

SECUTEST S2 | N+w

Test Instrument with Automatic Test Sequences for IEC 60974-4 and Draft IEC 62638

3-349-629-03
5/9.14

- **Selectable test current for protective conductor test:**
200 mA DC or 10 A AC
- **Leakage current measurement**
 - direct
 - differential
 - alternative
- **Voltage measurement AC / DC / RMS**
- **Maximum safety for the user** by means of shutdown in case of dangerous leakage current
- **Integrated test report templates**
- **Automatic measuring point recognition** for protective conductor testing (option)
- **Data memory** for up to 125 tests (option)
- **With calibration certificate in accordance with DAkkS**



Features

Connection of the Device Under Test

- Via the test socket with and without adapter (accessory) for various types of mains connections
- Via connector jacks for devices under test which do not have a mains plug
- Via adapter (accessory) for extension cables with and without multiple outlets
- Permanently connected DUTs

Automatic Recognition of

- Mains connection errors
- Safety class (I or II) (with German, French and Swiss test sockets only)
- Measuring point change:
During protective conductor measurement, the test instrument recognizes whether or not the test probe is in contact with the protective conductor, which is indicated by means of two different acoustic signals. This function is very useful where several protective conductor connections need to be tested.

Menu Driven Test Sequence

- Fully automated or manual

Data Interface for PC, Printer and Barcodes

With direct read-put of measurement data after each individual test, or at the end of the test sequence

Compact Design, Minimal Weight

Applications

Testing the Electrical Safety of Devices

The SECUTEST S2N+w test instrument is intended for quick and safe testing of electrical devices and arc welding equipment after repair or servicing, as well as for periodic testing.

Adherence to technical safety requirements assures safe use of devices for users of the test instrument.

The following are measured in accordance with the regulations listed below:

Draft IEC 62638	IEC 60974-4
Protective conductor resistance	Protective conductor resistance
Insulation resistance	Insulation resistance
Protective conductor current for safety class I devices	Primary leakage current
Touch current (for safety class II devices)	Leakage current from the welding circuit
Voltage (U AC, U DC)	Open-circuit peak voltage under load *

* only with SECULOAD accessory

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Test Instrument for IEC 60974-4 and Draft IEC 62638

Report Generating Functions

All of the values required for approval reports or device logbooks for electrical devices can be measured with this test instrument.

All measured data can be documented and archived thanks to the measurement and test report which can be printed from, or stored to a PC.

The SECUTEST SI+ module (accessory), i.e. a memory module which can be inserted into the cover with integrated interface and keypad, expands the test instrument's range of possible applications.

Function test with power analysis (also suitable for high power DUTs with current consumption of up to 16 A)

The device under test can be subjected to a function test with line voltage via the integrated test socket (not when 3-phase adapters are used).

The function test can be executed immediately after electrical safety testing has been successfully completed. The following are measured, or calculated automatically:

- Line voltage
- Differential current
- Current consumption
- Active and apparent power
- Power Factor
- Electrical energy
- On-time

Multimeter Functions

Extensive multimeter functions, including temperature measurement, expand the user's measuring options in a logical fashion. The following individual measurements are possible:

- Direct and alternating current (momentary and min./max. values), suitable for connection with *SECULOAD* test adapter for welding units
- Resistance
- Voltage to PE, e.g. phase locating
- Current via current clamp (accessory)
- Temperature via Pt100 or Pt1000 (accessory)

Features

Display

The LCD panel consists of a dot matrix at which menus, setting options, measurement results, instructions and error messages, as well schematic diagrams appear.

Automatic Classification and Test Sequence

The instrument detects the safety class of the device under test, and executes even complex measurements fully automatically.

RS 232 Interface for PC and Printer

This port allows for power supply and data transmission to the optionally available SI+ module.

Other devices can also be connected to this port with the help of an interface cable, for example a PC or a barcode scanner. 5 V / 500 mA is also available at the interface for supplying power to, for example, barcode scanners.

