

Variable speed drives Altivar 61 and Altivar 61 Plus

for asynchronous motors from 0.75 to 2400 kW

Catalogue

October 2011





All technical information about products listed in this catalogue are now available on:

www.schneider-electric.com

Browse the “product data sheet” to check out :

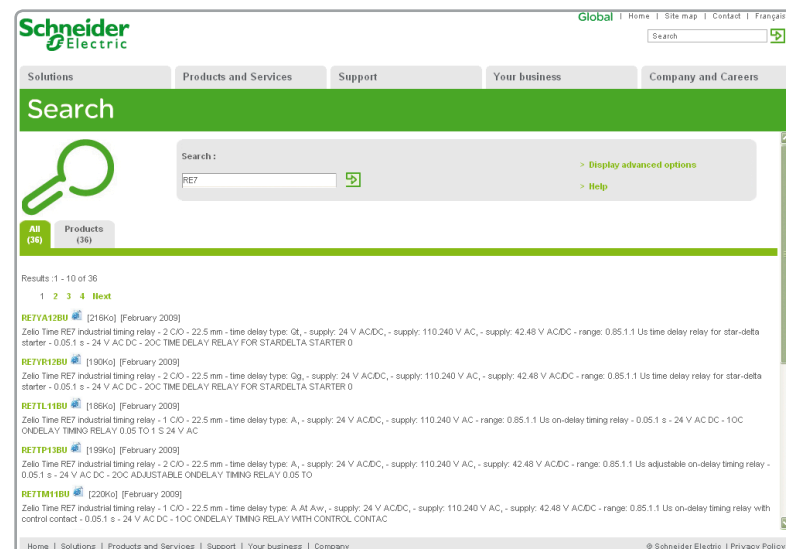
- characteristics,
- dimensions,
- curves, ...
- and also the links to the user guides and the CAD files.

1 From the home page, type the model number* into the “Search” box.



* type the model number without any blank, replace “.” by “*”

2 Under “All” tab, click the model number that interests you.



3 The product data sheet displays.

Example : Zelio Time data sheet

Automation and Control

You are here: Home > Products and Services > Automation and Control > Product offers

Zelio Time-RE 7 / RE 8 / RE 9

Timer relays that are simply ingenious

Overview Downloads Support Register your software **Select Product**

RE7YA12BU

Zelio Time RE7 industrial timing relay - 2 C/O - 22.5 mm - time delay type: Ot - supply: 110...240 V AC, - supply: 42...48 V AC/DC - range: 0.85...1.1 Us

Main	
range of product	Zelio Time
product or component type	Industrial timing relay
discrete output type	relay
width pitch dimension	22.5 mm
contacts type and composition	2 C/O
component name	RE7
contacts material	90/10 silver nickel contacts
time delay type	On
time delay range	0.05 s - 300 h
[Us]rated supply voltage	24 V AC/DC 50/60 Hz 42...48 V AC/DC 50/60 Hz
product weight	0.15 kg
voltage range	0.85...1.1 Us
lighting torque	0.6...1.1 Nm
CAD overall width	22.5 mm
CAD overall height	78 mm
CAD overall depth	80 mm

Discover this product

- Characteristics
- Functions
- Connection
- Dimensions
- Download & Documents

Other products

- Help me to choose
- ### Accessories
- Plug
 - Sockets

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☑ You can get this information in one single pdf file.

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IP 20 or IP 21 variable speed drives for asynchronous and synchronous motors

Type of machine		Simple machines		Pumps and fans (building (HVAC)) (1)	
					
					
Power range for 50...60 Hz (kW) line supply		0.18...4	0.18...15	0.75...75	
Single-phase 100...120 V (kW)		0.18...0.75	–	–	
Single-phase 200...240 V (kW)		0.18...2.2	0.18...2.2	–	
Three-phase 200...230 V (kW)		–	–	–	
Three-phase 200...240 V (kW)		0.18...4	0.18...15	0.75...30	
Three-phase 380...480 V (kW)		–	–	0.75...75	
Three-phase 380...500 V (kW)		–	0.37...15	–	
Three-phase 500...600 V (kW)		–	–	–	
Three-phase 525...600 V (kW)		–	0.75...15	–	
Three-phase 500...690 V (kW)		–	–	–	
Degree of protection		IP 20		IP 21	
Type of cooling		Heatsink			
Drive	Output frequency	0.1...400 Hz	0.1...500 Hz	0.5...200 Hz	
	Type of control	Asynchronous motor	Standard (voltage/frequency) Performance (sensorless flux vector control) Pump/fan (Kn ² quadratic ratio)	Standard (voltage/frequency) Performance (sensorless flux vector control) Energy saving ratio	Sensorless flux vector control Voltage/frequency ratio (2 points) Energy saving ratio
		Synchronous motor	–	–	–
	Transient overtorque	150...170% of the nominal motor torque	170...200% of the nominal motor torque	120% of the nominal motor torque	
Functions		40	50	50	
Number of functions		8	16	7	
Number of preset speeds		1	3	2	
Number of I/O	Analog inputs	4	6	3	
	Logic inputs	1	1	1	
	Analog outputs	1	–	–	
	Logic outputs	1	2	2	
Relay outputs	1	2	2		
Communication	Integrated	Modbus	Modbus and CANopen	Modbus, METASYS N2, APOGEE FLN, BACnet	
	Available as an option	–	CANopen Daisy Chain, DeviceNet, PROFIBUS DP, Modbus TCP, Fipio	LonWORKS	
Cards (available as an option)		–		–	
Dialogue tools		IP 54 or IP 65 remote terminal	IP 54 or IP 65 remote terminal IP 54 remote graphic display terminal	IP 54 or IP 65 remote graphic display terminal	
Configuration tools	Setup software	SoMove		PCSoft for ATV 212	
	Configuration tools	Simple Loader, Multi-Loader		Multi-Loader	
Standards and certifications		IEC 61800-5-1 IEC 61800-3 (environments 1 and 2, categories C1 to C3, cat. C1 with option for ATV 212)		EN 55011: Group 1, class A and class B with option card.	
		CE, UL, CSA, C-Tick, NOM, GOST	CE, UL, CSA, DNV, C-Tick, NOM, GOST	CE, UL, CSA, C-Tick, NOM	
References		ATV 12	ATV 312	ATV 212	
Catalogues		"Altivar 12 variable speed drives"	"Altivar 312 variable speed drives"	"Altivar 212 variable speed drives"	

(1) Heating, Ventilation and Air Conditioning



More technical information on www.schneider-electric.com

**Pumps and fans
(industrial)**



Complex machines



0.37...800

–
0.37...5.5
–
0.75...90
0.75...630
–
2.2...7.5
–
2.2...800

IP 20

Heatsink or water-cooled system

0.1...500 Hz for the entire range
0.1...599 Hz up to 37 kW at 200...240 V ~ and 380...480 V ~
Sensorless flux vector control
Voltage/frequency ratio (2 or 5 points)
Energy saving ratio

Vector control without speed feedback
120% of the nominal motor torque for 60 seconds

> 100
8
2...4
6...20
1...3
0...8
2...4

Modbus and CANopen

Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-LINK, LonWORKS, METASYS N2, APOGEE FLN, BACnet

I/O extension cards, "Controller Inside" programmable card, multi-pump cards, encoder interface cards

IP 54 or IP 65 remote graphic display terminal

SoMove

Simple Loader, Multi-Loader

IEC 61800-5-1
IEC 61800-3 (environments 1 and 2, categories C1 to C3), IEC 61000-4-2/4-3/4-4/4-5/4-6/4-11

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

ATV 61

Page 18

0.37...630

–
0.37...5.5
–
0.37...75
0.75...500
–
1.5...7.5
–
1.5...630

Heatsink, base plate or water-cooled system

0.1...500 Hz for the entire range
0.1...599 Hz up to 37 kW at 200...240 V ~ and 380...480 V ~
Flux vector control with or without sensor
Voltage/frequency ratio (2 or 5 points)
ENA System

Vector control with or without speed feedback
220% of the nominal motor torque for 2 seconds
170% for 60 seconds

> 150
16
2...4
6...20
1...3
0...8
2...4

Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-LINK

Interface cards for incremental, resolver, SinCos, SinCos Hiperface®, EnDat® or SSI encoders, I/O extension cards, Controller Inside programmable card

ATV 71

"Altivar 71 and Altivar 71 Plus variable speed drives"



More technical information on www.schneider-electric.com

IP 54 or IP 55 variable speed drives for asynchronous and synchronous motors

Type of machine		Simple machines	Pumps and fans (building HVAC)) (1)
			
