mask 1	190V101	MMI,RST	Control setting	0...959	-	682	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	190V103	MMI,RST	Control setting	0...959	-	682	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	190V105	MMI,RST	Control setting	0...959	-	682	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	190V107	MMI,RST	Control setting	0...959	-	682	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
100191 / Rev B CMTCS1										
	Alarm delay	191S1	MMI,RST	Actual setting	0...300.000	s	3	Rd/Wr	Retain	Alarm delay
	Activation	191S2	MMI,RST	Actual setting	0..1[0 = Inactive; 1 = Active]	-	1	Rd/Wr	Retain	Activation of TCS function
	Event mask 1	191V101	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 2	191V103	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	191V105	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	191V107	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
	BS state	191I2	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Blocking signal state
	Alarm state	191O1	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Alarm state
100192 / Rev B CMTCS2										
	BS state	192I2	MMI,RST	Input data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Blocking signal state
	Alarm state	192O1	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Alarm state
	Alarm delay	192S1	MMI,RST	Actual setting	0...300.000	s	3	Rd/Wr	Retain	Alarm delay
	Activation	192S2	MMI,RST	Actual setting	0..1[0 = Inactive; 1 = Active]	-	1	Rd/Wr	Retain	Activation of TCS function
	Event mask 1	192V101	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	192V103	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	192V105	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	192V107	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
100193 / Rev B CMTRAV1										
	Open alarm lim.	193S1	MMI,RST	Actual setting	0...100.000	s	0.01	Rd/Wr	Retain	Alarm limit for opening
	Close alarm lim.	193S2	MMI,RST	Actual setting	0...100.000	s	0.01	Rd/Wr	Retain	Alarm limit for closing
	Last open	193V1	MMI,RST	Control setting	0...100.000	s	0	Read	Retain	Last open travel time
	Last close	193V2	MMI,RST	Control setting	0...100.000	s	0	Read	Retain	Last close travel time
	Regist clear	193V98	MMI,RST	Control setting	0..1[0 = 0; 1 = Clear]	-	0	Write	Volatile	Clear internal registrations
	Alarm ack	193V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowledge alarm
	Event mask 1	193V101	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E3)
	Event mask 2	193V103	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E3)
	Event mask 3	193V105	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E3)
	Event mask 4	193V107	MMI,RST	Control setting	0...15	-	10	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E3)
	Open alarm	193O1	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Alarm signal status for open
	Close alarm	193O2	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Alarm signal status for close
100194 / Rev A CMGAS3										
	Gas pressure L1	194I1	MMI,RST	Input data	0..1[0 = Invalid; 1 = Valid]	-	0	Read	Volatile	Indication of valid gas pressure in pole L1
	Gas pressure L2	194I2	MMI,RST	Input data	0..1[0 = Invalid; 1 = Valid]	-	0	Read	Volatile	Indication of valid gas pressure in pole L2
	Gas pressure L3	194I3	MMI,RST	Input data	0..1[0 = Invalid; 1 = Valid]	-	0	Read	Volatile	Indication of valid gas pressure in pole L3
	Alarm state	194O1	MMI,RST	Output data	0..1[0 = Inactive; 1 = Active]	-	0	Read	Volatile	Low gas pressure alarm
	Alarm delay	194S1	MMI,RST	Actual setting	0...300.000	s	0	Rd/Wr	Retain	Alarm delay
	Alarm ack	194V99	MMI,RST	Control setting	0..1[0 = 0; 1 = Acknowledge]	-	0	Write	Volatile	Acknowledge alarm
	Event mask 1	194V101	MMI,RST	Control setting	0...255	-	170	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E7)
	Event mask 2	194V103	MMI,RST	Control setting	0...255	-	170	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E7)
	Event mask 3	194V105	MMI,RST	Control setting	0...255	-	170	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E7)
	Event mask 4	194V107	MMI,RST	Control setting	0...255	-	170	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E7)
100200 / Rev D MECU3A										
	Phase selection	200V1	MMI,RST	Control setting	0..6[0 = L1,L2,L3; 1 = L1,L2; 2 = L2,L3; 3 = L1,L3; 4 = L1; 5 = L2; 6 = L3]	-	0	Rd/Wr	Retain	Selection of phase currents to be measured
	Demand interval	200V2	MMI,RST	Control setting	0..5[0 = 1 min; 1 = 5 min; 2 = 10 min; 3 = 15 min; 4 = 30 min; 5 = 60 min]	-	1	Rd/Wr	Retain	Time interval for demand supervision
	Threshold select	200V3	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	200V4	MMI,RST	Control setting	0.1...25.0	% In	1.0	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	200V5	MMI,RST	Control setting	0..9[0 = Not in use; 1= HW, HA, LW, LA; 2 = HW, HA; 3 = LW, LA; 4 = HW, LW; 5 = HA, LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	High warning	200V6	MMI,RST	Control setting	80.0...500.0	% In	100.0	Rd/Wr	Retain	High warning limit value
	High alarm	200V7	MMI,RST	Control setting	80.0...500.0	% In	120.0	Rd/Wr	Retain	High alarm limit value
	Low warning	200V8	MMI,RST	Control setting	0.0...80.0	% In	0.0	Rd/Wr	Retain	Low warning limit value
	Low alarm	200V9	MMI,RST	Control setting	0.0...80.0	% In	0.0	Rd/Wr	Retain	Low alarm limit value
	Time interval	200V10	MMI,RST	Control setting	1...600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	200V101	MMI,RST	Control setting	0..721420287	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E29)
	Event mask 2	200V103	MMI,RST	Control setting	0..721420287	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E29)
	Event mask 3	200V105	MMI,RST	Control setting	0..721420287	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E29)
	Event mask 4	200V107	MMI,RST	Control setting	0..721420287	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E29)
	IL1	200I1	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Current IL1 in amperes
	IL2	200I2	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Current IL2 in amperes
	IL3	200I3	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Current IL3 in amperes
	IL1	200I4	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	Current IL1 in percents
	IL2	200I5	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	Current IL2 in percents
	IL3	200I6	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	Current IL3 in percents
	IL1 demand	200I7	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	IL1 demand in amperes
	IL2 demand	200I8	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	IL2 demand in amperes
	IL3 demand	200I9	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	IL3 demand in amperes
	IL1 demand	200I10	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	IL1 demand in percents
	IL2 demand	200I11	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	IL2 demand in percents
	IL3 demand	200I12	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	IL3 demand in percents
	Input RESET	200I13	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting demand values and registers of MECU3A
	IL1 maximum date	200V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of IL1 max demand
	IL1 maximum time	200V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of IL1 max demand
	IL1 maximum (A)	200V203	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Maximum demand for IL1 in amperes
	IL1 maximum (%)	200V204	MMI,RST	Recorded data1	0.0...1000.0	% In	0.0	Read	Retain	Maximum demand for IL1 in percents
	IL2 maximum date	200V205	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of IL2 max demand
	IL2 maximum time	200V206	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of IL2 max demand
	IL2 maximum (A)	200V207	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Maximum demand for IL2 in amperes
	IL2 maximum (%)	200V208	MMI,RST	Recorded data1	0.0...1000.0	% In	0.0	Read	Retain	Maximum demand for IL2 in percents
	IL3 maximum date	200V209	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of IL3 max demand
	IL3 maximum time	200V210	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of IL3 max demand
	IL3 maximum (A)	200V211	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Maximum demand for IL3 in amperes
	IL3 maximum (%)	200V212	MMI,RST	Recorded data1	0.0...1000.0	% In	0.0	Read	Retain	Maximum demand for IL3 in percents
100201 / Rev D MECU1A										
	Io	201I1	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Current Io in amperes
	Io	201I2	MMI,RST	Input data	0.0...80.0	% In	0.0	Read	Volatile	Current Io in percents
	Input RESET	201I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting demand values and registers of MECU1A
	Io Peak Date	201V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of Io peak
	Io Peak Time	201V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of Io peak
	Io Peak Amps	201V203	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Io peak in amperes
	Io Peak %	201V204	MMI,RST	Recorded data1	0.0...80.0	% In	0.0	Read	Retain	Io peak in percents
	Threshold select	201V1	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	201V2	MMI,RST	Control setting	0.1...25.0	% In	1.0	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	201V3	MMI,RST	Control setting	0..3[0= Not in use; 1= HW,HA; 2= HW; 3= HA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	201V4	MMI,RST	Control setting	0.0...80.0	% In	0.0	Rd/Wr	Retain	High warning limit value

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	High alarm	201V5	MMI,RST	Control setting	0.0...80.0	% In	0.0	Rd/Wr	Retain	High alarm limit value
	Time interval	201V6	MMI,RST	Control setting	1...600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	201V101	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E5)
	Event mask 2	201V103	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E5)
	Event mask 3	201V105	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E5)
	Event mask 4	201V107	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E5)
100202 / Rev C MECU3B										
	IL1	202I1	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Current IL1 in amperes
	IL2	202I2	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Current IL2 in amperes
	IL3	202I3	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Current IL3 in amperes
	IL1	202I4	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	Current IL1 in percents
	IL2	202I5	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	Current IL2 in percents
	IL3	202I6	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	Current IL3 in percents
	IL1 demand	202I7	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	IL1 demand in amperes
	IL2 demand	202I8	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	IL2 demand in amperes
	IL3 demand	202I9	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	IL3 demand in amperes
	IL1 demand	202I10	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	IL1 demand in percents
	IL2 demand	202I11	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	IL2 demand in percents
	IL3 demand	202I12	MMI,RST	Input data	0.0...1000.0	% In	0.0	Read	Volatile	IL3 demand in percents
	Input RESET	202I13	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting demand values and registers of MECU3B
	IL1 maximum date	202V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of IL1 max demand
	IL1 maximum time	202V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of IL1 max demand
	IL1 maximum (A)	202V203	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Maximum demand for IL1 in amperes
	IL1 maximum (%)	202V204	MMI,RST	Recorded data1	0.0...1000.0	% In	0.0	Read	Retain	Maximum demand for IL1 in percents
	IL2 maximum date	202V205	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of IL2 max demand
	IL2 maximum time	202V206	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of IL2 max demand
	IL2 maximum (A)	202V207	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Maximum demand for IL2 in amperes
	IL2 maximum (%)	202V208	MMI,RST	Recorded data1	0.0...1000.0	% In	0.0	Read	Retain	Maximum demand for IL2 in percents
	IL3 maximum date	202V209	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of IL3 max demand
	IL3 maximum time	202V210	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of IL3 max demand
	IL3 maximum (A)	202V211	MMI,RST	Recorded data1	0.0...20000.0	A	0.0	Read	Retain	Maximum demand for IL3 in amperes
	IL3 maximum (%)	202V212	MMI,RST	Recorded data1	0.0...1000.0	% In	0.0	Read	Retain	Maximum demand for IL3 in percents
	Phase selection	202V1	MMI,RST	Control setting	0..6[0 = L1,L2,L3; 1 = L1,L2; 2 = L2,L3; 3 = L1,L3; 4 = L1; 5 = L2; 6 = L3]	-	0	Rd/Wr	Retain	Selection of phase currents to be measured
	Demand interval	202V2	MMI,RST	Control setting	0..5[0 = 1 min; 1 = 5 min; 2 = 10 min; 3 = 15 min; 4 = 30 min; 5 = 60 min]	-	1	Rd/Wr	Retain	Time interval for demand supervision
	Threshold select	202V3	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	202V4	MMI,RST	Control setting	0.1...25.0	% In	1.0	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	202V5	MMI,RST	Control setting	0..9[0 = Not in use; 1= HW,HA,LW,LA; 2 = HW,HA; 3 = LW,LA; 4 = HW,LW; 5 = HA,LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	202V6	MMI,RST	Control setting	80.0...500.0	% In	100.0	Rd/Wr	Retain	High warning limit value
	High alarm	202V7	MMI,RST	Control setting	80.0...500.0	% In	120.0	Rd/Wr	Retain	High alarm limit value
	Low warning	202V8	MMI,RST	Control setting	0.0...80.0	% In	0.0	Rd/Wr	Retain	Low warning limit value
	Low alarm	202V9	MMI,RST	Control setting	0.0...80.0	% In	0.0	Rd/Wr	Retain	Low alarm limit value
	Time interval	202V10	MMI,RST	Control setting	1...600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	202V101	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E29)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 2	202V103	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E29)
	Event mask 3	202V105	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E29)
	Event mask 4	202V107	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E29)
100203 / Rev D MECU1B										
	Threshold select	203V1	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	203V2	MMI,RST	Control setting	0.1...25.0	% In	1.0	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	203V3	MMI,RST	Control setting	0..3[0 = Not in use; 1 = HW,HA; 2 = HW; 3 = HA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	203V4	MMI,RST	Control setting	0.0...80.0	% In	0.0	Rd/Wr	Retain	High warning limit value
	High alarm	203V5	MMI,RST	Control setting	0.0...80.0	% In	0.0	Rd/Wr	Retain	High alarm limit value
	Time interval	203V6	MMI,RST	Control setting	1...600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	203V101	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E5)
	Event mask 2	203V103	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E5)
	Event mask 3	203V105	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E5)
	Event mask 4	203V107	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E5)
	Io	203I1	MMI,RST	Input data	0.0...20000.0	A	0.0	Read	Volatile	Current Io in amperes
	Io	203I2	MMI,RST	Input data	0.0...80.0	% In	0.0	Read	Volatile	Current Io in percents
	Input RESET	203I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting demand values and registers of MECU1B
	Io Peak Date	203V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of Io peak
	Io Peak Time	203V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of Io peak
	Io Peak Amps	203V203	MMI,RST	Recorded data1	0.0...20000.0	A	0	Read	Retain	Io peak in amperes
	Io Peak %	203V204	MMI,RST	Recorded data1	0.0...80.0	% In	0	Read	Retain	Io peak in percents
100204 / Rev E MEVO3A										
	Phase selection	204V1	MMI,RST	Control setting	0..6[0 = Uch1&Uch2&Uch3; 1 = Uch1 & Uch2; 2 = Uch2 & Uch3; 3 = Uch1 & Uch3; 4 = Uch1; 5 = Uch2; 6 = Uch3]	-	0	Rd/Wr	Retain	Selection of channels to be measured
	Average interval	204V2	MMI,RST	Control setting	0..5[0 = 1 min; 1 = 5 min; 2 = 10 min; 3 = 15 min; 4 = 30 min; 5 = 60 min]	-	1	Rd/Wr	Retain	Time interval for average value
	Threshold select	204V3	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	204V4	MMI,RST	Control setting	0.01...1.00	x Un	0.01	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	204V5	MMI,RST	Control setting	0..9[0 = Not in use; 1 = HW, HA, LW, LA; 2 = HW, HA; 3 = LW, LA; 4 = HW, LW; 5 = HA, LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	204V6	MMI,RST	Control setting	0.80...1.50	x Un	1.00	Rd/Wr	Retain	High warning limit value
	High alarm	204V7	MMI,RST	Control setting	0.80...1.50	x Un	1.loka	Rd/Wr	Retain	High alarm limit value
	Low warning	204V8	MMI,RST	Control setting	0.00...0.99	x Un	0.00	Rd/Wr	Retain	Low warning limit value
	Low alarm	204V9	MMI,RST	Control setting	0.00...0.99	x Un	0.00	Rd/Wr	Retain	Low alarm limit value
	Time interval	204V10	MMI,RST	Control setting	1...600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1A	204V101	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E29)
	Event mask 1B	204V102	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E32 ... E61)
	Event mask 2A	204V103	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E29)
	Event mask 2B	204V104	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E32 ... E61)
	Event mask 3A	204V105	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E29)
	Event mask 3B	204V106	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E32 ... E61)
	Event mask 4A	204V107	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E29)
	Event mask 4B	204V108	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E32 ... E61)
	UL1_U12	204I1	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Voltage UL1_U12 in kilovolts