The Help Key

Information and schematic diagrams for the momentary display can be accessed with this key. The appropriate information is displayed at the LCD window.

Function Selector Switch

Test sequences and measuring functions are selected with the function selector switch. Direct allocation of the switch position to the test regulation simplifies operation.

Mains Plug Polarity Reversal

It's not necessary to reverse polarity at the mains plug manually. Reversal is executed during the test sequence upon request (not when 3-phase adapters are used).

Test Instrument Safety Features

- Mains connection monitoring:
Any faulty or dangerous connection is indicated, and measurement is disabled in the event of danger.
- Personal safety by means of integrated leakage current monitoring.

Regulations and Standard in Accordance with which the Test Instrument is Manufactured and Tested:

IEC/EN 61010-1:2001 VDE 0411-1:2002	Safety requirements for electrical equipment for measurement, control and laboratory use – general requirements
Draft IEC 61557-16	Test and measuring equipment for testing the electrical safety of electrical devices – General requirements
IEC EN 60529	Test instruments and test procedures Degrees of protection provided by enclosures (IP code)
IEC 61326-1	Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements

Applicable Regulations and Standards for the Use of SECUTEST S2N +w Test Instruments

DUTs to be tested in accordance with the following regulations	Repair Tests /Periodic Testing	
	Draft IEC 62638	IEC 60974-4
Electrical devices	•	
Working devices	•	
Mains operated electronic devices	•	
Hand-held electric tools	•	
Extension cables	•	
Data processing devices	•	
Arc welding equipment		•

