

Soft starters and variable speed drives

The essential guide



Motor Control

Accurate and reliable control of motors and electrical circuits

The Altistart and Altivar ranges offer more **simplicity**, **compactness**, **openness** and **flexibility**: ready-to-use versions, PowerSuite software workshop, wide range of communication networks...
... so many product developments and new features to boost your productivity!

The essential guide

A simplified selection guide enabling you to select your starters and drives quickly.

The simplicity of a complete offer!

Altistart, Altivar

Simple machines

>>> compact



Starters
Altistart 01
■ 0,37 to 75 kW



Drives
Altivar 11
■ 0,18 to 2,2 kW



Drives
Altivar 31
■ 0,18 to 15 kW

Pumping and ventilation machines

>>> tailor-made



Starters
Altistart 48
■ 4 to 1 200 kW



Drives
Altivar 21
■ 0,75 to 75 kW



Drives
Altivar 61
■ 0,37 to 630 kW

Complex, high-power machines

>>> high-performance



Drives
Altivar 71
■ 0,37 to 500 kW

Contents

pg. 2, 3

Altistart / Altivar selection guide

pg. 4, 5

■ Soft starters **Altistart 01**

pg. 6, 7

■ Soft starters **Altistart 48**

pg. 8, 9

■ Variable speed drives **Altivar 11**

pg. 10, 11

■ Variable speed drives **Altivar 21**

pg. 12, 13

■ Variable speed drives **Altivar 31**

pg. 14, 21

■ Variable speed drives **Altivar 61**

pg. 22, 29

■ Variable speed drives **Altivar 71**

pg. 30, 33

■ Dialogue and communication

Selection guide

Type of machine

Simple machines



→ Applications:
Compressors, pumps, fans, conveyors, automatic doors, washing gantries, advanced systems, decentralised architectures...



→ Applications:
Conveyors, garage and lift doors, automatic parking barriers, check out counters, grinders, saws, drills, exercise equipment, scrolling displays, retractable hoods, dough mixers...



→ Applications:
Pumps, fans, conveyors, material handling machines, packaging, conditioning machines, special machines, textile machines...



Variable speed drives
Soft starters and soft start/soft stop units

Altistart 01

- **Compactness:** side by side mounting
- **Simplicity:** mounting, cabling and adjustments simplified
- **Efficiency:** increase your productivity and maximize the life of your machines, reduction of mechanical shocks, limitation of current peaks on starting.



Altivar 11

- **Compactness:** side by side mounting
- **Simplicity:** settings simplified
- EMC filters integrated class B



Altivar 31

- **Compactness:** side by side mounting
- EMC filters integrated class A
- Simplified start up with "plug and drive" function
- **Openess:** CANopen and modbus integrated

Starters/drives

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	-	0.5...200 Hz	0.5...500 Hz
	Type of control Asynchronous motor	-	Sensorless flux vector control	-
	Synchronous motor	-	-	-
	Transient overtorque	-	150...170% of torque nominal motor	170...200% of the nominal motor torque
Functions				
Number of functions		1	26	50
Number of preset speeds		-	4	16
Number of I/O	Analog inputs	-	1	3
	Logic inputs	3	4	6
	Analog outputs	-	-	1
	Logic outputs	1	1	-
	Relay outputs	1	1	2
Communication	Integrated	-	-	Modbus and CANopen
	Available as an option	Combined with TeSys model U starter-controller	-	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 - CSA

Pumping and ventilation machines



→ Applications:
Compressors, pumps, fans
and high inertia machines, conveyors.



Soft start/soft stop units

Alstair 48

- **Torque Control System:** pressure surges suppression and temperature rise limitation
- **Simplicity:** simplified start up
- **Protection of the motor** and the machine: thermal protection, detection of phase failure, locked rotor detection



→ Applications:
Pumps and fans in HVAC (1)



Variable speed drives

Altivar 21

- **Compactness:** side by side mounting
- **Simplicity:** "plug and drive" function and "local remote" button
- EMC filters integrated
- Harmonics reduction THDI < 30%
- **Openess:** communication buses cards for building



→ Applications:
macro-configurations
Pumps, Multipumps, fans, compressors



Industry
Building (HVAC)(1)

Altivar 61

- Extended ranges
- Quick start up and easy diagnostics thanks to the multilingual graphic keypad
- **Openess:** to all communication buses
- for industry and building



→ Applications:
macro-configurations
Hoisting, packaging, material
handling, wood, textile, process
machines...



Variable speed drive

Altivar 71

- Extended ranges
- Quick start up and easy diagnostics thanks to the multilingual graphic keypad
- **Openess:** to all communication buses
- for industry

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

4...1200 kW

-

TCS
(Torque Control System)

-

-

36

-

1 PTC probe

4

1

2

3

Modbus

DeviceNet, Ethernet TCP/IP,
Fipio, Profibus DP

-

IEC/EN 60947-4-2
EMC class A and B
DNV - C-TICK - GOST
CCIB - NOM - UL - CE
CCC - CSA

Three phase 200...240 V
Three phase 380...480 V

0.75...75 kW

0.5...200 Hz

kn²: quadratic ratio, sensorless flux vector
control, voltage/frequency ratio
(2 points), energy saving ratio

-

Transient overload: 110% of the nominal
drive current for 60 seconds

50

8

2

3

1

-

2

Modbus

Lonworks, METASYS N2, APOGEE FLN,
BACnet

-

EN 50178, IEC/EN 61800-3
EN 55011, EN 55022:
class A, class B with option
CE, UL, C-Tick, N998

Single phase 200...240 V
Three phase 200...240 V
Three phase 380...480 V

0.37...630 kW

0.5...1600 Hz up to 37 kW

0.5...500 Hz from 45 to 630 kW

kn: quadratic ratio, flux vector control with or
without sensor, voltage/frequency ratio
(2 or 5 points), energy saving ratio

-

Transient overload: 120...130% of the
nominal drive current for 60 seconds

> 150

16

2...4

6...20

1...3

0...8

2...4

Modbus and CANopen

Ethernet TCP/IP, Fipio, Modbus Plus, InterBus,
Profibus DP, Modbus/Uni-Telway, DeviceNet,
Lonworks, METASYS N2, APOGEE FLN, BACnet

I/O extension cards

"Controller Inside" programmable card,
multi-pump cards

IEC/EN 61800-5-1,

IEC/EN 61800-3 (environments 1 and 2, C1 to C3)

EN 55011, EN 55022,

IEC/EN 61000-4-2/4-3/4-4/4-5/4-6/4-11

CE, UL, CSA, DNV, C-Tick, NOM 117, GOST

Single phase 200...240 V
Three phase 200...240 V
Three phase 380...480 V

0.37...500 kW

0.1...1600 Hz up to 37 kW

0.1...500 Hz from 45 to 500 kW

Flux vector control with or without sensor,
voltage/frequency ratio
(2 or 5 points), ENA System

Vector control without speed feedback

200% of the nominal motor torque for 2 s
170% for 60 seconds

> 150

16

2...4

6...20

1...3

0...8

2...4

Modbus and CANopen

Ethernet TCP/IP, Modbus/Uni-Telway, Fipio,
Modbus Plus, Profibus DP, DeviceNet, InterBus

Encoder interface card

I/O extension cards

"Controller Inside" programmable card

(1) Heating Ventilation Air Conditioning

Altistart 01

0.37...75 kW

Simple machines Starters



Type of starter						Soft starters	Soft start/soft stop units				
Motor power						0.37 to 11 kW	0.75 to 15 kW				
Degree of protection						IP20					
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...230 V					
Motor power											
230 V						Nominal current					
kW						(IcL)					
0.37						3 A					
0.75						6 A					
1.1						9 A					
1.5						12 A					
2.2						25 A					
Supply voltage						Three phase 110...230 v		Three phase 200...240 v		Three phase 380...415 v	Three phase 440...480 v
Motor power											
210 V		230 V		400 V		460 V		Nominal current			
HP	kW	HP	kW	HP	kW	HP	kW	(IcL)			
-	0.37-0.55	0.5/-	1.1	0.5-1.5	3 A	ATS01N103FT		-	-	-	
0.5	0.75-1.1	1-1.5	2.2-3	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	
2-3	3-4-5.5	5-7.5	7.5-9-11	10-15	25A	ATS01N112FT		-	-	-	
-	7.5	10	15	20	32 A	-		ATS01N232LU	ATS01N232QN	ATS01N232RT	

Dimensions (in mm)		width x height x depth
ATS01	N103FT/N106 FT	22.5 x 100 x 100
	N109FT/N112 FT/N125 FT	45 x 124 x 130
	N206●●/N209●● / N212●●	
	N222●●/N232●●	45 x 154 x 130

Starters



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							IP20 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 (run and stop)		
Relay outputs							1 relay output		
Control supply voltage							110 VDC ± 10%	Built into the starter	
Supply voltage							Three phase 230...690 V	Three phase 400 V	
Motor power									
230 V		400 V		460 V		690 V		Nominal current	
kW	HP	kW	HP	HP	kW			(IcL)	
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 130
	N222LT/N232LT	45 x 154 x 130

Type of starter							Soft start/soft stop units			
Motor power							0.75 to 15 kW			
Degree of protection							IP20			
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 starter-controller		Power connector
								Power base	Control unit (1)	between ATSU and TeSys model U
Supply voltage							Three phase 200...480 V			
Motor power										
230 V		400 V		460 V		Nominal current				
kW	HP	kW	HP	HP	kW	(IcL)				
0.75	1	1.5	2	-	6 A	ATSU01N206LT	LUB12	LUC●05BL	VW3G4104	
1.1	1.5	2.2	3	-	6 A	ATSU01N206LT	LUB12	LUC●12BL		
1.5	2	3	-	-	9 A	ATSU01N209LT	LUB12	LUC●12BL	VW3G4104	
-	-	4	5	-	9 A	ATSU01N209LT	LUB12	LUC●12BL		
2.2	3	-	-	-	12	ATSU01N212LT	LUB12	LUC●12BL	VW3G4104	
3	-	5.5	7.5	-	12 A	ATSU01N212LT	LUB32	LUC●18BL		
4	5	7.5	10	-	22 A	ATSU01N222LT	LUB32	LUC●18BL	VW3G4104	
5.5	7.5	11	15	-	22 A	ATSU01N222LT	LUB32	LUC●32BL		
7.5	10	15	20	-	32 A	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 advanced unit.

Altistart 48

4...1200 kW

Pumping and ventilation machines

Soft start/soft stop units

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



Supply voltage		Three phase 230...415 V (1)			
Type of application		Standard		Severe (2)	
Starter control supply voltage		220...415 V			
Protection		Degree of protection		IP20: ATS48D17● to ATS48C11● starters IP00: ATS48C14● to ATS48M12● starters	
EMC		Motor thermal protection		Class 10 ; Class 20	
Starting mode		Class A		On all starters	
I/O		Class B		On all starters up to 170 A	
Dialogue		Analog inputs		Torque control (patented TCS: Torque Control System)	
Communication (4)		Logic inputs		1 PTC probe	
Motor power		Logic outputs		4 logic inputs, 2 of which are configurable	
230 V		Analog outputs		2 configurable logic outputs	
kW		Relay outputs		1 analog output	
3		Integrated		3 relay outputs, 2 of which are configurable	
4		Available as an option		Integrated or remote display terminal, or PowerSuite software workshop (3)	
5.5				Modbus	
7.5				DeviceNet, Ethernet TCP/IP, Fipio, Profibus DP	
9					
11					
15					
18.5					
22					
30					
37					
45					
55					
75					
90					
110					
132					
160					
-					
220					
250					
355					
		Nominal current (IcL)			
		12 A			
		17 A		ATS48D17Q Size A	
		22 A		ATS48D22Q Size A	
		32 A		ATS48D32Q Size A	
		38 A		ATS48D38Q Size A	
		47 A		ATS48D47Q Size A	
		62 A		ATS48D62Q Size B	
		75 A		ATS48D75Q Size B	
		88 A		ATS48D88Q Size B	
		110 A		ATS48C11Q Size B	
		140 A		ATS48C14Q Size C	
		170 A		ATS48C17Q Size C	
		210 A		ATS48C21Q Size D	
		250 A		ATS48C25Q Size D	
		320 A		ATS48C32Q Size D	
		410 A		ATS48C41Q Size E	
		480 A		ATS48C48Q Size E	
		590 A		ATS48C59Q Size E	
		660 A		ATS48C66Q Size E	
		790 A		ATS48C79Q Size F	
		1000 A		ATS48M10Q Size F	
		1200 A		ATS48M12Q Size F	
				-	

