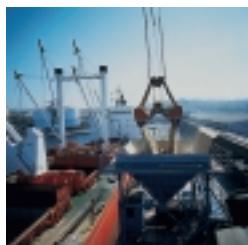


Soft starters and variable speed drives

The essential guide



The *simplicity* of a complete offer



Welcome to the Simply Smart* world compliments of Telemecanique

Altistart starters and **Altivar** variable speed drives open the doors to this world by offering you more **simplicity**, **compactness**, **open access** and **flexibility**:

- Ready to use versions,
- PowerSuite software workshop,
- Large choice of communication networks...

... so many evolutions and new items to aid your productivity.

* **Simply Smart** : more ingenuity and intelligence for continually improving ease of use

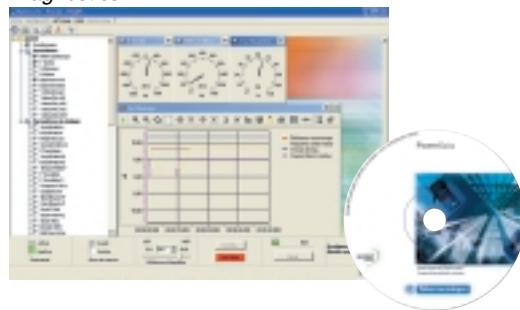
PowerSuite : a unique software for all Altistart and Altivar

Customise your settings with
the **minimum of effort!**

- Simplified definition of the parameters,
- Preparation and printing out for the configurations,
- Comparison of files,
- Quickly reproduction on all similar applications,
- Remote monitoring...



Graphic display of settings,
Current status,
Diagnostics...



Additional ergonomics
with the pocket PC

The essential guide Soft starters and variable speed drives **Altistart / Altivar**

A simplified selection guide
enabling you to quickly
select the starter or the drive
suitable for your application.

Contents

For each application,
a solution in
soft starting and
variable speed

Altistart / Altivar selection guide pages 2-3



Simple machines

Soft starters pages 4-7



■ 0,37 to 75 kW

Altistart 01 - pages 4-5



■ 4 to 1 200 kW

Altistart 48 - pages 6-7



Pumping and
ventilation machines

Variable speed drives pages 8-19



Simple machines



■ 0,18 to 2,2 kW

Altivar 11 - pages 8-9



■ 0,18 to 15 kW

Altivar 31 - pages 10-11



Pumping and
ventilation machines



■ 0,75 to 315 kW

Altivar 38 - pages 12-13



■ 75 to 630 kW

Altivar 68 - pages 18-19



Complex,
high power machines



■ 0,37 to 55 kW

Altivar 58 - pages 14-17

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Selection guide

Type of machine	Simple machines		
Starters/drives	Soft starters and soft start/soft stop units Altistart 01 	Variable speed drives Altivar 11 	Altivar 31 
Supply voltage ranges for 50/60 Hz line supply	Single phase 110...480 V Three phase 110...690 V	Single phase 100...120 V Single phase 200...240 V Three phase 200...230 V	Single phase 200...240 V Three phase 200...240 V Three phase 380...500 V Three phase 525...600 V
Motor power	0.37...75 kW	0.18...2.2 kW	0.18...15 kW
Drive	Output frequency Type of control Transient overtorque	– – –	0.5...200 Hz Sensorless flux vector control 150...170% of the nominal motor torque 170...200% of the nominal motor torque
Functions	Number of functions Number of preset speeds	1 –	26 4
	Number of I/O	Analog inputs Logic inputs Analog outputs Logic outputs Relay outputs	1 3 – 1 1
Communication	Integrated Available as an option	– Combined with TeSys model U controller-starter	– Modbus and CANopen DeviceNet, Ethernet TCP/IP, Fipio, Profibus DP
Cards (available as an option)	–	–	–
Standards and certifications	IEC/EN 60947-4/2 C-TICK - CSA - UL CE - CCC	EN 50178, EN 61800-3 EN 55011 - EN 55022 class B and class A gr.1 NOM 117 - C-TICK - CSA UL - N998 - CE	EN 50178, EN 61800-3 EN 55011 - EN 55022: class A, class B with option C-TICK - UL - N998 - CE
Pages	4-5	8-9	10-11

Pumping and ventilation machines



Soft start/soft stop units

Altistart 48



Three phase 230...415 V
Three phase 208...690 V

4...1 200 kW



Variable speed drives

Altivar 38



Three phase 380...460 V

0.1...500 Hz

Complex, high power machines



Soft start/soft stop units

Altivar 58



Single phase 200...240 V
Three phase 200...240 V
Three phase 380...500 V

0.37...55 kW

0.1...500 Hz

Altivar 68



Three phase 380...500 V

75...630 kW

0...300 Hz

TCS
(Torque Control System)

Sensorless flux vector control

Sensor/sensorless flux vector control

–

110% of the nominal motor torque for 60 sec.

200% of the nominal motor torque for 2 sec. 170% for 60 sec.

180% of the nominal motor torque in high torque configuration

36

44

> 60

> 60

–

8

8

8

1 PTC probe

2 to 3

2 to 3

2 to 4

4

4 to 6

4 to 6

4 to 8

1

1 to 2

1 to 2

1 to 2

2

0 to 1

0 to 1

0 to 1

3

2

2

1 to 5

Modbus

Modbus

Modbus

–

DeviceNet, Ethernet TCP/IP,
Fipio, Profibus DP

AS-Interface, CANopen,
DeviceNet, Ethernet TCP/IP,
Fipio, INTERBUS, Lonworks,
Modbus Plus, METASYS N2,
Profibus DP, Uni-Telway

AS-Interface, CANopen,
DeviceNet, Ethernet TCP/IP,
Fipio, INTERBUS, Modbus Plus,
Profibus DP, Uni-Telway

Fipio, Modbus, Modbus Plus,
Profibus DP

–

Pump switching
“Controller Inside” programmable card
I/O extension card

Multi-motor
Multi-parameter
Simple positioning
“Controller Inside” programmable card
I/O extension card

I/O extension card

IEC/EN 60947-4-2

EN 50178 - IEC 1800-3

EN 50178 - EN 55011

EN 50178 - IEC 61800-3

EMC class A and B

EN 55011 class A

EN 55022 class A,

CSA - UL - CE

DNV - C-TICK - GOST

EN 55022 class B

class B with option

CCIB - NOM - UL - CE

UL - N998 - CE

IEC 61000-4/2/4-3/4-4/4-5

CCC - CSA

IEC 61800-3 - DNV - GOST

UL - CE - CSA - N998 - NOM 117

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Altistart 01

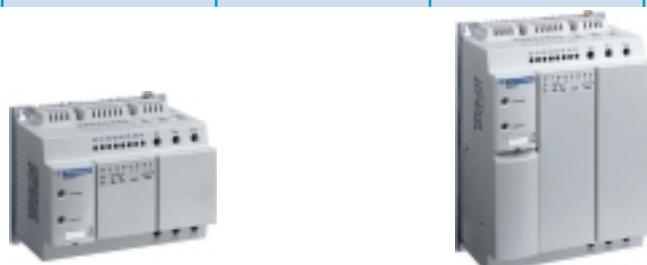
0.37 to 75 kW

Simple machines Starters

Dimensions (in mm)		width x height x depth
ATS01	N103FT / N106 FT	22.5 x 100 x 100
	N109FT / N112 FT	45 x 124 x 113
	N206●● / N209●● / N212●●	
	N222●● / N232●●	45 x 154 x 113