Test Instrument for IEC 60974-4 and Draft IEC 62638

Characteristic Values




Function	Measured Quantity	Measuring Range / Nominal Range of Use	Resolution	Nominal Voltage U_N	Open-Circuit Voltage U_0	Nominal Current I_N	Short-Circuit Current I_K	Internal Resistance R_I	Reference Resistance R_{REF}	Measuring Uncertainty ⁴	Intrinsic Error ⁴	Overload Capacity		
												Value	Time	
Individual Measurements	Device protective conductor resistance R_E	0.000 ... 2100 Ω	1 m Ω	—	4.5 ... 9 V DC	—	> 200 mA DC	—	—	$\pm(5\% \text{ rdg.} + 10 \text{ d})$ > 10 d	$\pm(2.5\% \text{ rdg.} + 5 \text{ d})$ > 10 d	253 V	Cont.	
		2.11 ... 31.00 Ω	10 m Ω									No protection ³		
		0.000 ... 2.100 Ω	1 m Ω											
	Insulation resistance measurement R_{INS}	0.050 ... 1500 M Ω	1 k Ω	50 ... 500 V DC	1.0 • U_N ... 1.5 • U_N	> 1 mA	< 10 mA	—	—	$\pm(5\% \text{ rdg.} + 10 \text{ d})$	$\pm(2.5\% \text{ rdg.} + 5 \text{ d})$ > 10 d	253 V	Cont.	
		1.01 ... 10.00 M Ω	10 k Ω											
		10.1 ... 310.0 M Ω	100 k Ω											
	Equivalent leakage current I_{EA} or I_{EGA}	0.00 ... 21.00 mA	10 μ A	—	230 V~ -20 / +10%	—	< 3.5 mA	> 72 k Ω	$\leq 2 \text{ k}\Omega$	$\pm(5\% \text{ rdg.} + 10 \text{ d})$	$\pm(2.5\% \text{ rdg.} + 5 \text{ d})$ > 10 d	253 V	Cont.	
		20.1 ... 120.0 mA	100 μ A											
	Equivalent patient leakage current I_{EPA}	0.0 ... 310.0 μ A	100 nA	—	230 V~ -20 / +10%	—	< 3.5 mA	> 72 k Ω	1 k Ω $\pm 10 \Omega$	$\pm(5\% \text{ rdg.} + 10 \text{ d})$	$\pm(2.5\% \text{ rdg.} + 5 \text{ d})$ > 10 d	253 V	Cont.	
		0.300 ... 2.100 mA	1 μ A											
2.00 ... 11.00 mA		10 μ A												
Touch current I_T (leakage current from welding circuit)	0 ... 310 μ A 0.300 ... 3.500 mA	0.1 μ A 1 μ A	—	—	—	—	$\leq 2 \text{ k}\Omega$	—	$\pm(5\% \text{ rdg.} + 10 \text{ d})$	$\pm(2.5\% \text{ rdg.} + 5 \text{ d})$ > 10 d	253 V	Cont.		
Residual current ΔI (primary leakage current) between L and N	0.000 ... 3.100 mA~	1 μ A	—	—	—	—	—	$\leq 2 \text{ k}\Omega$	—	$\pm(10\% \text{ rdg.} + 10 \text{ d})$ > 10 d	$\pm(5\% \text{ rdg.} + 5 \text{ d})$ > 10 d	1	1	
	3.00 ... 31.00 mA~ ⁻¹	10 μ A												
	2.00 ... 11.00 mA	10 μ A												
Function Test	Line voltage U_{L-N}	207.0 ... 253.0 V~	0.1 V	—	—	—	—	—	—	—	$\pm(2.5\% \text{ rdg.} + 5 \text{ d})$	253 V	Cont.	
	Load current I_L	0 ... 16.00 A R_{MS}	10 mA	—	—	—	—	—	—	—	$\pm(2.5\% \text{ rdg.} + 5 \text{ d})$	20 A	10 min.	
	Active power P	0 ... 3700 W ²	1 W	—	—	—	—	—	—	—	$\pm(5\% \text{ rdg.} + 10 \text{ d})$ > 20 d	253 V	Cont.	
												20 A	10 min.	
	Apparent power S	0 ... 4000 VA	1 VA	Calculated value, $U_{L-N} \cdot I_V$								$\pm(5\% \text{ rdg.} + 10 \text{ d})$ > 20 d		
	Power factor LF with sinusoidal waveshape: $\cos\phi$	0.00 ... 1.00	0.01	Calculated value, P / S, display > 10 W								$\pm(10\% \text{ rdg.} + 5 \text{ d})$		
Residual current ΔI between L and N	0.00 ... 31.00 mA~	10 μ A	—	—	—	—	—	—	—	$\pm(10\% \text{ rdg.} + 10 \text{ d})$ > 10 d	$\pm(5\% \text{ rdg.} + 5 \text{ d})$	1	1	
U_{Probe}	Probe voltage (phase search)	0 ... 253.0 V —, ~ and —	0.1 V	—	—	—	—	—	—	—	$\pm(2.5\% \text{ rdg.} + 5 \text{ d})$ > 10 d	253 V	Cont.	
$U_{AC/DC}$	Voltage	0 ... 253.0 V —, ~ and —	0.1 V	—	—	—	—	—	—	$\pm(5\% \text{ rdg.} + 10 \text{ d})$	$\pm(2.5\% \text{ rdg.} + 5 \text{ d})$ > 10 d	253 V	Cont.	
R	Resistance	0 ... 150.0 k Ω	100 Ω	—	< 20 V~	—	1.1 mA	—	—	—	$\pm(1\% \text{ rdg.} + 3 \text{ d})$	253 V	Cont.	
I_{Clamp}	Current via current-voltage transformer clamp Z3510	0.000 ... 10.00 A~	1 mA (1 mV)	—	—	—	—	1.5 M Ω	—	—	$\pm(3\% \text{ rdg.} + 10 \text{ d})$ > 10 d	253 V	Cont.	
		0 ... 100 A~	1 A (1 mV)	—	—	—	—	1.5 M Ω	—	—	without clamp	253 V	Cont.	
Temp	Temperature with Pt100 sensor	-200 ... -50 °C	1 °C	—	< 20 V~	—	1.1 mA	—	—	—	$\pm(2\% \text{ rdg.} + 1 \text{ }^\circ\text{C})$	10 V	Cont.	
		-50.1 ... + 3000 °C	0.1 °C								$\pm(1\% \text{ rdg.} + 1 \text{ }^\circ\text{C})$	10 V	Cont.	
		+300 ... +850 °C	1 °C								$\pm(2\% \text{ rdg.} + 1 \text{ }^\circ\text{C})$	10 V	Cont.	