Power range for 50...60 Hz (kW) line supply		0.18...15	0.75...75
Single-phase 200...240 V (kW)		0.18...2.2	–
Three-phase 380...480 V (kW)		–	0.75...75
Three-phase 380...500 V (kW)		0.37...15	–
Degree of protection		IP 55	IP 55
Variants		Enclosure user-definable up to 4 kW: Vario switch disconnecter, LEDs, selector switch, potentiometer	–
Drive	Output frequency	0.1...500 Hz	0.1...200 Hz
	Type of control	Sensorless flux vector control Voltage/frequency ratio	Sensorless flux vector control Voltage/frequency ratio (2 points) Energy saving ratio
		Asynchronous motor	–
		Synchronous motor	–
Transient overtorque		170...200% of the nominal motor torque	120% of the nominal motor torque for 60 seconds
Functions			
Number of functions		50	50
Number of preset speeds		16	7
Number of I/O	Analog inputs	3	2
	Logic inputs	6	3
	Analog outputs	1	1
	Logic outputs	–	–
	Relay outputs	2	2
Communication			
Integrated		Modbus and CANopen	Modbus, METASYS N2, APOGEE FLN, BACnet
Available as an option		Modbus TCP, Fipio, PROFIBUS DP, DeviceNet	LonWorks
Cards (available as an option)		–	–
Dialogue tools		IP 65 remote terminal	IP 54 or IP 65 remote graphic display terminal
Configuration tools	Setup software	SoMove	PCSoft for ATV 212 drive
	Configuration tool	Simple Loader	Multi-Loader
Standards and certifications		IEC 61800-5-1, IEC 61800-3 (environments 1 and 2, categories C1 to C3) CE, UL, CSA, C-Tick, GOST	
References		ATV 31C	ATV 212W
Catalogues		"Altivar 31C variable speed drives" (1) Heating, Ventilation and Air Conditioning	"Altivar 212 variable speed drives"



**Pumps and fans
(industrial)**



0.75...90

–
0.75...90

IP 54

– Equipped with a Vario switch disconnecter

0.1...599 Hz from 0.75 to 45 kW
0.1...500 Hz from 55...90 kW

Sensorless flux vector control
Voltage/frequency ratio (2 or 5 points)
Energy saving ratio

Vector control without speed feedback
110% of the nominal motor torque for 60 seconds

>100

8
2...4
6...20
1...3
0...8
2...4

Modbus and CANopen

Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-LINK, LONWORKS, METASYS N2, APOGEE FLN, BACnet

I/O extension cards, "Controller Inside" programmable card, multi-pump cards, encoder interface cards

IP 54 or IP 65 remote graphic display terminal

SoMove
Simple Loader, Multi-Loader

IEC 61800-5-1, IEC 61800-3 (environments 1 and 2, categories C1 to C3), IEC 61000-4-2/4-3/4-4/4-5/4-6/4-11
CE, UL, CSA, DNV, C-Tick, NOM, GOST

ATV 61W

ATV 61E5

Pages 21 et 22

Complex machines



0.75...75

0.75...75

– Equipped with a Vario switch disconnecter

0.1...599 Hz from 0.75 to 37 kW
0.1...500 Hz from 45 to 75 kW

Sensorless flux vector control
Voltage/frequency ratio (2 or 5 points)
ENA System

Vector control with or without speed feedback
220% of the nominal motor torque for 2 seconds
170% for 60 seconds

>150

16
2...4
6...20
1...3
0...8
2...4

Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-LINK

Interface cards for incremental, resolver, SinCos, SinCos Hiperface®, EnDat® or SSI encoders, I/O extension cards, Controller Inside programmable card

ATV 71W

ATV 71E5

"Altivar 71 and Altivar 71 Plus variable speed drives"



More technical information on www.schneider-electric.com

Variable speed drives Altivar 61 Plus and Altivar 71 Plus

Integrated solutions

Type of machine

Pumps and fans (industrial)



Power range for 50...60 Hz (kW) line supply
Three-phase 380...415 V
Three-phase 500 V
Three-phase 690 V

90...630	90...800	630...2400
90...630	90...630	630...1400
–	90...630	630...1800
–	110...800	800...2400

Main characteristics

With enhanced protection	With enhanced protection and integrated cooling circuit
--------------------------	---

Variants

Ready to use	Standard offer Modular with integrated options User-definable on request
--------------	--

Drive	Output frequency
Type of control	Asynchronous motor
	Synchronous motor
Transient overtorque	

0.1...500 Hz
Sensorless flux vector control Voltage/frequency ratio 2 or 5 points Energy saving ratio
Flux vector control without speed feedback
120% of the nominal motor torque for 60 seconds

Communication	Embedded
	As an option

Modbus and CANopen
Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP V0 and V1, InterBus, CC-LINK LonWorks, METASYS N2, APOGEE FLN, BACnet

Cards (available as an option)

"Controller Inside" programmable card Multi-pump cards

Degree of protection

IP 54 with separate air flows, ATV 61ES5	IP 23 compact version, ATV 61EXC2 IP 54 compact version, ATV 61EXC5 IP 54 with separate air flows, ATV 61EXS5	With integrated air-cooled circuit: IP 23: ATV 61EXA2 IP 54: ATV 61EXA5 With external water-cooled system: IP 55, on request
--	---	---

References

ATV 61 Plus

Catalogues

Page 106



Complex machines
(industrial and infrastructure)



90...500	90...630	500...2000
90...500	90...500	500...1300
–	90...500	500...1500
–	110...630	630...2000
With enhanced protection		With enhanced protection and integrated cooling circuit
Ready to use	Standard offer Modular with integrated options User-definable on request	
0.1...500 Hz		
Flux vector control with or without sensor Voltage/frequency ratio (2 or 5 points) ENA System		
Vector control with or without speed feedback		
220% of the nominal motor torque for 2 seconds 170% of the nominal motor torque for 60 seconds		
Modbus and CANopen		
Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP V0 and V1, InterBus, CC-LINK		
"Controller Inside" programmable card		
IP 54 with separate air flows, ATV 71ES5	IP 23 compact version, ATV 71EXC2 IP 54 compact version, ATV 71EXC5 IP 54 with separate air flows, ATV 71EXS5	IP 23, with integrated air-cooled circuit, ATV 71EXA2 IP 54, with integrated air-cooled circuit, ATV 71EXA5 IP 55, with external water-cooled system (on request)

ATV 71 Plus

"Altivar 71 and Altivar 71 Plus variable speed drives"



More technical information on www.schneider-electric.com



ATV 61HC31N4,
ATV 61HD22M3X, ATV 61HU22N4



PF095485

ATV 61W075N4,
ATV 61W075N4C



PF095305

ATV 61EXS5●●●●●

Presentation

The Altivar 61 drive is a frequency inverter for 0.75 kW to 2400 kW three-phase synchronous and asynchronous motors.

It has been designed for the most common fluid management applications in industrial and commercial buildings and infrastructures.

The Altivar 61 can increase the performance of equipment and reduce operating costs in buildings by optimizing energy consumption whilst improving user comfort.

Environmentally-friendly and energy-saving

The drive is designed to be environmentally-friendly:

- Energy saving with a reduction in energy consumption of 70% for ventilation applications and 50% for pumping applications
- Reduction of fluid losses in distribution networks
- Use of 80% recyclable materials - the Altivar 61 drive conforms to environmental standard ISO 14040 which defines a critical analysis of the product's impact on the environment

An environmental report is available for the Altivar 61 drive on our website www.schneider-electric.com.

Compliance with international standards and certifications

The Altivar 61 drive has been developed to meet the requirements of directives regarding the protection of the environment (RoHS, REACH, WEEE, etc.) as well as those of European Directives to obtain the CE mark.

The entire range is UL, CSA, DNV, C-Tick, NOM and GOST certified and conforms to international standards relating to electrical industrial control equipment IEC/EN 61800-2 and IEC/EN 61800-5-1.

The need for electromagnetic compatibility was taken into account at the outset when designing the drive. The entire range conforms to international standard IEC/EN 61800-3.

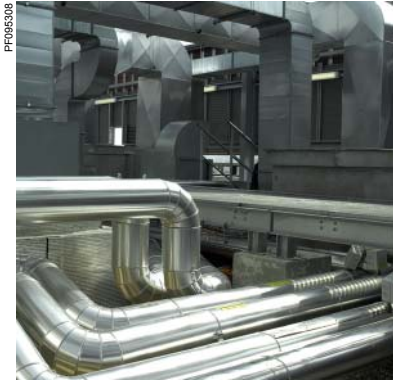
The Altivar 61 drive complies with the requirements of safety standards for applications in explosive atmospheres (ATEX). Please refer to the ATEX guide which is available on our website www.schneider-electric.com.

An extensive range

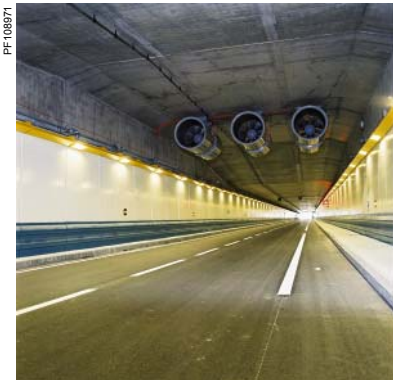
The Altivar 61 range offers numerous variants to meet the requirements of applications in a wide variety of fields and in very harsh environments. With these variants, the Altivar 61 range offers ready-to-use or modular solutions that can adapt perfectly to your needs.

Its numerous and comprehensive options enable it to be adapted and incorporated into electrical installations, sophisticated control systems, infrastructures and building management systems. They also create significant energy savings and reduce line interference.