Type of starter	Soft starter	Soft start/soft stop units							
Motor power	0.37 to 5.5 kW	0.75 to 15 kW							
Degree of protection	IP 20								
Peak current reduction	No (1 controlled phase)	Yes (2 controlled phases)							
Adjustable starting time	1...5 s	1...10 s							
Adjustable stopping time	No: freewheel stop	Yes: 1... 10 s							
Adjustable starting torque	30...80% of DOL motor starting torque								
Logic inputs	-	3 logic inputs (Start, stop and startup boost)							
Logic outputs	-	1 logic output							
Relay outputs	-	1 relay output							
Control supply voltage	110...240 VAC ± 10%, 24 VDC ± 10%	Built into the starter							
Supply voltage	Single phase 110...480 V								
Motor power									
230 V	Nominal current (I _{cL})								
0,37	3 A	ATS01N103FT							
0,75	6 A	ATS01N106FT							
1,1	9 A	ATS01N109FT							
1,5	12 A	ATS01N112FT							
Supply voltage	3-phase 110...480 V	3-phase 200...240 V	3-phase 380...415 V	3-phase 440...480 V					
Motor power									
210 V	230 V	400 V	460 V	Nominal current (I _{cL})					
HP	kW	HP	kW	HP					
-	0.37-0.55	0.5/-	1.1	0.5-1.5	3 A	ATS01N103FT	-	-	-
0.5	0.75-1.1	1-1.5	2.2	2-3	6 A	ATS01N106FT	ATS01N206LU	ATS01N206QN	ATS01N206RT
1	1.5	2	4	5	9 A	ATS01N109FT	ATS01N209LU	ATS01N209QN	ATS01N209RT
1.5	2.2	3	5.5	7.5	12 A	ATS01N112FT	ATS01N212LU	ATS01N212QN	ATS01N212RT
-	4-5.5	5-7.5	7.5-11	10-15	22 A	-	ATS01N222LU	ATS01N222QN	ATS01N222RT
-	7.5	10	15	20	32 A	-	ATS01N232LU	ATS01N232QN	ATS01N232RT



Dimensions (in mm)		width x height x depth
ATS01	N230●●/N244●●	180 x 146 x 126
	N272●●/N285●●	180 x 254.5 x 126

Type of starter	Soft start/soft stop units								
Motor power	15 to 75 kW								
Degree of protection	IP 20 on front panel								
Peak current reduction	Yes								
Adjustable starting and stopping times	1... 25 s								
Adjustable starting torque	30... 80% of DOL motor starting torque								
Logic inputs	2 logic inputs (start and stop)								
Relay outputs	1 relay output								
Control supply voltage	110 VDC ± 10%								
Supply voltage	Built into the starter								
Motor power	3-phase 230...690 V								
230 V	400 V	460 V	690 V	Nominal current (I _{cL})					
kW	HP	kW	HP	HP					
7.5	10	15	15	20	30	32 A	ATS01N230LY	-	
11	15	22	25	30	37	44 A	ATS01N244LY	ATS01N244Q	
18.5	25	37	40	50	55	72 A	ATS01N272LY	ATS01N272Q	
22	30	45	50	60	75	85 A	ATS01N285LY	ATS01N285Q	

Starters with TeSys model U



Dimensions (in mm)		width x height x depth
ATSU01	N206LT / N209LT/N212LT	45 x 124 x 113
	N222LT / N232LT	45 x 154 x 113

Type of starter	Soft start/soft stop units			
Motor power	0.75 to 15 kW			
Degree of protection	IP 20			
Peak current reduction	Yes			
Adjustable starting and stopping times	1...10 s			
Adjustable starting torque	30... 80% of DOL motor starting torque			
Logic inputs	3 logic inputs (start, stop and startup boost)			
Logic outputs	1 logic output			
Relay outputs	1 relay output			
Control supply voltage	Built into the starter			
References	Soft start/ soft stop units	TeSys model U controller-starter Power base	Control unit (1)	Power connector between ATSU and TeSys model U
Supply voltage	3-phase 200...480 V			
Motor power	3-phase 200...480 V			
230 V	400 V	460 V	Nominal current (I _{cl})	
kW	HP	kW	HP	
0.75	1	1.5	2	6 A
1.1	1.5	2.2	3	6 A
1.5	2	3	—	9 A
—		4	5	9 A
2.2	3	—	—	12 A
3	—	5.5	7.5	12 A
4	5	7.5	10	22 A
5.5	7.5	11	15	22 A
7.5	10	15	20	32 A
				ATSU01N206LT
				LUB12
				LUC●05BL
				VW3G4104
				ATSU01N209LT
				LUB12
				LUC●12BL
				VW3G4104
				ATSU01N212LT
				LUB12
				LUC●12BL
				VW3G4104
				ATSU01N212LT
				LUB32
				LUC●18BL
				VW3G4104
				ATSU01N222LT
				LUB32
				LUC●18BL
				VW3G4104
				ATSU01N222LT
				LUB32
				LUC●32BL
				VW3G4104
				ATSU01N232LT
				LUB32
				LUC●32BL
				VW3G4104

(1) To compose your reference, replace ● in the reference with: "A" for a standard control unit, "M" for a multifunction unit and "B" for an expandable unit.

Altistart 48

4 to 1200 kW

Pumping machines, ventilation
Soft start/soft stop units

Dimensions (in mm)		width x height x depth
ATS48	D17Q to D47Q	160 x 275 x 190
	D62Q to C11Q	190 x 290 x 235
	C14Q to C17Q	200 x 340 x 265
	C21Q to C32Q	320 x 380 x 265
	C41Q to C66Q	400 x 670 x 300
	C79Q to M12Q	770 x 890 x 315



Supply voltage			3-phase 230...415 V (1)	
Type of application			Standard	Severe (2)
Starter control supply voltage			220...415 V	
Protection			IP 20: ATS48D17● to ATS48C11● starters IP 00: ATS48C14● to ATS48M12● starters	
EMC			Motor thermal protection Class A Class B	Class 10 On all starters On all starters up to 170 A
Starting mode			Torque control (patented TCS: Torque Control System)	
I/O			Analog inputs Logic inputs Logic outputs Analog outputs Relay outputs	1 PTC probe 4 logic inputs, 2 of which are configurable 2 configurable logic outputs 1 analog output 3 relay outputs, 2 of which are configurable
Dialog			Integrated or remote display terminal, or PowerSuite software workshop (3)	
Communication (4)			Integrated Available as an option	Modbus DeviceNet, Ethernet TCP/IP, Fipio, Profibus DP
Motor power				
230 V	400 V	Nominal current (I _{cL})		
kW	kW			
3	5.5	12 A	-	
4	7.5	17 A	ATS48D17Q	ATS48D22Q
5.5	11	22 A	ATS48D22Q	ATS48D32Q
7.5	15	32 A	ATS48D32Q	ATS48D38Q
9	18.5	38 A	ATS48D38Q	ATS48D47Q
11	22	47 A	ATS48D47Q	ATS48D62Q
15	30	62 A	ATS48D62Q	ATS48D75Q
18.5	37	75 A	ATS48D75Q	ATS48D88Q
22	45	88 A	ATS48D88Q	ATS48C11Q
30	55	110 A	ATS48C11Q	ATS48C14Q
37	75	140 A	ATS48C14Q	ATS48C17Q
45	90	170 A	ATS48C17Q	ATS48C21Q
55	110	210 A	ATS48C21Q	ATS48C25Q
75	132	250 A	ATS48C25Q	ATS48C32Q
90	160	320 A	ATS48C32Q	ATS48C41Q
110	220	410 A	ATS48C41Q	ATS48C48Q
132	250	480 A	ATS48C48Q	ATS48C59Q
160	315	590 A	ATS48C59Q	ATS48C66Q
-	355	660 A	ATS48C66Q	ATS48C79Q
220	400	790 A	ATS48C79Q	ATS48M10Q
250	500	1000 A	ATS48M10Q	ATS48M12Q
355	630	1200 A	ATS48M12Q	-