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	UL2_U23	204I2	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Voltage UL2_U23 in kilovolts
	UL3_U31	204I3	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Voltage UL3_U31 in kilovolts
	UL1_U12	204I4	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Voltage UL1_U12 in percents
	UL2_U23	204I5	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Voltage UL2_U23 in percents
	UL3_U31	204I6	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Voltage UL3_U31 in percents
	UL1_U12 average	204I7	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Average value of UL1_U12 in voltages
	UL2_U23 average	204I8	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Average value of UL2_U23 in voltages
	UL3_U31 average	204I9	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Average value of UL3_U31 in voltages
	UL1_U12 average	204I10	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Average value of UL1_U12 in percents
	UL2_U23 average	204I11	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Average value of UL2_U23 in percents
	UL3_U31 average	204I12	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Average value of UL3_U31 in percents
	Input RESET	204I13	MMI,RST	Input data	0..1[0=Not active; 1=Active]	-	0	Read	Volatile	Signal for resetting demand values and registers of MEVO3A
	U1_12 max date	204V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of UL1_U12 maximum average voltage
	U1_12 max time	204V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of UL1_U12 maximum average voltage
	U1_12 max (kV)	204V203	MMI,RST	Recorded data1	0.00...999.99	kV	0.00	Read	Retain	Maximum average of UL1_U12 in voltages
	U1_12 max (pu)	204V204	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Maximum average of UL1_U12 in percents
	U2_23 max date	204V205	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of UL2_U23 maximum average voltage
	U2_23 max time	204V206	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of UL2_U23 maximum average voltage
	U2_23 max (kV)	204V207	MMI,RST	Recorded data1	0.00...999.99	kV	0.00	Read	Retain	Maximum average of UL2_U23 in voltages
	U2_23 max (pu)	204V208	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Maximum average of UL2_U23 in percents
	U3_31 max date	204V209	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of UL3_U31 maximum average voltage
	U3_31 max time	204V210	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of UL3_U31 maximum average voltage
	U3_31 max (kV)	204V211	MMI,RST	Recorded data1	0.00...999.99	kV	0.00	Read	Retain	Maximum average of UL3_U31 in voltages
	U3_31 max (pu)	204V212	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Maximum average of UL3_U31 in percents
	U1_12 min date	204V213	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of UL1_U12 minimum average voltage
	U1_12 min time	204V214	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of UL1_U12 minimum average voltage
	U1_12 min (kV)	204V215	MMI,RST	Recorded data1	0.00...999.99	kV	999.99	Read	Retain	Minimum average of UL1_U12 in voltages
	U1_12 min (pu)	204V216	MMI,RST	Recorded data1	0.00...2.00	x Un	2.00	Read	Retain	Minimum average of UL1_U12 in percents
	U2_23 min date	204V217	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of UL2_U23 minimum average voltage
	U2_23 min time	204V218	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of UL2_U23 minimum average voltage
	U2_23 min (kV)	204V219	MMI,RST	Recorded data1	0.00...999.99	kV	999.99	Read	Retain	Minimum average of UL2_U23 in voltages
	U2_23 min (pu)	204V220	MMI,RST	Recorded data1	0.00...2.00	x Un	2.00	Read	Retain	Minimum average of UL2_U23 in percents
	U3_31 min date	204V221	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of UL3_U31 minimum average voltage
	U3_31 min time	204V222	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of UL3_U31 minimum average voltage
	U3_31 min (kV)	204V223	MMI,RST	Recorded data1	0.00...999.99	kV	999.99	Read	Retain	Minimum average of UL3_U31 in voltages
	U3_31 min (pu)	204V224	MMI,RST	Recorded data1	0.00...2.00	x Un	2.00	Read	Retain	Minimum average of UL3_U31 in percents
100205 / Rev F	MEVO1A									
	Uo	205I1	MMI,RST	Input data	0...440000	V	0	Read	Volatile	Residual voltage Uo in volts
	Uo	205I2	MMI,RST	Input data	0.0...120.0	% Un	0.0	Read	Volatile	Residual voltage Uo in percents
	Input RESET	205I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting demand values and registers of MEVO1A
	Uo peak date	205V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of Uo peak
	Uo peak time	205V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of Uo peak
	Uo peak volts	205V203	MMI,RST	Recorded data1	0...440000	V	0	Read	Retain	Uo peak in volts
	Uo peak %	205V204	MMI,RST	Recorded data1	0.0...120.0	% Un	0.0	Read	Retain	Uo peak in percents
	Threshold select	205V1	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	205V2	MMI,RST	Control setting	0.1...25.0	% Un	1.0	Rd/Wr	Retain	Threshold value for threshold supervision

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Limit selection	205V3	MMI,RST	Control setting	0..3[0 = Not in use; 1 = HW,HA; 2 = HW; 3 = HA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	205V4	MMI,RST	Control setting	2.0...100.0	% Un	2.0	Rd/Wr	Retain	High warning limit value
	High alarm	205V5	MMI,RST	Control setting	2.0...100.0	% Un	10.0	Rd/Wr	Retain	High alarm limit value
	Time interval	205V6	MMI,RST	Control setting	1...600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Measuring mode	205V7	MMI,RST	Control setting	0..1[0 = True RMS; 1 = Fundam.freq.]	-	0	Rd/Wr	Retain	Selection of measuring mode
	Event mask 1	205V101	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E5)
	Event mask 2	205V103	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E5)
	Event mask 3	205V105	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E5)
	Event mask 4	205V107	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E5)
100206 / Rev C MEVO3B										
	UL1_U12	206I1	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Voltage UL1_U12 in kilovolts
	UL2_U23	206I2	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Voltage UL2_U23 in kilovolts
	UL3_U31	206I3	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Voltage UL3_U31 in kilovolts
	UL1_U12	206I4	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Voltage UL1_U12 in percents
	UL2_U23	206I5	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Voltage UL2_U23 in percents
	UL3_U31	206I6	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Voltage UL3_U31 in percents
	UL1_U12 average	206I7	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Average value of UL1_U12 in voltages
	UL2_U23 average	206I8	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Average value of UL2_U23 in voltages
	UL3_U31 average	206I9	MMI,RST	Input data	0.00...999.99	kV	0.00	Read	Volatile	Average value of UL3_U31 in voltages
	UL1_U12 average	206I10	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Average value of UL1_U12 in percents
	UL2_U23 average	206I11	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Average value of UL2_U23 in percents
	UL3_U31 average	206I12	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Average value of UL3_U31 in percents
	Input RESET	206I13	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting demand values and registers of MEVO3B
	U1_12 max date	206V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of U1_12 maximum average voltage
	U1_12 max time	206V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of U1_12 maximum average voltage
	U1_12 max (kV)	206V203	MMI,RST	Recorded data1	0.00...999.99	kV	0.00	Read	Retain	Maximum average of U1_12 in voltages
	U1_12 max (pu)	206V204	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Maximum average of U1_12 in percents
	U2_23 max date	206V205	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of U2_23 maximum average voltage
	U2_23 max time	206V206	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of U2_23 maximum average voltage
	U2_23 max (kV)	206V207	MMI,RST	Recorded data1	0.00...999.99	kV	0.00	Read	Retain	Maximum average of U2_23 in voltages
	U2_23 max (pu)	206V208	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Maximum average of U2_23 in percents
	U3_31 max date	206V209	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of U3_31 maximum average voltage
	U3_31 max time	206V210	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of U3_31 maximum average voltage
	U3_31 max (kV)	206V211	MMI,RST	Recorded data1	0.00...999.99	kV	0.00	Read	Retain	Maximum average of U3_31 in voltages
	U3_31 max (pu)	206V212	MMI,RST	Recorded data1	0.00...2.00	x Un	0.00	Read	Retain	Maximum average of U3_31 in percents
	U1_12 min date	206V213	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of U1_12 minimum average voltage
	U1_12 min time	206V214	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of U1_12 minimum average voltage
	U1_12 min (kV)	206V215	MMI,RST	Recorded data1	0.00...999.99	kV	999.99	Read	Retain	Minimum average of U1_12 in voltages
	U1_12 min (pu)	206V216	MMI,RST	Recorded data1	0.00...2.00	x Un	2.00	Read	Retain	Minimum average of U1_12 in percents
	U2_23 min date	206V217	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of U2_23 minimum average voltage
	U2_23 min time	206V218	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of U2_23 minimum average voltage
	U2_23 min (kV)	206V219	MMI,RST	Recorded data1	0.00...999.99	kV	999.99	Read	Retain	Minimum average of U2_23 in voltages
	U2_23 min (pu)	206V220	MMI,RST	Recorded data1	0.00...2.00	x Un	2.00	Read	Retain	Minimum average of U2_23 in percents
	U3_31 min date	206V221	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of U3_31 minimum average voltage
	U3_31 min time	206V222	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of U3_31 minimum average voltage
	U3_31 min (kV)	206V223	MMI,RST	Recorded data1	0.00...999.99	kV	999.99	Read	Retain	Minimum average of U3_31 in voltages
	U3_31 min (pu)	206V224	MMI,RST	Recorded data1	0.00...2.00	x Un	2.00	Read	Retain	Minimum average of U3_31 in percents

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Phase selection	206V1	MMI,RST	Control setting	0..6[0 = Uch1&Uch2&Uch3; 1 = Uch1 & Uch2; 2 = Uch2 & Uch3; 3 = Uch1 & Uch3; 4 = Uch1; 5 = Uch2; 6 = Uch3]	-	0	Rd/Wr	Retain	Selection of channels to be measured
	Average interval	206V2	MMI,RST	Control setting	0..5[0 = 1 min; 1 = 5 min; 2 = 10 min; 3 = 15 min; 4 = 30 min; 5 = 60 min]	-	1	Rd/Wr	Retain	Time interval for average value
	Threshold select	206V3	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	206V4	MMI,RST	Control setting	0.01...1.00	x Un	0.01	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	206V5	MMI,RST	Control setting	0..9[0 = Not in use; 1 = HW, HA, LW, LA; 2 = HW, HA; 3 = LW, LA; 4 = HW, LW; 5 = HA, LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	206V6	MMI,RST	Control setting	0.80...1.50	x Un	1.00	Rd/Wr	Retain	High warning limit value
	High alarm	206V7	MMI,RST	Control setting	0.80...1.50	x Un	1.loka	Rd/Wr	Retain	High alarm limit value
	Low warning	206V8	MMI,RST	Control setting	0.00...0.99	x Un	0.00	Rd/Wr	Retain	Low warning limit value
	Low alarm	206V9	MMI,RST	Control setting	0.00...0.99	x Un	0.00	Rd/Wr	Retain	Low alarm limit value
	Time interval	206V10	MMI,RST	Control setting	1...600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1A	206V101	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E29)
	Event mask 1B	206V102	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E32 ... E61)
	Event mask 2A	206V103	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E29)
	Event mask 2B	206V104	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E32 ... E61)
	Event mask 3A	206V105	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E29)
	Event mask 3B	206V106	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E32 ... E61)
	Event mask 4A	206V107	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E29)
	Event mask 4B	206V108	MMI,RST	Control setting	0...721420287	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E32 ... E61)
100207 / Rev G MEPE7										
	P3 (kW)	207I1	MMI,RST	Input data	-999999...999999	kW	0	Read	Volatile	3-phase active power
	Q3 (kvar)	207I2	MMI,RST	Input data	-999999...999999	kvar	0	Read	Volatile	3-phase reactive power
	Power factor DPF	207I3	MMI,RST	Input data	-1.00...1.00	-	0.00	Read	Volatile	Displacement power factor cos(j)
	Power factor PF	207I4	MMI,RST	Input data	-1.00...1.00	-	0.00	Read	Volatile	Power factor
	P3 demand (kW)	207I5	MMI,RST	Input data	-999999...999999	kW	0	Read	Volatile	Active power demand
	Q3 demand (kvar)	207I6	MMI,RST	Input data	-999999...999999	kvar	0	Read	Volatile	Reactive power demand
	Input RESET	207I7	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting demand values and registers of MEPE7
	P3 maximum date	207V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of P3 max demand
	P3 maximum time	207V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of P3 max demand
	P3 maximum	207V203	MMI,RST	Recorded data1	-999999...999999	kW	-999999	Read	Retain	Maximum demand for P3
	Q3 maximum date	207V204	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of Q3 max demand
	Q3 maximum time	207V205	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of Q3 max demand
	Q3 maximum	207V206	MMI,RST	Recorded data1	-999999...999999	kvar	-999999	Read	Retain	Maximum demand for Q3
	Energy kWh	207V207	MMI,RST	Recorded data1	0...999999999	kWh	0	Read	Retain	Active energy in kWh (Accumulated)
	Reverse kWh	207V208	MMI,RST	Recorded data1	0...999999999	kWh	0	Read	Retain	Reversed active energy in kWh (Accumulated)
	Energy kvarh	207V209	MMI,RST	Recorded data1	0...999999999	kvarh	0	Read	Retain	Reactive energy in kvarh (Accumulated)
	Reverse kvarh	207V210	MMI,RST	Recorded data1	0...999999999	kvarh	0	Read	Retain	Reversed reactive energy in kvarh (Accumulated)
	Ener. kWh (1)	207V211	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (2)	207V212	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (3)	207V213	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (4)	207V214	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (5)	207V215	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (6)	207V216	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (7)	207V217	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Ener. kWh (8)	207V218	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (9)	207V219	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (10)	207V220	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (11)	207V221	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (12)	207V222	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (13)	207V223	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (14)	207V224	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (15)	207V225	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (16)	207V226	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (17)	207V227	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (18)	207V228	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (19)	207V229	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (20)	207V230	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (21)	207V231	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (22)	207V232	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (23)	207V233	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (24)	207V234	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (25)	207V235	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (26)	207V236	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (27)	207V237	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (28)	207V238	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (29)	207V239	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (30)	207V240	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (31)	207V241	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (32)	207V242	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (33)	207V243	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (34)	207V244	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (35)	207V245	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (36)	207V246	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (37)	207V247	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (38)	207V248	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (39)	207V249	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (40)	207V250	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (41)	207V251	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (42)	207V252	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (43)	207V253	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (44)	207V254	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (45)	207V255	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (46)	207V256	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (47)	207V257	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (48)	207V258	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (49)	207V259	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Ener. kWh (50)	207V260	RST	Recorded data2	0...999999	kWh	0	Read	Retain	Active energy in kWh (50 latest)
	Rev. kWh (1)	207V261	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (2)	207V262	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (3)	207V263	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (4)	207V264	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (5)	207V265	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (6)	207V266	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Rev. kWh (7)	207V267	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (8)	207V268	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (9)	207V269	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (10)	207V270	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (11)	207V271	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (12)	207V272	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (13)	207V273	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (14)	207V274	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (15)	207V275	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (16)	207V276	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (17)	207V277	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (18)	207V278	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (19)	207V279	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (20)	207V280	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (21)	207V281	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (22)	207V282	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (23)	207V283	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (24)	207V284	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (25)	207V285	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (26)	207V286	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (27)	207V287	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (28)	207V288	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (29)	207V289	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (30)	207V290	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (31)	207V291	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (32)	207V292	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (33)	207V293	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (34)	207V294	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (35)	207V295	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (36)	207V296	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (37)	207V297	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (38)	207V298	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (39)	207V299	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (40)	207V300	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (41)	207V301	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (42)	207V302	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (43)	207V303	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (44)	207V304	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (45)	207V305	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (46)	207V306	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (47)	207V307	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (48)	207V308	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (49)	207V309	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Rev. kWh (50)	207V310	RST	Recorded data3	0...999999	kWh	0	Read	Retain	Reversed active energy in kWh (50 latest)
	Ener. kvarh (1)	207V311	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (2)	207V312	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (3)	207V313	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (4)	207V314	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (5)	207V315	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Ener. kvarh (6)	207V316	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (7)	207V317	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (8)	207V318	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (9)	207V319	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (10)	207V320	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (11)	207V321	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (12)	207V322	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (13)	207V323	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (14)	207V324	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (15)	207V325	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (16)	207V326	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (17)	207V327	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (18)	207V328	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (19)	207V329	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (20)	207V330	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (21)	207V331	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (22)	207V332	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (23)	207V333	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (24)	207V334	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (25)	207V335	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (26)	207V336	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (27)	207V337	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (28)	207V338	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (29)	207V339	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (30)	207V340	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (31)	207V341	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (32)	207V342	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (33)	207V343	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (34)	207V344	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (35)	207V345	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (36)	207V346	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (37)	207V347	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (38)	207V348	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (39)	207V349	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (40)	207V350	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (41)	207V351	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (42)	207V352	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (43)	207V353	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (44)	207V354	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (45)	207V355	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (46)	207V356	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (47)	207V357	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (48)	207V358	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (49)	207V359	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Ener. kvarh (50)	207V360	RST	Recorded data4	0...999999	kvarh	0	Read	Retain	Reactive energy in kvarh (50 latest)
	Rev. kvarh (1)	207V361	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (2)	207V362	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (3)	207V363	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (4)	207V364	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Rev. kvarh (5)	207V365	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (6)	207V366	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (7)	207V367	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (8)	207V368	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (9)	207V369	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (10)	207V370	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (11)	207V371	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (12)	207V372	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (13)	207V373	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (14)	207V374	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (15)	207V375	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (16)	207V376	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (17)	207V377	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (18)	207V378	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (19)	207V379	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (20)	207V380	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (21)	207V381	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (22)	207V382	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (23)	207V383	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (24)	207V384	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (25)	207V385	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (26)	207V386	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (27)	207V387	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (28)	207V388	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (29)	207V389	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (30)	207V390	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (31)	207V391	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (32)	207V392	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (33)	207V393	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (34)	207V394	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (35)	207V395	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (36)	207V396	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (37)	207V397	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (38)	207V398	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (39)	207V399	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (40)	207V400	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (41)	207V401	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (42)	207V402	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (43)	207V403	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (44)	207V404	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (45)	207V405	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (46)	207V406	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (47)	207V407	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (48)	207V408	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (49)	207V409	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Rev. kvarh (50)	207V410	RST	Recorded data5	0...999999	kvarh	0	Read	Retain	Rev. reactive energy in kvarh (50 latest)
	Last save date	207V411	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of last registered energy values
	Last save time	207V412	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of last registered energy values