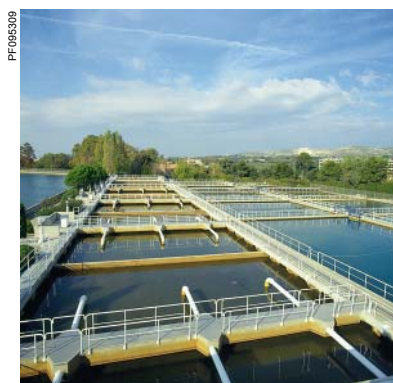
A specific option, the Active Front End, enables the Altivar 61 to be used in installations where particularly low harmonic levels are required. It also allows the Altivar 61 drive to operate on unstable line supplies.



Air treatment application



Air purification application



Water treatment application

A wide range of applications

The Altivar 61 drive incorporates advanced functions for optimum efficiency in the majority of applications in the industrial or commercial buildings sector:

- Ventilation
- Air conditioning
- Air purification, smoke extraction
- Fluid management
- Pumping and booster stations
- Irrigation stations
- Off-shore drilling rigs
- Etc.

Advanced functions

The Altivar 61 drive meets the most stringent requirements due to its numerous integrated application functions, while ensuring the reliability of equipment with its protection and safety functions.

Functions designed specifically for pump and fan applications

- Energy saving ratio, 2 or 5 point quadratic ratio
- Automatic catching a spinning load with speed detection
- Adaptation of current limiting according to speed
- Noise and resonance suppression due to the possibility of adjusting the switching frequency during operation up to 16 kHz depending on the rating and the possibility of making frequency skips
- Preset speeds
- Integrated PID regulator with preset PID references and automatic/manual (Auto/Man.) mode
- Electricity and service hours meter
- Fluid absence detection, zero flow and limited flow detection
- Sleep function, wake-up function
- Customer settings with display of physical measurements (bar, l/s, °C, etc.)

Protection functions

- Motor and drive thermal protection, PTC thermal probe management
- Protection against overloads and overcurrents in continuous operation
- Machine mechanical protection via skip frequency function, output phase rotation
- Protection of the installation by means of underload, overload and zero flow detection
- Protection via management of multiple faults and configurable alarms

Safety functions

■ Machine safety via the integrated Power Removal function
This function stops the motor and prevents accidental restarts; it complies with machine safety standard ISO 1389-1, category 3 and the standard for functional safety IEC/EN 61508, SIL2 capability (safety control-signalling applied to processes and systems).

This safety function means that the drive can be installed as part of the safety system for an Electrical/Electronic/Programmable Electronic control system relating to the safety of a machine or industrial process.

- Installation safety is assured by means of the forced operation function with configurable fault inhibiting, direction of operation and references.

An open-ended offer to adapt to your applications

The Altivar 61 and Altivar 61 Plus offers cover motor power ratings from 0.75 kW to 2400 kW with several types of power supply:

Three-phase power supply	Motor power	Reference
200...240 V	0.75 kW...90 kW	ATV 61H●●●M3 ATV 61H●●●M3X
	380...415 V	55 kW...630 kW 90 kW...630 kW
380...480 V	630 kW...1400 kW	ATV 61EXA●●●●N4
	0.75 kW...630 kW 0.75 kW...90 kW	ATV 61H●●●N4 ATV 61W●●●N4 ATV 61W●●●N4C
500 V	110 kW...630 kW	ATV 61Q●●●N4
	90 kW...630 kW	ATV 61EXS5●●●N ATV 61EXC●●●●N
500...600 V	630 kW...1800 kW	ATV 61EXA●●●●N
	1.5 kW...15 kW	ATV 61H●●●S6X
500...690 V	2.2 kW...800 kW	ATV 61H●●●Y
	110 kW...630 kW	ATV 61Q●●●Y
690 V	110 kW...800 kW	ATV 61EXC●●●●Y ATV 61EXS5●●●Y
	800 kW...2400 kW	ATV 61EXA●●●●Y

Altivar 61 drives with 200...240 V three-phase supply voltage can also be used with motor power ratings from 0.37 kW to 5.5 kW single-phase, if the motor is derated.

Flexibility in control systems and building management systems

The Altivar 61 drive **1** has numerous logic and analog inputs and outputs that can be configured to adapt better to applications. Its functions can be extended by using I/O expansion cards **2** (see page 55).

It includes the Modbus and CANopen protocols as standard to enhance the performance of your control systems. It is open to other control system architectures for industry and integrates easily into building management systems (HVAC) using communication option cards **2** (see page 62).

All communication protocols for use in industry (Modbus TCP, Ethernet/IP, Modbus/Uni-Telway, PROFIBUS DP V0 or V1, DeviceNet, INTERBUS and CC-LINK) or in building management (LonWorks, METASYS N2, APOGEE FLN, BACnet) are available.

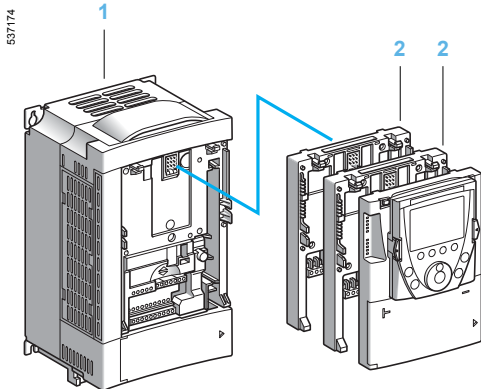
It can be open to a distributed architecture by using a Controller Inside programmable card **2** which allows the drive to be adapted to specific applications, quickly and in an open-ended manner, by decentralizing the control system functions (programming in IEC 61131-3 compliant languages) (see pages 58 to 61).

It can also be used to manage several pumps using multi-pump cards **2** (see pages 56 and 57).

The Controller Inside and multi-pump cards have their own I/O and can manage the drive's I/O as well as those of the I/O expansion cards. They can also use drive parameters such as speed, current, torque, etc.

The Altivar 61 drive can also take an encoder interface card to increase the safety of the application (see page 54).

Note: The Altivar 61 can accommodate a maximum of two option cards simultaneously; please refer to the summary table of possible combinations to find out which options are available for each drive (see pages 42 to 53).



Extended functions using option cards

An open-ended offer to adapt to your applications (continued)

Electromagnetic compatibility (EMC)

The need for electromagnetic compatibility was taken into account at the outset when designing the drive.

The incorporation of EMC filters in **ATV 61H●●●M3**, **ATV 61●●●N4** and **ATV 61●●●Y** drives and the observance of requirements in respect of EMC simplifies installation and provides an economical means of ensuring equipment meets CE marking requirements.

ATV 61W●●●N4C drives have integrated EMC filters, which make them compliant with the requirements of EN 55011 (class B group 1) and IEC/EN 61800-3 (category C1) standards.

ATV 61H●●●M3X, **ATV 61H●●●S6X** and **ATV 61Q●●●●●** drives have been designed without an EMC filter. Filters are available as an option and can be installed by the customer to reduce the level of emissions (see page 86).

A wide range of options

A large number of external options can be combined with the Altivar 61:

- Braking units and resistors (see pages 68 to 71)
- DC chokes, line chokes and passive filters (see pages 72 to 81) and the Active Front End option for reducing current harmonics (see pages 82 to 85)
- Additional EMC input filters for reducing conducted emissions on the line (see pages 86 and 87)
- Motor chokes and sinus filters for long cable runs or to remove the need for shielding (see pages 89 to 93)

Mounting options

The Altivar 61 drive can be mounted in a variety of ways to adapt to the various needs of an installation.

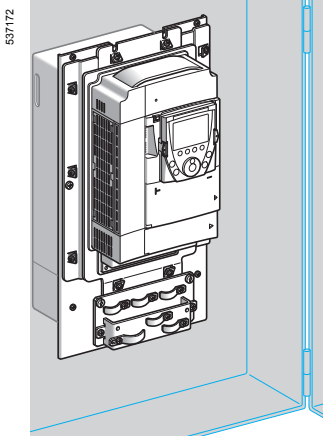
Mounting without an enclosure

The Altivar 61 drive can be mounted directly on a wall without having to be installed inside an enclosure. UL Type 1 conformity can be achieved by using kit **VW3 A9 2●●**, or IP 21 or IP 31 conformity with kit **VW3 A9 1●●** (see pages 28 and 29).

Flush-mounting in dust and damp proof enclosure

The Altivar 61 drive has been designed to reduce the size of enclosures (floor-standing, wall-mounted, etc.).

Flush-mounting kit **VW3 A9 5●●** makes it possible to mount the power section outside the enclosure and limit the temperature rise inside the enclosure (see page 27). This variant also allows side-by-side mounting, if operating conditions require it.



ATV 61HU75N4 flush-mounted



Altivar 61 drive equipped with a Vario switch disconnector

Solutions for all environments

The offer includes numerous variants which make it possible to further broaden the Altivar 61 drive's range of applications. It is designed to meet the requirements of each application as closely as possible, and offers ready-to-use or modular solutions.

Reinforced version variant

This reinforced version variant enables the Altivar 61 drive to be used for applications in difficult ambient pollution conditions (see page 25).