(1) Possible to connect the starter in the motor delta connection

(2) Starting time greater than 30 seconds (fans, high inertia machines and compressors)

(3) (4) PowerSuite software and communication protocols, see page 20

Accessory



Type of accessory	Remote display terminal
Reference	VW3G48101

Soft start/soft stop units

Dimensions (in mm)		width x height x depth
ATS48	D17Y to D47Y	160 x 275 x 190
	D62Y to C11Y	190 x 290 x 235
	C14Y to C17Y	200 x 340 x 265
	C21Y to C32Y	320 x 380 x 265
	C41Y to C66Y	400 x 670 x 300
	C79Y to M12Y	770 x 890 x 315



Supply voltage												3-phase 208...690 V (1)	Standard	Severe (2)		
Type of application												110...230 V				
Starter control supply voltage												Identical to 230...415 V starters				
Characteristics																
Motor power												Nominal current (I _{cL})				
208 V	230 V	460 V	575 V	230 V	400 V	440 V	500 V	525 V	660 V	690 V		12 A	–	ATS48D17Y		
HP				kW								17 A	ATS48D22Y	ATS48D22Y		
2	3	7.5	10	3	5.5	5.5	7.5	7.5	9	11	15	22 A	ATS48D32Y	ATS48D32Y		
3	5	10	15	4	7.5	7.5	9	9	11	15	18.5	32 A	ATS48D32Y	ATS48D38Y		
5	7.5	15	20	5.5	11	11	11	11	15	18.5		38 A	ATS48D38Y	ATS48D47Y		
7.5	10	20	25	7.5	15	15	18.5	18.5	22	22		47 A	ATS48D47Y	ATS48D62Y		
10	–	25	30	9	18.5	18.5	22	22	30	30		62 A	ATS48D62Y	ATS48D75Y		
–	15	30	40	11	22	22	30	30	37	37		75 A	ATS48D75Y	ATS48D88Y		
15	20	40	50	15	30	30	37	37	45	45		88 A	ATS48D88Y	ATS48C11Y		
20	25	50	60	18.5	37	37	45	45	55	55		110 A	ATS48C11Y	ATS48C14Y		
25	30	60	75	22	45	45	55	55	75	75		140 A	ATS48C14Y	ATS48C17Y		
30	40	75	100	30	55	55	75	75	90	90		170 A	ATS48C17Y	ATS48C21Y		
40	50	100	125	37	75	75	90	90	110	110		210 A	ATS48C21Y	ATS48C25Y		
50	60	125	150	45	90	90	110	110	132	160		250 A	ATS48C25Y	ATS48C32Y		
60	75	150	200	55	110	110	132	132	160	200		320 A	ATS48C32Y	ATS48C41Y		
75	100	200	250	75	132	132	160	160	220	250		410 A	ATS48C41Y	ATS48C48Y		
100	125	250	300	90	160	160	220	220	250	315		480 A	ATS48C48Y	ATS48C59Y		
125	150	300	350	110	220	220	250	250	355	400		590 A	ATS48C59Y	ATS48C66Y		
150	–	350	400	132	250	250	315	315	400	500		660 A	ATS48C66Y	ATS48C79Y		
–	200	400	500	160	315	355	400	400	560	560		790 A	ATS48C79Y	ATS48M10Y		
200	250	500	600	–	355	400	–	–	630	630		1000 A	ATS48M10Y	ATS48M12Y		
250	300	600	800	220	400	500	500	500	710	710		1200 A	ATS48M12Y	–		

(1) Starter connection in the motor delta connection: add "S316" at the end of the reference

Line chokes



Degree of protection		IP 20	IP 00
Reference	Type of starter Chokes	ATS48 D17● VZ1L015UM17T	D75● to C14● VZ1L150U17T
	Type of starter Chokes	ATS48 D22● VZ1L030U800T	C17● to C25● VZ1L0250U100T
	Type of starter Chokes	ATS48 D32● and D38● VZ1L040U600T	AC32● VZ1L325U075T
	Type of starter Chokes	ATS48 D47● and D62● VZ1L070U350T	M12● VZ1LM14U016T



Dimensions (in mm)	width x height x depth (1)
Size 1: 72 x 142 x 101 / Size 2: 72 x 142 x 125	
Size 3: 72 x 142 x 138 / Size 4: 117 x 142 x 156	

Range	Europe	America	Asia
Output frequency	0.5...200 Hz		
Type of control	Sensorless flux vector control		
Speed range	1 to 20		
Degree of protection	IP 20		
I/O			
Analog inputs	1 configurable analog input		
Logic inputs	4 assignable logic inputs		
Outputs	1 PWM open collector output assignable as logic output		
Relay outputs	1 protected relay logic output		
Dialogue	Integrated display terminal or PowerSuite software workshop (2)		
EMC	Integrated class B filter	External filter available as an option	External filter available as an option
Local controls (3)/negative logic	No	No	Yes
Standard NEC 208 V 1999	No	Yes	No
Supply voltage	Single phase 100...120 V		
Motor power	kW/HP	0.18/0.25	ATV11HU05F1U Size 1
		0.37/0.5	ATV11HU09F1U Size 2
		0.75/1	ATV11HU18F1U Size 4
Supply voltage	Single phase 200...240 V		
Motor power	kW/HP	0.18/0.25	ATV11HU05M2E Size 1
		0.37/0.5	ATV11HU09M2E Size 2
		0.55	ATV11HU12M2E Size 3
		0.75/1	ATV11HU18M2E Size 3
		1.5/2	ATV11HU29M2E Size 4
		2.2/3	ATV11HU41M2E Size 4
Supply voltage	Three phase 200...230 V		
Motor power	kW/HP	0.18/0.25	ATV11HU05M3U Size 1
		0.37/0.5	ATV11HU09M3U Size 2
		0.75/1	ATV11HU18M3U Size 3
		1.5/2	ATV11HU29M3U Size 4
		2.2/3	ATV11HU41M3U Size 4

(1) Asia range: add 7 mm to depth (height of the potentiometer)