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Last save pos.	207V413	RST	Recorded data1	0...50	-	0	Read	Retain	Position of last registered energy values (1...50, 0=No registered values)
	Last ener. kWh	207V414	MMI,RST	Recorded data1	0...999999	-	0	Read	Retain	Last registered active energy
	Last rev. kWh	207V415	MMI,RST	Recorded data1	0...999999	-	0	Read	Retain	Last registered reversed active energy
	Last ener. kvarh	207V416	MMI,RST	Recorded data1	0...999999	-	0	Read	Retain	Last registered reactive energy
	Last rev. kvarh	207V417	MMI,RST	Recorded data1	0...999999	-	0	Read	Retain	Last registered reversed reactive energy
	Reset flag	207V418	RST	Recorded data1	0..1[0 = Valid; 1 = Invalid]	-	1	Read	Retain	Indication of valid energy history; 0= All values valid, 1= 'Last save Pos.' values valid
	Power direction	207V1	MMI,RST	Control setting	0..1[0 = Forward; 1= Reverse]	-	0	Rd/Wr	Retain	Direction of power flow
	Demand interval	207V2	MMI,RST	Control setting	0..5[0 = 1 min; 1 = 5 min; 2 = 10 min; 3 = 15 min; 4 = 30 min; 5 = 60 min]	-	3	Rd/Wr	Retain	Time interval for demand supervision
	Energy interval	207V3	MMI,RST	Control setting	0..6[0 = 1 min; 1 = 5 min; 2 = 10 min; 3 = 15 min; 4 = 30 min; 5 = 60 min; 6 = 120 min]	-	3	Rd/Wr	Retain	Time interval for energy calculation
	Threshold select	207V4	MMI,RST	Control setting	0..2[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	P3 threshold	207V5	MMI,RST	Control setting	1...999999	kW	999999	Rd/Wr	Retain	Threshold value for active power
	Q3 threshold	207V6	MMI,RST	Control setting	1...999999	kvar	999999	Rd/Wr	Retain	Threshold value for reactive power
	P3 limit select.	207V7	MMI,RST	Control setting	0..8[0 = Not in use; 1 = HW,HA,LW,LA; 2 = HW,HA; 3 = LW,LA; 4 = HW,LW; 5 = HA,LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of active power limits to be monitored
	Q3 limit select.	207V8	MMI,RST	Control setting	0..8[0 = Not in use; 1 = HW,HA,LW,LA; 2 = HW,HA; 3 = LW,LA; 4 = HW,LW; 5 = HA,LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of reactive power limits to be monitored
	P3 high warning	207V9	MMI,RST	Control setting	-999999...999999	kW	0	Rd/Wr	Retain	High warning limit value for active power
	P3 high alarm	207V10	MMI,RST	Control setting	-999999...999999	kW	0	Rd/Wr	Retain	High alarm limit value for active power
	P3 low warning	207V11	MMI,RST	Control setting	-999999...999999	kW	0	Rd/Wr	Retain	Low warning limit value for active power
	P3 low alarm	207V12	MMI,RST	Control setting	-999999...999999	kW	0	Rd/Wr	Retain	Low alarm limit value for active power
	Q3 high warning	207V13	MMI,RST	Control setting	-999999...999999	kvar	0	Rd/Wr	Retain	High warning limit value for reactive power
	Q3 high alarm	207V14	MMI,RST	Control setting	-999999...999999	kvar	0	Rd/Wr	Retain	High alarm limit value for reactive power
	Q3 low warning	207V15	MMI,RST	Control setting	-999999...999999	kvar	0	Rd/Wr	Retain	Low warning limit value for reactive power
	Q3 low alarm	207V16	MMI,RST	Control setting	-999999...999999	kvar	0	Rd/Wr	Retain	Low alarm limit value for reactive power
	Energy meas.	207V17	MMI,RST	Control setting	0..1[0 = No energy reg.; 1 = Energy reg. on]	-	0	Rd/Wr	Retain	Parameter for enable energy measurement and registration
	MEPEmode	207V18	MMI,RST	Control setting	0..13[0 = Not in use; 1 = U1,U2,U3 &...; 2 = U12,U23,U0 &...; 3 = U23,U31,U0 &...; 4 = U12,U31,U0 &...; 5 = U12,U23 &...; 6 = U23,U31 &...; 7 = U12,U31 &...; 8 = U1 & I1; 9 = U2 & I2; 10 = U3 & I3; 11 = U12 & I3; 12 = U23 & I1; 13 = U31 & I2]	-	0	Read	Volatile	Power measurement mode
	Time interval	207V19	MMI,RST	Control setting	1...600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	PF Threshold	207V20	MMI,RST	Control setting	0.01...0.50	-	0.50	Rd/Wr	Retain	Threshold value for power factor
	Event mask 1	207V101	MMI,RST	Control setting	0...2863333375	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E31)
	Event mask 2	207V103	MMI,RST	Control setting	0...2863333375	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E31)
	Event mask 3	207V105	MMI,RST	Control setting	0...2863333375	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E31)
	Event mask 4	207V107	MMI,RST	Control setting	0...2863333375	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E31)
100208 / Rev D MEFR1										
	Average interval	208V1	MMI,RST	Control setting	0..5[0 = 1 min; 1 = 5 min; 2 = 10 min; 3 = 15 min; 4 = 30 min; 5 = 60 min]	-	1	Rd/Wr	Retain	Time interval for average supervision
	Threshold select	208V2	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	208V3	MMI,RST	Control setting	0.01...5.00	Hz	0.10	Rd/Wr	Retain	Threshold value for threshold supervision

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Limit selection	208V4	MMI,RST	Control setting	0..9[0 = Not in use; 1 = HW,HA,LW,LA; 2 = HW,HA; 3 = LW,LA; 4 = HW,LW; 5 = HA,LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	208V5	MMI,RST	Control setting	15.00...75.00	Hz	55.0	Rd/Wr	Retain	High warning limit value
	High alarm	208V6	MMI,RST	Control setting	15.00...75.00	Hz	60.0	Rd/Wr	Retain	High alarm limit value
	Low warning	208V7	MMI,RST	Control setting	10.00...60.00	Hz	45.0	Rd/Wr	Retain	Low warning limit value
	Low alarm	208V8	MMI,RST	Control setting	10.00...60.00	Hz	40.0	Rd/Wr	Retain	Low alarm limit value
	Voltage limit	208V9	MMI,RST	Control setting	0.30...0.90	x Un	0.30	Rd/Wr	Retain	Undervoltage limit for blocking
	Time interval	208V10	MMI,RST	Control setting	1...600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	208V101	MMI,RST	Control setting	0...767	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E9)
	Event mask 2	208V103	MMI,RST	Control setting	0...767	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E9)
	Event mask 3	208V105	MMI,RST	Control setting	0...767	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E9)
	Event mask 4	208V107	MMI,RST	Control setting	0...767	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E9)
	Frequency	208I1	MMI,RST	Input data	0.00...75.00	Hz	0.00	Read	Volatile	System frequency in Hertzs
	Average Freq.	208I2	MMI,RST	Input data	0.00...75.00	Hz	0.00	Read	Volatile	Average system frequency in Hertzs
	Voltage U	208I3	MMI,RST	Input data	0.0...2.0	x Un	0.0	Read	Volatile	Voltage U
	Input RESET	208I4	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting demand values and registers of MEFR1
	Freq max date	208V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of maximum average frequency
	Freq max time	208V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of maximum average frequency
	Frequency max	208V203	MMI,RST	Recorded data1	0.00...75.00	Hz	0.00	Read	Retain	Maximum average frequency
	Freq min date	208V204	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of minimum average frequency
	Freq min time	208V205	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of minimum average frequency
	Frequency min	208V206	MMI,RST	Recorded data1	0.00...75.00	Hz	75.00	Read	Retain	Minimum average frequency
100213 / Rev C MEAI1										
	Threshold select	213V001	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	213V002	MMI,RST	Control setting	0.0001..10.0000	-	1.0000	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	213V003	MMI,RST	Control setting	0..9[0 = Not in use; 1 = HW, HA, LW, LA; 2 = HW, HA; 3 = LW, LA; 4 = HW, LW; 5 = HA, LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	213V004	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High warning limit value
	High alarm	213V005	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High alarm limit value
	Low warning	213V006	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low warning limit value
	Low alarm	213V007	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low alarm limit value
	HW start delay	213V008	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high warning signal
	HW reset delay	213V009	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high warning signal
	HA start delay	213V010	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high alarm signal
	HA reset delay	213V011	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high alarm signal
	LW start delay	213V012	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low warning signal
	LW reset delay	213V013	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low warning signal
	LA start delay	213V014	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low alarm signal
	LA reset delay	213V015	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low alarm signal
	Limit hysteresis	213V016	MMI,RST	Control setting	0..10.0000	-	0.0000	Rd/Wr	Retain	Hysteresis for limit supervision
	Measuring mode	213V017	MMI,RST	Control setting	0..1[0 = DC; 1 = AC]	-	0	Rd/Wr	Retain	Measurement mode
	Zero force limit	213V018	MMI,RST	Control setting	0..10.0000	-	0	Rd/Wr	Retain	Zero value supervision threshold
	Time interval	213V019	MMI,RST	Control setting	1..600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	213V101	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	213V103	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	213V105	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Event mask 4	213V107	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
	Input value	213I1	MMI,RST	Input data	-10000.00000...10000.00000	-	0	Read	Volatile	Measurement value
	Input invalid	213I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input validity signal
	Input RESET	213I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting registers of MEAI1
	Max value date	213V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Maximum value date
	Max value time	213V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Maximum value time
	Maximum value	213V203	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Maximum value
	Min value date	213V204	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Minimujm value date
	Min value time	213V205	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Minimum value time
	Minimum value	213V206	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Minimum value
100214 / Rev C MEAI2										
	Input value	214I1	MMI,RST	Input data	-10000.00000...10000.00000	-	0	Read	Volatile	Measurement value
	Input invalid	214I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input validity signal
	Input RESET	214I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting registers of MEAI2
	Max value date	214V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Maximum value date
	Max value time	214V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Maximum value time
	Maximum value	214V203	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Maximum value
	Min value date	214V204	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Minimujm value date
	Min value time	214V205	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Minimum value time
	Minimum value	214V206	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Minimum value
	Threshold select	214V001	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	214V002	MMI,RST	Control setting	0.0001..10.0000	-	1.0000	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	214V003	MMI,RST	Control setting	0..9[0 = Not in use; 1 = HW, HA, LW, LA; 2 = HW, HA; 3 = LW, LA; 4 = HW, LW; 5 = HA, LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	214V004	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High warning limit value
	High alarm	214V005	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High alarm limit value
	Low warning	214V006	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low warning limit value
	Low alarm	214V007	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low alarm limit value
	HW start delay	214V008	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high warning signal
	HW reset delay	214V009	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high warning signal
	HA start delay	214V010	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high alarm signal
	HA reset delay	214V011	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high alarm signal
	LW start delay	214V012	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low warning signal
	LW reset delay	214V013	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low warning signal
	LA start delay	214V014	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low alarm signal
	LA reset delay	214V015	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low alarm signal
	Limit hysteresis	214V016	MMI,RST	Control setting	0..10.0000	-	0.0000	Rd/Wr	Retain	Hysteresis for limit supervision
	Measuring mode	214V017	MMI,RST	Control setting	0..1[0 = DC; 1 = AC]	-	0	Rd/Wr	Retain	Measurement mode
	Zero force limit	214V018	MMI,RST	Control setting	0..10.0000	-	0	Rd/Wr	Retain	Zero value supervision threshold
	Time interval	214V019	MMI,RST	Control setting	1..600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	214V101	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	214V103	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	214V105	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	214V107	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
100215 / Rev C MEAI3										
	Threshold select	215V001	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Threshold value	215V002	MMI,RST	Control setting	0.0001..10.0000	-	1.0000	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	215V003	MMI,RST	Control setting	0..9[0 = Not in use; 1 = HW, HA, LW, LA; 2 = HW, HA; 3 = LW, LA; 4 = HW, LW; 5 = HA, LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	215V004	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High warning limit value
	High alarm	215V005	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High alarm limit value
	Low warning	215V006	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low warning limit value
	Low alarm	215V007	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low alarm limit value
	HW start delay	215V008	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high warning signal
	HW reset delay	215V009	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high warning signal
	HA start delay	215V010	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high alarm signal
	HA reset delay	215V011	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high alarm signal
	LW start delay	215V012	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low warning signal
	LW reset delay	215V013	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low warning signal
	LA start delay	215V014	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low alarm signal
	LA reset delay	215V015	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low alarm signal
	Limit hysteresis	215V016	MMI,RST	Control setting	0..10.0000	-	0.0000	Rd/Wr	Retain	Hysteresis for limit supervision
	Measuring mode	215V017	MMI,RST	Control setting	0..1[0 = DC; 1 = AC]	-	0	Rd/Wr	Retain	Measurement mode
	Zero force limit	215V018	MMI,RST	Control setting	0..10.0000	-	0	Rd/Wr	Retain	Zero value supervision threshold
	Time interval	215V019	MMI,RST	Control setting	1..600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	215V101	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	215V103	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	215V105	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	215V107	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
	Input value	215I1	MMI,RST	Input data	-10000.00000...10000.00000	-	0	Read	Volatile	Measurement value
	Input invalid	215I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input validity signal
	Input RESET	215I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting registers of MEAI3
	Max value date	215V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Maximum value date
	Max value time	215V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Maximum value time
	Maximum value	215V203	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Maximum value
	Min value date	215V204	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Minimujm value date
	Min value time	215V205	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Minimum value time
	Minimum value	215V206	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Minimum value
100216 / Rev C MEAI4										
	Input value	216I1	MMI,RST	Input data	-10000.00000...10000.00000	-	0	Read	Volatile	Measurement value
	Input invalid	216I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input validity signal
	Input RESET	216I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting registers of MEAI4
	Max value date	216V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Maximum value date
	Max value time	216V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Maximum value time
	Maximum value	216V203	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Maximum value
	Min value date	216V204	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Minimujm value date
	Min value time	216V205	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Minimum value time
	Minimum value	216V206	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Minimum value
	Threshold select	216V001	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	216V002	MMI,RST	Control setting	0.0001..10.0000	-	1.0000	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	216V003	MMI,RST	Control setting	0..9[0 = Not in use; 1 = HW, HA, LW, LA; 2 = HW, HA; 3 = LW, LA; 4 = HW, LW; 5 = HA, LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	High warning	216V004	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High warning limit value
	High alarm	216V005	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High alarm limit value
	Low warning	216V006	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low warning limit value
	Low alarm	216V007	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low alarm limit value
	HW start delay	216V008	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high warning signal
	HW reset delay	216V009	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high warning signal
	HA start delay	216V010	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high alarm signal
	HA reset delay	216V011	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high alarm signal
	LW start delay	216V012	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low warning signal
	LW reset delay	216V013	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low warning signal
	LA start delay	216V014	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low alarm signal
	LA reset delay	216V015	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low alarm signal
	Limit hysteresis	216V016	MMI,RST	Control setting	0..10.0000	-	0.0000	Rd/Wr	Retain	Hysteresis for limit supervision
	Measuring mode	216V017	MMI,RST	Control setting	0..1[0 = DC; 1 = AC]	-	0	Rd/Wr	Retain	Measurement mode
	Zero force limit	216V018	MMI,RST	Control setting	0..10.0000	-	0	Rd/Wr	Retain	Zero value supervision threshold
	Time interval	216V019	MMI,RST	Control setting	1..600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	216V101	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	216V103	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	216V105	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	216V107	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
100217 / Rev C MEAI5										
	Threshold select	217V001	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	217V002	MMI,RST	Control setting	0.0001..10.0000	-	1.0000	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	217V003	MMI,RST	Control setting	0..9[0 = Not in use; 1 = HW, HA, LW, LA; 2 = HW, HA; 3 = LW, LA; 4 = HW, LW; 5 = HA, LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	217V004	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High warning limit value
	High alarm	217V005	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High alarm limit value
	Low warning	217V006	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low warning limit value
	Low alarm	217V007	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low alarm limit value
	HW start delay	217V008	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high warning signal
	HW reset delay	217V009	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high warning signal
	HA start delay	217V010	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high alarm signal
	HA reset delay	217V011	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high alarm signal
	LW start delay	217V012	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low warning signal
	LW reset delay	217V013	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low warning signal
	LA start delay	217V014	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low alarm signal
	LA reset delay	217V015	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low alarm signal
	Limit hysteresis	217V016	MMI,RST	Control setting	0..10.0000	-	0.0000	Rd/Wr	Retain	Hysteresis for limit supervision
	Measuring mode	217V017	MMI,RST	Control setting	0..1[0 = DC; 1 = AC]	-	0	Rd/Wr	Retain	Measurement mode
	Zero force limit	217V018	MMI,RST	Control setting	0..10.0000	-	0	Rd/Wr	Retain	Zero value supervision threshold
	Time interval	217V019	MMI,RST	Control setting	1..600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	217V101	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	217V103	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	217V105	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	217V107	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
	Input value	217I1	MMI,RST	Input data	-10000.00000...10000.00000	-	0	Read	Volatile	Measurement value
	Input invalid	217I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input validity signal