Variant with Vario switch disconnector

IP 54 Altivar 61 drives can be supplied equipped with a Vario switch disconnector. This ready-equipped offer, **ATV 61E5●●●N4**, is specially designed for applications that require an accessible drive as close as possible to the motor (such as in fluid, waste water and air treatment applications).

It covers motor power ratings from 0.75 kW to 90 kW (see page 22).

Variant for medium voltage motors

This variant enables the Altivar 61 drive to be used for applications involving medium voltage motors (see page 26).

Variant for industrial environments and infrastructure

To facilitate set-up in industrial environments and infrastructure contexts (such as tunnels, subways, smoke extraction and pumping), an enclosed drive solution is available, enhanced by a wide range of options.

Altivar 61 Plus drive in IP 23 or IP 54 ready-assembled, compact floor-standing enclosure

This enclosed drive solution (**ATV 61EXC●●●●●**) provides IP 23 or IP 54 protection. It is supplied ready-assembled and ready to connect. A common air circuit provides enclosure ventilation.

In addition to a standard version, a modular version is available with a choice of options to suit the requirements of your installation.

The offer covers a range of drives from 90 kW to 800 kW (see page 116).

Variant for applications requiring a very low harmonic level

Altivar 61 Plus drive with harmonic filtering in "Ready to use" IP 23 or IP 54 floor-standing enclosure

This enclosed product has been designed to offer, in a compact "ready-to-use" version, a range of drives designed to meet the requirements of applications requiring very low harmonic distortion factors (THDI ≤ 5%).

This enclosed drive solution provides, depending on the model, degree of protection IP 23 (**ATV61EXC2●●●N4H**) or IP 54 (**ATV61EXC5●●●N4H**).

In addition to a standard version, a modular version is available with a choice of options to suit the requirements of your installation.

The offer covers a range of drives from 55 kW to 630 kW.



Altivar 61 Plus variant with harmonic filtering in "ready to use" IP 23 or IP 54 floor-standing enclosure



Pre-equipped IP 54 kit



Altivar 61 Plus variant in "ready to use" IP 54 floor-standing enclosure



Altivar 61 Plus variant in an IP 23 or IP 54 enclosure with separate air flows

Solutions for all environments (continued)

Variant for environments requiring greater ruggedness

Water-cooled Altivar 61 drive

With their internal water-cooled system, Altivar 61Q (ATV 61Q●●●N4 and ATV 61Q●●●Y) drives represent the optimum solution for applications in which rugged versions are essential.

The integrated water-cooled system circuit can dissipate heat at its source and hence offers optimum integration of the whole electrical control system. Evacuation of thermal losses by this system also avoids the need to install an expensive air conditioning system.

The Altivar 61Q offer is also perfectly suited to frequent start-up applications.

It covers motor power ratings between 110 kW and 630 kW (see pages 20 and 24).

These variants offer enclosed drive solutions with cooling systems specially designed to allow the Altivar 61 drive to operate in difficult environmental conditions.

Variants for harsh and highly polluted environments

These variants offer enclosed drive solutions with cooling systems specially designed to allow the Altivar 61 drive to operate in difficult environmental conditions.

Pre-equipped IP 54 kit

This straightforward and cost-effective solution, which is available by quoting a single reference, provides you with all the mechanical components you need to create an IP 54 certified floor-standing enclosure (VW3 A9 541...VW3 A9 551) (see page 106).

The cooling systems enable the equipment to be installed in a variety of difficult environments (1 or 3 air circuits, depending on the model). The overall dimensions, reduced to a minimum, allow assembly in extremely confined spaces.

The kit is available for IP 20 Altivar 61 drives from 110 kW to 630 kW (see page 106).

Altivar 61 Plus drive in "ready-to-use" IP 54 floor-standing enclosure

This enclosed drive solution (ATV 61ES5●●●N4) provides IP 54 protection. It is supplied ready-assembled and ready to connect. Optimum enclosure ventilation is ensured by two separate cooling circuits.

The offer covers a range of drives from 90 kW to 630 kW (see page 108).

Altivar 61 Plus drive in IP 23 or IP 54 floor-standing enclosure with separate air flows

These floor-standing enclosures are designed to operate in harsh and highly polluted environments, by using two separate cooling circuits, one for the control section and one for the power section, to optimize enclosure ventilation.

Depending on the model, they provide IP 54 protection (ATV 61EXS5●●●●) and IP 23 or IP 54 (ATV 61EXA●●●●●●).

It includes a standard version, a modular version via the addition of numerous options and a fully customizable version to suit your requirements.

The offer covers a range of drives from 90 kW to 630 kW (ATV 61EXS5●●●●) and 630 kW to 2400 kW (ATV 61EXA●●●●●●) (see page 112).



Dialogue and configuration tools for Altivar 61 drive

Dialogue and configuration tools

Remote graphic display terminal

The Altivar 61 drive 1 is supplied with a remote graphic display terminal 3.

This terminal provides a user-friendly interface with fast and easy access, on-line help screens, text in the user's language (8 languages factory-installed, plus others available via flash memory). It can be customized for the user or the machine. The advanced functions on the display unit allow easy access to the more complex configuration, setup or maintenance functions.

It can be located remotely on an enclosure door with IP 54 or IP 65 degree of protection on IP 20 drives, or built-in on IP 54 drives. See page 35.

SoMove Mobile Software

SoMove Mobile software 2 is particularly suitable for maintenance operations. It can be used to edit the drive parameters from a mobile phone, save configurations, import them from a PC and export them to a PC via a Bluetooth® wireless connection. See page 37.

SoMove setup software

SoMove setup software for PC 4 is used to configure, adjust and debug the Altivar 61 drive with the Oscilloscope function, as well as for drive maintenance, in the same way as for all other Schneider Electric drives and starters.

For presentation, description and references, see page 38.

Simple Loader and Multi-Loader configuration tools

The Simple Loader tool 6 enables the configuration from one powered-up drive to be duplicated on another powered-up drive.

The Multi-Loader tool 5 enables configurations from a PC or drive to be copied and duplicated on another drive; Altivar 61 drives do not need to be powered up. See page 37.

Quick programming tools

With its macro-configurations and its Simply Start menu, the Altivar 61 drive gets applications up and running immediately.

Macro-configuration

The Altivar 61 drive offers quick and easy programming using macro-configurations corresponding to different applications or uses: start-stop, pumping and ventilation, general use, connection to communication networks, PID regulator. Each of these configurations is still fully modifiable.

Simply Start menu

The Simply Start menu can be used to ensure that the application is working correctly, maximize motor performance and ensure motor protection.

The architecture, the hierarchical parameter structure and the direct access functions all serve to make programming quick and easy, even for the more complex functions.

537766

RUN	Term	+50.00Hz	5.4A
1.1 SIMPLY START <input type="checkbox"/>			
Cde 2 fils/3 fils :		Cde 2 fils	
Macro-configuration :	Manutention		
Standard fr. mot :	50Hz IEC		
Puissance nom. mot :	2.2kW		
Tension nom. mot :	400V		
Code	<<	>>	Quick <input type="button" value="v"/>

Simply Start menu

537165

RUN	Term	+50.00Hz	5.4A
1.1 SIMPLY START <input type="checkbox"/>			
Cde 2 fils/3 fils		Cde 2 fils	
Macro-configuration	:	Manutention	
Standard fréq. mot	:	50Hz IEC	
Puissance nom. mot	:	2.2kW	
Tension nom. mot	:	400V	
Code	<<	>>	Quick

Built-in function: fault log

Integrated functions for maintenance, monitoring and diagnostics

The Altivar 61 has numerous built-in maintenance, monitoring and diagnostic functions.

The option of powering the control part separately enables communication to be maintained (monitoring, diagnostics) even if there is no power supply to the power part.

Example of functions:

- Drive test functions with diagnostic screen on the remote graphic display terminal
- I/O maps
- Communication maps for the different ports
- Oscilloscope function that can be viewed using the SoMove setup software
- Management of the drive installed base via microprocessors with flash memory
- Remote use of these functions by connecting the drive to a modem via the Modbus port
- Identification of all the drive's component parts as well as the software versions
- Fault logs with display of the value of up to 16 variables on occurrence of a fault
- Downloading languages to the terminal via flash memory
- Storage of a 5-line, 24-character message in the drive

Documentation on the entire offer

The Altivar 61 range is also described in a DVD-ROM which includes all the Schneider Electric documentation on variable speed drives and soft start/soft stop units.

The DVD-ROM includes:

- Technical documentation (programming manuals, installation manuals, quick reference guides)
- Brochures
- Catalogues

The content of the DVD-ROM is also available on our website www.schneider-electric.com.