(2) PowerSuite software, see page 20

(3) Local controls: Run/Stop keys and potentiometer

Drives on base plates



Dimensions (in mm)	width x height x depth (1)
1 size: 72 x 142 x 101	

Range	Europe	America	Asia
Supply voltage	Single phase 100...120 V		
Motor power	kW/HP	0.37/0.5	ATV11PU09F1U
Supply voltage	Single phase 200...240 V		
Motor power	kW/HP	0.37/0.5	ATV11PU09M2E
		0.55	ATV11PU12M2E
		0.75/1	ATV11PU18M2E
Supply voltage	Three phase 200...230 V		
Motor power	kW/HP	0.37/0.5	ATV11PU09M3U
		0.75/1	ATV11PU18M3U

(1) Asia range: add 7 mm to depth (height of the potentiometer)

Additional EMC input filters



Supply voltage		Single phase 100...120 V		Three phase 200...230 V	
Europe range	Drive type	ATV11	–	HU05M2E to HU41M2E	–
	References	Filters	–	Integrated	–
America range	Drive type	ATV11	HU05F1U, HU09F1U	HU05M2U to HU18M2U	HU05M3U to HU18M3U
	References	Filters	VW3A11401	VW3A11401	VW3A11403
Asia range	Drive type	ATV11	HU18F1U	HU29M2U - HU41M2U	HU29M3U to HU41M3U
	References	Filters	VW3A11402	VW3A11402	VW3A11404
	Drive type	ATV11	HU05F1A - HU09F1A	HU05M2A to HU18M2A	HU05M3A to HU18M3A
	References	Filters	VW3A11401	VW3A11401	VW3A11403
	Drive type	ATV11	HU18F1A - HU18F1A	HU29M2A - HU41M2A	HU29M3A to HU41M3A
	References	Filters	VW3A11402	VW3A11402	VW3A11404

Accessories



Accessory	Mounting plates for Omega rail		Substitution plate	Speed reference potentiometer	Grounding plate for EMC mounting	
Description	Width 35 mm		For replacing ATV08	2.2 kΩ		
References	Drive type	ATV11	HU05●●●	HU05M2●	All ATV11 models	
			HU09●●●	●HU09M2●●	All ATV11 models	
		HU12M2●	HU41●●●	●U12M2E		
		HU18●●●	–	●U18M2●		
Accessories		VW3A11851	VW3A11852	VW3A11811	SZ1RV1202	
Braking resistors and modules...other accessories: Please consult the "Variable speed drives and soft starters" catalog						

Dimensions (in mm)	width x height x depth
Size 1: 72 x 145 x 120 / Size 2: 72 x 145 x 130	
Size 3: 72 x 145 x 140 / Size 4: 105 x 143 x 130	
Size 5: 105 x 143 x 150 / Size 6: 140 x 184 x 150	
Size 7: 180 x 232 x 170 / Size 8: 245 x 330 x 190	



Supply voltage	Single phase 200...240 V	Three phase 200...240 V	380...500 V
Output frequency	0.5...500 Hz		
Type of control	Sensorless flux vector control		
Speed range	1 to 50		
Degree of protection	IP 31 and IP 41 on upper part and IP 21 on connection terminals		
I/O			
Analog inputs	3 configurable analog inputs		
Logic inputs	6 programmable logic inputs		
Analog outputs	1 current analog output (assignable as logic output) and 1 voltage analog output		
Relay outputs	2 relay logic outputs		
Dialogue	Integrated display terminal with or without local controls (1) or PowerSuite software workshop (2)		
Communication (3)	Modbus and CANopen		
Available as an option	DeviceNet, Ethernet TCP/IP, Fipio, Profibus DP		
EMC	Class A	Integrated class A filter	External filter available as an option
	Class B	External filter available as an option	Integrated class A filter
Motor power	kW/HP		
	0.18/0.25	ATV31H018M2	ATV31H018M3X
	0.37/0.5	ATV31H037M2	ATV31H037M3X
	0.55/0.75	ATV31H055M2	ATV31H055M3X
	0.75/1	ATV31H075M2	ATV31H075M3X
	1.1/1.5	ATV31HU11M2	ATV31HU11M3X
	1.5/2	ATV31HU15M2	ATV31HU15M3X
	2.2/3	ATV31HU22M2	ATV31HU22M3X
	3/–	–	ATV31HU30M3X
	4/5	–	ATV31HU40M3X
	5.5/7.5	–	ATV31HU55M3X
	7.5/10	–	ATV31HU75M3X
	11/15	–	ATV31HD11M3X
	15/20	–	ATV31HD15M3X
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
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			ATV31HD11N4
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			ATV31H037N4
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			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
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			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
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			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
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			ATV31HD15N4
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			ATV31HD11N4
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			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
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			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
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			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
			ATV31HU55N4
			ATV31HU75N4
			ATV31HD11N4
			ATV31HD15N4
			ATV31H037N4
			ATV31H055N4
			ATV31H075N4
			ATV31HU11N4
			ATV31HU15N4
			ATV31HU22N4
			ATV31HU30N4
			ATV31HU40N4
		</	

Additional EMC input filters



Supply voltage		Single phase 200...240 V		Three phase 200...240 V		380...500 V	
Maximum length of shielded cable (1)	Class A	5 m	50 m	5 m		5 m	50 m
	Class B	–	20 m	–		–	20 m
References	Drive type	ATV31	H018M2 to H075M2	H018M3X to H075M3X		H037N4 to HU15N4	
	Filters		Integrated	VW3A31401	VW3A31402	Integrated	VW3A31404
	Drive type	ATV31	HU11M2 to HU15M2	HU11M3X to HU22M3X		HU22N4 to HU40N4	
	Filters		Integrated	VW3A31403	VW3A31404	Integrated	VW3A31406
	Drive type	ATV31	HU22M2	HU30M3X - HU40M3X		HU55N4 - HU75 N4	
	Filters		Integrated	VW3A31405	VW3A31406	Integrated	VW3A31407
Drive type	ATV31	–		HU55M3X - HU75M3X		HD11N4 - HD15N4	
	Filters			VW3A31407		Integrated	VW3A31409
Drive type	ATV31	–		HD11M3X - HD15M3X		–	
	Filters			VW3A31408			

(1) Maximum lengths for shielded cables connecting motors to drives for a switching frequency of 2 to 16 kHz

Line chokes



Supply voltage		Single phase 200...240 V		Three phase 200...240 V		380...500 V	
References	Drive type	ATV31	H018M2 to H037M2	H018M3X to H075M3X		H037N4 to HU15N4	
	Chokes		VZ1 L004M010	VW3A66501		VW3A66501	
	Drive type	ATV31	H055M2 to H075M2	HU11M3X and HU15M3X		HU22N4 to HU40N4	
	Chokes		VZ1 L007UM50	VW3A66502		VW3A66502	
	Drive type	ATV31	HU11M2 to HU22M2	HU22M3X and HU30M3X		HU55N4 and HU75N4	
	Chokes		VZ1 L018UM20	VW3A66503		VW3A66503	
Drive type	ATV31	–		HU40M3X to HU75M3X		HD11N4 and HD15N4	
	Chokes			VW3A66504		VW3A66504	
Drive type	ATV31	–		HD11M3X and HD15M3X		–	
	Chokes			VW3A66505			

Braking resistors... accessories: Please consult your Schneider Electric sales office.