(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 30

Accessory



Accessory

Remote display terminal

Reference

VW3G48101

Soft start/soft stop units

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



Supply voltage												Three phase 208...690 V (1)				
Type of application												Standard	Severe (2)			
Starter control supply voltage												110...230 V				
Characteristics												Identical to 230...415 V starters				
Motor power																
208 V	230 V	460 V	575 V	230 V	400 V	440 V	500 V	525 V	660 V	690 V	Nominal current (IcL)					
HP				kW												
2	3	7.5	10	3	5.5	5.5	7.5	7.5	9	11	12 A	-	ATS48D17Y	Size A	ATS48D17Y	Size A
3	5	10	15	4	7.5	7.5	9	9	11	15	17 A	-	ATS48D22Y	Size A	ATS48D22Y	Size A
5	7.5	15	20	5.5	11	11	11	11	15	18.5	22 A	-	ATS48D22Y	Size A	ATS48D32Y	Size A
7.5	10	20	25	7.5	15	15	18.5	18.5	22	22	32 A	-	ATS48D32Y	Size A	ATS48D38Y	Size A
10	-	25	30	9	18.5	18.5	22	22	30	30	38 A	-	ATS48D38Y	Size A	ATS48D47Y	Size A
-	15	30	40	11	22	22	30	30	37	37	47 A	-	ATS48D47Y	Size A	ATS48D62Y	Size B
15	20	40	50	15	30	30	37	37	45	45	62 A	-	ATS48D62Y	Size B	ATS48D75Y	Size B
20	25	50	60	18.5	37	37	45	45	55	55	75 A	-	ATS48D75Y	Size B	ATS48D88Y	Size B
25	30	60	75	22	45	45	55	55	75	75	88 A	-	ATS48D88Y	Size B	ATS48C11Y	Size B
30	40	75	100	30	55	55	75	75	90	90	110 A	-	ATS48C11Y	Size B	ATS48C14Y	Size C
40	50	100	125	37	75	75	90	90	110	110	140 A	-	ATS48C14Y	Size C	ATS48C17Y	Size C
50	60	125	150	45	90	90	110	110	132	160	170 A	-	ATS48C17Y	Size C	ATS48C21Y	Size D
60	75	150	200	55	110	110	132	132	160	200	210 A	-	ATS48C21Y	Size D	ATS48C25Y	Size D
75	100	200	250	75	132	132	160	160	220	250	250 A	-	ATS48C25Y	Size D	ATS48C32Y	Size D
100	125	250	300	90	160	160	220	220	250	315	320 A	-	ATS48C32Y	Size D	ATS48C41Y	Size E
125	150	300	350	110	220	220	250	250	355	400	410 A	-	ATS48C41Y	Size E	ATS48C48Y	Size E
150	-	350	400	132	250	250	315	315	400	500	480 A	-	ATS48C48Y	Size E	ATS48C59Y	Size E
-	200	400	500	160	315	355	400	400	560	560	590 A	-	ATS48C59Y	Size E	ATS48C66Y	Size E
200	250	500	600	-	355	400	-	-	630	630	660 A	-	ATS48C66Y	Size E	ATS48C79Y	Size F
250	300	600	800	220	400	500	500	500	710	710	790 A	-	ATS48C79Y	Size F	ATS48M10Y	Size F
350	350	800	1000	250	500	630	630	630	900	900	1000 A	-	ATS48M10Y	Size F	ATS48M12Y	Size F
400	455	1000	1200	355	630	710	800	800	-	-	1200 A	-	ATS48M12Y	Size F	-	-

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

Line chokes



Degree of protection	IP20	IP00		
References	Starter	ATS48 D17●	D75p to C14●	C41p to C48●
	Choke	VZ1L015UM17T	VZ1L150U170T	VZ1L530U045T
	Type of starter	ATS48 D22●	C17p to C25●	C59p to M10●
	Choke	VZ1L030U800T	VZ1L0250U100T	VZ1LM10U024T
	Type of starter	ATS48 D32● and D38●	AC32●	M12●
	Choke	VZ1L040U600T	VZ1L325U075T	VZ1LM14U016T
	Type of starter	ATS48 D47● and D62●	-	-
	Choke	VZ1L070U350T	-	-

Altivar 11

0.18...2.2 kW

Simple machines

Drives on heatsinks



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			IP20					
I/O	Analog inputs	1 configurable analog input						
	Logic inputs	4 assignable logic inputs						
	Outputs	1 PWM open collector output or 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	ATV11HU05F1A	Size 1	
		0.37/0.5	-	ATV11HU09F1U	Size 2	ATV11HU09F1A	Size 2	
		0.75/1	-	ATV11HU18F1U	Size 4	ATV11HU18F1A	Size 4	
Supply voltage			Single phase 200...240 V					
Motor power	kW/HP	0.18/0.25	ATV11HU05M2E	Size 1	ATV11HU05M2U	Size 1	ATV11HU05M2A	Size 1
		0.37/0.5	ATV11HU09M2E	Size 2	ATV11HU09M2U	Size 2	ATV11HU09M2A	Size 2
		0.55	ATV11HU12M2E	Size 3	-	-	-	
		0.75/1	ATV11HU18M2E	Size 3	ATV11HU18M2U	Size 3	ATV11HU18M2A	Size 3
		1.5/2	ATV11HU29M2E	Size 4	ATV11HU29M2U	Size 4	ATV11HU29M2A	Size 4
2.2/3	ATV11HU41M2E	Size 4	ATV11HU41M2U	Size 4	ATV11HU41M2A	Size 4		
Supply voltage			Three phase 200...230 V					
Motor power	kW/HP	0.18/0.25	-	ATV11HU05M3U	Size 1	ATV11HU05M3A	Size 1	
		0.37/0.5	-	ATV11HU09M3U	Size 2	ATV11HU09M3A	Size 2	
		0.75/1	-	ATV11HU18M3U	Size 3	ATV11HU18M3A	Size 3	
		1.5/2	-	ATV11HU29M3U	Size 4	ATV11HU29M3A	Size 4	
		2.2/3	-	ATV11HU41M3U	Size 4	ATV11HU41M3A	Size 4	

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

(2) PowerSuite software, see page 4/30

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

Drives on base plate



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	ATV11PU09F1A
Supply voltage			Single phase 200...240 V		
Motor power	kW/HP	0.37/0.5	ATV11PU09M2E	ATV11PU09M2U	ATV11PU09M2A
		0.55	ATV11PU12M2E	-	-
		0.75/1	ATV11PU18M2E	ATV11PU18M2U	ATV11PU18M2A
Supply voltage			Three phase 200...230 V		
Motor power	kW/HP	0.37/0.5	-	ATV11PU09M3U	ATV11PU09M3A
		0.75/1	-	ATV11PU18M3U	ATV11PU18M3A

Additional EMC input filters



Supply voltage		Single phase 100...120 V	200...240 V	Three phase 200...230 V	
Europe range	Drive	ATV11	–	HU05M2E to HU41M2E	–
	References	Filters	–	Integrated	–
America range	Drive	ATV11	HU05F1U, HU09F1U	HU05M2U to HU18M2U	HU05M3U to HU18M3U
	References	Filters	VW3A11401	VW3A11401	VW3A11403
	Drive	ATV11	HU18F1U	HU29M2U - HU41M2U	HU29M3U to HU41M3U
	References	Filters	VW3A11402	VW3A11402	VW3A11404
Asia range	Drive	ATV11	HU05F1A - HU09F1A	HU05M2A to HU18M2A	HU05M3A to HU18M3A
	References	Filters	VW3A11401	VW3A11401	VW3A11403
	Drive	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	Plate for EMC mounting		
Description		Width 35 mm	For replacing ATV08	2.2 k Ω			
References	Drive	ATV11	HU05●●● HU09●●● HU12M2● HU18●●●	HU18F1● HU29●●● HU41●●● –	HU05M2● ●HU09M2●● ●U12M2E ●U18M2●	All ATV11 models	All ATV11 models
	Accessories		VW3A11851	VW3A11852	VW3A11811	SZ1RV1202	VW3A11831

Braking resistors and modules...other accessories: Please consult www.schneider-electric.co.in

Altivar 21

0.75...75 kW

Building (HVAC)⁽¹⁾ UL Type 1/IP20 and IP54 drives



Drive			IP20 200...240 V		380...480 V		IP54 380...480 V				
Supply voltage	Three phase										
Degree of protection			IP21 and IP41 on the upper part				IP54 drive available in two manufacturing variants, ATV21W...N4 class A or ATV21W...N4C class B				
Output frequency			0.5...200 Hz								
Type of control			kn ² quadratic ratio, sensorless flux vector control, voltage/frequency ratio (2 points), energy saving ratio								
Speed range			1 to 10								
I/O	Analog inputs		1 switch-configurable current or voltage analog input, and 1 voltage analog input configurable as a PTC probe input								
	Logic inputs		3 programmable logic inputs								
	Analog outputs		1 switch-configurable current or voltage analog output								
	Relay outputs		2 relay logic outputs								
Dialogue			Integrated display terminal with local controls (2) or remote display terminal or PC software (see page 4/11)								
Communication	Integrated		Modbus RTU								
(see page 4/11)	Available as an option		HVAC protocols: Lonworks, METASYS N2, APOGEE FLN, BACnet								
EMC	Class A		External filter in option		Integrated class A filter		Integrated class A filter		-		
	Class B		External filter in option		External filter in option		-		Integrated class B filter		
Motor power	kW/HP		0,75 / 1		ATV21H075M3X S1A		ATV21H075N4 S1A		ATV21W075N4 S1		ATV21W075N4C S1
	1,5 / 2		ATV21HU15M3X S1A		ATV21HU15N4 S1A		ATV21WU15N4 S1		ATV21WU15N4C S1		
	2,2 / 3		ATV21HU22M3X S1A		ATV21HU22N4 S1A		ATV21WU22N4 S2		ATV21WU22N4C S2		
	3 / -		ATV21HU30M3X S2A		ATV21HU30N4 S2A		ATV21WU30N4 S2		ATV21WU30N4C S2		
	4 / 5		ATV21HU40M3X S2A		ATV21HU40N4 S2A		ATV21WU40N4 S2		ATV21WU40N4C S2		
	5,5 / 7,5		ATV21HU55M3X S3A		ATV21HU55N4 S2A		ATV21WU55N4 S2		ATV21WU55N4C S2		
	7,5 / 10		ATV21HU75M3X S3A		ATV21HU75N4 S3A		ATV21WU75N4 S2		ATV21WU75N4C S2		
	11 / 15		ATV21HD11M3X S4A		ATV21HD11N4 S3A		ATV21WD11N4 S3		ATV21WD11N4C S3		
	15 / 20		ATV21HD15M3X S4A		ATV21HD15N4 S4A		ATV21WD15N4 S3		ATV21WD15N4C S3		
	18,5 / 25		ATV21HD18M3X S4A		ATV21HD18N4 S4A		ATV21WD18N4 S4		ATV21WD18N4C S4		
	22 / 30		ATV21HD22M3X S5A		ATV21HD22N4 S5A		ATV21WD22N4 S5		ATV21WD22N4C S5		
	30 / 40		ATV21HD30M3X S6A		ATV21HD30N4 S5A		ATV21WD30N4 S5		ATV21WD30N4C S5		
	37 / 50		-		ATV21HD37N4 S7A		ATV21WD37N4 S6		ATV21WD37N4C S6		
	45 / 60		-		ATV21HD45N4 S7A		ATV21WD45N4 S6		ATV21WD45N4C S6		
	55 / 75		-		ATV21HD55N4 S8A		ATV21WD55N4 S7		ATV21WD55N4C S7		
	75 / 100		-		ATV21HD75N4 S8A		ATV21WD75N4 S7		ATV21WD75N4C S7		

(1) Heating Ventilation Air Conditioning

(2) Drive with local controls, Run/Stop, Loc/Rem. keys

Dimensions (in mm)	width x height x depth
IP20	IP54
S1A : 107 x 143 x 150	S1 : 215 x 297 x 192
S2A : 142 x 184 x 150	S2 : 230 x 340 x 208
S3A : 180 x 232 x 170	S3 : 290 x 560 x 315
S4A : 245 x 329,5 x 190	S4 : 310 x 665 x 315
S5A : 240 x 420 x 210	S5 : 284 x 720 x 315
S6A : 320 x 630 x 290	S5 : 284 x 880 x 343
S7A : 240 x 550 x 266	S5 : 362 x 1000 x 364
S8A : 320 x 630 x 290	