- ¹ As of 25 mA: shutdown within 100 ms as a result of differential current measurement
- ² Measured value P and calculated value S are compared, and the smaller of the two is displayed
- ³ Maximum test duration: 40 seconds, protection against overheating: measurement cannot be restarted until after waiting for 1 minute.
- ⁴ Applies only to displayed values at the test instrument. Data transmitted via the RS 232 interface may differ.
- ⁵ Measurement with AC test current is not possible at sockets 1 through 3.

Key: rdg. = reading (measured value), d = digit(s)

Testing for Correct Mains Connection

The device automatically recognizes mains connection errors if the conditions in the following table have been fulfilled. The user is informed of the type of error, and all measuring functions are disabled in the event of danger.

Type of Mains Connection Error	Message	Condition	Measurement
Phase conductor L at protective conductor PE to finger contact	Text at LCD panel	Press  key $U > 100 \text{ V}$	Disabled
Protective conductor PE and phase conductor L reversed and/or neutral conductor N interrupted	 lamp lights up	Voltage at PE $> 100 \text{ V}$	Disabled
Contact voltage at protective conductor PE to neutral conductor N	Text at LCD panel	$U > 50 \text{ V}$	Disabled, but disabling can be deactivated e.g. IT network)
Line voltage too low	 lamp lights up	$U_{L-N} < 180 \text{ V}$	Possible

Influencing Quantities and Influence Error

Influencing Quantity / Sphere of Influence	Designation per IEC 61557	Influence Error $\pm \dots \% \text{ rdg.}$
Change of position	E1	—
Change to test equipment supply voltage	E2	2.5
Temperature fluctuation	E3	Specified influence error valid starting with temperature changes as of 10 K:
0 ... 21 °C and 25 ... 40 °C		1 for protective conductor resistance 0.5 for all other measuring ranges
Amount of current at DUT	E4	2.5
Low frequency magnetic fields	E5	2.5
DUT impedance	E6	2.5
Capacitance during insulation measurement	E7	2.5
Waveshape of measured current	E8	2 with capacitive load (for equivalent leakage current) 1 (for touch current) 2.5 for all other measuring ranges
49 ... 51 Hz		
45 ... 100 Hz		

Reference Ranges

Line voltage	230 V $\pm 0.2\%$
Line frequency	50 Hz $\pm 2 \text{ Hz}$
Waveform	Sine (deviation between effective and rectified value $< 0.5\%$)
Ambient temperature	+23 °C $\pm 2 \text{ K}$
Relative humidity	40 ... 60%
Load resistance	Linear

Nominal Ranges of Use

Line voltage	103.5 ... 126.5 V or 207 ... 253 V
Line frequency	50 Hz $\pm 2 \text{ Hz}$
Line voltage waveform	Sine
Temperature	0 ... +50 °C

Ambient Conditions

Storage temperature	-20 ... + 60 °C
Operating temperature	-10 ... + 50 °C
Accuracy range	0 ... + 50 °C
Relative humidity	Max. 75%, no condensation allowed
Elevation	Max. 2000 m
Deployment	Indoors, except within specified ambient conditions

Power Supply

Line voltage	103.5 ... 126.5 V or 207 ... 253 V
Line frequency	50 / 60 Hz
Power consumption	Approx. 15 VA
for function test	Continuous max. 3600 VA, power is conducted through the instrument only, switching capacity $\leq 16 \text{ A}$