Dimensions (in mm)		width x height x depth
Size 1:	150 x 230 x 184	/ Size 2: 175 x 286 x 184
Size 3:	230 x 325 x 210	/ Size 4: 230 x 415 x 210
Size 5:	240 x 550 x 283	/ Size 6: 350 x 650 x 304
Size 7:	370 x 630 x 360	/ Size 8: 480 x 680 x 400
Size 9:	660 x 950 x 440	/ Size 10: 500 x 700 x 300.5
Size 11:	460 x 850 x 365.5	/ Size 12: 570 x 1050 x 405.5



Drive type	Drives on heatsinks			"Energy" ready-assembled enclosures
Supply voltage	Three phase 380...460 V			Three phase 380...460 V
Description	Altivar 38 on heatsink			Ready-assembled wall-fixing enclosure with an Altivar 38 drive, a line choke, an EMC filter, a Vario switch disconnector, a potentiometer, a switch for selecting the direction of operation and an operator terminal
Output frequency	0.1...500 Hz			
Type of flux vector control	Sensorless flux vector control			
Speed range	1 to 10			
Degree of protection	IP 21 and IP 41 on upper part for drives up to 75 kW. IP 00 on lower part and IP 20 on other sides for drives above 75 kW.			IP 55
I/O	Analog inputs	1 voltage analog input and 1 current analog input		
	Logic inputs	4 assignable logic inputs		
	Analog outputs	1 assignable analog output		
	Logic outputs	2 relay logic outputs		
Dialogue	Integrated or remote display terminal, or PowerSuite software workshop (1)			
Communication (2)	Integrated	Modbus (3)		
	Available as an option	AS-Interface, CANopen, DeviceNet, Ethernet TCP/IP, Fipio, INTERBUS, Lonworks, Modbus Plus, METASYS N2, Profibus DP, Uni-Telway		
EMC	Class A	Integrated class A filter up to 75 kW		Integrated class A filter
	Class B	External filter available as an option		
Motor power	kW/HP	0.75/1	ATV38HU18N4	Size 1
		1.5/2	ATV38HU29N4	Size 1
		2.2/3	ATV38HU41N4	Size 1
		3/–	ATV38HU54N4	Size 2
		4/5	ATV38HU72N4	Size 2
		5.5/7.5	ATV38HU90N4	Size 2
		7.5/10	ATV38HD12N4	Size 3
		11/15	ATV38HD16N4	Size 3
		15/20	ATV38HD23N4	Size 4
		18.5/25	ATV38HD25N4 (4)	Size 5
		22/30	ATV38HD28N4 (4)	Size 5
		30/40	ATV38HD33N4 (4)	Size 5
		37/50	ATV38HD46N4 (4)	Size 5
		45/60	ATV38HD54N4 (4)	Size 6
		55/75	ATV38HD64N4 (4)	Size 6
		75/100	ATV38HD79N4 (4)	Size 6
		90/125	ATV38HC10N4X	Size 7
		110/150	ATV38HC13N4X	Size 8
		132/200	ATV38HC15N4X	Size 8
		160/250	ATV38HC19N4X	Size 8
		200/300	ATV38HC23N4X	Size 9
		220/350	ATV38HC25N4X	Size 9
		250/400	ATV38HC28N4X	Size 9
		280/450	ATV38HC31N4X	Size 9
		315/500	ATV38HC33N4X	Size 9

(1) (2) PowerSuite software and communication protocols, see page 20

(3) For simultaneous use with the operator terminal, choose the Modbus communication card, see page 23

(4) Without EMC filter, add an "X" at the end of the reference

Additional EMC input filters

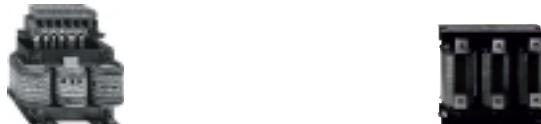


Supply voltage		Three phase 380...460 V		
Maximum length of shielded cable (1)	Class A	50 m	200 m	100 m
	Class B	20 m		
References (2)	Drive type	ATV38	HU18N4, HU29N4, HU41N4 VW3A58402	—
	Filters	ATV38	HU54N4, HU72N4, HU90N4 VW3A58403	—
References (2)	Drive type	ATV38	HD12N4, HD16N4 VW3A58404	—
	Filters	ATV38	HD23N4 VW3A58405	—
References (2)	Drive type	ATV38	HD25N4X, HD28N4X VW3A58406	HD25N4, HD28N4 VW3A58406
	Filters	ATV38	HD33N4X, HD46N4X VW3A58407	HD33N4, HD46N4 VW3A58407
References (2)	Drive type	ATV38	HD54N4, HD64N4, HD79N4 VW3A58408	HD54N4, HD64N4, HD79N4 VW3A58408
	Filters			

(1) Maximum lengths for shielded cables connecting motors to drives for a switching frequency of 0.5 to 12 kHz

(2) Above 75 kW, please consult our "Variable speed drives and soft starters" catalog

Line chokes



Supply voltage		Three phase 380...460 V		
Motor power		0.75 to 75 kW		
References	Drive type	ATV38	HU18N4, HU29N4 VW3A66501	HC10N4X VW3A68501
	Chokes	ATV38	HU41N4, HU54N4, HU72N4 VW3A66502	HC15N4X VW3A68503
	Drive type	ATV38	HU90N4, HD12N4 VW3A66503	HC23N4X VW3A68505
	Chokes	ATV38	HD16N4, HD23N4 VW3A66504	HC25N4X, HC28N4X VW3A68506
	Drive type	ATV38	HD25N4● to HD79N4● Integrated	HC31N4X, HC33N4X VW3A68507

(1) The addition of a line choke is highly recommended

I/O extension and specific cards



Type of card (1)	I/O extension	Pump switching
Description	2 logic inputs 24 VDC 1 open collector logic output 24 VDC 1 analog output 0/20 mA 1 bipolar analog input ± 10 V	Control of an entire pumping or compression station
Reference	VW3A58201	VW3A58210

(1) "Controller Inside" programmable card: Please consult your Schneider Electric sales office.



Dimensions (in mm)	width x height x depth
Size 1: 113 x 206 x 167	/ Size 2: 150 x 230 x 184
Size 3: 175 x 286 x 184	/ Size 4: 230 x 325 x 210
Size 5: 230 x 415 x 210	/ Size 6: 240 x 550 x 283
Size 7: 350 x 650 x 304	

Drive type	Altivar 58	Altivar 58F	
Supply voltage	Single phase 200...240 V	Three phase 200...240 V	
Output frequency	0.1... 500 Hz		
Type of flux vector control	Sensorless		
Speed range	1 to 100		
Degree of protection	IP 21 for unprotected drives and IP 41 on the upper part		
I/O	Analog inputs 1 voltage analog input and 1 current analog input Logic inputs 4 assignable logic inputs Logic outputs 2 relay logic outputs		
Dialogue	Integrated display terminal or PowerSuite software workshop (1)		
Communication (2)	Integrated	Modbus (3)	
	Available as an option	AS-Interface, CANopen, DeviceNet, Ethernet TCP/IP, Fipio, INTERBUS, Lonworks, Modbus Plus, METASYS N2, Profibus DP, Uni-Telway	
EMC	Class A	Integrated filter	1.5 to 7.5 kW filter
	Class B	External filter available as an option	
Motor power	kW/HP	0.37/0.5	ATV58HU09M2 S1 - - -
		0.75/1	ATV58HU18M2 S1 - - -
		1.5/2	ATV58HU29M2 S2 ATV58HU29M2 S2 - -
		2.2/3	ATV58HU41M2 S2 ATV58HU41M2 S2 - -
		3/-	ATV58HU72M2 (4) S3 ATV58HU54M2 S3 - -
		4/5	ATV58HU90M2 (4) T4 ATV58HU72M2 S3 - -
		5.5/7.5	ATV58HD12M2 (4) S4 ATV58HU90M2 S4 - -
		7.5/10	- - - - -
		11/15	- - - - -
		15/20	- - - - -
		18.5/25	- - - - -
		22/30	- - - - -
		30/40	- - - - -
		37/50	- - - - -
		45/60	- - - - -
		55/75	- - - - -