Additional EMC input filters



Supply voltage		Three phase 200...240 V				380...480 V			
Maximum length of shielded cable m (1)				Class A	Class B			Class A	Class B
References	Type of drive	ATV21	H075M3X to HU22M3X	50 m	20 m	H075N4 to HU22N4	50 m	20 m	
	Filters		VW3A31404			VW3A31404			
	Type of drive	ATV21	HU30M3X and HU40M3X	80 m	50 m	HU30N4 to HU55N4	50 m	20 m	
	Filters		VW3A31406			VW3A31406			
	Type of drive	ATV21	HU55M3X and HU75M3X	80 m	50 m	HU75N4 and HD11N4	50 m	20 m	
	Filters		VW3A31407			VW3A31407			
	Type of drive	ATV21	HD11M3X to HD18M3X	50 m	1 m	HD15N4 and HD18N4	50 m	20 m	
	Filters		VW3A31408			VW3A31409			
Type of drive	ATV21	HD22M3X	100 m	25 m	HD22N4 and HD30N4	200 m	100 m		
Filters		VW3A4406			VW3A4406				
Type of drive	ATV21	HD30M3X	100 m	25 m	HD37N4 à HD45N4	200 m	100 m		
Filters		VW3A4408			VW3A4407				
Type of drive	ATV21	-			HD55N4 à HD75N4	200 m	100 m		
Filters					VW3A4408				

(1) Maximum lengths for shielded cables connecting motors to drives for a switching frequency of 6 to 16 kHz

Communication cards

Type		LonWorks	METASYS N2	APOGEE FLN	BACnet
Structure	Connector	1 removable 3-way screw terminal	1 removable 3-way screw terminal	1 removable 3-way screw terminal	1 removable 3-way screw terminal
	Topology	TP/FT-10 (free topology)	-	-	-
	Transmission speed	78 Kbps	-	-	-
Diagnostics	With LEDs	1 LED on the card: "Service"	1 LED on the card: "COM" (network traffic)		
	Using the graphic display terminal	Command word received/reference received			
Description file		.xif file supplied on CD-ROM	-	-	-
Reference		VW3A21312	VW3A21313	VW3A21314	VW3A21315

Remote display terminal

Description	The Altivar 21 drive can be connected to a remote display terminal. The display terminal can be mounted on the door of an enclosure with IP54 protection on the front panel. Max. operating temperature: 40°C Supplied with: - 1 cable with 2 RJ45 connectors, length 3.6 m - Seal and screws for IP54 mounting on an enclosure door
Reference	VW3A21101

Connection accessories

Modbus bus	Splitter box	Cables (L = 1 m)	T-junction boxes (L = 1 m)	Line terminator
Description	10 RJ45 connectors and 1 screw terminal	Equipped with 2 RJ45 connectors	T-junction boxes (with integrated cable)	Adaptation for RJ45 connector
Reference	LU9GC3	VW3A8306R10	VW3A8306TF10	VW3A8306RC

PC software for Altivar 21 drives

Free software available on www.schneider-electric.co.in	
Description	It includes various functions such as: Preparing configurations, setup and maintenance (oscilloscope). It can operate in the following PC environments and configurations: Microsoft Windows® 98, Microsoft Windows® 2000, Microsoft Windows® XP, Pentium® 233 MHz or more, hard disk with 10 Mb available, 32 Mb RAM, 256 colour 640 x 480 pixels or higher definition monitor.
Connection kit reference	VW3A8106

Altivar 31

0.18...15 kW

Simple machines Drives on heatsinks



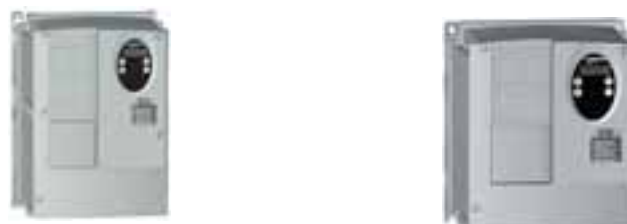
Dimensions (in mm)	width x height x depth
Size 1: 72 x 145 x 120	Size 2: 72 x 145 x 130
Size 3: 72 x 145 x 140	Size 4: 72 x 145 x 145
Size 5: 105 x 143 x 130	Size 6: 107 x 143 x 150
Size 7: 142 x 184 x 150	Size 8: 180 x 232 x 170
Size 9: 245 x 330 x 190	

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		IP31 and IP41 on upper part and IP21 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 (see page 4/30)						
Communication (see page 4/30)	Integrated	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		Integrated class A filter		
	Class B	External filter available as an option						
Motor power	kW/HP	0.18/0.25	ATV31H018M2	Size 3	ATV31H018M3X	Size 1	-	
		0.37/0.5	ATV31H037M2	Size 3	ATV31H037M3X	Size 1	ATV31H037N4	Size 5
		0.55/0.75	ATV31H055M2	Size 4	ATV31H055M3X	Size 2	ATV31H055N4	Size 5
		0.75/1	ATV31H075M2	Size 4	ATV31H075M3X	Size 2	ATV31H075N4	Size 6
		1.1/1.5	ATV31HU11M2	Size 6	ATV31HU11M3X	Size 5	ATV31HU11N4	Size 6
		1.5/2	ATV31HU15M2	Size 6	ATV31HU15M3X	Size 5	ATV31HU15N4	Size 6
		2.2/3	ATV31HU22M2	Size 7	ATV31HU22M3X	Size 6	ATV31HU22N4	Size 7
		3/-	-	-	ATV31HU30M3X	Size 7	ATV31HU30N4	Size 7
		4/5	-	-	ATV31HU40M3X	Size 7	ATV31HU40N4	Size 7
		5.5/7.5	-	-	ATV31HU55M3X	Size 8	ATV31HU55N4	Size 8
		7.5/10	-	-	ATV31HU75M3X	Size 8	ATV31HU75N4	Size 8
		11/15	-	-	ATV31HD11M3X	Size 9	ATV31HD11N4	Size 9
15/20	-	-	ATV31HD15M3X	Size 9	ATV31HD15N4	Size 9		

(1) For drive with local controls (Run/Stop keys and potentiometer) add an "A" at the end of the reference.

To order a drive intended for spooling applications, add a «T» at the end of the reference.

Enclosed drives



Dimensions (in mm)	width x height x depth
Size 1: 210 x 240 x 163	Size 2: 215 x 297 x 192
Size 3: 230 x 340 x 208	Size 4: 320 x 512 x 276
Size 5: 440 x 625 x 276	

Supply voltage		Single phase 200...240 V	Three phase 380...500 V			
Degree of protection		IP55				
Description		Enclosure equipped with an ATV31 drive with external heatsink. Removable covers for adding 1 switch-disconnector or 1 circuit-breaker, 3 buttons and/or LEDs, 1 potentiometer				
Motor power	kW/HP	0.18/0.25	ATV31C018M2	Size 1	-	
		0.37/0.5	ATV31C037M2	Size 1	ATV31C037N4	Size 2
		0.55/0.75	ATV31C055M2	Size 1	ATV31C055N4	Size 2
		0.75/1	ATV31C075M2	Size 1	ATV31C075N4	Size 2
		1.1/1.5	ATV31CU11M2	Size 2	ATV31CU11N4	Size 2
		1.5/2	ATV31CU15M2	Size 2	ATV31CU15N4	Size 2
		2.2/3	ATV31CU22M2	Size 3	ATV31CU22N4	Size 3
		3/-	-	-	ATV31CU30N4	Size 3
		4/5	-	-	ATV31CU40N4	Size 3
		5.5/7.5	-	-	ATV31CU55N4 (2)	Size 4
		7.5/10	-	-	ATV31CU75N4 (2)	Size 4
		11/15	-	-	ATV31CD11N4 (2)	Size 5
15/20	-	-	ATV31CD15N4 (2)	Size 5		

Drive kit (Altivar 31 drive on metal support plate with EMC filter): Please consult your Schneider Electric sales office. (2) Drive in metal enclosure without cover.

Other versions: Please consult your Schneider Electric sales office.

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	50 m	50 m	
		Class B	-	20 m	-	-	20 m	
References	Drive	ATV31	H018M2 to H075M2		H018M3X to H075M3X		H037N4 to HU15N4	
	Filter		Integrated	VW3A31401	VW3A31402		Integrated	VW3A31404
	Drive	ATV31	HU11M2 to HU15M2		HU11M3X to HU22M3X		HU22N4 to HU40N4	
	Filters		Integrated	VW3A31403	VW3A31404		Integrated	VW3A31406
	Drive	ATV31	HU22M2		HU30M3X - HU40M3X		HU55N4 - HU75 N4	
	Filters		Integrated	VW3A31405	VW3A31406		Integrated	VW3A31407
Drive	ATV31	-		HU55M3X - HU75M3X		HD11N4 - HD15N4		
Filters		-		VW3A31407		Integrated	VW3A31409	
Drive	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	ATV31	H018M2 to H037M2		H018M3X to H075M3X		H037N4 to HU15N4	
	Choke		VZ1L004M010		VW3A4551		VW3A4551	
	Drive	ATV31	H055M2 to H075M2		HU11M3X and HU15M3X		HU22N4 to HU40N4	
	Choke		VZ1L007UM50		VW3A4552		VW3A4552	
	Drive	ATV31	HU11M2 to HU22M2		HU22M3X and HU30M3X		HU55N4 and HU75N4	
	Choke		VZ1L018UM20		VW3A4553		VW3A4553	
Drive	ATV31	-		HU40M3X to HU75M3X		HD11N4 and HD15N4		
Choke		VW3A4554		VW3A4554		-		
Drive	ATV31	-		HD11M3X and HD15M3X		-		
Choke		VW3A4555		-		-		

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

Altivar 61

0.37...630 kW

Pumping and ventilation machines

IP21 drives

Dimensions (in mm)		width x height x depth	
S2	: 130 x 230 x 175	S3	: 155 x 260 x 187
S4	: 175 x 295 x 187	S5A	: 210 x 295 x 213
S5B	: 230 x 400 x 213	S6	: 240 x 420 x 236
S7A	: 240 x 550 x 266	S7B	: 320 x 550 x 266
S8	: 320 x 630 x 290	S9	: 320 x 920 x 377
S10	: 360 x 1022 x 377	S11	: 340 x 1190 x 377
S12	: 440 x 1190 x 377	S13	: 595 x 1190 x 377
S14	: 890 x 1390 x 377	S15	: 1120 x 1390 x 377



Type of drive		Single phase	Three phase	Three phase	
Supply voltage		200...240 V (3)	200...240 V (3)	380...480 V (3)	
Degree of protection		IP21 for unprotected drives and IP41 on the upper part			
Drive	Output frequency	0.5...1000 Hz up to 37 kW; 0.5...500 Hz from 45 to 630 kW			
	Type of control	Asynchronous motor kn ² quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio			
		Synchronous motor Vector control without speed feedback			
Transient overtorque		120...130% of the nominal drive current for 60 seconds			
Speed range		1...100 in open loop mode			
Functions	Number of functions	> 150			
	Number of preset speeds	16			
	Number of I/O	Analog inputs 2...4/Logic inputs 6...20			
		Analog outputs 1...3/Logic outputs 0...8			
Dialogue		Remote graphic display terminal or PowerSuite software workshop (see pages 17 and 30)			
Communication (see page 4/30)	Integrated	Modbus and CANopen			
	Available as an option	HVAC protocols: LonWorks, BACnet, METASYS N2, APOGEE FLN Industrial: Ethernet TCP/IP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DP, DeviceNet, INTERBUS			
Cards (available as an option)		Multi-pump cards, I/O extension cards, "Controller Inside" programmable card			
Reduction of current harmonics		DC choke integrated or supplied with the product (optional chokes and passive filters, see page 4/18)			
EMC	Class A	Integrated filter			
	Class B	External filter available as an option			
Motor power	kW/HP	0.37/0.5	ATV61H075M3 S2	-	
		0.75/1	ATV61HU15M3 S2	ATV61H075M3 S2	ATV61H075N4 (3) S2
		1.5/2	ATV61HU22M3 S3	ATV61HU15M3 S2	ATV61HU15N4 (3) S2
		2.2/3	ATV61HU30M3 S3	ATV61HU22M3 S3	ATV61HU22N4 (3) S2
		3/-	ATV61HU40M3 (1) S3	ATV61HU30M3 S3	ATV61HU30N4 (3) S3
		4/5	ATV61HU55M3 (1) S4	ATV61HU40M3 S3	ATV61HU40N4 (3) S3
		5.5/7.5	ATV61HU75M3 (1) S5A	ATV61HU55M3 S4	ATV61HU55N4 (3) S4
		7.5/10	-	ATV61HU75M3 S5A	ATV61HU75N4 (3) S4
		11/15	-	ATV61HD11M3X(2) S5B	ATV61HD11N4 (3) S5A
		15/20	-	ATV61HD15M3X(2) S5B	ATV61HD15N4 (3) S5B
		18.5/25	-	ATV61HD18M3X(2) S6	ATV61HD18N4 (3) S5B
		22/30	-	ATV61HD22M3X(2) S6	ATV61HD22N4 (3) S6
		30/40	-	ATV61HD30M3X(2) S7B	ATV61HD30N4 (3) S7A
		37/50	-	ATV61HD37M3X(2) S7B	ATV61HD37N4 (3) S7A
		45/60	-	ATV61HD45M3X(2) S7B	ATV61HD45N4 (3) S8
		55/75	-	ATV61HD55M3X(2) S9	ATV61HD55N4 (3) S8
		75/100	-	ATV61HD75M3X(2) S9	ATV61HD75N4 (3) S8
		90/125	-	ATV61HD90M3X(2) S10	ATV61HD90N4 (3) S9
		110/150	-	-	ATV61HC11N4 S9
		132/200	-	-	ATV61HC13N4 S10
		160/250	-	-	ATV61HC16N4 S11
		200/300	-	-	ATV61HC22N4 S12
		220/350	-	-	ATV61HC22N4 S12
		250/400	-	-	ATV61HC25N4 S13
		280/450	-	-	ATV61HC31N4 S13
		315/500	-	-	ATV61HC31N4 S13
		355/-	-	-	ATV61HC40N4 S14
		400/600	-	-	ATV61HC40N4 S14
		500/700	-	-	ATV61HC50N4 S14
		560/800	-	-	ATV61HC63N4 S15
		630/900	-	-	ATV61HC63N4 S15

(1) Must be used with a line choke, see page 4/18

(2) Drive supplied without EMC filter

(3) To order a reinforced version of the drive for specific environmental conditions, conforming to IEC 60721-3-3 class 3c2, add **S337** at the end of the reference.