Description	Reference	Weight kg
"Description of the Motion & Drives offer" DVD-ROM	VW3 A8 200	0.100

Variable speed drives

Altivar 61

Supply voltage 200...240 V 50/60 Hz

PF-107573



ATV 61H075M3

PF-107574



ATV 61HU22M3Z

PF-107581



ATV 61HD22M3X

IP 20 drives

Motor		Line supply				Altivar 61		Reference	Weight
Power indicated on rating plate (1)	kW	Line current (2)		Apparent power	Maximum prospective line Isc	Maximum continuous current (1)	Max. transient current for 60 s		
		200 V	240 V						
HP		A	A	kVA	kA	A	A	kg	
Single-phase supply voltage: 200...240 V 50/60 Hz									
0.37	0.5	6.9	5.8	1.4	5	3	3.6	ATV 61H075M3	3.000
0.75	1	12	9.9	2.4	5	4.8	5.7	ATV 61HU15M3	3.000
1.5	2	18.2	15.7	3.7	5	8	9.6	ATV 61HU22M3	4.000
2.2	3	25.9	22.1	5.3	5	11	13.2	ATV 61HU30M3	4.000
3	–	25.9	22	5.3	5	13.7	16.4	ATV 61HU40M3 (3)	4.000
4	5	34.9	29.9	7	5	17.5	21	ATV 61HU55M3 (3)	5.500
5.5	7.5	47.3	40.1	9.5	22	27.5	33	ATV 61HU75M3 (3)	7.000

Three-phase supply voltage: 200...240 V 50/60 Hz

0.75	1	6.1	5.3	2.2	5	4.8	5.7	ATV 61H075M3	3.000
1.5	2	11.3	9.6	4	5	8	9.6	ATV 61HU15M3	3.000
2.2	3	15	12.8	5.3	5	11	13.2	ATV 61HU22M3	4.000
3	–	19.3	16.4	6.8	5	13.7	16.4	ATV 61HU30M3	4.000
4	5	25.8	22.9	9.5	5	17.5	21	ATV 61HU40M3	4.000
5.5	7.5	35	30.8	12.8	22	27.5	33	ATV 61HU55M3	5.500
7.5	10	45	39.4	16.4	22	33	39.6	ATV 61HU75M3	7.000
11	15	53.3	45.8	19	22	54	64.8	ATV 61HD11M3X (4)	22.000
15	20	71.7	61.6	25.6	22	66	79.2	ATV 61HD15M3X (4)	22.000
18.5	25	77	69	28.7	22	75	90	ATV 61HD18M3X (4)	30.000
22	30	88	80	33.3	22	88	105.6	ATV 61HD22M3X (4)	30.000
30	40	124	110	45.7	22	120	144	ATV 61HD30M3X (4)	37.000
37	50	141	127	52.8	22	144	172.8	ATV 61HD37M3X (4)	37.000
45	60	167	147	61.1	22	176	211.2	ATV 61HD45M3X (4)	37.000
55	75	200	173	71.9	35	221	265.2	ATV 61HD55M3X (4)	84.000
75	100	271	232	96.4	35	285	342	ATV 61HD75M3X (4)	84.000
90	125	336	288	119.7	35	359	431	ATV 61HD90M3X (4)	106.000

Dimensions (overall)

Drives	W x H x D mm
ATV 61H075M3, HU15M3	130 x 230 x 175
ATV 61HU22M3...HU40M3	155 x 260 x 187
ATV 61HU55M3	175 x 295 x 187
ATV 61HU75M3	210 x 295 x 213
ATV 61HD11M3X, HD15M3X	230 x 400 x 213
ATV 61HD18M3X, HD22M3X	240 x 420 x 236
ATV 61HD30M3X... HD45M3X	320 x 550 x 266
ATV 61HD55M3X, HD75M3X	320 x 920 x 377
ATV 61HD90M3X	360 x 1022 x 377

(1) These values are given for a nominal switching frequency of 12 kHz up to ATV 61HD45M3X or 2.5 kHz for ATV 61HD55M3X...HD90M3X drives for use in continuous operation.

The switching frequency is adjustable from 1...16 kHz up to ATV 61HD45M3X, from 2.5...12 kHz for ATV 61HD55M3X and from 2.5...8 kHz for ATV 61HD75M3X, HD90M3X.

Above 2.5 or 12 kHz, depending on the rating, the drive will reduce the switching frequency automatically in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current, see derating curves on our website www.schneider-electric.com.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

(3) A line choke must be used (see page 75).

(4) Drive supplied without EMC filter. EMC filters are available as an option (see page 87).

Note: Consult the summary tables of possible drive, option and accessory combinations (see pages 42, 43, 52 and 53).

Variable speed drives

Altivar 61

Supply voltage 380...480 V 50/60 Hz

PF107483



ATV 61HU22N4

PF107575



ATV 61HU40N4Z

PF107686



ATV 61HC31N4

IP 20 drives with integrated category C2 or C3 EMC filter

Motor		Line supply				Altivar 61			Reference	Weight
Power indicated on rating plate (1)	HP	Line current (2)		Apparent power	Maximum prospective line Isc	Maximum continuous current (1)		Max. transient current for 60 s		
		380 V	480 V			380 V	380 V (IEC)		460 V (NEC)	
kW	HP	A	A	kVA	kA	A	A		kg	
Three-phase supply voltage: 380...480 V 50/60 Hz										
0.75	1	3.7	3	2.4	5	2.3	2.1	2.7	ATV 61H075N4	3.000
1.5	2	5.8	5.3	3.8	5	4.1	3.4	4.9	ATV 61HU15N4	3.000
2.2	3	8.2	7.1	5.4	5	5.8	4.8	6.9	ATV 61HU22N4	3.000
3	–	10.7	9	7	5	7.8	6.2	9.3	ATV 61HU30N4	4.000
4	5	14.1	11.5	9.3	5	10.5	7.6	12.6	ATV 61HU40N4	4.000
5.5	7.5	20.3	17	13.4	22	14.3	11	17.1	ATV 61HU55N4	5.500
7.5	10	27	22.2	17.8	22	17.6	14	21.1	ATV 61HU75N4	5.500
11	15	36.6	30	24.1	22	27.7	21	33.2	ATV 61HD11N4	7.000
15	20	48	39	31.6	22	33	27	39.6	ATV 61HD15N4	22.000
18.5	25	45.5	37.5	29.9	22	41	34	49.2	ATV 61HD18N4	22.000
22	30	50	42	32.9	22	48	40	57.6	ATV 61HD22N4	30.000
30	40	66	56	43.4	22	66	52	79.2	ATV 61HD30N4	37.000
37	50	84	69	55.3	22	79	65	94.8	ATV 61HD37N4	37.000
45	60	104	85	68.5	22	94	77	112.8	ATV 61HD45N4	44.000
55	75	120	101	79	22	116	96	139.2	ATV 61HD55N4	44.000
75	100	167	137	109.9	22	160	124	192	ATV 61HD75N4	44.000
90	125	166	143	109.3	35	179	179	214.8	ATV 61HD90N4	84.000
110	150	202	168	133	35	215	215	258	ATV 61HC11N4	84.000
132	200	239	224	157.3	35	259	259	310.8	ATV 61HC13N4	106.000
160	250	289	275	190.2	50	314	314	376.8	ATV 61HC16N4	116.000
200	300	357	331	235	50	427	427	512.4	ATV 61HC22N4	163.000
220	350	396	383	260.6	50					
250	400	444	435	292.2	50	481	481	577.2	ATV 61HC25N4	207.000
280	450	494	494	325.1	50	616	616	739.2	ATV 61HC31N4	207.000
315	500	555	544	365.3	50					
355	–	637	597	419.3	50	759	759	910.8	ATV 61HC40N4	320.000
400	600	709	644	466.6	50					
500	700	876	760	576.6	50	941	941	1129.2	ATV 61HC50N4	330.000
560	800	978	858	643.6	50	1188	1188	1425.6	ATV 61HC63N4	435.000
630	900	1091	964	718	50					

Dimensions (overall)

Drives	W x H x D mm
ATV 61H075N4...HU22N4	130 x 230 x 175
ATV 61HU30N4, HU40N4	155 x 260 x 187
ATV 61HU55N4, HU75N4	175 x 295 x 187
ATV 61HD11N4	210 x 295 x 213
ATV 61HD15N4, HD18N4	230 x 400 x 213
ATV 61 HD22N4	240 x 420 x 236
ATV 61HD30N4, HD37N4	240 x 550 x 266
ATV 61HD45N4... HD75N4	320 x 630 x 290
ATV 61HD90N4, HC11N4	320 x 920 x 377
ATV 61HC13N4	360 x 1022 x 377
ATV 61HC16N4	340 x 1190 x 377
ATV 61HC22N4	440 x 1190 x 377
ATV 61HC25N4, HC31N4	595 x 1190 x 377
ATV 61HC40N4, HC50N4	890 x 1390 x 377
ATV 61HC63N4	1120 x 1390 x 377

(1) These values are given for a nominal switching frequency of 12 kHz up to ATV 61HD75N4, 4 kHz for ATV 61HD90N4 or 2.5 kHz for ATV 61HC11N4...HC63N4 drives for use in continuous operation.

The switching frequency is adjustable from 1...16 kHz up to ATV 61HD75N4 and from 2...8 kHz for ATV 61HD90N4...ATV 61HC63N4 drives.

Above 2.5, 4 or 12 kHz, depending on the rating, the drive will reduce the switching frequency automatically in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current, see derating curves on our website www.schneider-electric.com.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

Note: Consult the summary tables of possible drive, option and accessory combinations (see pages 44, 45, 52 and 53).