RS 232 Interface

Type	RS 232C, serial
Configuration	9600, N, 8, 1
Connection	9-pin subminiature socket connector

Electrical Safety

Protection class	I per IEC 61010-1/EN 61010-1
Nominal voltage	230 V
Test voltage	2.3 kV 50 Hz
Measuring category	250 V CAT II (does not apply to sockets 1, 2 and 3)
Pollution degree	2
Safety shutdown	At DUT differential current of $> 25 \text{ mA}$, shutdown time: $< 100 \text{ ms}$, probe current: $> 10 \text{ mA}$, $< 1 \text{ ms}$

Electromagnetic Compatibility

Product Standard	EN 61326
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Interference Emission		Class
EN 55011		B
Interference Immunity	Test Value	Evaluation Criterion
EN 61000-4-2	Contact/atmos. - 4 kV/8 kV	A
EN 61000-4-3	3 V/m or 1 V/m	A
EN 61000-4-4	1 kV	B
EN 61000-4-5	1 kV or 2 kV	A
EN 61000-4-6	3 V/m	A
EN 61000-4-11	0.5 / 1 / 25 periods	A
	250 periods	C

Mechanical Design

Display	Multiple display with dot matrix, 128 x 128 pixels, backlit display
Dimensions	L x W x H: 292 x 138 x 243 mm
Weight	Approx. 4.5 kg
Protection	Housing: IP 40, connectors: IP 20 per IEC / EN 60529

Excerpt from Table on the Meaning of IP Codes

IP XY (1 st digit X)	Protection Against Foreign Object Entry	IP XY (2 nd digit Y)	Protection Against Penetration by Water
2	$\geq 12.5 \text{ mm dia.}$	0	Not protected
4	$\geq 1.0 \text{ mm dia.}$	0	Not protected

Test Instrument for IEC 60974-4 and Draft IEC 62638

Scope of Delivery:

- 1 Test instrument
- 2 Probe cables with test probes
- 2 Plug-on alligator clips for test probes
- 1 Calibration certificate per DAkkS
- 1 Set operating instructions
- 1 Carrying strap

Accessories

User interface languages which are not included as a standard feature can be installed from our website as software (www.gossenmetrawatt.com). One language can be installed to the test instrument.

* Prerequisites for installing the software:

Software:

- MS Windows 2000, XP, VISTA or 7 (32 bit version)

Hardware:

- IBM compatible Windows PC, 200 MHz Pentium processor or faster with at least 64 MB RAM
- SVGA monitor
- Hard disk with at least 20 MB available memory capacity
- Microsoft compatible mouse

SECUTEST SI+ Memory and Input Module

Values measured by the test instrument can be stored to this module, and can be furnished with comments with the help of the alphanumeric keypad. The LCD panel at the test instrument is used



as a display for the module. Statistical analysis of the measurement results is also possible – percentage of passed tests. The SI+ module is screwed into the lid of the test instrument in a space-saving fashion. The module is equipped with an RS 232 port and a USB port for data transmission to a PC. Please request our SECUTEST SI+ data sheet for further information.

Test report and Data Management Software

Further information regarding software is available on the Internet at:

<http://www.gossenmetrawatt.com>
 (→ Products → Electrical Testing →
 → Electrical Device Testing (portable) → SECUTEST ...)

or

<http://www.gossenmetrawatt.com>
 (→ Products → Software → Software for Testers)

SECUSTORE – Memory Adapter for SECUTEST...

Test reports an individual test steps or test series can be written (“printed”) directly from the SECUTEST... instrument to the memory adapter, and can be subsequently read out and processed at a PC. The memory adapter is thus especially well suited for archiving and transmitting test reports.

Depending upon their scope, up to 1000 test reports or test series can be saved to memory.

Please note that the direct printing option has to be enabled in order to save individual test steps or test series to your SECUTEST....