E.g. ATV61H075N4**S337**

IP54 drives

Dimensions (in mm)	width x height x depth
ATV61W...	ATV61E5C... in enclosure
SA2 : 235 x 490 x 272	A1 : 616 x 2000 x 600
SA3 : 235 x 490 x 286	A2 : 816 x 2000 x 600
SB : 255 x 525 x 286	A3 : 1016 x 2000 x 600
SC : 290 x 560 x 315	A3 : 1220 x 2000 x 600
SD : 310 x 665 x 315	A3 : 2024 x 2000 x 600
SE : 284 x 720 x 315	A4 : 1216 x 2000 x 600
SF : 284 x 880 x 343	A4 : 1820 x 2000 x 600
SG : 362 x 1000 x 364	A4 : 2224 x 2000 x 600



Type of drive		Three phase 380...480 V (3)	Three phase range in ready-assembled enclosure (4)					
Degree of protection		UL Type 12/IP54	IP54 enclosure					
Drive	Output frequency	0.5...1600 Hz up to 37 kW; 0.5...500 Hz from 45 to 630 kW						
	Type of control	Asynchronous motor kn^2 quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio						
	Synchronous motor	Vector control without speed feedback						
	Transient overtorque	120...130% of the nominal drive current for 60 seconds						
Speed range		1...100 in open loop mode						
Functions	Number of functions	> 150						
	Number of preset speeds	16						
	Number of I/O	Analog inputs 2...4/Logic inputs 6...20 Analog outputs 1...3/Logic outputs 0...8 Relay outputs 2...4 Safety input 1						
Dialogue		Remote graphic display terminal or PowerSuite software workshop (see page 4/30)						
Communication (see page 4/30)	Integrated	Modbus and CANopen						
	Available as an option	HVAC protocols: LonWorks, BACnet, METASYS N2, APOGEE FLN Industrial: Ethernet TCP/IP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DP, DeviceNet, INTERBUS						
Cards (available as an option)		Multi-pump cards, I/O extension cards, "Controller Inside" programmable card						
Reduction of current harmonics		Integrated DC choke (optional chokes and passive filters, see page 4/18)						
EMC	Class A	Integrated filter		Integrated filter				
	Class B	Integrated filter		External filter available as an option				
Motor power	kW/HP	0.75/1	ATV61W075N4	SA2	ATV61W075N4C	SA2	-	
		1.5/2	ATV61WU15N4	SA2	ATV61WU15N4C	SA2	-	
		2.2/3	ATV61WU22N4	SA2	ATV61WU22N4C	SA2	-	
		3/-	ATV61WU30N4	SA3	ATV61WU30N4C	SA3	-	
		4/5	ATV61WU40N4	SA3	ATV61WU40N4C	SA3	-	
		5.5/7.5	ATV61WU55N4	SB	ATV61WU55N4C	SB	-	
		7.5/10	ATV61WU75N4	SB	ATV61WU75N4C	SB	-	
		11/15	ATV61WD11N4	SC	ATV61WD11N4C	SC	-	
		15/20	ATV61WD15N4	SD	ATV61WD15N4C	SD	-	
		18.5/25	ATV61WD18N4	SD	ATV61WD18N4C	SD	-	
		22/30	ATV61WD22N4	SE	ATV61WD22N4C	SE	-	
		30/40	ATV61WD30N4	SF	ATV61WD30N4C	SF	-	
		37/50	ATV61WD37N4	SF	ATV61WD37N4C	SF	-	
		45/60	ATV61WD45N4	SG	ATV61WD45N4C	SG	-	
		55/75	ATV61WD55N4	SG	ATV61WD55N4C	SG	-	
		75/100	ATV61WD75N4	SG	ATV61WD75N4C	SG	-	
		90/125	ATV61WD90N4	SG	ATV61WD90N4C	SG	-	
		Ready-assembled enclosure with braking transistor integrated in the drive	110/150	-	-	ATV61HC11N4	ATV61E5C11N4	A1
			132/200	-	-	ATV61HC13N4	ATV61E5C13N4	A1
160/250	-		-	ATV61HC16N4	ATV61E5C16N4	A1		
220/350	-		-	ATV61HC22N4	ATV61E5C22N4	A1		
Ready-assembled enclosure with braking unit in the enclosure	250/400	-	-	ATV61HC25N4	ATV61E5C25N4F	A2		
	315/500	-	-	ATV61HC31N4	ATV61E5C31N4F	A2		
Ready-assembled enclosure without braking unit	250/400	-	-	ATV61HC25N4	ATV61E5C25N4	A2		
	315/500	-	-	ATV61HC31N4	ATV61E5C31N4	A2		
	400/600	-	-	ATV61HC40N4	ATV61E5C40N4	A3		
	500/700	-	-	ATV61HC50N4	ATV61E5C50N4	A3		
	630/900	-	-	ATV61HC63N4	ATV61E5C63N4	A4		

(4) The Altivar 61 range in ready-assembled enclosure consists of:

- An ATV61H... drive
- A switch and fast-acting fuses
- An IP65 remote mounting kit for graphic display terminal

Altivar 61

0.37...630 kW

Pumping and ventilation machines

I/O extension and specific cards



Type of card	I/O extension Logic	Extended
Description	<ul style="list-style-type: none"> 1 relay logic output ("C/O" contact) 4 x 24 VDC positive or negative logic inputs 2 x 24 VDC open collector positive or negative logic outputs 1 input for PTC probes 	<ul style="list-style-type: none"> 1 x 0...20 mA differential current analog input 1 software-configurable voltage (0...10 VDC) or current (0...20 mA) analog input 2 software-configurable voltage ($\pm 10V$, 0...10 VDC) or current (0...20 mA) analog outputs 1 relay logic output ("C/O" contact) 4 x 24 VDC positive or negative logic inputs 2 x 24 VDC open collector positive or negative logic outputs 1 input for PTC probes 1 frequency control input
Reference	VW3A3201	VW3A3202

"Controller Inside" programmable card



Type of card	Programmable "Controller Inside"
Description	<ul style="list-style-type: none"> 10 logic inputs, 2 of which can be used for 2 counters or 4 of which can be used for 2 incremental encoders 2 analog inputs, 6 logic outputs, 2 analog outputs, a master port for the CANopen bus, a PC port for programming with the PS 1131 software workshop.
Reference	VW3A3501

Multi-pump cards



Type of card	Multi-pump
Description	<ul style="list-style-type: none"> Ensures compatibility with an ATV61 of applications developed for an ATV 38. The card's 9 operating modes are: <ul style="list-style-type: none"> ■ OFF: no function is activated. This mode is used in particular during maintenance of the installation. ■ Single variable. ■ Multiple variable. ■ Single variable with changeover of auxiliary pumps. ■ Multiple variable with changeover of auxiliary pumps. ■ Single variable with limited operating time. ■ Multiple variable with limited operating time. ■ Single variable with changeover of auxiliary pumps and limited operating time. ■ Multiple variable with changeover of auxiliary pumps and limited operating time.
Reference Description	VW3A3502
Reference	VW3A3503

Dialogue accessories



Accessory	Remote graphic display terminal	Remote mounting kit (1)
Description	This display terminal is attached to the front of the drive. It includes the integrated 7-segment display terminal for drives supplied without a graphic display terminal.	A remote mounting kit for mounting on an enclosure door with IP54 degree of protection. It includes: ■ All the mechanical fittings ■ Fixing accessories
Reference	VW3A1101	VW3A1102

(1) Use a VW3A1104R●● remote-mounting connection cable, to be ordered separately (please consult the "Soft starters and variable speed drives" catalogue)

Additional EMC input filters

The additional EMC input filters can be used to meet the requirements of the EMC "products" standard IEC/EN 61800-3, edition 2, category C2 or C3 in environment 1 or 2.

Type of drive	Three phase 200...240 V 50/60 Hz			380...480 V 50/60 Hz		
		Class A	Class B		Class A	Class B
Maximum length of shielded cable						
ATV61H075M3, HU15M3	VW3A4401	100 m	50 m	-		
ATV61HU22M3...HU40M3	VW3A4402	100 m	50 m	-		
ATV61HU55M3	VW3A4403	100 m	50 m	-		
ATV61HU75M3	VW3A4404	100 m	50 m	-		
ATV61HD11M3X, HD15M3X	VW3A4405	200 m	50 m	-		
ATV61HD18M3X, HD22M3X	VW3A4406	200 m	50 m	-		
ATV61HD30M3X...HD45M3X	VW3A4408	200 m	50 m	-		
ATV61HD55M3X, HD75M3X	VW3A4410	100 m	50 m	-		
ATV61HD90M3X	VW3A4411	100 m	50 m	-		
ATV61●075N4(C)...●U22N4(C)	-			VW3A4401	100 m	50 m
ATV61●U30N4(C)...●U40N4(C)	-			VW3A4402	100 m	50 m
ATV61●U55N4(C)...●U75N4(C)	-			VW3A4403	100 m	50 m
ATV61●D11N4(C)	-			VW3A4404	100 m	50 m
ATV61●D15N4(C)...●D18N4(C)	-			VW3A4405	300 m	100 m
ATV61●D22N4(C)	-			VW3A4406	300 m	100 m
ATV61●D30N4(C)...●D37N4(C)	-			VW3A4407	300 m	100 m
ATV61●D45N4(C)...●D75N4(C)	-			VW3A4408	300 m	100 m
ATV61●D90N4(C)...HC16N4, ATV61E5C11N4...E5C16N4	-			VW3A4410	300 m	50 m
ATV61HC22N4...HC31N4, ATV61E5C22N4...E5C31N4	-			VW3A4411	300 m	50 m
ATV61HC40N4, HC50N4, ATV61E5C40N4, E5C50N4	-			VW3A4412	300 m	50 m
ATV61HC63N4, ATV61E5C63N4	-			VW3A4413	300 m	50 m

● Applies to the following drives: ATV61H...N4, ATV61H...N4C, ATV61W...N4, ATV61W...N4C

Altivar 61

0.37...630 kW

Pumping and ventilation machines

Reduction of current harmonics

AC line chokes



A line choke can be used to provide improved protection against overvoltages on the line supply and to reduce harmonic distortion of the current produced by the drive.