Variable speed drives

Altivar 61

Supply voltage 380...480 V 50/60 Hz



ATV 61QC11N4

Water-cooled IP 20 drives

Motor		Line supply				Altivar 61			Reference	Weight
Power indicated on rating plate (1)	Line current (2)	Apparent power	Maximum prospective line Isc	380 V 480 V		380 V		Maximum transient current for 60 s		
				380 V (IEC)	460 V (NEC)	A	A		kg	
kW	HP	A	A	kVA	kA	A	A			
Three-phase supply voltage: 380...480 V 50/60 Hz										
110	150	202	168	133	35	215	215	258	ATV 61QC11N4	80.000
132	200	239	224	157.3	35	259	259	310.8	ATV 61QC13N4	80.000
160	250	289	275	190.2	50	314	314	376.8	ATV 61QC16N4	80.000
200	300	357	331	235	50	387	387	464	ATV 61QC20N4	140.000
220	350	396	383	260.6	50	481	481	577.2	ATV 61QC25N4	140.000
250	400	444	435	292.2	50					
280	450	494	494	325.1	50	616	616	739.2	ATV 61QC31N4	140.000
315	500	555	544	365.3	50					
355	–	637	597	419.3	50	759	759	910.8	ATV 61QC40N4	300.000
400	600	709	644	466.6	50					
500	700	876	760	576.6	50	941	941	1129.2	ATV 61QC50N4	300.000
560	800	978	858	643.6	50	1188	1188	1425.6	ATV 61QC63N4	300.000
630	900	1091	964	718	50					
Dimensions (overall)										
Drives									W x H x D mm	
ATV 61QC11N4...QC16N4									330 x 950 x 377	
ATV 61QC20N4...QC31N4									585 x 950 x 377	
ATV 61QC40N4...QC63N4									1110 x 1150 x 377	

(1) These values are given for a nominal switching frequency of 2.5 kHz, for use in continuous operation.

The switching frequency is adjustable from 2.5...8 kHz.

Above 2.5 kHz, the drive will reduce the switching frequency automatically in the event of excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current, see derating curves on our website www.schneider-electric.com.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

Note: Consult the summary tables of possible drive, option and accessory combinations (see pages 44, 45, 52 and 53).

Variable speed drives

Altivar 61

Supply voltage 380...480 V 50/60 Hz

PF107485



ATV 61W075N4

PF107483



ATV 61WD30N4C

Motor		Line supply				Altivar 61			Reference	Weight
		Line current (2)		Apparent power	Maximum prospective line Isc	Maximum continuous current (1)		Max. transient current for 60 s		
kW	HP	380 V	480 V			kVA	kA		380 V (IEC)	460 V (NEC)
		IP 54 drives with integrated category C2 EMC filter								
Three-phase supply voltage: 380...480 V 50/60 Hz										
0.75	1	1.8	1.5	1.2	5	2.3	2.1	2.5	ATV 61W075N4	13.000
1.5	2	3.5	3	2.3	5	4.1	3.4	4.5	ATV 61WU15N4	13.000
2.2	3	5	4.1	3.3	5	5.1	4.8	5.6	ATV 61WU22N4	13.000
3	–	6.7	5.6	4.4	5	7.2	6.2	7.9	ATV 61WU30N4	14.000
4	5	8.8	7.4	5.8	5	9.1	7.6	10	ATV 61WU40N4	16.000
5.5	7.5	11.4	9.2	7.5	22	12	11	13.2	ATV 61WU55N4	16.000
7.5	10	15.8	13.3	10.4	22	16	14	17.6	ATV 61WU75N4	22.000
11	15	21.9	17.8	14.4	22	22.5	21	24.7	ATV 61WD11N4	22.000
15	20	30.5	25.8	20	22	30.5	27	33.5	ATV 61WD15N4	28.000
18.5	25	37.5	32.3	24.7	22	37	34	40.7	ATV 61WD18N4	36.000
22	30	43.6	36.6	28.7	22	43.5	40	47.8	ATV 61WD22N4	36.000
30	40	56.7	46.2	37.3	22	58.5	52	64.3	ATV 61WD30N4	51.000
37	50	69.5	56.8	45.7	22	71.5	65	78.6	ATV 61WD37N4	64.000
45	60	85.1	69.6	56	22	85	77	93.5	ATV 61WD45N4	65.000
55	75	104.8	87	69	35	103	96	113.3	ATV 61WD55N4	92.000
75	100	140.3	113.8	92.3	35	137	124	150.7	ATV 61WD75N4	92.000
90	125	171.8	140.9	113	35	163	156	179.3	ATV 61WD90N4	92.000
IP 54 drives with integrated category C1 EMC filter										
Three-phase supply voltage: 380...480 V 50/60 Hz										
0.75	1	1.8	1.5	1.2	5	2.3	2.1	2.5	ATV 61W075N4C	19.000
1.5	2	3.5	3	2.3	5	4.1	3.4	4.5	ATV 61WU15N4C	19.000
2.2	3	5	4.1	3.3	5	5.1	4.8	5.6	ATV 61WU22N4C	20.000
3	–	6.7	5.6	4.4	5	7.2	6.2	7.9	ATV 61WU30N4C	20.000
4	5	8.8	7.4	5.8	5	9.1	7.6	10	ATV 61WU40N4C	23.000
5.5	7.5	11.4	9.2	7.5	22	12	11	13.2	ATV 61WU55N4C	23.000
7.5	10	15.8	13.3	10.4	22	16	14	17.6	ATV 61WU75N4C	32.000
11	15	21.9	17.8	14.4	22	22.5	21	24.7	ATV 61WD11N4C	32.000
15	20	30.5	25.8	20	22	30.5	27	33.5	ATV 61WD15N4C	40.000
18.5	25	37.5	32.3	24.7	22	37	34	40.7	ATV 61WD18N4C	51.000
22	30	43.6	36.6	28.7	22	43.5	40	47.8	ATV 61WD22N4C	50.000
30	40	56.7	46.2	37.3	22	58.5	52	64.3	ATV 61WD30N4C	68.000
37	50	69.5	56.8	45.7	22	71.5	65	78.6	ATV 61WD37N4C	85.000
45	60	85.1	69.6	56	22	85	77	93.5	ATV 61WD45N4C	85.000
55	75	104.8	87	69	35	103	96	113.3	ATV 61WD55N4C	119.000
75	100	140.3	113.8	92.3	35	137	124	150.7	ATV 61WD75N4C	119.000
90	125	171.8	140.9	113	35	163	156	179.3	ATV 61WD90N4C	119.000
Dimensions (overall)										
Drives									W x H x D mm	
ATV 61W075N4 (C)...WU30N4 (C)									240 x 490 x 272	
ATV 61WU40N4 (C), WU55N4 (C)									240 x 490 x 286	
ATV 61WU75N4 (C), WD11N4 (C)									260 x 525 x 286	
ATV 61WD15N4 (C)									295 x 560 x 315	
ATV 61WD18N4 (C), WD22N4 (C)									315 x 665 x 315	
ATV 61WD30N4 (C)									285 x 720 x 315	
ATV 61WD37N4 (C), WD45N4 (C)									285 x 880 x 343	
ATV 61WD55N4 (C)...WD90N4 (C)									362 x 1000 x 364	

(1) These values are given for a nominal switching frequency of 8 kHz up to ATV 61WD15N4 or ATV 61WD15N4C, or 4 kHz for ATV 61WD18N4...WD90N4 or ATV 61WD18N4C...WD90N4C for use in continuous operation.

The switching frequency is adjustable from 2...16 kHz for all ratings.

Above 4 or 8 kHz, depending on the rating, the drive will reduce the switching frequency automatically in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current, see derating curves on our website www.schneider-electric.com.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

Note: Consult the summary tables of possible drive, option and accessory combinations (see pages pages 46, 47, 52 and 53).