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Input RESET	217I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting registers of MEAI5
	Max value date	217V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Maximum value date
	Max value time	217V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Maximum value time
	Maximum value	217V203	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Maximum value
	Min value date	217V204	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Minimujm value date
	Min value time	217V205	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Minimum value time
	Minimum value	217V206	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Minimum value
100218 / Rev C	MEAI6									
	Input value	218I1	MMI,RST	Input data	10000.00000...10000.00000	-	0	Read	Volatile	Measurement value
	Input invalid	218I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input validity signal
	Input RESET	218I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting registers of MEAI6
	Max value date	218V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Maximum value date
	Max value time	218V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Maximum value time
	Maximum value	218V203	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Maximum value
	Min value date	218V204	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Minimujm value date
	Min value time	218V205	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Minimum value time
	Minimum value	218V206	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Minimum value
	Threshold select	218V001	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	218V002	MMI,RST	Control setting	0.0001..10.0000	-	1.0000	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	218V003	MMI,RST	Control setting	0..9[0 = Not in use; 1 = HW, HA, LW, LA; 2 = HW, HA; 3 = LW, LA; 4 = HW, LW; 5 = HA, LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	218V004	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High warning limit value
	High alarm	218V005	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High alarm limit value
	Low warning	218V006	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low warning limit value
	Low alarm	218V007	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low alarm limit value
	HW start delay	218V008	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high warning signal
	HW reset delay	218V009	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high warning signal
	HA start delay	218V010	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high alarm signal
	HA reset delay	218V011	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high alarm signal
	LW start delay	218V012	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low warning signal
	LW reset delay	218V013	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low warning signal
	LA start delay	218V014	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low alarm signal
	LA reset delay	218V015	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low alarm signal
	Limit hysteresis	218V016	MMI,RST	Control setting	0..10.0000	-	0.0000	Rd/Wr	Retain	Hysteresis for limit supervision
	Measuring mode	218V017	MMI,RST	Control setting	0..1[0 = DC; 1 = AC]	-	0	Rd/Wr	Retain	Measurement mode
	Zero force limit	218V018	MMI,RST	Control setting	0..10.0000	-	0	Rd/Wr	Retain	Zero value supervision threshold
	Time interval	218V019	MMI,RST	Control setting	1..600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	218V101	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	218V103	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	218V105	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	218V107	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
100219 / Rev C	MEAI7									
	Input value	219I1	MMI,RST	Input data	-10000.00000...10000.00000	-	0	Read	Volatile	Measurement value
	Input invalid	219I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input validity signal
	Input RESET	219I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting registers of MEAI7
	Max value date	219V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Maximum value date
	Max value time	219V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Maximum value time

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Maximum value	219V203	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Maximum value
	Min value date	219V204	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Minimujm value date
	Min value time	219V205	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Minimum value time
	Minimum value	219V206	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Minimum value
	Threshold select	219V001	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	219V002	MMI,RST	Control setting	0.0001..10.0000	-	1.0000	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	219V003	MMI,RST	Control setting	0..9[0 = Not in use; 1 = HW, HA, LW, LA; 2 = HW, HA; 3 = LW, LA; 4 = HW, LW; 5 = HA, LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	219V004	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High warning limit value
	High alarm	219V005	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High alarm limit value
	Low warning	219V006	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low warning limit value
	Low alarm	219V007	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low alarm limit value
	HW start delay	219V008	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high warning signal
	HW reset delay	219V009	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high warning signal
	HA start delay	219V010	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high alarm signal
	HA reset delay	219V011	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high alarm signal
	LW start delay	219V012	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low warning signal
	LW reset delay	219V013	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low warning signal
	LA start delay	219V014	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low alarm signal
	LA reset delay	219V015	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low alarm signal
	Limit hysteresis	219V016	MMI,RST	Control setting	0..10.0000	-	0.0000	Rd/Wr	Retain	Hysteresis for limit supervision
	Measuring mode	219V017	MMI,RST	Control setting	0..1[0 = DC; 1 = AC]	-	0	Rd/Wr	Retain	Measurement mode
	Zero force limit	219V018	MMI,RST	Control setting	0..10.0000	-	0	Rd/Wr	Retain	Zero value supervision threshold
	Time interval	219V019	MMI,RST	Control setting	1..600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	219V101	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	219V103	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	219V105	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	219V107	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
100220 / Rev C MEAI8										
	Threshold select	220V001	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	220V002	MMI,RST	Control setting	0.0001..10.0000	-	1.0000	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	220V003	MMI,RST	Control setting	0..9[0 = Not in use; 1 = HW, HA, LW, LA; 2 = HW, HA; 3 = LW, LA; 4 = HW, LW; 5 = HA, LA; 6 = HW; 7 = HA; 8 = LW; 9 = LA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	220V004	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High warning limit value
	High alarm	220V005	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	High alarm limit value
	Low warning	220V006	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low warning limit value
	Low alarm	220V007	MMI,RST	Control setting	-10000.00000..10000.00000	-	0.0000	Rd/Wr	Retain	Low alarm limit value
	HW start delay	220V008	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high warning signal
	HW reset delay	220V009	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high warning signal
	HA start delay	220V010	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the high alarm signal
	HA reset delay	220V011	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the high alarm signal
	LW start delay	220V012	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low warning signal
	LW reset delay	220V013	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low warning signal
	LA start delay	220V014	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Starting delay of the low alarm signal
	LA reset delay	220V015	MMI,RST	Control setting	1.0..300.0	s	1.0	Rd/Wr	Retain	Resetting delay of the low alarm signal

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Limit hysteresis	220V016	MMI,RST	Control setting	0..10.0000	-	0.0000	Rd/Wr	Retain	Hysteresis for limit supervision
	Measuring mode	220V017	MMI,RST	Control setting	0..1[0 = DC; 1 = AC]	-	0	Rd/Wr	Retain	Measurement mode
	Zero force limit	220V018	MMI,RST	Control setting	0..10.0000	-	0	Rd/Wr	Retain	Zero value supervision threshold
	Time interval	220V019	MMI,RST	Control setting	1..600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Event mask 1	220V101	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E11)
	Event mask 2	220V103	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E11)
	Event mask 3	220V105	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E11)
	Event mask 4	220V107	MMI,RST	Control setting	0..3071	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E11)
	Input value	220I1	MMI,RST	Input data	-10000.00000...10000.00000	-	0	Read	Volatile	Measurement value
	Input invalid	220I2	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Input validity signal
	Input RESET	220I3	MMI,RST	Input data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for resetting registers of MEAI8
	Max value date	220V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Maximum value date
	Max value time	220V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Maximum value time
	Maximum value	220V203	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Maximum value
	Min value date	220V204	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Minimujm value date
	Min value time	220V205	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Minimum value time
	Minimum value	220V206	MMI,RST	Recorded data1	-100000.000000 ... 100000.000000	-	0	Read	Retain	Minimum value
100225 / Rev K MEDREC16										
	Periodic time	225V1	MMI,RST	Trg settings	0...604800	s	0	Rd/Wr	Retain	Time between periodic triggerings
	Exclusion time	225V2	MMI,RST	Control setting	0...86400	s	0	Rd/Wr	Retain	Time how long triggerings from same reason ar ignored
	Operation mode	225V3	MMI,RST	Control setting	0..2 [0 = Saturation; 1 = Overwrite; 2 = Extension]	-	0	Rd/Wr	Retain	Operation mode of the recorder
	Pre-trg time	225V5	MMI,RST	Control setting	0...100	%	50	Rd/Wr	Retain	Length of record preceding the triggering
	BI enable	225V6	MMI,RST	Trg settings	0...65535	-	0	Rd/Wr	Retain	Binary channel triggering enable bit mask
	BI mode	225V7	MMI,RST	Trg settings	0...65535	-	0	Rd/Wr	Retain	Binary channel triggering mode bit mask
	Over lim. enab.	225V8	MMI,RST	Trg settings	0...65535	-	0	Rd/Wr	Retain	Analog channel over limit triggering bit mask
	Under lim. enab.	225V9	MMI,RST	Trg settings	0...65535	-	0	Rd/Wr	Retain	Analog channel under limit triggering bit mask
	Over limit ILx	225V10	MMI,RST	Trg limits	0.00...40.00	x In	10.00	Rd/Wr	Retain	Over limit for IL1, IL2 and IL3
	Over limit Io	225V11	MMI,RST	Trg limits	0.00...40.00	x In	10.00	Rd/Wr	Retain	Over limit for Io
	Over limit Iob	225V12	MMI,RST	Trg limits	0.00...40.00	x In	10.00	Rd/Wr	Retain	Over limit for Iob
	Over limit Uo	225V13	MMI,RST	Trg limits	0.00...2.00	x Un	2.00	Rd/Wr	Retain	Over limit for Uo
	Over limit Ux	225V14	MMI,RST	Trg limits	0.00...2.00	x Un	2.00	Rd/Wr	Retain	Over limit for U1, U2 and U3
	Over limit Uxy	225V15	MMI,RST	Trg limits	0.00...2.00	x Un	2.00	Rd/Wr	Retain	Over limit for U12, U23 and U31
	Over limit U12b	225V16	MMI,RST	Trg limits	0.00...2.00	x Un	2.00	Rd/Wr	Retain	Over limit for U12b
	Over limit ILxb	225V17	MMI,RST	Trg limits	0.00...40.00	x In	10.00	Rd/Wr	Retain	Over limit for IL1b, IL2b and IL3b
	Under limit Ux	225V18	MMI,RST	Trg limits	0.00...2.00	x Un	0.00	Rd/Wr	Retain	Under limit for U1, U2 and U3
	Under limit Uxy	225V19	MMI,RST	Trg limits	0.00...2.00	x Un	0.00	Rd/Wr	Retain	Under limit for U12, U23 and U31
	AI filter time	225V20	MMI,RST	Trg settings	0.000...60.000	s	0.050	Rd/Wr	Retain	Filtering time for analogue channel limit triggerings
	Header file	225V30	Internal	Control setting	-	-	-	Read	Volatile	LON file object for recording header
	Data file	225V31	Internal	Control setting	-	-	-	Read	Volatile	LON file object for recording data
	Transfer data va	225V32	Internal	Control setting	0...1	-	0	Read	Volatile	Tells to the upload SW that the data is valid in transfer buffer
	Transfer data lo	225V33	Internal	Control setting	0...1	-	0	Write	Volatile	The upload SW tells to the FB that it is not allowed to write to the transfer buffer
	Event mask 1	225V101	MMI,RST	Event masks	0...2147484299	-	2147484299	Rd/Wr	Retain	Event mask 1 for event transmission
	Event mask 2	225V103	MMI,RST	Event masks	0...2147484299	-	###########	Rd/Wr	Retain	Event mask 2 for event transmission
	Event mask 3	225V105	MMI,RST	Event masks	0...2147484299	-	2147484299	Rd/Wr	Retain	Event mask 3 for event transmission
	Event mask 4	225V107	MMI,RST	Event masks	0...2147484299	-	###########	Rd/Wr	Retain	Event mask 4 for event transmission
	Recorder channel	0M10	Internal	Control setting	-	-	225	Read	Volatile	Channel number of the internal disturbance recorder
	Data format	225M12	Internal	Control setting	-	-	2	Read	Volatile	Data format of the recording