Type of drive	Single phase	Three phase	
Supply voltage	200...240 V 50/60 Hz	200...240 V 50/60 Hz	380...480 V 50/60 Hz
ATV61HU40M3	VW3A58501	-	-
ATV61HU55M3, HU75M3	VW3A58502	-	-
ATV61H075M3	-	VW3A4551	-
ATV61HU15M3, HU22M3	-	VW3A4552	-
ATV61HU30M3	-	VW3A4553	-
ATV61HU40M3, HU55M3	-	VW3A4554	-
ATV61HU75M3, HD11M3X	-	VW3A4555	-
ATV61HD15M3X	-	VW3A4556	-
ATV61HD18M3X...HD45M3X	-	VW3A4557	-
ATV61HD55M3XD, ATV61HD75M3XD	-	VW3A4561	-
ATV61HD90M3XD	-	VW3A4564	-
ATV61•075N4(C), •U15N4(C)	-	-	VW3A4551
ATV61•U22N4(C)...•U40N4(C)	-	-	VW3A4552
ATV61•U55N4(C), •U75N4(C)	-	-	VW3A4553
ATV61•D11N4(C), •D15N4(C)	-	-	VW3A4554
ATV61•D18N4(C), •D22N4(C)	-	-	VW3A4555
ATV61•D30N4(C)...•D55N4(C)	-	-	VW3A4556
ATV61•D75N4(C)	-	-	VW3A4557
ATV61HD90N4D	-	-	VW3A4558
ATV61HC11N4D, ATV61E5C11N4	-	-	VW3A4559
ATV61HC13N4D, ATV61E5C13N4	-	-	VW3A4560
ATV61HC16N4D, ATV61E5C16N4	-	-	VW3A4568
ATV61HC22N4D, ATV61E5C22N4	Motor P 200□kw	-	VW3A4561
	Motor P 220□kw	-	VW3A4569
ATV61HC25N4D, HC50N4D, ATV61E5C25N4, E5C50N4	-	-	VW3A4569
ATV61HC31N4D, HC63N4D, ATV61E5C31N4, E5C63N4	-	-	VW3A4564
ATV61HC40N4D, ATV61E5C40N4	-	-	VW3A4565

DC chokes are used to reduce current harmonics in order to comply with standard 61000-3-2 for drives in which the line current is more than 16 A and less than 75 A.

Reduction of current harmonics

Optional DC chokes ⁽¹⁾

Type of drive	Three phase	
Supply voltage	200...240 V 50/60 Hz	380...480 V 50/60 Hz
ATV61H075M3	VW3A4503	-
ATV61HU15M3	VW3A4505	-
ATV61HU22M3	VW3A4506	-
ATV61HU30M3	VW3A4507	-
ATV61HU40M3, HU55M3	VW3A4508	-
ATV61HU75M3	VW3A4509	-
ATV61HD11M3X, HD15M3X	VW3A4510	-
ATV61HD18M3X, HD22M3X	VW3A4511	-
ATV61HD30M3X...HD45M3X	VW3A4512	-
ATV61•075N4(C)	-	VW3A4501
ATV61•U15N4(C)	-	VW3A4502
ATV61•U22N4(C), •U30N4(C)	-	VW3A4503
ATV61•U40N4(C)	-	VW3A4504
ATV61•U55N4(C)	-	VW3A4505
ATV61•U75N4(C)	-	VW3A4506
ATV61•D11N4(C)	-	VW3A4507
ATV61•D15N4(C), •D18N4(C)	-	VW3A4508
ATV61•D22N4(C)...•D37N4(C)	-	VW3A4510
ATV61•D45N4(C)...•D75N4(C)	-	VW3A4511

• Applies to the following drives: ATV61H...N4, ATV61H...N4C, ATV61W...N4, ATV61W...N4C

(1) For ATV61HD55M3X, HD75M3X and ATV61HD90N4... HC50N4 drives, the choke is supplied as standard with the drive.

Passive filters

A passive filter is used to reduce current harmonics with total harmonic distortion factors of less than 16% or 10%. These factors may be less than 10%, or 5% if used with a DC choke.

Type of drive	Three phase 400 V 50/60 Hz		Three phase 460 V 50/60 Hz	
	THDI 16% (1)	THDI 10% (2)	THDI 16% (1)	THDI 10% (2)
ATV61●075N4(C), ●U15N4(C), ●U22N4(C), ●U30N4(C)	VW3A4601	VW3A4621	VW3A4641	VW3A4661
ATV61●U40N4(C), ●U55N4(C)	VW3A4602	VW3A4622	VW3A4642	VW3A4662
ATV61●U75N4(C), ●D11N4(C)	VW3A4603	VW3A4623	VW3A4643	VW3A4663
ATV61●D15N4(C)	VW3A4604	VW3A4624	VW3A4644	VW3A4664
ATV61●D18N4(C)	VW3A4605	VW3A4625	VW3A4645	VW3A4665
ATV61●D22N4(C)	VW3A4606	VW3A4626	VW3A4645	VW3A4665
ATV61●D30N4(C)	VW3A4607	VW3A4627	VW3A4646	VW3A4666
ATV61●D37N4(C)	VW3A4607	VW3A4627	VW3A4647	VW3A4667
ATV61●D45N4(C)	VW3A4608	VW3A4628	VW3A4647	VW3A4667
ATV61●D55N4(C)	VW3A4608	VW3A4628	VW3A4648	VW3A4668
ATV61●D75N4(C)	VW3A4609	VW3A4629	VW3A4648	VW3A4668
ATV61●D90N4(C)	VW3A4609	VW3A4629	VW3A4649	VW3A4669
ATV61HC11N4, ATV61E5C11N4	VW3A4610	VW3A4630	VW3A4649	VW3A4669
ATV61HC13N4, ATV61E5C13N4	VW3A4611	VW3A4631	VW3A4656	VW3A4676
ATV61HC16N4, ATV61E5C16N4	VW3A4612	VW3A4632	VW3A4650	VW3A4670
ATV61HC22N4, ATV61E5C22N4	VW3A4613	VW3A4633	VW3A4651	VW3A4671
ATV61HC25N4, ATV61E5C25N4	VW3A4611	VW3A4631	VW3A4656	VW3A4676
ATV61HC31N4, HC40N4, ATV61E5C31N4, E5C63N4	VW3A4612	VW3A4632	VW3A4650	VW3A4670
ATV61HC40N4, ATV61E5C40N4	VW3A4619	VW3A4639	VW3A4657	VW3A4677
ATV61HC50N4, ATV61E5C50N4	VW3A4612	VW3A4632	VW3A4651	VW3A4671
ATV61HC63N4, ATV61E5C63N4	VW3A4613	VW3A4633	VW3A4657	VW3A4677

● Applies to the following drives: ATV61H...N4, ATV61H...N4C, ATV61W...N4, ATV61W...N4C

(1) By adding a DC choke, we get: THD \leq 10%

(2) By adding a DC choke, we get: THD \leq 15%

These reduced current harmonics are obtained on condition that the THDu is < 20% and the RSCE > 66%

Sinusoidal filters

Sinusoidal filters allow Altivar 61 drives to operate with longer motor cables (up to 1000 m).

Type of drive	Three phase	
Supply voltage	200...240 V 50/60 Hz	380...480 V 50/60 Hz
ATV61H075M3, HU15M3 (2)	VW3A5201	-
ATV61HU22M3, HU30M3	VW3A5202	-
ATV61HU40M3...HU75M3	VW3A5203	-
ATV61HD11M3X, HD15M3X	VW3A5204	-
ATV61HD18M3X, HD22M3X	VW3A5205	-
ATV61HD30M3X...HD45M3X	VW3A5206	-
ATV61HD55M3X, HD75M3X	VW3A5208	-
ATV61HD90M3X	VW3A5209	-
ATV61●U15N4(C)...HU40N4(C) (2)	-	VW3A5201
ATV61●U55N4(C)	-	VW3A5202
ATV61●U75N4(C)...●D15N4(C)	-	VW3A5203
ATV61●D18N4(C)...●D30N4(C)	-	VW3A5204
ATV61●D37N4(C), ●D45N4(C)	-	VW3A5205
ATV61●D55N4(C), ●D75N4(C)	-	VW3A5206
ATV61●D90N4(C), HC11N4, ATV61E5C11N4	-	VW3A5207
ATV61HC13N4, HC16N4, ATV61E5C13N4, E5C16N4	-	VW3A5208
ATV61HC22N4, ATV61E5C22N4	-	VW3A5209
ATV61HC25N4, HC31N4, ATV61E5C25N4, E5C31N4	-	VW3A5210
ATV61HC40N4, ATV61E5C40N4	Motor P 355 kW	VW3A5210
	Motor P 400 kW	VW3A5211
ATV61HC50N4, HC63N4, ATV61E5C50N4, E5C63N4	-	VW3A5211

● Applies to the following drives: ATV61H...N4, ATV61H...N4C, ATV61W...N4, ATV61W...N4C

(2) For ATV61H075M3, HU15M3 and ATV61HU15N4 drives, it is advisable to use a lower power motor with a sinusoidal filter

Altivar 61

0.37...630 kW

Pumping and ventilation machines

Output filter options

Motor chokes

Above a certain motor cable length, it is advisable to insert a motor choke between the drive and the motor. This maximum length depends on the drive rating and the type of motor cable.

Type of drive	Max. motor cable length		Three phase	
	Shielded	Unshielded	200...240 V 50/60Hz	380...480 V 50/60 Hz
ATV61H075M3...HU22M3	150 m	300 m	VW3A5101	-
ATV61HU30M3...HU75M3	200 m	260 m	VW3A5102	-
	300 m	300 m	VW3A5103	-
ATV61HD11M3X...HD22M3X	150 m	300 m	VW3A5103	-
ATV61HD30M3X...HD45M3X	150 m	300 m	VW3A5104	-
ATV61HD55M3X, HD75M3X	150 m	300 m	VW3A5105	-
ATV61HD90M3X	250 m	300 m	VW3A5106	-
ATV61•075N4(C)...•U40N4(C)	75 m	90 m	-	VW3A5101
	85 m	95 m	-	VW3A5102
	160 m	200 m	-	VW3A5103
ATV61•U55N4(C)...•D18N4(C)	85 m	95 m	-	VW3A5102
	160 m	200 m	-	VW3A5103
	200 m	300 m	-	VW3A5104 (1)
ATV61•D22N4(C)...•D30N4(C)	140 m	170 m	-	VW3A5103
	150 m	300 m	-	VW3A5104 (1)
ATV61•D37N4(C)	97 m	166 m	-	VW3A5103
	200 m	300 m	-	VW3A5104 (1)
ATV61•D45N4(C)...•D75N4(C)	150 m	300 m	-	VW3A5104 (1)
ATV61•D90N4(C)	200 m	300 m	-	VW3A5104 (1)
ATV61HC11N4, HC13N4, ATV61E5C11N4,E5C13N4	150 m	250 m	-	VW3A5105 (1)
ATV61HC16N4, ATV61E5C16N4	250 m	300 m	-	VW3A5106 (1)
ATV61HC22N4, ATV61E5C22N4	250 m	300 m	-	VW3A5106 (1)
ATV61HC25N4, ATV61E5C25N4	200 m	250 m	-	VW3A5107 (1)
ATV61HC31N4, ATV61E5C31N4	200 m	250 m	-	VW3A5107 (1)
ATV61HC40N4, ATV61E5C40N4	Motor P 355 kW	200 m	250 m	-
	Motor P 400 kW	250 m	300 m	-
ATV61HC50N4, ATV61E5C50N4	250 m	300 m	-	VW3A5108 (1)
ATV61HC63N4, ATV61E5C63N4	250 m	300 m	-	VW3A5108 (1)

• Applies to the following drives: ATV61H...N4, ATV61H...N4C, ATV61W...N4, ATV61W...N4C

(1) 3 single phase chokes are included with the drive.

Resistance braking units (integrated in ATV61 drives up to 220 kW)

ATV61H●●●M3, ATV61H●●●M3X and ATV61H075N4...HC22N4, ATV61W●●●N4 and ATV61W●●●N4C drives have a built-in braking transistor.

The braking resistor enables the Altivar 61 drive to operate while braking to a standstill or during slowdown braking, by dissipating the braking energy.