PF095313



ATV 61E5D11N4

IP 54 drives with integrated Vario switch disconnecter and category C2 EMC filter

Three-phase supply voltage: 380...480 V 50/60 Hz

Motor		Line supply				Altivar 61			Reference	Weight
Power indicated on rating plate (1)		Line current (2)		Apparent power	Maximum prospective line Isc	Maximum continuous current In (1)		Maximum transient current for 60 s		
kW	HP	380 V	480 V	380 V	kA	380 V	460 V			
		A	A	kVA	kA	A	A	A	kg	
0.75	1	1.8	1.5	1.2	5	2.3	2.1	2.5	ATV 61E5075N4	16.400
1.5	2	3.5	3	2.3	5	4.1	3.4	4.5	ATV 61E5U15N4	16.400
2.2	3	5	4.1	3.3	5	5.1	4.8	5.6	ATV 61E5U22N4	16.400
3	–	6.7	5.6	4.4	5	7.2	6.2	7.9	ATV 61E5U30N4	16.400
4	5	8.8	7.4	5.8	5	9.1	7.6	10	ATV 61E5U40N4	18.400
5.5	7.5	11.4	9.2	7.5	22	12	11	13.2	ATV 61E5U55N4	18.400
7.5	10	15.8	13.3	10.4	22	16	14	17.6	ATV 61E5U75N4	22.700
11	15	21.9	17.8	14.4	22	22.5	21	24.7	ATV 61E5D11N4	22.700
15	20	30.5	25.8	20	22	30.5	27	33.5	ATV 61E5D15N4	36.700
18.5	25	37.5	32.3	24.7	22	37	34	40.7	ATV 61E5D18N4	45.400
22	30	43.6	36.6	28.7	22	43.5	40	47.8	ATV 61E5D22N4	45.400
30	40	56.7	46.2	37.3	22	58.5	52	64.3	ATV 61E5D30N4	52.800
37	50	69.5	56.8	45.7	22	71.5	65	78.6	ATV 61E5D37N4	65.800
45	60	85.1	69.6	56	22	85	77	93.5	ATV 61E5D45N4	65.800
55	75	104.8	87	69	35	103	96	113.3	ATV 61E5D55N4	84.400
75	100	140.3	113.8	92.3	35	137	124	150.7	ATV 61E5D75N4	84.400
90	125	171.8	140.9	113	35	163	156	179.3	ATV 61E5D90N4	84.400

Dimensions (overall)

Drives

W x H x D

ATV 61E5075N4...U30N4	240 x 490 x 296
ATV 61E5U40N4, U55N4	240 x 490 x 310
ATV 61E5U75N4, D11N4	260 x 525 x 310
ATV 61E5D15N4	295 x 560 x 339
ATV 61E5D18N4, D22N4	315 x 665 x 340
ATV 61E5D30N4	285 x 720 x 335
ATV 61E5D37N4, D45N4	285 x 880 x 383
ATV 61E5D55N4...D90N4	362 x 1000 x 404

(1) These values are given for a nominal switching frequency of 8 kHz up to ATV 61E5D15N4 or 4 kHz for ATV 61E5D18N4...E5D90N4 drives for use in continuous operation.

The switching frequency is adjustable from 2...16 kHz for all ratings.

Above 4 or 8 kHz, depending on the rating, the drive will reduce the switching frequency automatically in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current, see derating curves on our website www.schneider-electric.com.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

Variable speed drives

Altivar 61

Supply voltage 500...690 V 50/60 Hz

PF107591



ATV 61HU30S6X

IP 20 drives								
Motor		Line supply			Altivar 61		Reference	Weight
Power indicated on rating plate (1)		Line current (2)		Maximum prospective line Isc	Maximum continuous current (1) (3)			
500 V	575 V	500 V 600 V				500 V 575 V		
kW	HP	A	A	kA		A	A	kg
Three-phase supply voltage: 500...600 V 50/60 Hz								
2.2	3	7.6	6.7	22		4.5	3.9	ATV61HU22S6X 7.500
3	–	9.9	10	22		5.8	–	ATV61HU30S6X 7.500
4	5	12.5	10.9	22		7.5	6.1	ATV61HU40S6X 7.500
5.5	7.5	16.4	14.2	22		10	9	ATV61HU55S6X 7.500
7.5	10	21.4	18.4	22		13.5	11	ATV61HU75S6X 7.500

PF107583



ATV 61HD45Y

IP 20 drives with integrated category C3 EMC filter										
Three-phase supply voltage: 500...690 V 50/60 Hz										
Motor			Line supply				Altivar 61		Reference (4)	Weight
Power indicated on rating plate (1)			Line current (2)			Maximum prospective line Isc	Maximum continuous current (1) (3)			
500 V	575 V	690 V	500 V 600 V 690 V				500 V 575 V 690 V			
kW	HP	kW	A	A	A	kA	A	A	A	kg
2.2	3	3	5.2	4.4	5.2	22	4.5	3.9	4.5	ATV 61HU30Y 30.000
3	–	4	6.8	–	6.6	22	5.8	–	5.5	ATV 61HU40Y 30.000
4	5	5.5	8.6	7.2	8.6	22	7.5	6.1	7.5	ATV 61HU55Y 30.000
5.5	7.5	7.5	11.2	9.5	11.2	22	10	9	10	ATV 61HU75Y 30.000
7.5	10	11	14.6	12.3	15.5	22	13.5	11	13.5	ATV 61HD11Y 30.000
11	15	15	19.8	16.7	20.2	22	18.5	17	18.5	ATV 61HD15Y 30.000
15	20	18.5	24.6	20.7	24	22	24	22	24	ATV 61HD18Y 30.000
18.5	25	22	29	24	27	22	29	27	27	ATV 61HD22Y 30.000
22	30	30	33	28	34	22	35	32	35	ATV 61HD30Y 30.000
30	40	37	48	41	47	22	47	41	43	ATV 61HD37Y 68.000
37	50	45	62	51	55	22	59	52	54	ATV 61HD45Y 68.000
45	60	55	68	57	63	22	68	62	62	ATV 61HD55Y 68.000
55	75	75	79	67.0	82	22	85	77	84	ATV 61HD75Y 68.000
75	100	90	109	92	101	22	110	99	104	ATV 61HD90Y 68.000
90	125	110	128	113	117	22	136	125	125	ATV 61HC11Y (4) 102.000
110	150	132	153	133	137	28	165	144	150	ATV 61HC13Y (4) 102.000
132	–	160	182	158.9	163	28	200	–	180	ATV 61HC16Y (4) 102.000
160	200	200	218	197	199	35	240	192	220	ATV 61HC20Y (4) 102.000
200	250	250	277	250	257	35	312	242	290	ATV 61HC25Y (4) 181.000
250	350	315	342	311	317	35	390	336	355	ATV 61HC31Y (4) 181.000
315	450	400	426	390	394	35	462	412	420	ATV 61HC40Y (4) 181.000
400	550	500	547	494	505	35	590	528	543	ATV 61HC50Y (4) 383.000
500	700	630	673	613	616	42	740	672	675	ATV 61HC63Y (4) 383.000
630	800	800	847	771	775	42	900	768	840	ATV 61HC80Y (4) 383.000

PF107586



ATV 61HC31Y
+
VW3 A4 572 (line choke mandatory) (4)

PF107532



Dimensions (overall)	
Drives	W x H x D mm
ATV 61HU22S6X...HU75S6X	210 x 295 x 213
ATV 61HU30Y...HD30Y	240 x 420 x 236
ATV 61HD37Y...HD90Y	320 x 630 x 290
ATV 61HC11Y...HC20Y	340 x 1190 x 377
ATV 61HC25Y...HC40Y	595 x 1190 x 377
ATV 61HC50Y...HC80Y	1120 x 1390 x 377

(1) These values are given for a nominal switching frequency of 4 kHz for ATV 61HU●●S6X and for ATV 61HU30Y...HD30Y or 2.5 kHz for ATV 61HD37Y...HC80Y for use in continuous operation.

The switching frequency is adjustable from 2.5...6 kHz for ATV 61HU●●S6X and for ATV 61HU30Y...HD30Y and from 2.5...4.9 kHz for ATV 61HD37Y...HC80Y drives.

Above 2.5 kHz or 4 kHz, depending on the rating, the drive will reduce the switching frequency automatically in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current, see derating curves on our website www.schneider-electric.com.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

(3) The maximum transient current for 60 seconds is equal to 120% of the maximum continuous current.

(4) Line choke mandatory for ATV 61HC11Y...HC80Y drives, unless a special transformer is used (12-pulse) or when using the "387" variant for medium voltage motors (see page 26). The line choke must be ordered separately (see page 76).

Note: Consult the summary tables of possible drive, option and accessory combinations (see pages 48 to 53).

Variable speed drives

Altivar 61

Supply voltage 500...690 V 50/60 Hz



ATV 61QC13Y

Water-cooled IP 20 drives

Three-phase supply voltage: 500...690 V 50/60 Hz

Motor			Line supply				Altivar 61			Reference (4)	Weight
Power indicated on rating plate (1)			Line current (2)			Maximum prospective line Isc	Maximum continuous current (1) (3)				
500 V	575 V	690 V	500 V 600 V 690 V			kA	500 V 575 V 690 V			kg	
kW	HP	kW	A	A	A		A	A	A		
110	150	132	153	133	137	28	165	144	150	ATV 61QC13Y	80.000
132	—	160	182	158.9	163	28	200	—	180	ATV 61QC16Y	80.000
160	200	200	218	197	199	35	240	192	220	ATV 61QC20Y	80.000
200	250	250	277	250	257	35	312	242	290	ATV 61QC25Y	140.000
250	350	315	342	311	317	35	390	336	355	ATV 61QC31Y	140.000
315	450	400	426	390	394	35	462	412	420	ATV 61QC40Y	140.000
400	550	500	547	494	505	35	590	528	543	ATV 61QC50Y	300.000
500	700	630	673	613	616	42	740	672	675	ATV 61QC63Y	300.000
630	800	800	847	771	775	42	900	768	840	ATV 61QC80Y	300.000

Dimensions (overall)

Drives	I x H x P mm
ATV 61QC13Y...QC20Y	330 x 950 x 377
ATV 61QC25Y...QC40Y	585 x 950 x 377
ATV 61QC50Y...QC80Y	1110 x 1150 x 377

(1) These values are given for a nominal switching frequency of 2.5 kHz, for use in continuous operation.