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Transfer format	225M17	Internal	Control setting	-	-	0	Read	Volatile	The protocol of the file transmission
	Remote trigger	225M1	MMI,RST	Control setting	0..1 [0 = 0; 1 = Trigger]	-	0	Write	Volatile	Remote triggering
	Reset memory	225M2	MMI,RST	Control setting	0..1 [0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of recording memory
	Record length	225M11	MMI,RST	Control setting	10...65535	cyc.	50	Rd/Wr	Retain	Size of the recording memory in cycles
	Max # records	225M3	MMI,RST	Control setting	0...65535	-	0	Read	Volatile	Maximum number of recordings
	# records	225M16	MMI,RST	Control setting	0...65535	-	0	Read	Volatile	Number of recordings in memory
	AI chs used	225M13	MMI,RST	General info	0...65535	-	65535	Rd/Wr	Retain	Bit mask of recorded analog channels
	BI chs used	225M14	MMI,RST	General info	0...65535	-	65535	Read	Volatile	Bit mask of recorded binary channels
	Sampling rate	225M15	MMI,RST	General info	400...2400	Hz	2000	Read	Volatile	Sampling frequency (Hz)
	Line frequency	225M19	MMI,RST	General info	10.00...60.00	Hz	50.00	Read	Volatile	Nominal system frequency
	Identification	225M18	MMI,RST	General info	0...10000	-	0	Rd/Wr	Retain	Station identification or unit number
	Main header	225M20	MMI,RST	General info	Default header	-	Default header	Rd/Wr	Retain	Main header for recordings
	Text of BI1	225M40	MMI,RST	BI texts	BI1	-	BI1	Rd/Wr	Retain	Text of binary input BI1
	Text of BI2	225M41	MMI,RST	BI texts	BI2	-	BI2	Rd/Wr	Retain	Text of binary input BI2
	Text of BI3	225M42	MMI,RST	BI texts	BI3	-	BI3	Rd/Wr	Retain	Text of binary input BI3
	Text of BI4	225M43	MMI,RST	BI texts	BI4	-	BI4	Rd/Wr	Retain	Text of binary input BI4
	Text of BI5	225M44	MMI,RST	BI texts	BI5	-	BI5	Rd/Wr	Retain	Text of binary input BI5
	Text of BI6	225M45	MMI,RST	BI texts	BI6	-	BI6	Rd/Wr	Retain	Text of binary input BI6
	Text of BI7	225M46	MMI,RST	BI texts	BI7	-	BI7	Rd/Wr	Retain	Text of binary input BI7
	Text of BI8	225M47	MMI,RST	BI texts	BI8	-	BI8	Rd/Wr	Retain	Text of binary input BI8
	Text of BI9	225M48	MMI,RST	BI texts	BI9	-	BI9	Rd/Wr	Retain	Text of binary input BI9
	Text of BI10	225M49	MMI,RST	BI texts	BI10	-	BI10	Rd/Wr	Retain	Text of binary input BI10
	Text of BI11	225M50	MMI,RST	BI texts	BI11	-	BI11	Rd/Wr	Retain	Text of binary input BI11
	Text of BI12	225M51	MMI,RST	BI texts	BI12	-	BI12	Rd/Wr	Retain	Text of binary input BI12
	Text of BI13	225M52	MMI,RST	BI texts	BI13	-	BI13	Rd/Wr	Retain	Text of binary input BI13
	Text of BI14	225M53	MMI,RST	BI texts	BI14	-	BI14	Rd/Wr	Retain	Text of binary input BI14
	Text of BI15	225M54	MMI,RST	BI texts	BI15	-	BI15	Rd/Wr	Retain	Text of binary input BI15
	Text of BI16	225M55	MMI,RST	BI texts	BI16	-	BI16	Rd/Wr	Retain	Text of binary input BI16
	Text of AI1	225M60	MMI,RST	AI texts	IL1	-	IL1	Read	Volatile	Text of analog input channel 1 (IL1)
	Text of AI2	225M61	MMI,RST	AI texts	IL2	-	IL2	Read	Volatile	Text of analog input channel 2 (IL2)
	Text of AI3	225M62	MMI,RST	AI texts	IL3	-	IL3	Read	Volatile	Text of analog input channel 3 (IL3)
	Text of AI4	225M63	MMI,RST	AI texts	Io	-	Io	Read	Volatile	Text of analog input channel 4 (Io)
	Text of AI5	225M64	MMI,RST	AI texts	Iob	-	Iob	Read	Volatile	Text of analog input channel 5 (Iob)
	Text of AI6	225M65	MMI,RST	AI texts	Uo	-	Uo	Read	Volatile	Text of analog input channel 6 (Uo)
	Text of AI7	225M66	MMI,RST	AI texts	U1	-	U1	Read	Volatile	Text of analog input channel 7 (U1)
	Text of AI8	225M67	MMI,RST	AI texts	U2	-	U2	Read	Volatile	Text of analog input channel 8 (U2)
	Text of AI9	225M68	MMI,RST	AI texts	U3	-	U3	Read	Volatile	Text of analog input channel 9 (U3)
	Text of AI10	225M69	MMI,RST	AI texts	U12	-	U12	Read	Volatile	Text of analog input channel 10 (U12)
	Text of AI11	225M70	MMI,RST	AI texts	U23	-	U23	Read	Volatile	Text of analog input channel 11 (U23)
	Text of AI12	225M71	MMI,RST	AI texts	U31	-	U31	Read	Volatile	Text of analog input channel 12 (U31)
	Text of AI13	225M72	MMI,RST	AI texts	U12b	-	U12b	Read	Volatile	Text of analog input channel 13 (U12b)
	Text of AI14	225M73	MMI,RST	AI texts	IL1b	-	IL1b	Read	Volatile	Text of analog input channel 14 (IL1b)
	Text of AI15	225M74	MMI,RST	AI texts	IL2b	-	IL2b	Read	Volatile	Text of analog input channel 15 (IL2b)
	Text of AI16	225M75	MMI,RST	AI texts	IL3b	-	IL3b	Read	Volatile	Text of analog input channel 16 ((IL3b)
	IL1 pu-scale	225M80	Internal	Control setting	0...6000	A	1	Read	Volatile	Conversion factor for IL1 from pu to A
	IL2 pu-scale	225M81	Internal	Control setting	0...6000	A	1	Read	Volatile	Conversion factor for IL2 from pu to A
	IL3 pu-scale	225M82	Internal	Control setting	0...6000	A	1	Read	Volatile	Conversion factor for IL3 from pu to A
	Io pu-scale	225M83	Internal	Control setting	0...6000	A	1	Read	Volatile	Conversion factor for Io from pu to A
	Iob pu-scale	225M84	Internal	Control setting	0...6000	A	1	Read	Volatile	Conversion factor for Iob from pu to A

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Uo pu-scale	225M85	Internal	Control setting	0...440.000	kV	1.000	Read	Volatile	Conversion factor for Uo from pu to kV
	U1 pu-scale	225M86	Internal	Control setting	0...440.000	kV	1.000	Read	Volatile	Conversion factor for U1 from pu to kV
	U2 pu-scale	225M87	Internal	Control setting	0...440.000	kV	1.000	Read	Volatile	Conversion factor for U2 from pu to kV
	U3 pu-scale	225M88	Internal	Control setting	0...440.000	kV	1.000	Read	Volatile	Conversion factor for U3 from pu to kV
	U12 pu-scale	225M89	Internal	Control setting	0...440.000	kV	1.000	Read	Volatile	Conversion factor for U12 from pu to kV
	U23 pu-scale	225M90	Internal	Control setting	0...440.000	kV	1.000	Read	Volatile	Conversion factor for U23 from pu to kV
	U31 pu-scale	225M91	Internal	Control setting	0...440.000	kV	1.000	Read	Volatile	Conversion factor for U31 from pu to kV
	U12b pu-scale	225M92	Internal	Control setting	0...440.000	kV	1.000	Read	Volatile	Conversion factor for U12b from pu to kV
	IL1b pu-scale	225M93	Internal	Control setting	0...6000	A	1	Read	Volatile	Conversion factor for IL1b from pu to A
	IL2b pu-scale	225M94	Internal	Control setting	0...6000	A	1	Read	Volatile	Conversion factor for IL2b from pu to A
	IL3b pu-scale	225M95	Internal	Control setting	0...6000	A	1	Read	Volatile	Conversion factor for IL3b from pu to A
	Conv. factor uni	225M100	Internal	Control setting	0...65535	-	57375	Read	Volatile	Units of the conversion factors of each analog channel, bit mask, 0 = kV, 1 = A
	Time to trigger	225O1	MMI,RST	Output data	0...604800	s	0	Read	Volatile	Remaining time of periodic triggering
	Exclusion time	225O2	MMI,RST	Output data	0...86400	s	0	Read	Volatile	Remaining time of exclusion time
100226 / Rev D MEVO1B										
	Threshold select	226V1	MMI,RST	Control setting	0..3[0 = Not in use; 1 = Absolute alg.; 2 = Integrat. alg.; 3 = Time interval]	-	0	Rd/Wr	Retain	Selection of threshold supervision algorithm
	Threshold value	226V2	MMI,RST	Control setting	0.1...25.0	% Un	1.0	Rd/Wr	Retain	Threshold value for threshold supervision
	Limit selection	226V3	MMI,RST	Control setting	0..3[0= Not in use; 1= HW,HA; 2= HW; 3= HA]	-	0	Rd/Wr	Retain	Selection of monitored limits
	High warning	226V4	MMI,RST	Control setting	2.0...100.0	% Un	2.0	Rd/Wr	Retain	High warning limit value
	High alarm	226V5	MMI,RST	Control setting	2.0...100.0	% Un	10.0	Rd/Wr	Retain	High alarm limit value
	Time interval	226V6	MMI,RST	Control setting	1...600	s	1	Rd/Wr	Retain	Time interval for threshold supervision
	Measuring mode	226V7	MMI,RST	Control setting	0..1[0 = RMS; 1 = Fundam.freq.]	-	0	Rd/Wr	Retain	Selection of measuring mode
	Event mask 1	226V101	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E5)
	Event mask 2	226V103	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E5)
	Event mask 3	226V105	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E5)
	Event mask 4	226V107	MMI,RST	Control setting	0...47	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E5)
	Uo	226I1	MMI,RST	Input data	0...440000	V	0	Read	Volatile	Residual voltage Uo in volts
	Uo	226I2	MMI,RST	Input data	0.0...120.0	% Un	0.0	Read	Volatile	Residual voltage Uo in percents
	Input RESET	226I3	MMI,RST	Input data	0..1[0=Not active; 1=Active]	-	0	Read	Volatile	Signal for resetting demand values and registers of MEVO1B
	Uo peak date	226V201	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of Uo peak
	Uo peak time	226V202	MMI,RST	Recorded data1	hh:mm:ss.000	-	-	Read	Retain	Time of Uo peak
	Uo peak volts	226V203	MMI,RST	Recorded data1	0...440000	V	0	Read	Retain	Uo peak in volts
	Uo peak %	226V204	MMI,RST	Recorded data1	0.0...120.0	% Un	0.0	Read	Retain	Uo peak in percents
100230 / Rev B EVENT230										
	Event mask 1A	230V101	MMI,RST	Control setting	0...4294967295	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E0 ... E31)
	Event mask 1B	230V102	MMI,RST	Control setting	0...4294967295	-	0	Rd/Wr	Retain	Event mask 1 for event transmission (E32 ... E63)
	Event mask 2A	230V103	MMI,RST	Control setting	0...4294967295	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E0 ... E31)
	Event mask 2B	230V104	MMI,RST	Control setting	0...4294967295	-	0	Rd/Wr	Retain	Event mask 2 for event transmission (E32 ... E63)
	Event mask 3A	230V105	MMI,RST	Control setting	0...4294967295	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E0 ... E31)
	Event mask 3B	230V106	MMI,RST	Control setting	0...4294967295	-	0	Rd/Wr	Retain	Event mask 3 for event transmission (E32 ... E63)
	Event mask 4A	230V107	MMI,RST	Control setting	0...4294967295	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E0 ... E31)
	Event mask 4B	230V108	MMI,RST	Control setting	0...4294967295	-	0	Rd/Wr	Retain	Event mask 4 for event transmission (E32 ... E63)
100456 / Rev A MEAO1										
	Output range	456V001	MMI,RST	Control setting	0..1[0 = 0..20; 1 = 4..20]	mA	0	Rd/Wr	Retain	Output range
	Threshold value	456V002	MMI,RST	Control setting	0.01..1.00	-	1	Rd/Wr	Retain	Threshold value for threshold supervision
	Input low limit	456V003	MMI,RST	Control setting	-10000.00000..10000.00000	-	0	Rd/Wr	Retain	Input low limit