Supply voltage	Three phase 380...480 V 50/60 Hz	
Type of drive	ATV61HC25N4, HC31N4	ATV61HC40N4, HC50N4, HC63N4
Continuous power/Max (kw)	200/420	400/750
Reference	VW3A7101	VW3A7102

Braking resistors



The network braking unit can be used to restore the following to the line supply:

- The energy from the motor
- The energy from the motors controlled by several drives connected on the same DC bus

Type of drive	Three phase 200...240 V 50/60 Hz	380...480 V 50/60 Hz
Supply voltage		
ATV61H075M3	VW3A7701	-
ATV61HU15M3, HU22M3	VW3A7702	-
ATV61HU30M3, HU40M3	VW3A7703	-
ATV61HU55M3, HU75M3	VW3A7704	-
ATV61HD11M3X	VW3A7705	-
ATV61HD15M3X	VW3A7706	-
ATV61HD18M3X, HD22M3X	VW3A7707	-
ATV61HD30M3X	VW3A7708	-
ATV61HD37M3X, HD45M3X	VW3A7709	-
ATV61HD55M3X, HD75M3X	VW3A7713	-
ATV61HD90M3X	VW3A7714	-
ATV61H075N4...HU40N4, ATV61W075N4...WU55N4, ATV61W075N4C...WU55N4C	-	VW3A7701
ATV61HU55N4, HU75N4, ATV61WU75N4, WD11N4, ATV61WU75N4C, WD11N4C	-	VW3A7702
ATV61HD11N4, HD15N4, ATV61WD15N4, WD18N4, ATV61WD15N4C, WD18N4C	-	VW3A7703
ATV61HD18N4...HD30N4, ATV61WD22N4...WD37N4, ATV61WD22N4C...WD37N4C	-	VW3A7704
ATV61HD37N4, ATV61WD45N4, WD45N4C	-	VW3A7705
ATV61WD55N4...WD90N4, ATV61WD55N4C...WD90N4C	-	VW3A7706
ATV61HD45N4...HD75N4	-	VW3A7707
ATV61HD90N4, HC11N4, ATV61E5C11N4	-	VW3A7710
ATV61HC13N4, HC16N4, ATV61E5C13N4, E5C16N4	-	VW3A7711
ATV61HC22N4, ATV61E5C22N4	-	VW3A7712
ATV61HC25N4, ATV61E5C25N4	-	VW3A7715
ATV61HC31N4, ATV61E5C31N4	-	VW3A7716
ATV61HC40N4, HC50N4, ATV61E5C40N4, E5C50N4	-	VW3A7717
ATV61HC63N4, ATV61E5C63N4	-	VW3A7718

Altivar 71

0.37...500 kW

Complex, high-power machines

IP21 drives

Dimensions (in mm)		width x height x depth
S2	: 130 x 230 x 175	S3 : 155 x 260 x 187
S4	: 175 x 295 x 187	S5A: 210 x 295 x 213
S5B	: 230 x 400 x 213	S6 : 240 x 420 x 236
S7A	: 240 x 550 x 266	S7B: 320 x 550 x 266
S8	: 320 x 630 x 290	S9 : 320 x 920 x 377
S10	: 360 x 1022 x 377	S11 : 340 x 1190 x 377
S12	: 440 x 1190 x 377	S13: 595 x 1190 x 377
S14	: 890 x 1390 x 377	S15: 1120 x 1390 x 377



Type of drive		Single phase	Three phase	Three phase	Three phase on base plate	
Supply voltage		200...240 V (3)	200...240 V (3)	380...480 V (3)	380...480 V (3)	
Degree of protection		IP21 for unprotected drives and IP41 on the upper part				
Drive	Output frequency	0.1...1600 Hz up to 37 kW, 0.1...500 Hz from 45 to 500 kW				
	Type of control	Flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), ENA System				
		Asynchronous motor	Vector control without speed feedback			
	Synchronous motor	Vector control without speed feedback				
Transient overtorque		220% of nominal motor torque for 2 seconds, and 170% for 60 seconds				
Speed range		1...1000 in closed loop mode with encoder feedback, 1...100 in open loop mode				
Functions	Number of functions		> 150			
	Number of preset speeds		16			
	Number of I/O	Analog inputs	2...4			
		Logic inputs	6...20			
	Analog outputs	1...3				
	Logic outputs	0...8				
	Relay outputs	2...4				
	Safety input	1				
Dialogue		Remote graphic display terminal or PowerSuite software workshop (see pages 4/25 and 4/30)				
Communication (see page 4/30)	Integrated	Modbus and CANopen				
	Available as an option	Ethernet TCP/IP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DP, DeviceNet, InterBus				
Cards (available as an option)		Encoder interface cards, I/O extension cards, "Controller Inside" programmable card				
Reduction of current harmonics		DC choke integrated or supplied with the product, (optional chokes and passive filters, see page 4/26)				
EMC	Class A	Integrated filter				
	Class B	External filter available as an option				
Motor power	kW/HP	0.37/0.5	ATV71HO75M3 S2	ATV71HO37M3 S2	-	-
		0.75/1	ATV71HU15M3 S2	ATV71HO75M3 S2	ATV71HO75N4 (3) S2	ATV71PO75N4Z S2
		1.5/2	ATV71HU22M3 S3	ATV71HU15M3 S2	ATV71HU15N4 (3) S2	ATV71PU15N4Z S2
		2.2/3	ATV71HU30M3 S3	ATV71HU22M3 S3	ATV71HU22N4 (3) S2	ATV71PU22N4Z S2
		3/-	ATV71HU40M3 (1) S3	ATV71HU30M3 S3	ATV71HU30N4 (3) S3	ATV71PU30N4Z S3
		4/5	ATV71HU55M3 (1) S4	ATV71HU40M3 S3	ATV71HU40N4 (3) S3	ATV71PU40N4Z S3
		5.5/7.5	ATV71HU75M3 (1) S5A	ATV71HU55M3 S4	ATV71HU55N4 (3) S4	ATV71PU55N4Z S4
		7.5/10	-	ATV71HU75M3 S5A	ATV71HU75N4 (3) S4	ATV71PU75N4Z S4
		11/15	-	ATV71HD11M3X (2) S5B	ATV71HD11N4 (3) S5A	-
		15/20	-	ATV71HD15M3X (2) S5B	ATV71HD15N4 (3) S5B	-
		18.5/25	-	ATV71HD18M3X (2) S6	ATV71HD18N4 (3) S5B	-
		22/30	-	ATV71HD22M3X (2) S6	ATV71HD22N4 (3) S6	-
		30/40	-	ATV71HD30M3X (2) S7B	ATV71HD30N4 (3) S7A	-
		37/50	-	ATV71HD37M3X (2) S7B	ATV71HD37N4 (3) S7A	-
		45/60	-	ATV71HD45M3X (2) S7B	ATV71HD45N4 (3) S8	-
		55/75	-	ATV71HD55M3X (2) S9	ATV71HD55N4 (3) S8	-
		75/100	-	ATV71HD75M3X (2) S10	ATV71HD75N4 (3) S8	-
		90/125	-	-	ATV71HD90N4 S9	-
		110/150	-	-	ATV71HC11N4 S10	-
		132/200	-	-	ATV71HC13N4 S11	-
		160/250	-	-	ATV71HC16N4 S12	-
		200/300	-	-	ATV71HC20N4 S13	-
		220/350	-	-	ATV71HC25N4 S13	-
		280/450	-	-	ATV71HC28N4 S13	-
		315/500	-	-	ATV71HC31N4 S14	-
		355/-	-	-	ATV71HC40N4 S14	-
		500/700	-	-	ATV71HC50N4 S15	-

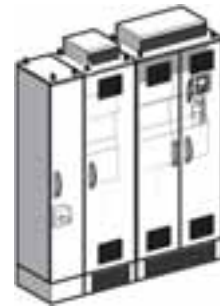
(1) Must be used with a line choke, see page 4/26

(2) Drive supplied without EMC filter

(3) To order a reinforced version of the drive for specific environmental conditions, conforming to IEC 60721-3-3 class 3c2, add **S337** at the end of the reference.

E.g. ATV71HO75N4**S337**

IP54 drives



Dimensions (in mm)	width x height x depth
ATV61W...	ATV61E5C... in enclosure
SA2 : 235 x 490 x 272	A1 : 616 x 2000 x 600
SA3 : 235 x 490 x 286	A2 : 816 x 2000 x 600
SB : 255 x 525 x 286	A3 : 1016 x 2000 x 600
SC : 290 x 560 x 315	A3 : 1220 x 2000 x 600
SD : 310 x 665 x 315	A3 : 2024 x 2000 x 600
SE : 284 x 720 x 315	A4 : 1216 x 2000 x 600
SF : 284 x 880 x 343	A4 : 1820 x 2000 x 600
SG : 362 x 1000 x 364	A4 : 2224 x 2000 x 600

Type of drive	Three phase 380...480 V (3)	Three phase range in ready-assembled enclosure (4) 380...480 V
Degree of protection	UL Type 12/IP54	IP54 enclosure
Drive	Output frequency Type of control Asynchronous motor Synchronous motor Transient overtorque	0.1...1600 Hz up to 37 kW, 0.1...500 Hz from 45 to 500 kW Flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), ENA System Vector control without speed feedback 220% of nominal motor torque for 2 seconds, and 170% for 60 seconds
Speed range	Number of functions	1...1000 in closed loop mode with encoder feedback, 1...100 in open loop mode
Functions	Number of preset speeds Number of I/O Analog inputs Logic inputs Analog outputs Logic outputs Relay outputs Safety input	> 150 16 2...4 6...20 1...3 0...8 2...4 1
Dialogue	Integrated	Remote graphic display terminal or PowerSuite software workshop (see page 4/30)
Communication (see page 4/30)	Available as an option	Modbus and CANopen Ethernet TCP/IP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DP, DeviceNet, INTERBUS
Cards (available as an option)		Encoder interface cards, I/O extension cards, "Controller Inside" programmable card
Reduction of current harmonics		Optional chokes and passive filters (see page 4/26)
EMC	Class A Class B	Integrated filter External filter available as an option
Motor power	kw/HP	
	0.75/1	ATV71W075N4 S2 -
	1.5/2	ATV71WU15N4 S2 -
	2.2/3	ATV71WU22N4 S2 -
	3/-	ATV71WU30N4 S3 -
	4/5	ATV71WU40N4 S3 -
	5.5/7.5	ATV71WU55N4 S4 -
	7.5/10	ATV71WU75N4 S4 -
	11/15	ATV71WD11N4 S5A -
	15/20	ATV71WD15N4 S5B -
	18.5/25	ATV71WD18N4 S5B -
	22/30	ATV71WD22N4 S6 -
	30/40	ATV71WD30N4 S7A -
	37/50	ATV71WD37N4 S7A -
	45/60	ATV71WD45N4 S8 -
	55/75	ATV71WD55N4 S8 -
	75/100	ATV71WD75N4 S8 -
Ready-assembled enclosure with braking transistor integrated in the drive	90/125 110/150 132/200 160/250 200/300 220/350 280/450	- - - - - - - ATV71HD90N4 ATV71E5D90N4 A1 ATV71HC11N4 ATV71E5C11N4 A1 ATV71HC13N4 ATV71E5C13N4 A1 ATV71HC16N4 ATV71E5C16N4 A1 ATV71HC20N4 ATV71E5C20N4 A2 ATV71HC25N4 ATV71E5C25N4 A2 ATV71HC28N4 ATV71E5C28N4 A2
Ready-assembled enclosure with braking unit in the enclosure	200/300 220/350 280/450	- - - ATV71HC20N4 ATV71E5C20N4F A2 ATV71HC25N4 ATV71E5C25N4F A2 ATV71HC28N4 ATV71E5C28N4F A2
Ready-assembled enclosure without braking unit	315/500 400/600 500/700	- - - ATV71HC31N4 ATV71E5C31N4 A3 ATV71HC40N4 ATV71E5C40N4 A3 ATV71HC50N4 ATV71E5C50N4 A4

- (4) The Altivar 71 range in ready-assembled enclosure consists of:
- An ATV71H... drive
 - A switch and fast-acting fuses
 - An IP65 remote mounting kit for graphic display terminal

Altivar 71

0.37...500 kW

Complex, high-power machines I/O extension and specific cards



Type of card	I/O extension Logic	Extended
Description	<ul style="list-style-type: none"> 1 relay logic output ("C/O" contact) 4 x 24 VDC positive or negative logic inputs 2 x 24 VDC open collector positive or negative logic outputs 1 input for PTC probes 	<ul style="list-style-type: none"> 1 0...20 mA differential current analog input 1 software-configurable voltage (0...10 VDC) or current (0...20 mA) analog input 2 software-configurable voltage ($\pm 10V$, 0...10 VDC) or current (0...20 mA) analog outputs 1 relay logic output ("C/O" contact) 4 x 24 VDC positive or negative logic inputs 2 x 24 VDC open collector positive or negative logic outputs 1 input for PTC probes 1 frequency control input
Reference	VW3A3201	VW3A3202

"Controller Inside" programmable card



Type of card	Programmable "Controller Inside"
Description	<ul style="list-style-type: none"> 10 logic inputs, 2 of which can be used for 2 counters or 4 of which can be used for 2 incremental encoders 2 analog inputs 6 logic outputs 2 analog outputs A master port for the CANopen bus A PC port for programming with the PS 1131 software workshop
Reference	VW3A3501

Encoder interface cards



Type of card	Encoder interface with Differential outputs (RS422)	Open collector outputs (NPN)	Push-pull outputs
Operating frequency	300 kHz		
References	<ul style="list-style-type: none"> 5 V VW3A3401 12 V - 15 V VW3A3402 24 V - 	<ul style="list-style-type: none"> - VW3A3403 VW3A3404 - 	<ul style="list-style-type: none"> - VW3A3405 VW3A3406 VW3A3407

Dialogue accessories



Accessory	Remote graphic display terminal	Remote mounting kit (1)
Description	This display terminal is attached to the front of the drive. It includes the integrated 7-segment display terminal for drives supplied without a graphic display terminal.	A remote mounting kit for mounting on an enclosure door with IP54 degree of protection. It includes: ■ All the mechanical fittings ■ Fixing accessories
Reference	VW3A1101	VW3A1102

(1) Use a VW3A1104R●● remote-mounting connection cable, to be ordered separately (please consult the "Soft starters and variable speed drives" catalogue)

Additional EMC input filters

The additional EMC input filters can be used to meet the requirements of the EMC "products" standard IEC/EN 61800-3, edition 2, category C2 or C3 in environment 1 or 2.