(1) (2) PowerSuite software and communication protocols, see page 20

(3) For simultaneous use with the operator terminal, choose the Modbus communication card, see page 23

(4) Must be used with a line choke

(5) Without EMC filter, add an "X" at the end of the reference

“Compact” ready-assembled enclosed drives



Dimensions (in mm)	width x height x depth
Size 1: 230 x 316 x 215	/ Size 2: 270 x 337 x 250
Size 3: 300 x 406 x 281	

Supply voltage	Single phase	Three phase	380...500 V
Description	Wall-fixing enclosure equipped with an Altivar 58 drive on base plate, a circuit-breaker and a downstream contactor.		
Degree of protection	IP 55		
Motor power	kW/HP	0.37/0.5	ATV58EU09M2 S1 - -
		0.75/1	ATV58EU18M2 S1 - -
		1.5/2	ATV58EU29M2 S2 ATV58EU29M2 S2 - -
		2.2/3	ATV58EU41M2 S3 ATV58EU41M2 S3 - -
		3/-	- - - - -
		4/5	- - - - -
		5.5/7.5	- - - - -

“Energy” ready-assembled enclosed drives



Dimensions (in mm)	width x height x depth
Size 1: 500 x 700 x 300.5	/ Size 2: 460 x 850 x 365.5
Size 3: 570 x 1050 x 405.5	

Supply voltage		Three phase 380...500 V	
Description		Ready-assembled wall-fixing enclosure equipped with an Altivar 58 drive and a Vario switch disconnector	
Degree of protection		IP 55	
Motor power	kW/HP	3/-	ATV58ED05N4 Size 1
		4/5	ATV58ED07N4 Size 1
		5.5/7.5	ATV58ED09N4 Size 1
		7.5/10	ATV58ED12N4 Size 1
		11/15	ATV58ED16N4 Size 1
		15/20	ATV58ED23N4 Size 1
		18.5/25	ATV58ED28N4 Size 2
		22/30	ATV58ED33N4 Size 2
		30/40	ATV58ED46N4 Size 2
		37/50	ATV58ED54N4 Size 3
		45/60	ATV58ED64N4 Size 3
		55/75	ATV58ED79N4 Size 3

I/O extension and specific cards



Type of card (1)	I/O extension	Multi-motor	Multi-parameter	Simple positioning
Description	2 logic inputs 24 VDC 1 open collector logic output 24 VDC 1 analog output 0/20 mA 1 bipolar analog input ± 10 V	2 non reassignable logic inputs 24 VDC 1 open collector logic output 24 VDC 1 analog output 0/20 mA 1 bipolar analog input ± 10 V	Switching: automatic or by logic input up to 18 sets of 13 parameters, 6 of which are predefined	6 logic inputs 24 VDC 1 open collector logic output 24 VDC 1 analog output 0/20 mA 1 analog input
References	VW3A58201	VW3A58211	VW3A58212	VW3A58213

(1) “Controller Inside” programmable card: Please consult your Schneider Electric sales office.



Supply voltage		Single phase 200...240 V	Three phase 200...240 V	380...500 V	
Maximum length of shielded cable (1)	Class A	50 m	50 m	50 m	200 m
	Class B	20 m	20 m	20 m	100 m
References	Drive type	ATV58	HU09M2, HU18M2	HU29M2, HU41M2	HU18N4, HU29N4, HU41N4
	Filters		VW3A58401	VW3A58402	VW3A58402
	Drive type	ATV58	HU29M2, HU41M2,	HU54M2, HU72M2	HU54N4, HU72N4, HU90N4
	Filters		VW3A58402	VW3A58403	VW3A58403
	Drive type	ATV58	HU72M2	HU90M2, HD12M2,	HD12N4, HD16N4
	Filters		VW3A58403	VW3A58404	VW3A58404
	Drive type	ATV58	HU90M2, HD12M2	HD16M2X, HD23M2X	HD23N4
	Filters		VW3A58404	VW3A58407	VW3A58405
	Drive type	ATV58	HD28M2X, HD33M2X	HD46M2X	HD28N4X
	Filters			VW3A58408	VW3A58406
	Drive type	ATV58			HD33N4X, HD46N4X
	Filters				VW3A58407
	Drive type	ATV58			HD54N4X, HD64N4X
	Filters				HD79N4X
					VW3A58408

(1) Maximum lengths for shielded cables connecting motors to drives for a switching frequency of 0.5 to 12 kHz

These limits are given as examples only as they vary depending on the stray capacitance of the motors and the cables used.

Line chokes



Supply voltage		Single phase 200...240 V	Three phase 200...240 V	380...500 V
References	Drive type	ATV58	HU09M2	HU18N4, HU29N4
	Chokes		VZ1L004M010	VW3A66501
	Drive type	ATV58	HU18M2	HU41M2, HU54M2
	Chokes		VZ1L007UM50	VW3A66502
	Drive type	ATV58	HU29M2, HU41M2	HU72M2, HU90M2, HD12M2
	Chokes		VZ1L018UM20	VW3A66503
	Drive type	ATV58	HU72M2 (1)	–
	Chokes		VW3A58501	VW3A66504
	Drive type	ATV58	HU90M2 (1), HD12M2 (1)	–
	Chokes		VW3A58502	HD28N4 to HD79N4 Integrated

(1) Line choke compulsory

Braking resistors



Supply voltage		Single phase 200...240 V	Three phase 200...240 V	380...500 V
References (1)	Drive type	ATV58	HU09M2 (1), HU18M2 (1), HU29M2	HU29M2
	Resistors	non prot./protected	VW3A58702 / VW3A58732	HU18N4, HU29N4, HU41N4
	Drive type	ATV58	HU41M2	HU41M2, HU54M2
	Resistors	non prot./protected	VW3A58704 / VW3A58733	HU54N4, HU72N4 VW3A58703 / VW3A58734
	Drive type	ATV58	HU72M2	—
	Resistors	protected	VW3A58736	HU90N4, HD12N4 VW3A58735
	Drive type	ATV58	HU90M2, D12M2	—
	Resistors	protected	VW3A58737	HD16N4, HD23N4 VW3A58736
	Drive type	ATV58	—	HD16M2X, HD23M2X, HD28M2X
	Resistors	protected		HD33M2X, HD46M2X VW3A66704
	Drive type	ATV58	—	HD28N4, HD33N4, HD46N4
	Resistors	protected		HD28N4X, HD33N4X, HD46N4X VW3A58737
	Drive type	ATV58	—	HD54N4, HD64N4, HD79N4
	Resistors	protected		HD54N4X, HD64N4X, HD79N4X VW3A66704