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Input high limit	456V004	MMI,RST	Control setting	-10000.00000..10000.00000	-	1	Rd/Wr	Retain	Input high limit
	Output value	456O001	MMI,RST	Output data	0.00...20.00	mA	0	Read	Volatile	Output value
100457 / Rev A MEAO2										
	Output value	457O001	MMI,RST	Output data	0.00...20.00	mA	0	Read	Volatile	Output value
	Output range	457V001	MMI,RST	Control setting	0..1[0 = 0..20; 1 = 4..20]	mA	0	Rd/Wr	Retain	Output range
	Threshold value	457V002	MMI,RST	Control setting	0.01..1.00	-	1	Rd/Wr	Retain	Threshold value for threshold supervision
	Input low limit	457V003	MMI,RST	Control setting	-10000.00000..10000.00000	-	0	Rd/Wr	Retain	Input low limit
	Input high limit	457V004	MMI,RST	Control setting	-10000.00000..10000.00000	-	1	Rd/Wr	Retain	Input high limit
100458 / Rev A MEAO3										
	Output range	458V001	MMI,RST	Control setting	0..1[0 = 0..20; 1 = 4..20]	mA	0	Rd/Wr	Retain	Output range
	Threshold value	458V002	MMI,RST	Control setting	0.01..1.00	-	1	Rd/Wr	Retain	Threshold value for threshold supervision
	Input low limit	458V003	MMI,RST	Control setting	-10000.00000..10000.00000	-	0	Rd/Wr	Retain	Input low limit
	Input high limit	458V004	MMI,RST	Control setting	-10000.00000..10000.00000	-	1	Rd/Wr	Retain	Input high limit
	Output value	458O001	MMI,RST	Output data	0.00...20.00	mA	0	Read	Volatile	Output value
100459 / Rev A MEAO4										
	Output value	459O001	MMI,RST	Output data	0.00...20.00	mA	0	Read	Volatile	Output value
	Output range	459V001	MMI,RST	Control setting	0..1[0 = 0..20; 1 = 4..20]	mA	0	Rd/Wr	Retain	Output range
	Threshold value	459V002	MMI,RST	Control setting	0.01..1.00	-	1	Rd/Wr	Retain	Threshold value for threshold supervision
	Input low limit	459V003	MMI,RST	Control setting	-10000.00000..10000.00000	-	0	Rd/Wr	Retain	Input low limit
	Input high limit	459V004	MMI,RST	Control setting	-10000.00000..10000.00000	-	1	Rd/Wr	Retain	Input high limit
100512 / Rev E PQCU3H										
	Limit THD	512V1	MMI,RST	Statistic limits	0.1...60.0	%	16.0	Rd/Wr	Retain	Limit for Total Harmonic Distortion
	Limit 2nd harm.	512V2	MMI,RST	Statistic limits	0.1...40.0	%In	4.0	Rd/Wr	Retain	Limit for 2nd harmonic
	Limit 3rd harm.	512V3	MMI,RST	Statistic limits	0.1...40.0	%In	10.0	Rd/Wr	Retain	Limit for 3rd harmonic
	Limit 4th harm.	512V4	MMI,RST	Statistic limits	0.1...40.0	%In	2.0	Rd/Wr	Retain	Limit for 4th harmonic
	Limit 5th harm.	512V5	MMI,RST	Statistic limits	0.1...40.0	%In	12.0	Rd/Wr	Retain	Limit for 5th harmonic
	Limit 6th harm.	512V6	MMI,RST	Statistic limits	0.1...40.0	%In	1.0	Rd/Wr	Retain	Limit for 6th harmonic
	Limit 7th harm.	512V7	MMI,RST	Statistic limits	0.1...40.0	%In	10.0	Rd/Wr	Retain	Limit for 7th harmonic
	Limit 8th harm.	512V8	MMI,RST	Statistic limits	0.1...40.0	%In	1.0	Rd/Wr	Retain	Limit for 8th harmonic
	Limit 9th harm.	512V9	MMI,RST	Statistic limits	0.1...40.0	%In	3.0	Rd/Wr	Retain	Limit for 9th harmonic
	Limit 10th harm.	512V10	MMI,RST	Statistic limits	0.1...40.0	%In	1.0	Rd/Wr	Retain	Limit for 10th harmonic
	Limit 11th harm.	512V11	MMI,RST	Statistic limits	0.1...40.0	%In	7.0	Rd/Wr	Retain	Limit for 11th harmonic
	Limit 12th harm.	512V12	MMI,RST	Statistic limits	0.1...40.0	%In	1.0	Rd/Wr	Retain	Limit for 12th harmonic
	Limit 13th harm.	512V13	MMI,RST	Statistic limits	0.1...40.0	%In	6.0	Rd/Wr	Retain	Limit for 13th harmonic
	Cum. probability	512V14	MMI,RST	Statistic limits	90.0...99.5	%	95.0	Rd/Wr	Retain	Limit for cumulative probability
	Measuring mode	512V15	MMI,RST	Settings	0..4[0 = Not in use; 1 = L1; 2 = L2; 3 = L3; 4 = Worst phase]	-	0	Rd/Wr	Retain	Measuring mode
	Distort. factor	512V16	MMI,RST	Settings	0..1[0 = THD; 1 = TDD]	-	1	Rd/Wr	Retain	Selection of distortion factor (THD or TDD)
	Observation time	512V17	MMI,RST	Settings	0..8[0 = 1 hour; 1 = 12 hours; 2 = 1 day; 3 = 2 days; 4 = 3 days; 5 = 4 days; 6 = 5 days; 7 = 6 days; 8 = 1 week]	-	8	Rd/Wr	Retain	Selection of Observation time
	Trigger mode	512V18	MMI,RST	Settings	0..2[0 = Single; 1 = Continuous; 2 = Periodic]	-	0	Rd/Wr	Retain	Selection of trigger mode
	Trigger year	512V19	MMI,RST	Settings	1980...2400	y	1980	Rd/Wr	Retain	Triggering year
	Trigger month	512V20	MMI,RST	Settings	1...12	m	1	Rd/Wr	Retain	Triggering month
	Trigger day	512V21	MMI,RST	Settings	1...31	d	1	Rd/Wr	Retain	Triggering day
	Trigger hour	512V22	MMI,RST	Settings	0...23	h	1	Rd/Wr	Retain	Triggering hour
	Remote trigger	512V23	MMI,RST	Settings	0..1[0 = 0; 1 = Trigger]	-	0	Write	Volatile	Remote or local triggering

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Selected harm.	512V24	MMI,RST	Settings	0..12[0 = THD; 1 = 2nd harmonic; 2 = 3rd harmonic; 3 = 4th harmonic; 4 = 5th harmonic; 5 = 6th harmonic; 6 = 7th harmonic; 7 = 8th harmonic; 8 = 9th harmonic; 9 = 10th harmonic; 10 = 11th harmonic; 11 = 12th harmonic; 12 = 13th harmonic]	-	2	Rd/Wr	Retain	Selected harmonic for recordings
	Reset registers	512V25	MMI,RST	Statistic limits	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of registers
	Act. meas.mode	512V26	MMI,RST	Settings	0..4[0 = Not in use; 1 = L1; 2 = L2; 3 = L3; 4 = Worst phase]	-	0	Read	Retain	Active measuring mode
	Event mask 1	512V101	MMI,RST	Settings	0...31	-	31	Rd/Wr	Retain	Event mask 1 for event transmission
	Event mask 2	512V103	MMI,RST	Settings	0...31	-	31	Rd/Wr	Retain	Event mask 2 for event transmission
	Event mask 3	512V105	MMI,RST	Settings	0...31	-	31	Rd/Wr	Retain	Event mask 3 for event transmission
	Event mask 4	512V107	MMI,RST	Settings	0...31	-	31	Rd/Wr	Retain	Event mask 3 for event transmission
	Measured input	512I1	MMI,RST	Inputs/Outputs	0..3[0 = None; 1 = L1; 2 = L2; 3 = L3]	-	1	Read	Volatile	Harmonic values are monitored from this current input
	THD	512I2	MMI,RST	sec. values	0.0...1000.0	%	0.0	Read	Volatile	3 s average value of Total Harmonic Distortion in percentage
	Fund. component	512I3	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 1st harmonic in percentage
	2nd harmonic	512I4	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 2nd harmonic in percentage
	3rd harmonic	512I5	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 3rd harmonic in percentage
	4th harmonic	512I6	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 4th harmonic in percentage
	5th harmonic	512I7	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 5th harmonic in percentage
	6th harmonic	512I8	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 6th harmonic in percentage
	7th harmonic	512I9	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 7th harmonic in percentage
	8th harmonic	512I10	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 8th harmonic in percentage
	9th harmonic	512I11	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 9th harmonic in percentage
	10th harmonic	512I12	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 10th harmonic in percentage
	11th harmonic	512I13	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 11th harmonic in percentage
	12th harmonic	512I14	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 12th harmonic in percentage
	13th harmonic	512I15	MMI,RST	sec. values	0.0...1000.0	%In	0.0	Read	Volatile	3 s average value of 13th harmonic in percentage
	Time to end	512I16	MMI,RST	A:Period info	0...10080	min	0	Read	Volatile	Time to the end of the Observation period
	Input DISABLE	512I17	MMI,RST	Inputs/Outputs	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for freezing registering of average values and blocking outputs
	THD	512I18	MMI,RST	min. values	0.0...1000.0	%	0.0	Read	Volatile	Short time sliding average value of Total Harmonic Distortion in percentage
	2nd harmonic	512I19	MMI,RST	min. values	0.0...1000.0	%In	0.0	Read	Volatile	Short time sliding average value of 2nd harmonic in percentage
	3rd harmonic	512I20	MMI,RST	min. values	0.0...1000.0	%In	0.0	Read	Volatile	Short time sliding average value of 3rd harmonic in percentage
	4th harmonic	512I21	MMI,RST	min. values	0.0...1000.0	%In	0.0	Read	Volatile	Short time sliding average value of 4th harmonic in percentage
	5th harmonic	512I22	MMI,RST	min. values	0.0...1000.0	%In	0.0	Read	Volatile	Short time sliding average value of 5th harmonic in percentage
	6th harmonic	512I23	MMI,RST	min. values	0.0...1000.0	%In	0.0	Read	Volatile	Short time sliding average value of 6th harmonic in percentage
	7th harmonic	512I24	MMI,RST	min. values	0.0...1000.0	%In	0.0	Read	Volatile	Short time sliding average value of 7th harmonic in percentage
	8th harmonic	512I25	MMI,RST	min. values	0.0...1000.0	%In	0.0	Read	Volatile	Short time sliding average value of 8th harmonic in percentage
	9th harmonic	512I26	MMI,RST	min. values	0.0...1000.0	%In	0.0	Read	Volatile	Short time sliding average value of 9th harmonic in percentage

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	10th harmonic	512I27	MMI,RST	min. values	0.0...1000.0	%In	0.0	Read	Volatile	Short time sliding average value of 10th harmonic in percentage
	11th harmonic	512I28	MMI,RST	min. values	0.0...1000.0	%In	0.0	Read	Volatile	Short time sliding average value of 11th harmonic in percentage
	12th harmonic	512I29	MMI,RST	min. values	0.0...1000.0	%In	0.0	Read	Volatile	Short time sliding average value of 12th harmonic in percentage
	13th harmonic	512I30	MMI,RST	min. values	0.0...1000.0	%In	0.0	Read	Volatile	Short time sliding average value of 13th harmonic in percentage
	Out HAR_HIGH	512O1	MMI,RST	Inputs/Outputs	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of output HAR_HIGH
	Out CUM_HIGH	512O2	MMI,RST	Inputs/Outputs	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of output CUM_HIGH
	Out THD	512O3	MMI,RST	Inputs/Outputs	0... 1000.0	%	0.0	Read	Volatile	Calculated total harmonic distortion
	Starting date	512V201	MMI,RST	B:Period info	YYYY-MM-DD	-	-	Read	Retain	Start date of last obs. period
	Starting time	512V202	MMI,RST	B:Period info	hh:mm:ss.000	-	-	Read	Retain	Start time of last obs. period
	End date	512V203	MMI,RST	B:Period info	YYYY-MM-DD	-	-	Read	Retain	End date of last obs. period
	End time	512V204	MMI,RST	B:Period info	hh:mm:ss.000	-	-	Read	Retain	End time of last obs. period
	Measuring mode	512V205	MMI,RST	B:Period info	0..4[0 = Not in Use; 1 = L1; 2 = L2; 3 = L3; 4 = Worst phase]	-	1	Read	Retain	Meas. mode of last obs.period
	Maximum THD	512V206	MMI,RST	B:Maxim. values	0.0...1000.0	%	0.0	Read	Retain	Max THD at last obs. period
	Max 2nd harm.	512V207	MMI,RST	B:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	Max 2nd harmonic at last obs. period
	Max 3rd harm.	512V208	MMI,RST	B:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 4th harm.	512V209	MMI,RST	B:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 5th harm.	512V210	MMI,RST	B:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 6th harm.	512V211	MMI,RST	B:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 7th harm.	512V212	MMI,RST	B:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 8th harm.	512V213	MMI,RST	B:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 9th harm.	512V214	MMI,RST	B:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 10th harm.	512V215	MMI,RST	B:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 11th harm.	512V216	MMI,RST	B:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 12th harm.	512V217	MMI,RST	B:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 13th harm.	512V218	MMI,RST	B:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Selected harm.	512V219	MMI,RST	B:Period info	0..12[0 = THD; 1 = 2nd harmonic; 2 = 3rd harmonic; 3 = 4th harmonic; 4 = 5th harmonic; 5 = 6th harmonic; 6 = 7th harmonic; 7 = 8th harmonic; 8 = 9th harmonic; 9 = 10th harmonic; 10 = 11th harmonic; 11 = 12th harmonic; 12 = 13th harmonic]	-	2	Read	Retain	Selected harmonic for percentage monitoring
	1% value	512V220	MMI,RST	B:Selected harm.	0.0...1000.0	%In	0.0	Read	Retain	1% percentile
	5% value	512V221	MMI,RST	B:Selected harm.	0.0...1000.0	%In	0.0	Read	Retain	5% percentile
	50% value	512V222	MMI,RST	B:Selected harm.	0.0...1000.0	%In	0.0	Read	Retain	95% percentile
	95% value	512V223	MMI,RST	B:Selected harm.	0.0...1000.0	%In	0.0	Read	Retain	50% percentile
	99% value	512V224	MMI,RST	B:Selected harm.	0.0...1000.0	%In	0.0	Read	Retain	99% percentile
	X% val for THD	512V225	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%	0.0	Read	Retain	Cum. prob. percentile for THD
	X% val for 2nd	512V226	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	Cum. prob. percentile for 2nd harmonic
	X% val for 3rd	512V227	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 4th	512V228	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 5th	512V229	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%Int	0.0	Read	Retain	'
	X% val for 6th	512V230	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 7th	512V231	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 8th	512V232	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 9th	512V233	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	X% val for 10th	512V234	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 11th	512V235	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 12th	512V236	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 13th	512V237	MMI,RST	B:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	Starting date	512V301	MMI,RST	A:Period info	YYYY-MM-DD	-	-	Read	Retain	Start date of active obs. period
	Starting time	512V302	MMI,RST	A:Period info	hh:mm:ss.000	-	-	Read	Retain	Start time of active obs. period
	End date	512V303	MMI,RST	A:Period info	YYYY-MM-DD	-	-	Read	Retain	End date of active obs. period
	End time	512V304	MMI,RST	A:Period info	hh:mm:ss.000	-	-	Read	Retain	End time of active obs. period
	Measuring mode	512V305	MMI,RST	A:Period info	0..4[0 = Not in Use; 1 = L1; 2 = L2; 3 = L3; 4 = Worst phase]	-	1	Read	Retain	Meas. mode of active obs.period
	Maximum THD	512V306	MMI,RST	A:Maxim. values	0.0...1000.0	%	0.0	Read	Retain	Max THD at active obs. period
	Max 2nd harm.	512V307	MMI,RST	A:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	Max 2nd harmonic at active obs. period
	Max 3rd harm.	512V308	MMI,RST	A:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 4th harm.	512V309	MMI,RST	A:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 5th harm.	512V310	MMI,RST	A:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 6th harm.	512V311	MMI,RST	A:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 7th harm.	512V312	MMI,RST	A:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 8th harm.	512V313	MMI,RST	A:Maxim. values	0.0...100.0	%In	0.0	Read	Retain	'
	Max 9th harm.	512V314	MMI,RST	A:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 10th harm.	512V315	MMI,RST	A:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 11th harm.	512V316	MMI,RST	A:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 12th harm.	512V317	MMI,RST	A:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Max 13th harm.	512V318	MMI,RST	A:Maxim. values	0.0...1000.0	%In	0.0	Read	Retain	'
	Selected harm.	512V319	MMI,RST	A:Period info	0..12[0 = THD; 1 = 2nd harmonic; 2 = 3rd harmonic; 3 = 4th harmonic; 4 = 5th harmonic; 5 = 6th harmonic; 6 = 7th harmonic; 7 = 8th harmonic; 8 = 9th harmonic; 9 = 10th harmonic; 10 = 11th harmonic; 11 = 12th harmonic; 12 = 13th harmonic]	-	2	Read	Retain	Selected harmonic for percentage monitoring
	1% value	512V320	MMI,RST	A:Selected harm.	0.0...1000.0	%In	0.0	Read	Retain	1% percentile
	5% value	512V321	MMI,RST	A:Selected harm.	0.0...1000.0	%In	0.0	Read	Retain	5% percentile
	50% value	512V322	MMI,RST	A:Selected harm.	0.0...1000.0	%In	0.0	Read	Retain	95% percentile
	95% value	512V323	MMI,RST	A:Selected harm.	0.0...1000.0	%In	0.0	Read	Retain	50% percentile
	99% value	512V324	MMI,RST	A:Selected harm.	0.0...1000.0	%In	0.0	Read	Retain	99% percentile
	X% val for THD	512V325	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%	0.0	Read	Retain	Cum. prob. percentile for THD
	X% val for 2nd	512V326	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	Cum. prob. percentile for 2nd harmonic
	X% val for 3rd	512V327	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 4th	512V328	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 5th	512V329	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 6th	512V330	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 7th	512V331	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 8th	512V332	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 9th	512V333	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 10th	512V334	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 11th	512V335	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	X% val for 12th	512V336	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%Int	0.0	Read	Retain	'
	X% val for 13th	512V337	MMI,RST	A:Cumulat. prob.	0.0...1000.0	%In	0.0	Read	Retain	'
	Date	512V401	MMI,RST	Last exceeding	YYYY-MM-DD	-	-	Read	Retain	Date for last exceeding
	Time	512V402	MMI,RST	Last exceeding	hh:mm:ss.000	-	-	Read	Retain	Time for exceeding
	Fund. component	512V403	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	Vsh value of 1st harmonic for last exceeding