Type of drive	Three phase 200...240 V 50/60 Hz			380...480 V 50/60 Hz		
		Class A	Class B		Class A	Class B
Maximum length of shielded cable						
ATV71H037M3...HU15M3	VW3A4401	100 m	50 m	-		
ATV71HU22M3...HU40M3	VW3A4402	100 m	50 m	-		
ATV71HU55M3	VW3A4403	100 m	50 m	-		
ATV71HU75M3	VW3A4404	100 m	50 m	-		
ATV71HD11M3X, HD15M3X	VW3A4405	100 m	50 m	-		
ATV71HD18M3X, HD22M3X	VW3A4406	100 m	50 m	-		
ATV71HD30M3X...HD45M3X	VW3A4408	100 m	50 m	-		
ATV71HD55M3X, HD75M3X	VW3A4410	100 m	50 m	-		
ATV71●075N4...●U22N4, ATV71P075N4Z...PU22N4Z	-			VW3A4401	100 m	50 m
ATV71●U30N4, ●U40N4, ATV71PU30N4Z, PU40N4Z	-			VW3A4402	100 m	50 m
ATV71●U55N4, ●U75N4, ATV71PU55N4Z, PU75N4Z	-			VW3A4403	100 m	50 m
ATV71●D11N4	-			VW3A4404	100 m	50 m
ATV71●D15N4, ●D18N4	-			VW3A4405	300 m	100 m
ATV71●D22N4	-			VW3A4406	300 m	100 m
ATV71●D30N4, ●D37N4	-			VW3A4407	300 m	100 m
ATV71●D45N4...●D75N4	-			VW3A4408	300 m	100 m
ATV71HD90N4...HC13N4, ATV71E5D90N4...E5C13N4	-			VW3A4410	300 m	50 m
ATV71HC16N4...HC28N4, ATV71E5C16N4...E5C28N4	-			VW3A4411	300 m	50 m
ATV71HC31N4, HC40N4, ATV71E5C31N4, E5C40N4	-			VW3A4412	300 m	50 m
ATV71HC50N4, ATV71E5C50N4	-			VW3A4413	300 m	50 m

● Applies to the following drives: ATV71H...N4, ATV71W...N4

Altivar 71

0.37...500 kW

Complex, high-power machines

Reduction of current harmonics

AC line chokes



A line choke can be used to provide improved protection against overvoltages on the line supply and to reduce harmonic distortion of the current produced by the drive.

Type of drive	Three phase	
Supply voltage	200...240 V 50/60 Hz	380...480 V 50/60 Hz
ATV71H037M3...H075M3	VW3A4551	-
ATV71HU15M3...HU22M3	VW3A4552	-
ATV71HU30M3	VW3A4553	-
ATV71HU40M3	VW3A4554	-
ATV71HU75M3, HD11M3X	VW3A4555	-
ATV71HD15M3X	VW3A4556	-
ATV71HD18M3X...HD45M3X	VW3A4557	-
ATV71HD55M3X	VW3A4562	-
ATV71HD75M3X	VW3A4563	-
ATV71●075N4, ●U15N4, ATV71P075N4Z, PU15N4Z	-	VW3A4551
ATV71●U22N4...●U40N4, ATV71PU22N4Z...PU40N4Z	-	VW3A4552
ATV71●U55N4, ●U75N4, ATV71PU55N4Z, PU75N4Z	-	VW3A4553
ATV71●D11N4, ●D15N4	-	VW3A4554
ATV71●D18N4, ●D22N4	-	VW3A4555
ATV71●D30N4...●D55N4	-	VW3A4556
ATV71●D75N4	-	VW3A4557
ATV71HD90N4, ATV71E5D90N4	-	VW3A4558
ATV71HC11N4, ATV71E5C11N4	-	VW3A4559
ATV71HC13N4, ATV71E5C13N4	-	VW3A4560
ATV71HC16N4, ATV71E5C16N4	-	VW3A4561
ATV71HC20N4, ATV71E5C20N4	-	VW3A4562
ATV71HC25N4, ATV71E5C25N4	Motor P 220kW	VW3A4562
	Motor P 250kW	VW3A4563
ATV71HC28N4, HC31N4, ATV71E5C28N4, E5C31N4	-	VW3A4564
ATV71HC40N4, ATV71E5C40N4	Motor P 355kW	VW3A4565
	Motor P 400kW	VW3A4566
ATV71HC50N4, ATV71E5C50N4	-	VW3A4567

● Applies to the following drives: ATV71H...N4, ATV71W...N4

DC chokes are used to reduce current harmonics in order to comply with standard 61000-3-2 for drives in which the line current is more than 16 A and less than 75 A.

Reduction of current harmonics

Optional DC chokes ⁽¹⁾

Type of drive	Three phase	
Supply voltage	200...240 V 50/60 Hz	380...480 V 50/60 Hz
ATV71H037M3	VW3A4501	-
ATV71H075M3	VW3A4503	-
ATV71HU15M3	VW3A4505	-
ATV71HU22M3	VW3A4506	-
ATV71HU30M3	VW3A4507	-
ATV71HU40M3, HU55M3	VW3A4508	-
ATV71HU75M3	VW3A4509	-
ATV71HD11M3X, HD15M3X	VW3A4510	-
ATV71HD18M3X, HD22M3X	VW3A4511	-
ATV71HD30M3X...HD45M3X	VW3A4512	-
ATV71●075N4, ATV71P075N4Z	-	VW3A4501
ATV71●U15N4, ATV71PU15N4Z	-	VW3A4502
ATV71●U22N4, ●U30N4, ATV71PU22N4Z, PU30N4Z	-	VW3A4503
ATV71●U40N4, ATV71PU40N4Z	-	VW3A4504
ATV71●U55N4, ATV71PU55N4Z	-	VW3A4505
ATV71●U75N4, ATV71PU75N4Z	-	VW3A4506
ATV71●D11N4	-	VW3A4507
ATV71●D15N4, ●D18N4	-	VW3A4508
ATV71●D22N4...●D37N4	-	VW3A4510
ATV71●D45N4...●D75N4	-	VW3A4511

(1) For ATV 71HD55M3X, HD75M3X and ATV 71HD90N4...HC50N4 drives, the choke is supplied as standard with the drive.

Passive filters

A passive filter is used to reduce current harmonics with total harmonic distortion factors of less than 16% or 10%. These factors may be less than 10%, or 5% if used with a DC choke.

Type of drive	Three phase 400 V 50/60 Hz		Three phase 460 V 50/60 Hz	
	THDI 16% (1)	THDI 10% (2)	THDI 16% (1)	THDI 10% (2)
ATV71●075N4...●U30N4, ATV71P075N4Z...PU30N4Z	VW3A4601	VW3A4601	VW3A4621	VW3A4 641
ATV71●U40N4,●U55N4, ATV71PU40N4Z, PU55N4Z	VW3A4602	VW3A4602	VW3A4622	VW3A4 642
ATV71●U75N4,●D11N4, ATV71PU75N4Z	VW3A4603	VW3A4603	VW3A4623	VW3A4 643
ATV71●D15N4	VW3A4604	VW3A4604	VW3A4624	VW3A4 644
ATV71●D18N4, ●D22N4	VW3A4606	VW3A4606	VW3A4626	VW3A4 645
ATV71●D30N4	VW3A4607	VW3A4607	VW3A4627	VW3A4 646
ATV71●D37N4	VW3A4607	VW3A4607	VW3A4627	VW3A4 647
ATV71●D45N4	VW3A4608	VW3A4608	VW3A4628	VW3A4 647
ATV71●D55N4	VW3A4608	VW3A4608	VW3A4628	VW3A4 648
ATV71●D75N4	VW3A4609	VW3A4609	VW3A4629	VW3A4 648
ATV71HD90N4, ATV71E5D90N4	VW3A4609	VW3A4609	VW3A4629	VW3A4 649
ATV71HC11N4, ATV71E5C11N4	VW3A4610	VW3A4610	VW3A4630	VW3A4 649
ATV71HC13N4, ATV71E5C13N4	VW3A4611	VW3A4611	VW3A4631	VW3A4 650
ATV71HC16N4, ATV71E5C16N4	VW3A4612	VW3A4612	VW3A4632	VW3A4 650
ATV71HC20N4, HC25N4, ATV71E5C20N4, E5C25N4	VW3A4613	VW3A4613	VW3A4633	VW3A4 651
ATV71HC25N4, ATV71E5C25N4	VW3A4611	VW3A4611	VW3A4631	VW3A4 656
ATV71HC28N4, HC31N4, HC40N4, ATV71E5C28N4, E5C31N4, E5C40N4	VW3A4612	VW3A4612	VW3A4632	VW3A4 650
ATV71HC40N4, ATV71E5C40N4	VW3A4619	VW3A4619	VW3A4639	VW3A4 657
ATV71HC50N4, ATV71E5C50N4	VW3A4612	VW3A4612	VW3A4632	VW3A4 651

● Applies to the following drives: ATV71H...N4, ATV71W...N4

(1) By adding a DC choke, we get: THD \leq 10%

(2) By adding a DC choke, we get: THD \leq 15%

These reduced current harmonics are obtained on condition that the THDu is < 20% and the RSCE > 66%.

Sinusoidal filters

Sinusoidal filters allow Altivar 71 drives to operate with longer motor cables (up to 1000 m).

Type of drive	Three phase	
Supply voltage	200...240 V 50/60 Hz	380...480 V 50/60 Hz
ATV71H037M3...HU15M3 (2)	VW3A5201	-
ATV71HU22M3, HU30M3	VW3A5202	-
ATV71HU40M3... HU75M3	VW3A5203	-
ATV71HD11M3X, HD15M3X	VW3A5204	-
ATV71HD18M3X, HD22M3X	VW3A5205	-
ATV71HD30M3X... HD45M3X	VW3A5206	-
ATV71HD55M3X, HD75M3X	VW3A5208	-
ATV71●075N4...pU40N4, ATV71P075N4Z...PU40N4Z (2)	-	VW3A5201
ATV71●U55N4, ATV71PU55N4Z	-	VW3A5202
ATV71●U75N4...●D15N4, ATV71PU75N4Z	-	VW3A5203
ATV71●D18N4...●D30N4	-	VW3A5204
ATV71●D37N4, ●D45N4	-	VW3A5205
ATV71●D55N4, ●D75N4	-	VW3A5206
ATV71 HD90N4, HC11N4, ATV71E5D90N4, E5C11N4	-	VW3A5207
ATV71 HC13N4, HC16N4, ATV71E5C13N4, E5C16N4	-	VW3A5208
ATV71 HC20N4, ATV71E5C20N4	-	VW3A5209
ATV71 HC25N4, ATV71E5C25N4	Motor P 220 kW	VW3A5209
	Motor P 250 kW	VW3A5210
ATV71 HC28N4, HC31N4, ATV71E5C28N4, E5C31N4	-	VW3A5210
ATV71 HC40N4, ATV71E5C40N4	Motor P 355 kW	VW3A5210
	Motor P 400 kW	VW3A5211
ATV71 HC50N4, ATV71E5C50N4	-	VW3A5211

● Applies to the following drives: ATV71H...N4, ATV71W...N4

(2) For these drive references, it is advisable to use a lower category motor with a sinusoidal filter

Altivar 71

0.37...500 kW

Complex, high-power machines

Output filter options

Motor chokes

Above a certain motor cable length, it is advisable to insert a motor choke between the drive and the motor. This maximum length depends on the drive rating and the type of motor cable.