Comparison: Memory Adapter / Test Instruments with Memory Option

Feature	SECUSTORE (Z745U)	SECUTEST SI+ (M702G)	SECUTEST S2N+W Feature KB01
Entry of comments with integrated keypad*	—	•	—
Data memory (flash)	•	•	—
Data memory (battery-backed)	—	—	•
Report functions	•	•	—
Statistical analysis of up to 8 device classes	—	•	—
Data transmission to the PC via RS 232 port	•	•	•
Data transmission to the PC via USB port	—	•	—
Connection of a barcode scanner via RS 232	•	•	•
Connection of an RFID reader via RS 232	•	•	•
Storage of function test values	•	•	—
Storage of entries for the DUT	—	•	—

SECU-cal 10 Calibration Adapter

The calibration adapter is used for testing measuring uncertainty of test instruments.



All limit values for the required tests, as well as protective conductor resistance, insulation resistance, equivalent leakage current, differential and/or touch current must be tested.

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SECULOAD / SECULOAD-N Test Adapter

Test Adapter for Testing Open-Circuit Voltage at Welding Units per IEC / EN 60974

In combination with the SECUTEST S2N+w, the test adapter is used for testing welding units in accordance with the IEC / EN 60974-4 standard. This standard stipulates that peak values for open-circuit voltage may not exceed the limit values, regardless of the utilized settings.

SECUTEST S2N+w testing instrument includes a test sequence for testing welding instruments with these adapters.

- **SECULOAD (Z745V):**

The peak value of the open-circuit voltage is determined in the SECULOAD by means of a peak value rectifier with very fast diodes. As a result, the actual peak value of the open-circuit voltage is also issued for pulsed voltage sources with clock rates in the range of several 10 kHz, based upon the filter stipulated in the standard.

- **SECULOAD-N (Z745R):**

The peak value rectifier of the SECULOAD-N uses rectifier diode 1N 4007 recommended by the standard. This diode is a power rectifier diode and, due to its design principle, only suitable for voltage sources with a low clock rate in the line frequency range or for voltage sources with conventional transformers.



Using the SECUTEST S2N+w with the SECULOAD



3-phase 32 A Differential Current Adapter AT16-DI



K2010 Accessory Case for SECUTEST S2N+w and Accessories



F2000 Accessory Pouch for SECUTEST S2N+w and Accessories



Order Information

Designation	Type	Article Number
Standard Models Available from Stock		
Test instrument with automatic test sequence, interface, German user interface, earthing contact plug and outlet, probe cable with test probe, plug-on alligator clip, DAKS calibration certificate and operating instructions.	SECUTEST S2N+W	M7010 ... D21...
Test Instrument Set		
Test Instrument set for arc welding equipment consisting of: SECUTEST S2N+W M7010-033 SECUTEST SI+ M702G SECULOAD Z745V Adapter AT16-DI Z750A Adapter cable 16/32 Z750F Carrying pouch F2020 Z700F	Profiset VDE 0544-4	M702P
PC Analysis Software		
Further information regarding software is available on the Internet at: http://www.gossenmetrawatt.com (→ Products → Electrical Testing → → Electrical Device Testing (portable) → SECUTEST ...) or http://www.gossenmetrawatt.com (→ Products → Software → Software for Testers)		
Report Generating / Data Storage Accessories		
Same as SECUTEST SI plus USB port for data transmission to a PC	SECUTEST SI+ ^D	M702G
Memory adapter for "direct printing" and internal reports	SECUSTORE ^D	Z745U
Firmware upgrade for SECUTEST database: data memory for up to 125 tests (without function test values or entries regarding the DUT)	DBmed	Z853H
See separate ID systems data sheet for barcode scanners/printers and RFID readers.		
Accessory Probes, Sensors, Adapters and Cables		
Special cable, 2 m	SK2	Z745D
Special cable, 5 m	SK5	Z745K
Brush probe	Z745G	Z745G
Pt100 temperature sensor, -40 to +500° C, for surface and immersion measurements	Z3409	GTZ3409000R0001
Pt100 oven sensor, -50 to +550 °C	TF550	GTZ3408000R0001
Switchable current clamp sensor, 1 mA ... 15 A and 1 A ... 150 A, frequency range 45...65 ... 500 Hz, transformation ratio: 1 mV/mA and 1 mV/A, clamp opening: 15 mm max. cable dia.	WZ12C ^D	Z219C
Adapter for testing single-phase extension cables including earth contact and inlet plug inserts	EL1	Z723A
Test adapter with single and 3-phase plug connectors up to CEE 32 A – For all tests without line voltage to single and 3-phase electrical devices – For tests at single and 3-phase extension cables	VL2E	Z745W
3-phase 16 A differential current adapter	AT16-DI	Z750A
3-phase 32 A differential current adapter	AT32-DI	Z750B