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	THD	512V404	MMI,RST	Last exceeding	0.0...1000.0	%	0.0	Read	Retain	'
	2nd harmonic	512V405	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	'
	3rd harmonic	512V406	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	'
	4th harmonic	512V407	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	'
	5th harmonic	512V408	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	'
	6th harmonic	512V409	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	'
	7th harmonic	512V410	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	'
	8th harmonic	512V411	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	'
	9th harmonic	512V412	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	'
	10th harmonic	512V413	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	'
	11th harmonic	512V414	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	'
	12th harmonic	512V415	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	'
	13th harmonic	512V416	MMI,RST	Last exceeding	0.0...1000.0	%In	0.0	Read	Retain	'
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	Measured input	513I1	MMI,RST	Inputs/Outputs	0..6[0 = None; 1 = L1; 2 = L2; 3 = L3; 4 = L1-L2; 5 = L2-L3; 6 = L3-L1]	-	1	Read	Volatile	Harmonic values are monitored from this voltage input
	THD	513I2	MMI,RST	sec. values	0.0...120.0	%	0.0	Read	Volatile	3 s average value of Total Harmonic Distortion in percentage
	Fund. component	513I3	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 1st harmonic in percentage
	2nd harmonic	513I4	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 2nd harmonic in percentage
	3rd harmonic	513I5	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 3rd harmonic in percentage
	4th harmonic	513I6	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 4th harmonic in percentage
	5th harmonic	513I7	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 5th harmonic in percentage
	6th harmonic	513I8	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 6th harmonic in percentage
	7th harmonic	513I9	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 7th harmonic in percentage
	8th harmonic	513I10	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 8th harmonic in percentage
	9th harmonic	513I11	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 9th harmonic in percentage
	10th harmonic	513I12	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 10th harmonic in percentage
	11th harmonic	513I13	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 11th harmonic in percentage
	12th harmonic	513I14	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 12th harmonic in percentage
	13th harmonic	513I15	MMI,RST	sec. values	0.0...120.0	%Un	0.0	Read	Volatile	3 s average value of 13th harmonic in percentage
	Time to end	513I16	MMI,RST	A:Period info	0...10080	min	0	Read	Volatile	Time to the end of the Observation period
	Input DISABLE	513I17	MMI,RST	Inputs/Outputs	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Signal for freezing registering of average values and blocking outputs
	THD	513I18	MMI,RST	min. values	0.0...120.0	%	0.0	Read	Volatile	Short time sliding average value of Total Harmonic Distortion in percentage
	2nd harmonic	513I19	MMI,RST	min. values	0.0...120.0	%Un	0.0	Read	Volatile	Short time sliding average value of 2nd harmonic in percentage
	3rd harmonic	513I20	MMI,RST	min. values	0.0...120.0	%Un	0.0	Read	Volatile	Short time sliding average value of 3rd harmonic in percentage
	4th harmonic	513I21	MMI,RST	min. values	0.0...120.0	%Un	0.0	Read	Volatile	Short time sliding average value of 4th harmonic in percentage
	5th harmonic	513I22	MMI,RST	min. values	0.0...120.0	%Un	0.0	Read	Volatile	Short time sliding average value of 5th harmonic in percentage
	6th harmonic	513I23	MMI,RST	min. values	0.0...120.0	%Un	0.0	Read	Volatile	Short time sliding average value of 6th harmonic in percentage
	7th harmonic	513I24	MMI,RST	min. values	0.0...120.0	%Un	0.0	Read	Volatile	Short time sliding average value of 7th harmonic in percentage

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	8th harmonic	513I25	MMI,RST	min. values	0.0...120.0	%Un	0.0	Read	Volatile	Short time sliding average value of 8th harmonic in percentage
	9th harmonic	513I26	MMI,RST	min. values	0.0...120.0	%Un	0.0	Read	Volatile	Short time sliding average value of 9th harmonic in percentage
	10th harmonic	513I27	MMI,RST	min. values	0.0...120.0	%Un	0.0	Read	Volatile	Short time sliding average value of 10th harmonic in percentage
	11th harmonic	513I28	MMI,RST	min. values	0.0...120.0	%Un	0.0	Read	Volatile	Short time sliding average value of 11th harmonic in percentage
	12th harmonic	513I29	MMI,RST	min. values	0.0...120.0	%Un	0.0	Read	Volatile	Short time sliding average value of 12th harmonic in percentage
	13th harmonic	513I30	MMI,RST	min. values	0.0...120.0	%Un	0.0	Read	Volatile	Short time sliding average value of 13th harmonic in percentage
	Out HAR_HIGH	513O1	MMI,RST	Inputs/Outputs	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of output HAR_HIGH
	Out CUM_HIGH	513O2	MMI,RST	Inputs/Outputs	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Status of output CUM_HIGH
	Out THD	513O3	MMI,RST	Inputs/Outputs	0.0...120.0	%	0.0	Read	Volatile	Calculated total harmonic distortion
	Starting date	513V201	MMI,RST	B:Period info	YYYY-MM-DD	-	-	Read	Retain	Start date of last obs. period
	Starting time	513V202	MMI,RST	B:Period info	hh:mm:ss.000	-	-	Read	Retain	Start time of last obs. period
	End date	513V203	MMI,RST	B:Period info	YYYY-MM-DD	-	-	Read	Retain	End date of last obs. period
	End time	513V204	MMI,RST	B:Period info	hh:mm:ss.000	-	-	Read	Retain	End time of last obs. period
	Measuring mode	513V205	MMI,RST	B:Period info	0..8[0 = Not in Use; 1 = L1; 2 = L2; 3 = L3; 4 = Worst phase; 5 = L1-L2; 6 = L2-L3; 7 = L3-L1; 8 = Worst main]	-	1	Read	Retain	Measuring mode in last obs. period
	Maximum THD	513V206	MMI,RST	B:Maxim. values	0.0...120.0	%	0.0	Read	Retain	Max THD value at last obs. period
	Max 2nd harm.	513V207	MMI,RST	B:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 3rd harm.	513V208	MMI,RST	B:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 4th harm.	513V209	MMI,RST	B:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 5th harm.	513V210	MMI,RST	B:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 6th harm.	513V211	MMI,RST	B:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 7th harm.	513V212	MMI,RST	B:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 8th harm.	513V213	MMI,RST	B:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 9th harm.	513V214	MMI,RST	B:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 10th harm.	513V215	MMI,RST	B:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 11th harm.	513V216	MMI,RST	B:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 12th harm.	513V217	MMI,RST	B:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 13th harm.	513V218	MMI,RST	B:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Selected harm.	513V219	MMI,RST	B:Period info	0..12[0 = THD; 1 = 2nd harmonic; 2 = 3rd harmonic; 3 = 4th harmonic; 4 = 5th harmonic; 5 = 6th harmonic; 6 = 7th harmonic; 7 = 8th harmonic; 8 = 9th harmonic; 9 = 10th harmonic; 10 = 11th harmonic; 11 = 12th harmonic; 12 = 13th harmonic]	-	2	Read	Retain	Selected harmonic for percentage values monitoring
	1% value	513V220	MMI,RST	B:Selected harm.	0.0...120.0	%Un	0.0	Read	Retain	1% percentile value
	5% value	513V221	MMI,RST	B:Selected harm.	0.0...120.0	%Un	0.0	Read	Retain	5% percentile value
	50% value	513V222	MMI,RST	B:Selected harm.	0.0...120.0	%Un	0.0	Read	Retain	50% percentile value
	95% value	513V223	MMI,RST	B:Selected harm.	0.0...120.0	%Un	0.0	Read	Retain	95% percentile value
	99% value	513V224	MMI,RST	B:Selected harm.	0.0...120.0	%Un	0.0	Read	Retain	99% percentile value
	X% val for THD	513V225	MMI,RST	B:Cumulat. prob.	0.0...120.0	%	0.0	Read	Retain	Cum.prob. percentile value for THD
	X% val for 2nd	513V226	MMI,RST	B:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 3rd	513V227	MMI,RST	B:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 4th	513V228	MMI,RST	B:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	X% val for 5th	513V229	MMI,RST	B:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 6th	513V230	MMI,RST	B:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 7th	513V231	MMI,RST	B:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 8th	513V232	MMI,RST	B:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 9th	513V233	MMI,RST	B:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 10th	513V234	MMI,RST	B:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 11th	513V235	MMI,RST	B:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 12th	513V236	MMI,RST	B:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 13th	513V237	MMI,RST	B:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	Starting date	513V301	MMI,RST	A:Period info	YYYY-MM-DD	-	-	Read	Retain	Start date of active obs. period
	Starting time	513V302	MMI,RST	A:Period info	hh:mm:ss.000	-	-	Read	Retain	Start time of active obs. period
	End date	513V303	MMI,RST	A:Period info	YYYY-MM-DD	-	-	Read	Retain	End date of active obs. period
	End time	513V304	MMI,RST	A:Period info	hh:mm:ss.000	-	-	Read	Retain	End time of active obs. period
	Measuring mode	513V305	MMI,RST	A:Period info	0..8[0 = Not in Use; 1 = L1; 2 = L2; 3 = L3; 4 = Worst phase; 5 = L1-L2; 6 = L2-L3; 7 = L3-L1; 8 = Worst main]	-	1	Read	Retain	Measuring mode in active obs. period
	Maximum THD	513V306	MMI,RST	A:Maxim. values	0.0...120.0	%	0.0	Read	Retain	Max THD value at active obs. period
	Max 2nd harm.	513V307	MMI,RST	A:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 3rd harm.	513V308	MMI,RST	A:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 4th harm.	513V309	MMI,RST	A:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 5th harm.	513V310	MMI,RST	A:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 6th harm.	513V311	MMI,RST	A:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 7th harm.	513V312	MMI,RST	A:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 8th harm.	513V313	MMI,RST	A:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 9th harm.	513V314	MMI,RST	A:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 10th harm.	513V315	MMI,RST	A:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 11th harm.	513V316	MMI,RST	A:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 12th harm.	513V317	MMI,RST	A:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Max 13th harm.	513V318	MMI,RST	A:Maxim. values	0.0...120.0	%Un	0.0	Read	Retain	'
	Selected harm.	513V319	MMI,RST	A:Period info	0..12[0 = THD; 1 = 2nd harmonic; 2 = 3rd harmonic; 3 = 4th harmonic; 4 = 5th harmonic; 5 = 6th harmonic; 6 = 7th harmonic; 7 = 8th harmonic; 8 = 9th harmonic; 9 = 10th harmonic; 10 = 11th harmonic; 11 = 12th harmonic; 12 = 13th harmonic]	-	2	Read	Retain	Selected harmonic for percentage values monitoring
	1% value	513V320	MMI,RST	A:Selected harm.	0.0...120.0	%Un	0.0	Read	Retain	1% percentile value
	5% value	513V321	MMI,RST	A:Selected harm.	0.0...120.0	%Un	0.0	Read	Retain	5% percentile value
	50% value	513V322	MMI,RST	A:Selected harm.	0.0...120.0	%Un	0.0	Read	Retain	50% percentile value
	95% value	513V323	MMI,RST	A:Selected harm.	0.0...120.0	%Un	0.0	Read	Retain	95% percentile value
	99% value	513V324	MMI,RST	A:Selected harm.	0.0...120.0	%Un	0.0	Read	Retain	99% percentile value
	X% val for THD	513V325	MMI,RST	A:Cumulat. prob.	0.0...120.0	%	0.0	Read	Retain	Cum.prob. percentile value for THDs
	X% val for 2nd	513V326	MMI,RST	A:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 3rd	513V327	MMI,RST	A:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 4th	513V328	MMI,RST	A:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 5th	513V329	MMI,RST	A:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 6th	513V330	MMI,RST	A:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 7th	513V331	MMI,RST	A:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 8th	513V332	MMI,RST	A:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 9th	513V333	MMI,RST	A:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 10th	513V334	MMI,RST	A:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	X% val for 11th	513V335	MMI,RST	A:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 12th	513V336	MMI,RST	A:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	X% val for 13th	513V337	MMI,RST	A:Cumulat. prob.	0.0...120.0	%Un	0.0	Read	Retain	'
	Date	513V401	MMI,RST	Last exceeding	YYYY-MM-DD	-	-	Read	Retain	Date for last exceeding
	Time	513V402	MMI,RST	Last exceeding	hh:mm:ss.000	-	-	Read	Retain	Time for exceeding
	Fund. component	513V403	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	Vsh value of 1st harmonic for last exceeding
	THD	513V404	MMI,RST	Last exceeding	0.0...120.0	%	0.0	Read	Retain	'
	2nd harmonic	513V405	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	'
	3rd harmonic	513V406	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	'
	4th harmonic	513V407	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	'
	5th harmonic	513V408	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	'
	6th harmonic	513V409	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	'
	7th harmonic	513V410	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	'
	8th harmonic	513V411	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	'
	9th harmonic	513V412	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	'
	10th harmonic	513V413	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	'
	11th harmonic	513V414	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	'
	12th harmonic	513V415	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	'
	13th harmonic	513V416	MMI,RST	Last exceeding	0.0...120.0	%Un	0.0	Read	Retain	'
	Limit THD	513V1	MMI,RST	Statistic limits	0.1...30.0	%	8.0	Rd/Wr	Retain	Limit for Total Harmonic Distortion
	Limit 2nd harm.	513V2	MMI,RST	Statistic limits	0.1...20.0	%Un	2.0	Rd/Wr	Retain	Limit for 2nd harmonic
	Limit 3rd harm.	513V3	MMI,RST	Statistic limits	0.1...20.0	%Un	5.0	Rd/Wr	Retain	Limit for 3rd harmonic
	Limit 4th harm.	513V4	MMI,RST	Statistic limits	0.1...20.0	%Un	1.0	Rd/Wr	Retain	Limit for 4th harmonic
	Limit 5th harm.	513V5	MMI,RST	Statistic limits	0.1...20.0	%Un	6.0	Rd/Wr	Retain	Limit for 5th harmonic
	Limit 6th harm.	513V6	MMI,RST	Statistic limits	0.1...20.0	%Un	0.5	Rd/Wr	Retain	Limit for 6th harmonic
	Limit 7th harm.	513V7	MMI,RST	Statistic limits	0.1...20.0	%Un	5.0	Rd/Wr	Retain	Limit for 7th harmonic
	Limit 8th harm.	513V8	MMI,RST	Statistic limits	0.1...20.0	%Un	0.5	Rd/Wr	Retain	Limit for 8th harmonic
	Limit 9th harm.	513V9	MMI,RST	Statistic limits	0.1...20.0	%Un	1.touko	Rd/Wr	Retain	Limit for 9th harmonic
	Limit 10th harm.	513V10	MMI,RST	Statistic limits	0.1...20.0	%Un	0.5	Rd/Wr	Retain	Limit for 10th harmonic
	Limit 11th harm.	513V11	MMI,RST	Statistic limits	0.1...20.0	%Un	3.touko	Rd/Wr	Retain	Limit for 11th harmonic
	Limit 12th harm.	513V12	MMI,RST	Statistic limits	0.1...20.0	%Un	0.5	Rd/Wr	Retain	Limit for 12th harmonic
	Limit 13th harm.	513V13	MMI,RST	Statistic limits	0.1...20.0	%Un	3.0	Rd/Wr	Retain	Limit for 13th harmonic
	Cum. probability	513V14	MMI,RST	Statistic limits	90.0...99.5	%	95.0	Rd/Wr	Retain	Limit for cumulative probability
	Measuring mode	513V15	MMI,RST	Settings	0..8[0 = Not in use; 1 = L1; 2 = L2; 3 = L3; 4 = Worst phase; 5 = L1-L2; 6 = L2-L3; 7 = L3-L1; 8 = Worst main]	-	0	Rd/Wr	Retain	Measuring mode
	Observation time	513V16	MMI,RST	Settings	0..8[0 = 1 hour; 1 = 12 hours; 2 = 1 day; 3 = 2 days; 4 = 3 days; 5 = 4 days; 6 = 5 days; 7 = 6 days; 8 = 1 week]	-	8	Rd/Wr	Retain	Selection of Observation time
	Trigger mode	513V17	MMI,RST	Settings	0..2[0 = Single; 1 = Continuous; 2 = Periodic]	-	0	Rd/Wr	Retain	Selection of trigger mode
	Trigger year	513V18	MMI,RST	Settings	1980...2400	y	1980	Rd/Wr	Retain	Triggering year
	Trigger month	513V19	MMI,RST	Settings	1...12	m	1	Rd/Wr	Retain	Triggering month
	Trigger day	513V20	MMI,RST	Settings	1...31	d	1	Rd/Wr	Retain	Triggering day
	Trigger hour	513V21	MMI,RST	Settings	0...23	h	1	Rd/Wr	Retain	Triggering hour
	Remote trigger	513V22	MMI,RST	Settings	0..1[0 = 0; 1 = Trigger]	-	0	Write	Volatile	Remote or local triggering
	Selected harm.	513V23	MMI,RST	Settings	0..12[0 = THD; 1 = 2nd harmonic; 2 = 3rd harmonic; 3 = 4th harmonic; 4 = 5th harmonic; 5 = 6th harmonic; 6 = 7th harmonic; 7 = 8th harmonic; 8 = 9th harmonic; 9 = 10th harmonic; 10 = 11th harmonic; 11 = 12th harmonic; 12 = 13th harmonic]	-	2	Rd/Wr	Retain	Selected harmonic for recordings