Type of drive	Max. motor cable length		Three phase	
	Shielded	Unshielded	200...240 V 50/60 Hz	380...480 V 50/60 Hz
ATV71H037M3...HU22M3	150 m	300 m	VW3A5101	-
ATV71HU30M3...HU75M3	200 m	260 m	VW3A5102	-
	300 m	300 m	VW3A5103	-
ATV71HD11M3X...HD22M3X	150 m	300 m	VW3A5103	-
ATV71HD30M3X...HD45M3X	150 m	300 m	VW3A5104	-
ATV71HD55M3X, HD75M3X	150 m	300 m	VW3A5105	-
ATV71●075N4...●U40N4, ATV71P075N4Z...PU40N4Z	75 m	90 m	-	VW3A5101
	85 m	95 m	-	VW3A5102
	160 m	200 m	-	VW3A5103
ATV71●U55N4...●D18N4, ATV71PU55N4Z...PU75N4Z	85 m	95 m	-	VW3A5102
	160 m	200 m	-	VW3A5103
	200 m	300 m	-	VW3A5104
ATV71●D22N4...●D30N4	140 m	170 m	-	VW3A5103
	150 m	300 m	-	VW3A5104 (1)
ATV71●D37N4	97 m	166 m	-	VW3A5103
	200 m	300 m	-	VW3A5104 (1)
ATV71H●45N4...●D75N4	150 m	300 m	-	VW3A5104 (1)
ATV71HD90N4, ATV71E5D90N4	200 m	300 m	-	VW3A5104 (1)
ATV71HC11N4, HC13N4, ATV71E5C11N4, E5C13N4	150 m	250 m	-	VW3A5105 (1)
ATV71HC16N4...HC20N4, ATV71E5C16N4...E5C20N4	250 m	300 m	-	VW3A5106 (1)
ATV71HC25N4, ATV71E5C25N4	Motor P 220 kW	250 m	300 m	-
	Motor P 250 kW	200 m	250 m	-
ATV71HC28N4, HC31N4, ATV71E5C28N4, E5C31N4	200 m	250 m	-	VW3A5107 (1)
ATV71HC40N4, ATV71E5C40N4	Motor P 355 kW	200 m	250 m	-
	Motor P 400 kW	250 m	300 m	-
ATV71HC50N4, ATV71E5C50N4	250 m	300 m	-	VW3A5108 (1)

● Applies to the following drives: ATV71H...N4, ATV71W...N4

(1) 3 single phase chokes are included with the drive

Resistance braking units (integrated in ATV71 drives up to 160 kW)

ATV 71H●●●M3, ATV71H●●●M3X and ATV71H075N4...HC16N4 drives have a built-in braking transistor.
The braking resistor enables the Altivar 71 drive to operate while braking to a standstill or during slowdown braking, by dissipating the braking energy.

Supply voltage	Three phase 380...480 V	
Type of drive	ATV71HC20N4...HC28N4	ATV71HC31N4...HC50N4
Continuous power/Max (kw)	200/420	400/750
Reference	VW3A7101	VW3A7102

Braking resistors

Type of drive Supply voltage	Braking resistor 40 s cycle		Hoisting resistor 40 s cycle	
	200...240 V 50/60 Hz	380...480 V 50/60 Hz	200...240 V 50/60 Hz	380...480 V 50/60 Hz
ATV71H037M3, H075M3	VW3A7701	-	VW3A7801	-
TV71HU15M3, HU22M3	VW3A7702	-	VW3A7802	-
ATV71HU30M3, HU40M3	VW3A7703	-	VW3A7803	-
ATV71HU55M3, HU75M3	VW3A7704	-	VW3A7804	-
ATV71HD11M3X	VW3A7705	-	VW3A7805	-
ATV71HD15M3X	VW3A7706	-	VW3A7806	-
ATV71HD18M3X, HD22M3X	VW3A7707	-	VW3A7807	-
ATV71HD30M3X	VW3A7708	-	VW3A7808	-
ATV71HD37M3X, HD45M3X	VW3A7709	-	VW3A7809	-
ATV71HD55M3X	VW3A7713	-	VW3A7810	-
ATV71HD75M3X	VW3A7714	-	-	-
ATV71●075N4...●U40N4, ATV71P075N4Z...PU40N4Z	-	VW3A7701	-	VW3A7801
ATV71●U55N4, ●U75N4, ATV71PU55N4Z, PU75N4Z	-	VW3A7702	-	VW3A7802
ATV71●D11N4, ●D15N4	-	VW3A7703	-	VW3A7803
ATV71●D18N4...●D30N4	-	VW3A7704	-	VW3A7804
ATV71●D37N4	-	VW3A7705	-	VW3A7805
ATV71●D45N4...●D75N4	-	VW3A7707	-	VW3A7806
ATV71HD90N4, ATV71E5D90N4	-	VW3A7710	-	VW3A7811
ATV71HC11N4, HC13N4, ATV71E5C11N4, E5C13N4	-	VW3A7711	-	VW3A7812
ATV71HC16N4, ATV71E5C16N4	-	VW3A7712	-	VW3A7813
ATV71HC20N4, ATV71E5C20N4	-	VW3A7715	-	VW3A7814
ATV71HC25N4, HC28N4, ATV71E5C25N4, E5C28N4	-	VW3A7716	-	VW3A7815
ATV71HC31N4, HC40N4, ATV71E5C31N4, E5C40N4	-	VW3A7717	-	VW3A7816
ATV71HC50N4, ATV71E5C50N4	-	VW3A7718	-	VW3A7817

● Applies to the following drives: ATV71H...N4, ATV71W...N4

The network braking unit can be used to restore the following to the line supply:

- The energy from the motor
- The energy from the motors controlled by several drives connected on the same DC bus.

Network braking units

Line voltage		400 VAC	460 VAC
Braking power continuous (kw)	7	VW3A7201	-
	13	VW3A7202	-
	11	VW3A7203	-
	-	-	VW3A7231
	21,5	VW3A7204	VW3A7232
	26	VW3A7205	VW3A7233
	32	VW3A7206	VW3A7234
	38	VW3A7207/VW3A7208	VW3A7235/VW3A7236/VW3A7237/VW3A7238
	86	VW3A7209	VW3A7239
	120	VW3A7210	VW3A7240
	135	VW3A7211	-
	200	VW3A7212	-
	240	-	VW3A7241



Multilingual configuration software		For PC
Configuration of drives and starters		Altistart 48, Altivar (except Altivar 21) and TeSys model U
Environment		Microsoft Windows®
Languages		English - French - German - Italian - Spanish
References	PowerSuite CD-ROM	VW3A8104
	PowerSuite update CD-ROM	VW3A8105
	Connection kit for serial port	VW3A8106

Accessories

Multilingual configuration software		Bluetooth® adaptor
Description	Modbus - Bluetooth®	USB - Bluetooth® for PC
References	VW3A8114 (1)	VW3A8115

(1) Can also be used to communicate between a Twido PLC and the TwidoSoft software workshop

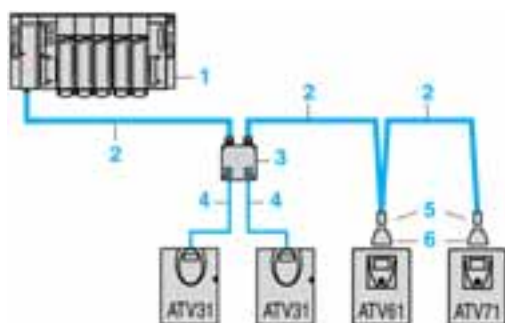
CANopen communication bus: connection accessories



Drives	Tap junction VW3CANTAP2 0.3 m cable	1 m cable	CANopen adaptor	CANopen connector
ATV31 ATV61 and ATV71	2 RJ45 connectors	-	-	-
References	VW3CANCARR03	VW3CANCARR1	VW3CANA71	VW3CANKCDF180T

CANopen cables

References	CANopen LSZH	CANopen UL/IEC332-2	LSZH HD flexible CANopen
L = 50 m	TSXCANCA50	TSXCANCB50	TSXCANCD50
L = 100 m	TSXCANCA100	TSXCANCB100	TSXCANCD100
L = 300 m	TSXCANCA300	TSXCANCB300	TSXCANCD300



- 1 PLC
- 2 CANopen trunk cable TSXCANC●●
- 3 CANopen tap junction VW3CANTAP2
- 4 CANopen drop cable VW3CANCARR●●
- 5 CANopen connector VW3CANKCDF180T
- 6 CANopen adaptor VW3CANA71

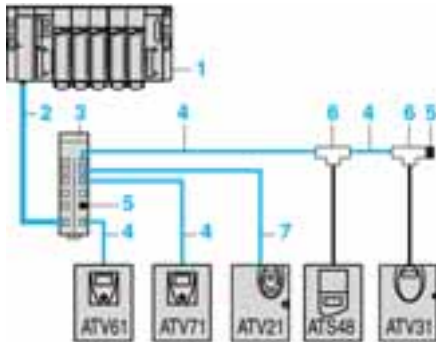
Modbus communication bus: connection accessories



Starters/drivers Altistart 48, Altivar 21, 31, 61, 71	Splitter box	Tap junction	Subscriber socket	Line terminators
Description	10 connectors RJ45 and 1 screw terminal	3 screw terminals line terminator RC	2 SUB-D connectors 15-way female and 2 screw terminals RC line terminator	For connector RJ 45 R = 120 Ω, C = 1 nF For screw terminals R = 120 Ω, C = 1 nF
References	LU9GC3	TSXSCA50	TSXSCA62	VW3A8306RC VW3A8306DRC

Modbus connection

Starters/drivers Altistart 48, Altivar 21, 31, 61, 71	Cables	Double shielded twisted pair cables RS 485	T-junction boxes
Description	2 connectors RJ 45	1 connector RJ45 and one stripped end	Supplied without connector With integrated cable
References	L = 0.3 m L = 1 m L = 3 m L = 100 m L = 200 m L = 500 m	VW3A8306R03 VW3A8306R10 VW3A8306R30 – – –	– – VW3A8306D30 – – –
			– – – – – –
			– – – – – –
			– – – – – –
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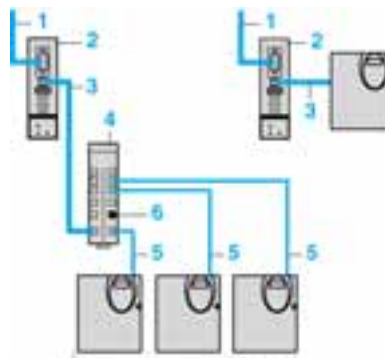


Connection via splitter boxes and RJ 45 connectors

- 1 PLC
- 2 Modbus cable depending on the type of PLC
- 3 Modbus splitter box LU9GC3
- 4 Modbus drop cables VW3A8306R●●
- 5 Line terminators VW3A8306RC
- 6 Modbus T-junction boxes VW3A8306TF●● (with cable)
- 7 Modbus drop cable VW3A58306Rpp



Starters/drives Altistart 48/Altivar 31		Ethernet/Modbus	DeviceNet/Modbus	Fipio/Modbus	ProfibusDP/Modbus	
Parameter setting		-	-	-	Standard configurator	ABC configurator program
References	Bridge	TSXETG100	-	-	-	-
	Gateway	-	LUF9	LUF1	LA9P307	LUF7
Cable references	L = 0.3 m	-	VW3A8306R03	VW3A8306R03	-	VW3A8306R03
	L = 1 m	-	VW3A8306R10	VW3A8306R10	VW3P07306R10	VW3A8306R10
	L = 3 m	VW3A8306D30	VW3A8306R30	VW3A8306R30	-	VW3A8306R30



- 1 To network
- 2 Communication modules
- 3 PLC cables VW3A8 306 Rpp, VW3 P07 306 R10
- 4 Modbus splitter box LU9 GC3
- 5 Modbus drop cables VW3A8 306 Rpp
- 6 Line terminator VW3A8 306 RC

Communication cards and modules

Transparent
Ready

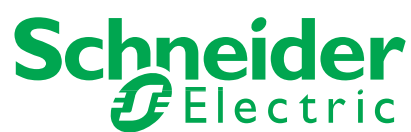


Drives Altivar 61, Altivar 71	Ethernet	Modbus/Uni-Telway	Fipio
Maximum number of drives controlled	–	Uni-Telway: 27 Modbus: 31	62
Transmission speed	10/100 Mbps	4800...19200 bps	1 Mbps
References	VW3A3310	VW3A3303	VW3A3311

Drives Altivar 61, Altivar 71	Modbus Plus	Profibus DP	DeviceNet	INTERBUS
Maximum number of drives controlled	64	126	63	64
Transmission speed	1 Mbps	9600 bps...12 Mbps	125/250/500 Kbps	1 Mbps
References	VW3A3302	VW3A3307	VW3A3309	VW3A3304

Drives Altivar 61	LonWorks	METASYSN2	APOGEE FLN	BACnet
Connector	1 removable 3-way screw terminal	1 removable 4-way screw terminal	1 removable 4-way screw terminal	1 removable 4-way screw terminal
Transmission speed	78 Kbps	–	–	–
References	VW3A3312	VW3A3313	VW3A3314	VW3A3315

For other connection accessories, please consult the "Soft starters and variable speed drives" catalogue.



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