Designation	Type	Article Number
Test adapter for testing devices with CEE16 and CEE32 connectors (max. 20 A load capacity)	AT3-II-S ^{D, 1}	Z745T
Same as AT3-II-S but with 32 A load capacity	AT3-II S32 ^{D, 1}	Z745X
16 A / 32 A 3-phase current adapter (test case) for connection to the test instrument	AT3-III-E ^{D, 1}	Z745S
Test adapter in combination with SECUTEST... for testing welding units in accordance with EN 60974-4:2007. The peak value of the open-circuit voltage is determined in the SECULOAD by means of a peak value rectifier with very fast diodes. As a result, the actual peak value of the open-circuit voltage is also issued for pulsed voltage sources with clock rates in the range of several 10 kHz, based upon the filter stipulated in the standard. Scope of delivery including 4 measuring cables and 2 plug-on alligator clips	SECULOAD	Z745V
Test adapter in combination with SECUTEST... for testing welding units in accordance with EN 60974-4:2007. The peak value rectifier of the SECULOAD-N uses rectifier diode 1N 4007 recommended by the standard. This diode is a power rectifier diode and, due to its design principle, only suitable for voltage sources with a low clock rate in the line frequency range or for voltage sources with conventional transformers. Scope of delivery including 4 measuring cables and 2 plug-on alligator clips	SECULOAD-N	Z745R
Adapter for connecting devices under test: 3-pole 16 A, 5-pole 16 A + 32 A, 5 ea. 4 mm socket – For all tests without line voltage to single and 3-phase electrical devices	CEE Adapter ¹	Z745A
Adapter cable CEE16 5-pole-plug red on CEE32 5-pole coupling red, 0,5 m, 5x1,5 mm ²	Adapter cable 16/32	Z750F
Cable set for connecting test instruments to the mains without using an earthing contact outlet, and for connecting DUTs. Consists of coupling socket with 3 permanently connected cables, 3 measurement cables, 3 plug-on pick-up clips and 2 plug-on test probes	KS13	GTY3624065P01
Cable set (1 pair of measurement cables) 1.2 m, with VDE-GS mark 1000 V / CAT III, 600 V / CAT IV, 16 A	KS17-2	GTY3620034P0002
Additional Accessories		
Calibration adapter for test instruments (max. 200 mA) not for use with 10 A protective conductor test current	SECU-cal 10	Z715A
Carrying pouch	F2000 ^D	Z700D
Large universal carrying pouch for SECUTEST... and accessories	F2020	Z700F
Carrying case	K2010	Z504L

^D Data sheet available

¹ Not suitable for IEC / EN 60974-4

For additional information regarding accessories please refer to

- Measuring Instruments and Testers catalog
- www.gossenmetrawatt.com

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Test Instrument for Draft IEC 62638 and IEC 60974-4

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 **GOSSEN METRAWATT**

GMC-I Messtechnik GmbH
Südwestpark 15
90449 Nürnberg • Germany

Phone: +49 911 8602-111
Fax: +49 911 8602-777
e-mail: info@gossenmetrawatt.com
www.gossenmetrawatt.com