(1) To be used with a braking module - reference: **VW3A58701**

Accessories



Type of accessory		Control card ventilation	Operator terminal	Remote terminal option
Description		Fan subassembly and mounting accessories	Supplied with the drive. Can be ordered separately.	1 x 3 m cable with connectors, with seals and screws for IP 65 mounting on door of enclosure.
References	Drive type	ATV58	HU09M2, HU18M2	All Altivar 58 drives
	Accessories		VW3A58821	VW3A58101
	Drive type	ATV58	HU29M2, HU41M2, HU18N4	—
	Accessories		HU29N4, HU41N4	—
	Accessories		VW3A58822	—
	Drive type	ATV58	HU54M2, HU72M2, HU54N4	—
	Accessories		HU72N4, HU90N4	—
	Accessories		VW3A58823	—
	Drive type	ATV58	HU90M2, D12M2, D12N4	—
	Accessories		D16N4, D23N4	—
	Accessories		VW3A58824	—
	Drive type	ATV58	HD16M2X, HD23M2X, HD28N4	—
	Accessories		HD33N4, HD46N4, HD28N4X	—
	Accessories		HD33N4X, HD46N4X	—
	Accessories		VW3A58825	—
	Drive type	ATV58	HD28M2X, HD33M2X, HD46M2X	—
	Accessories		HD54N4, HD64N4, HD79N4,	—
	Accessories		HD54N4X, HD64N4X, HD79N4X	—
	Accessories		VW3A58826	—

Altivar 68

75 to 630 kW

Complex, high-power machines Standard drives



Dimensions (in mm)	width x height x depth
Size 2: 346 x 600 x 355/ Size 3: 396 x 1200 x 425	
Size 4: 705 x 1300 x 425/ Size 5: 2 x (705 x 1500 x 425)	

Drive type	Altivar 68	Altivar 68F	
Supply voltage	Three phase 400...500 V		
Type of application	High torque applications (150% Tn) and standard torque applications (120% Tn) (1)		
Output frequency	0...300 Hz		
Type of flux vector control	Sensorless	With sensor	
Speed range	1 to 100 (in high torque configuration)		
Degree of protection	IP 00 (with protection on front panel)		
I/O	Analog inputs Analog outputs Logic inputs Relay outputs	1 current analog input + 1 voltage analog input 1 current analog output 4 bipolar inputs 2 relay outputs	
Dialogue	Integrated display terminal or PowerSuite software workshop (2)		
Communication (3)	Available as an option Fipio, Modbus, Modbus Plus, Profibus DP		
Motor power	kW/HP 75/100 90/125 110/150 132/200 160/250 200/300 250/350 315/500 400/600 500/700	Size 2 ATV68C10N4 Size 3 ATV68C13N4 Size 3 ATV68C15N4 Size 3 ATV68C19N4 Size 4 ATV68C23N4 Size 4 ATV68C28N4 Size 4 ATV68C33N4 Size 4 ATV68C43N4 Size 5 ATV68C53N4 Size 5 ATV68C63N4 Size 5	Size 2 ATV68FC10N4 Size 3 ATV68FC13N4 Size 3 ATV68FC15N4 Size 3 ATV68FC19N4 Size 4 ATV68FC23N4 Size 4 ATV68FC28N4 Size 4 ATV68FC33N4 Size 4 ATV68FC43N4 Size 5 ATV68FC53N4 Size 5 ATV68FC63N4 Size 5

(1) For standard torque applications, choose the next rating down - Eg: 132 kW = ATV68C15N4. At 460 V, only high torque is available

(2) (3) PowerSuite software and communication protocols, see page 20

Ready-assembled enclosed drives



Supply voltage	Three phase 400 V		
Description	Wired ready-assembled floor-standing enclosure, Altivar 68 drive, switch and fast-acting fuses and line chokes		
Type of application	High torque applications (150% Tn) and standard torque applications (120% Tn) (1)		
Specifications	Same specifications as standard drives		
Degree of protection	IP 23	IP 54	
Motor power	kW/HP	75/100	ATV68E2C10N4
		90/125	ATV68E2C13N4
		110/150	ATV68E2C15N4
		132/200	ATV68E2C19N4
		160/250	ATV68E2C23N4
		200/300	ATV68E2C28N4
		250/350	ATV68E2C33N4
		315/500	ATV68E2C43N4
		400/600	ATV68E2C53N4
		500/700	ATV68E2C63N4

(1) For standard torque applications, choose the next rating down - Eg: IP 54 protection, 132 kW = ATV68E5C15N4.

Additional EMC input filters

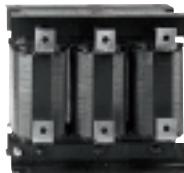


Supply voltage		Three phase 400 V			Three phase 440...500 V	
Maximum cable length (1)	with choke	100 m	120 m	150 m	100 m	120 m
	without choke	40 m	40 m	40 m	25 m	25 m
References	Drive type	ATV68(F) C10N4	–	VW3A68401	VW3A68402	VW3A68415
		ATV68(F) C13N4	–	–	–	VW3A68435
		ATV68(F) C15N4	–	–	–	VW3A68435
		ATV68(F) C19N4	VW3A68402	–	–	VW3A68435
		ATV68(F) C23N4	–	VW3A68403	–	VW3A68465
		ATV68(F) C28N4	–	–	–	–
		ATV68(F) C33N4	–	–	–	–
		ATV68(F) C43N4	VW3A68404	–	–	VW3A68465 (2)
		ATV68(F) C53N4	–	–	–	–
		ATV68(F) C63N4	–	–	–	–

(1) Motor cable lengths given for a modulation frequency of 2.5 kHz. For a 5 kHz frequency, multiply these values by 0.6, and for 10 kHz multiply by 0.3.

(2) Provide 2 filters per drive.

Line chokes (compulsory)



Supply voltage		Three phase 400 V			
References	Drive type	ATV68(F)	C10N4	C13N4	C15N4
	Chokes		VW3A68501	VW3A68502	VW3A68503
	Drive type	ATV68(F)	C23N4	C28N4	C33N4
	Chokes		VW3A68505	VW3A68506	VW3A68507
	Drive type	ATV68(F)	C43N4	C53N4	C63N4
	Chokes		VW3A68505 (1)	VW3A68506 (1)	VW3A68507 (1)

(1) Provide 2 chokes per drive

I/O extension card



Type of card	I/O extension
Description	1 current analog input: 0(4)... 20 mA 1 current analog output: 0(4)... 20 mA with programmable limit and use 4 bipolar inputs DI5 to DI8: positive or negative logic 2 relay outputs RL2 and RL3
Reference	VW3A68201

Motor chokes, braking modules and resistors, accessories, etc: Please consult the "Variable speed drives and soft starters" catalog