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Reset registers	513V24	MMI,RST	Statistic limits	0..1[0 = 0; 1 = Reset]	-	0	Write	Volatile	Resetting of registers
	Act. meas.mode	513V25	MMI,RST	Settings	0..8[0 = Not in use; 1 = L1; 2 = L2; 3 = L3; 4 = Worst phase; 5 = L1-L2; 6 = L2-L3; 7 = L3-L1; 8 = Worst main]	-	0	Read	Retain	Active measuring mode
	Event mask 1	513V101	MMI,RST	Settings	0...31	-	31	Rd/Wr	Retain	Event mask 1 for event transmission
	Event mask 2	513V103	MMI,RST	Settings	0...31	-	31	Rd/Wr	Retain	Event mask 2 for event transmission
	Event mask 3	513V105	MMI,RST	Settings	0...31	-	31	Rd/Wr	Retain	Event mask 3 for event transmission
	Event mask 4	513V107	MMI,RST	Settings	0...31	-	31	Rd/Wr	Retain	Event mask 3 for event transmission
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	Declared voltage	514V1	MMI,RST	Control setting	50.0...150.0	%	100.0	Rd/Wr	Retain	Declared input voltage (setting)
	Duration min	514V2	MMI,RST	Control setting	8...60000	ms	10	Rd/Wr	Retain	Minumum swell/sag/interruption duration (setting)
	Duration max	514V3	MMI,RST	Control setting	8...60000	ms	60000	Rd/Wr	Retain	Maximum swell/sag/interruption duration (setting)
	Swell limit	514V4	MMI,RST	Control setting	100.0...200.0	%	110.0	Rd/Wr	Retain	Swell threshold (setting)
	Sag limit	514V5	MMI,RST	Control setting	0.0...100.0	%	90.0	Rd/Wr	Retain	Sag threshold (setting)
	Interrupt. limit	514V6	MMI,RST	Control setting	0.0...100.0	%	1.0	Rd/Wr	Retain	Interruption threshold (setting)
	Reset registers	514V13	MMI,RST	Control setting	0...1	-	0	Write	Volatile	Resetting of counters and registered values (setting)
	Event mask 1	514V101	MMI,RST	Control setting	0...7	-	7	Rd/Wr	Retain	Event mask for event transmission (E0 ... E2) (setting)
	Event mask 2	514V103	MMI,RST	Control setting	0...7	-	7	Rd/Wr	Retain	Event mask for event transmission (E0 ... E2) (setting)
	Event mask 3	514V105	MMI,RST	Control setting	0...7	-	7	Rd/Wr	Retain	Event mask for event transmission (E0 ... E2) (setting)
	Event mask 4	514V107	MMI,RST	Control setting	0...7	-	7	Rd/Wr	Retain	Event mask for event transmission (E0 ... E2) (setting)
	Voltage UL1_U12	514I1	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage UL1 or phase-to-phase voltage U12
	Voltage UL2_U23	514I2	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage UL2 or phase-to-phase voltage U23
	Voltage UL3_U31	514I3	MMI,RST	Input data	0.00...2.00	x Un	0.00	Read	Volatile	Phase-to-earth voltage UL3 or phase-to-phase voltage U31
	Current IL1	514I4	MMI,RST	Input data	0.000...60.000	x In	0.000	Read	Volatile	Phase current IL1
	Current IL2	514I5	MMI,RST	Input data	0.000...60.000	x In	0.000	Read	Volatile	Phase current IL2
	Current IL3	514I6	MMI,RST	Input data	0.000...60.000	x In	0.000	Read	Volatile	Phase current IL3
	Out SWELL	514O1	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Swell in progress
	Out SAG	514O2	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Sag in progress
	Out INT	514O3	MMI,RST	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Interruption in progress
	Out SWELL_COUNT	514O4	MMI,RST	Output data	0...65535	-	0	Read	Volatile	Output for indicating the amount of swells counted
	Out SAG_COUNT	514O5	MMI,RST	Output data	0...65535	-	0	Read	Volatile	Output for indicating the amount of sags counted
	Out INT_COUNT	514O6	MMI,RST	Output data	0...65535	-	0	Read	Volatile	Output for indicating the amount of interruptions counted
	Variation active	514O7	Internal	Output data	0..1[0 = Not active; 1 = Active]	-	0	Read	Volatile	Voltage variation active
	Type	514V201	MMI,RST	Recorded data1	0..3[0 = Swell; 1 = Sag; 2 = Interruption; 3 = Sag&swell]	-	0	Read	Retain	Type of the detected voltage variation event
	Start date U1	514V202	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Event start date of phase 1
	Start time U1	514V203	MMI,RST	Recorded data1	hh:mm:ss.mss	-	-	Read	Retain	Event start time of phase 1
	Start date U2	514V204	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Event start date of phase 2
	Start time U2	514V205	MMI,RST	Recorded data1	hh:mm:ss.mss	-	-	Read	Retain	Event start time of phase 2
	Start date U3	514V206	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Event start date of phase 3
	Start time U3	514V207	MMI,RST	Recorded data1	hh:mm:ss.mss	-	-	Read	Retain	Event start time of phase 3
	Min/max date U1	514V208	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of phase 1 min/max value measurement
	Min/max time U1	514V209	MMI,RST	Recorded data1	hh:mm:ss.mss	-	-	Read	Retain	Time of phase 1 min/max value measurement
	Min/max date U2	514V210	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of phase 2 min/max value measurement
	Min/max time U2	514V211	MMI,RST	Recorded data1	hh:mm:ss.mss	-	-	Read	Retain	Time of phase 2 min/max value measurement
	Min/max date U3	514V212	MMI,RST	Recorded data1	YYYY-MM-DD	-	-	Read	Retain	Date of phase 3 min/max value measurement
	Min/max time U3	514V213	MMI,RST	Recorded data1	hh:mm:ss.mss	-	-	Read	Retain	Time of phase 3 min/max value measurement

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Duration 1	514V214	MMI,RST	Recorded data1	0...60000	ms	0	Read	Retain	Duration for phase 1
	Duration 2	514V215	MMI,RST	Recorded data1	0...60000	ms	0	Read	Retain	Duration for phase 2
	Duration 3	514V216	MMI,RST	Recorded data1	0...60000	ms	0	Read	Retain	Duration for phase 3
	Mag. UL1_U12	514V217	MMI,RST	Recorded data1	0.0...200.0	%	0.0	Read	Retain	Magnitude for phase 1
	Mag. UL2_U23	514V218	MMI,RST	Recorded data1	0.0...200.0	%	0.0	Read	Retain	Magnitude for phase 2
	Mag. UL3_U31	514V219	MMI,RST	Recorded data1	0.0...200.0	%	0.0	Read	Retain	Magnitude for phase 3
	Current IL1	514V220	MMI,RST	Recorded data1	0.000...60.000	x In	0.000	Read	Retain	Phase current IL1
	Current IL2	514V221	MMI,RST	Recorded data1	0.000...60.000	x In	0.000	Read	Retain	Phase current IL2
	Current IL3	514V222	MMI,RST	Recorded data1	0.000...60.000	x In	0.000	Read	Retain	Phase current IL3
	Type	514V301	MMI,RST	Recorded data2	0..3[0 = Swell; 1 = Sag; 2 = Interruption; 3 = Sag&swell]	-	0	Read	Retain	Type of the detected voltage variation event
	Start date U1	514V302	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Event start date of phase 1
	Start time U1	514V303	MMI,RST	Recorded data2	hh:mm:ss.mss	-	-	Read	Retain	Event start time of phase 1
	Start date U2	514V304	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Event start date of phase 2
	Start time U2	514V305	MMI,RST	Recorded data2	hh:mm:ss.mss	-	-	Read	Retain	Event start time of phase 2
	Start date U3	514V306	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Event start date of phase 3
	Start time U3	514V307	MMI,RST	Recorded data2	hh:mm:ss.mss	-	-	Read	Retain	Event start time of phase 3
	Min/max date U1	514V308	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Date of phase 1 min/max value measurement
	Min/max time U1	514V309	MMI,RST	Recorded data2	hh:mm:ss.mss	-	-	Read	Retain	Time of phase 1 min/max value measurement
	Min/max date U2	514V310	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Date of phase 2 min/max value measurement
	Min/max time U2	514V311	MMI,RST	Recorded data2	hh:mm:ss.mss	-	-	Read	Retain	Time of phase 2 min/max value measurement
	Min/max date U3	514V312	MMI,RST	Recorded data2	YYYY-MM-DD	-	-	Read	Retain	Date of phase 3 min/max value measurement
	Min/max time U3	514V313	MMI,RST	Recorded data2	hh:mm:ss.mss	-	-	Read	Retain	Time of phase 3 min/max value measurement
	Duration 1	514V314	MMI,RST	Recorded data2	0...60000	ms	0	Read	Retain	Duration for phase 1
	Duration 2	514V315	MMI,RST	Recorded data2	0...60000	ms	0	Read	Retain	Duration for phase 2
	Duration 3	514V316	MMI,RST	Recorded data2	0...60000	ms	0	Read	Retain	Duration for phase 3
	Mag. UL1_U12	514V317	MMI,RST	Recorded data2	0.0...200.0	%	0.0	Read	Retain	Magnitude for phase 1
	Mag. UL2_U23	514V318	MMI,RST	Recorded data2	0.0...200.0	%	0.0	Read	Retain	Magnitude for phase 2
	Mag. UL3_U31	514V319	MMI,RST	Recorded data2	0.0...200.0	%	0.0	Read	Retain	Magnitude for phase 3
	Current IL1	514V320	MMI,RST	Recorded data2	0.000...60.000	x In	0.000	Read	Retain	Phase current IL1
	Current IL2	514V321	MMI,RST	Recorded data2	0.000...60.000	x In	0.000	Read	Retain	Phase current IL2
	Current IL3	514V322	MMI,RST	Recorded data2	0.000...60.000	x In	0.000	Read	Retain	Phase current IL3
	Type	514V401	MMI,RST	Recorded data3	0..3[0 = Swell; 1 = Sag; 2 = Interruption; 3 = Sag&swell]	-	0	Read	Retain	Type of the detected voltage variation event
	Start date U1	514V402	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Event start date of phase 1
	Start time U1	514V403	MMI,RST	Recorded data3	hh:mm:ss.mss	-	-	Read	Retain	Event start time of phase 1
	Start date U2	514V404	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Event start date of phase 2
	Start time U2	514V405	MMI,RST	Recorded data3	hh:mm:ss.mss	-	-	Read	Retain	Event start time of phase 2
	Start date U3	514V406	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Event start date of phase 3
	Start time U3	514V407	MMI,RST	Recorded data3	hh:mm:ss.mss	-	-	Read	Retain	Event start time of phase 3
	Min/max date U1	514V408	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Date of phase 1 min/max value measurement
	Min/max time U1	514V409	MMI,RST	Recorded data3	hh:mm:ss.mss	-	-	Read	Retain	Time of phase 1 min/max value measurement
	Min/max date U2	514V410	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Date of phase 2 min/max value measurement
	Min/max time U2	514V411	MMI,RST	Recorded data3	hh:mm:ss.mss	-	-	Read	Retain	Time of phase 2 min/max value measurement
	Min/max date U3	514V412	MMI,RST	Recorded data3	YYYY-MM-DD	-	-	Read	Retain	Date of phase 3 min/max value measurement
	Min/max time U3	514V413	MMI,RST	Recorded data3	hh:mm:ss.mss	-	-	Read	Retain	Time of phase 3 min/max value measurement
	Duration 1	514V414	MMI,RST	Recorded data3	0...60000	ms	0	Read	Retain	Duration for phase 1
	Duration 2	514V415	MMI,RST	Recorded data3	0...60000	ms	0	Read	Retain	Duration for phase 2
	Duration 3	514V416	MMI,RST	Recorded data3	0...60000	ms	0	Read	Retain	Duration for phase 3
	Mag. UL1_U12	514V417	MMI,RST	Recorded data3	0.0...200.0	%	0.0	Read	Retain	Magnitude for phase 1
	Mag. UL2_U23	514V418	MMI,RST	Recorded data3	0.0...200.0	%	0.0	Read	Retain	Magnitude for phase 2

Module	Parameter	Code	Visiblity	Menu	Value range	Unit	Default	Access	Volatile	Explanation
	Mag. UL3_U31	514V419	MMI,RST	Recorded data3	0.0...200.0	%	0.0	Read	Retain	Magnitude for phase 3
	Current IL1	514V420	MMI,RST	Recorded data3	0.000...60.000	x In	0.000	Read	Retain	Phase current IL1
	Current IL2	514V421	MMI,RST	Recorded data3	0.000...60.000	x In	0.000	Read	Retain	Phase current IL2
	Current IL3	514V422	MMI,RST	Recorded data3	0.000...60.000	x In	0.000	Read	Retain	Phase current IL3