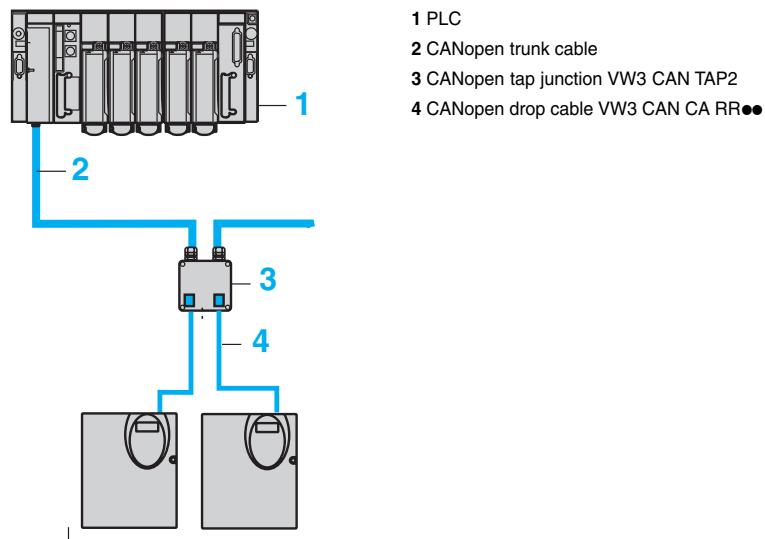
Multilingual configuration software	For PC	For Pocket PC
Configuration of drives and starters	Altistart 48, Altivar and TeSys model U	
Environment	Microsoft Windows ®	
Languages	English - French - German - Italian - Spanish	
References	PowerSuite CD-ROM (1) VW3A8104 PowerSuite update CD-ROM VW3A8105 Connection kit VW3A8106	VW3A8111

(1) Contents: Software, technical documentation and the ABC configurator program

CANopen communication bus: connection accessories



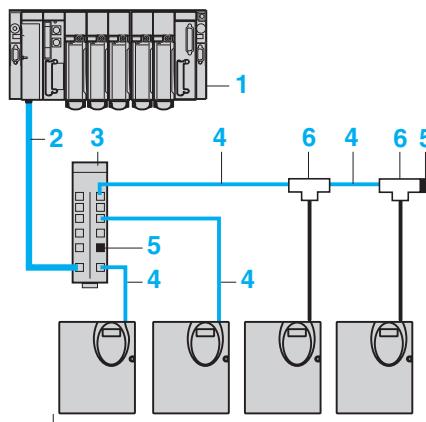
Drives	Altivar 31
Tap junction	VW3CANTAP2
Cables	Description: 2 RJ45 connectors Cable length: 0.3 m References: VW3CANCARR03
	1 m VW3CANCARR1



Modbus communication bus: connection accessories



Starters/drives		Altistart 48	Altivar 31	Altivar 38	Altivar 58
Splitter box	Description	10 RJ45 connectors and 1 screw terminal block			
	Reference	LU9GC3			
Line terminators	For RJ 45 connector	R = 120 Ω, C = 1 nF			
	Reference	VW3A8306RC			
	For screw terminals	R = 120 W, C = 1 nF			
	Reference	VW3A8306DRC			
T-junction boxes	With integrated cable	0.3 m	VW3A8306TF03		
	With integrated cable	1 m	VW3A8306TF10		
Cables	Description	2 RJ45 connectors			
	References	0.3 m 1 m 3 m	VW3A8306R03 VW3A8306R10 VW3A8306R30	—	VW3A58306R10 VW3A58306R30
Shielded twisted double pair cables RS 485	Description	1 RJ45 connector and one stripped end			
	Reference	3 m	VW3A8306D30		
	Description	Supplied without connector			
	References	100 m 200 m 500 m	TSXCSA100 TSXCSA200 TSXCSA500		

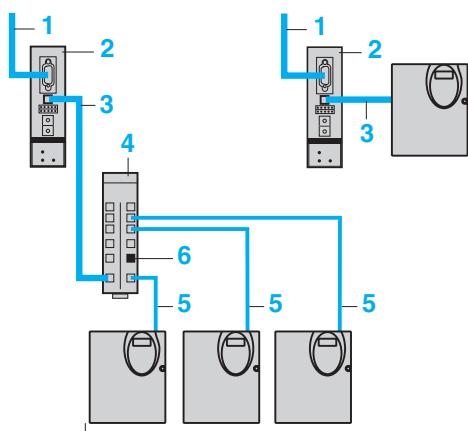


Connection via splitter boxes and RJ 45 connectors

- 1 PLC
- 2 Modbus cable depending on the type of PLC
- 3 Modbus splitter box LU9GC3
- 4 Modbus drop cables VW3A●8306R●●
- 5 Line terminators VW3A8306RC
- 6 Modbus T-junction boxes VW3 A 8 306 TF●● (with cable)



Starters/drives			Altistart 48/Altivar 31
Ethernet/Modbus	References	Bridge Cable	174CEV30020 VW3A8306D30
DeviceNet/Modbus	References	Gateway	LUFP9
		0.3 m cable	VW3A8306R03
		1 m cable	VW3A8306R10
Fipio/Modbus	References	Gateway	LUFP1
		0.3 m cable	VW3A8306R03
		1 m cable	VW3A8306R10
ProfibusDP/Modbus	Parameter setting		Standard configurator
	References	Gateway	LA9P307
		1 m cable	VW3P07306R10
	Parameter setting		ABC configurator program
	References	Gateway	LUFP7
		0.3 m cable	VW3A8306R03
		1 m cable	VW3A8306R10
		3 m cable	VW3A8306R30



Communication cards and modules



Drives	Altivar 38/Altivar 58	Altivar 68
AS-Interface		
Max. no. of drives controlled	31	
Transmission speed	166 kbps	
Reference	VW3A58305	
CANopen		
Max. no. of drives controlled	63	
Transmission speed	125/250/500/1000 kbps	
Reference	VW3A58308	
DeviceNet		
Max. no. of drives controlled	63	
Transmission speed	125/250/500 kbps	
Reference	VW3A58309	
Ethernet		
Max. no. of drives controlled	–	
Transmission speed	10/100 Mbps	
Reference	VW3A58310	
Fipio		
Max. no. of drives controlled	62	62
Transmission speed	1 Mbps	1 Mbps
Reference	VW3A58311	VW3A68301
INTERBUS		
Max. no. of drives controlled	64	
Transmission speed	1 Mbps	
Reference	VW3A58304E	
METASYS N2		
Max. no. of drives controlled	255	
Transmission speed	–	
Reference	VW3A58354U	
Modbus		
Max. no. of drives controlled	31	31
Transmission speed	4800... 19,200 bps	4800... 19,200 bps
Reference	VW3A58303	VW3A68303
Modbus Plus		
Max. no. of drives controlled	64	64
Transmission speed	1 Mbps	1 Mbps
Reference	VW3A58302	VW3A68302
Profibus DP		
Max. no. of drives controlled	126	126
Transmission speed	9600 bps... 12 Mbps	9600 bps... 12 Mbps
Reference	VW3A58307	VW3A68307
Uni-Telway		
Max. no. of drives controlled	28	
Transmission speed	4800... 19,200 bps	
Reference	VW3A58303	

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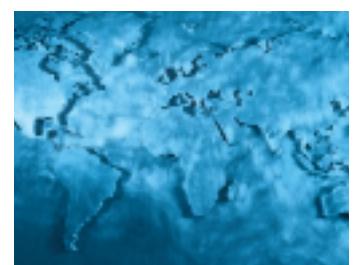


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