The switching frequency is adjustable from 2.5...8 kHz.

Above 2.5 kHz, the drive will reduce the switching frequency automatically in the event of excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current, see derating curves on our website www.schneider-electric.com.

(2) Typical value for the indicated motor power and for the maximum prospective line Isc.

(3) The maximum transient current for 60 seconds is equal to 120% of the maximum continuous current.

(4) A line choke must be used (see page 76).

Note: Consult the summary tables of possible drives, options and accessories (see pages 50 to 53).

Variable speed drive with additional power supply

When the power consumption table does not exceed 200 mA, ATV 61W●●●N4 drives can be supplied with an additional 24 V $\overline{\text{---}}$ power supply, which allows additional consumption of 250 mA.

In this case, add **A24** at the end of the reference. For example: ATV 61W075N4 becomes **ATV 61W075N4A24**.

Variable speed drive in a reinforced version

This variant enables variable speed drives to operate in difficult ambient pollution conditions and complies with standard IEC60721-3-3 class 3C2.

ATV 61HD55M3X...HD90M3X, ATV 61HD90N4...HC63N4, ATV 61H●●●Y and ATV 61W●●●N4A24 drives are supplied as standard in a reinforced version.

To order ATV 61H075M3...HU75M3 and ATV 61H075N4...HD75N4 variable speed drives in a reinforced version, add **S337** at the end of the reference.
For example: ATV 61H075M3 becomes **ATV 61H075M3S337**.

To order ATV 61HD11M3X...HD45M3X drives in a reinforced version, add **337** at the end of the reference.
For example: ATV 61HD11M3X becomes **ATV 61HD11M3X337**.

In the reinforced version, the variable speed drive is supplied with a remote graphic display terminal.

Variable speed drive with integrated terminal

All drives come with a remote graphic display terminal and an integrated terminal as standard.

ATV 61H075M3...HD45M3X and ATV 61H075N4...HD75N4 drives can be ordered without a remote graphic display terminal. They will then have the integrated terminal only.

In this case, add **Z** at the end of the reference.
For example: ATV 61H075M3 becomes **ATV 61H075M3Z**.

Variable speed drive without DC choke

ATV 61HD90N4...HC63N4 drives are supplied with a DC choke as standard.

They can be ordered without a DC choke for connections to the DC bus or when using a line choke (see page 75), by adding **D** at the end of the reference.
For example: ATV 61HD90N4 becomes **ATV 61HD90N4D**.

Variable speed drive with EMC plate conforming to NEMA type 12 standard

ATV 61W●●●N4 drives are supplied as standard with a European version EMC plate.

To order drives with an EMC plate conforming to NEMA type 12 standard, add **U** at the end of the reference. This plate is supplied without a drill hole.
For example: ATV 61W075N4 becomes **ATV 61W075N4U**.

Note:

- ATV 61H075M3...HD45M3X, ATV 61H075N4...HD75N4, ATV 61H●●●S6X, ATV 61W●●●N4C and ATV 61HU30Y...HD90Y drives are supplied as standard with a European version plate for EMC mounting

- ATV 61HD55M3X...HD90M3X, ATV 61HD90N4...HC63N4 and ATV 61HC11Y...HC80Y drives are supplied as standard without a plate for EMC mounting. Depending on the reference, the European version EMC plate is included in the UL Type 1 or IP 31 kit (see pages 28 and 29).

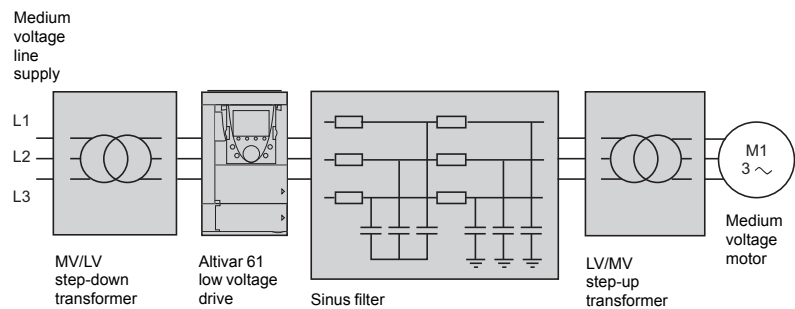
Low voltage drive for medium voltage motors

This variant is an optimized solution for a medium voltage installation since it allows a low voltage drive to be used to control a medium voltage motor, thus offering a significant reduction in costs.

Debugging and maintenance are also simpler and therefore less expensive.

This variant is particularly suitable for pump and fan installations requiring low starting torque and/or long cable runs, such as submersible pumps, etc.

The drive is supplied by a medium voltage/low voltage step-down transformer and controls the motor via a sinus filter and a low voltage/medium voltage step-up transformer.



This variant allows use of a low voltage drive covering motor ratings from 110 kW to 800 kW for a medium voltage line supply between 700 V and 6600 V.

To order ATV 61HC11N4D...HC63N4D and ATV 61HC11Y...HC80Y drives in this variant, add **387** at the end of the reference.

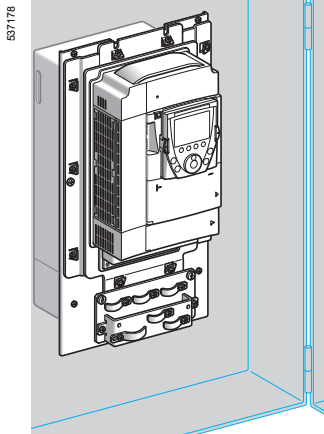
For example: ATV 61HC11N4D becomes **ATV 61HC11N4D387**.

The sinus filter must be ordered separately (see page 93) by adding **S387** at the end of the reference.

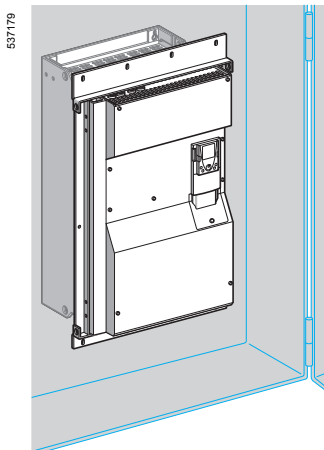
For example: VW3 A5 207 becomes **VW3 A5 207S387**.

For sinus filters used with ATV 61H●●●Y variable speed drives, please contact our Customer Care Centre.

To determine the size of the drive and the step-up/step-down transformers, please contact our Customer Care Centre.



ATV 61HU75N4 flush-mounted



ATV 61HC31N4D flush-mounted

Kit for flush-mounting in a dust and damp proof enclosure (for ATV 61H●●●● drives)

This kit is used to mount the power section of the drive outside the enclosure. This solution considerably reduces dissipated losses in the enclosure (1).

It is available for ATV 61H●●●M3, ATV 61H●●●M3X, ATV 61H075N4...HC31N4, ATV 61H●●●S6X, ATV 61HD90N4D...HC31N4D and ATV 61HU30Y...HC40Y drives.

With this type of mounting, the maximum internal temperature in the enclosure can then reach 60°C without it being necessary to derate the drive current. Between 50°C and 60°C, a control card fan kit must be used for ATV 61HD22N4...HD75N4 and ATV 61HU30Y...HD90Y drives to prevent hot spots (see page 32).

The back of the enclosure must be drilled and cut out for this type of mounting.

The kit comprises:

- A metal frame of the right size for the drive rating
- Corner pieces
- Seals
- A fan support (this is used to re-position the fans so that they can be accessed from the front of the enclosure)
- Fixing accessories
- A manual

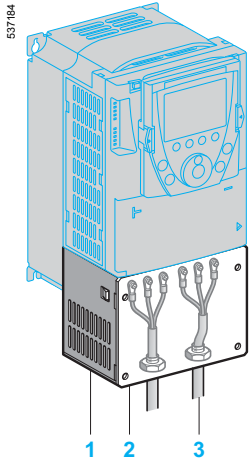
References

For drives	Reference	Weight kg
ATV 61H075M3, HU15M3 ATV 61H075N4...HU22N4	VW3 A9 501	2.700
ATV 61HU22M3...HU40M3 ATV 61HU30N4, HU40N4	VW3 A9 502	3.100
ATV 61HU55M3 ATV 61HU55N4, HU75N4	VW3 A9 503	3.700
ATV 61HU75M3 ATV 61HD11N4 ATV 61HU22S6X...HU75S6X	VW3 A9 504	4.600
ATV 61HD11M3X, HD15M3X ATV 61HD15N4, HD18N4	VW3 A9 505	4.900
ATV 61HD18M3X, HD22M3X ATV 61HD22N4 ATV 61HU30Y...HD30Y	VW3 A9 506	3.900
ATV 61HD30N4, HD37N4	VW3 A9 507	4.200
ATV 61HD30M3X... HD45M3X	VW3 A9 508	4.900
ATV 61HD45N4... HD75N4 ATV 61HD37Y...HD90Y	VW3 A9 509	5.200
ATV 61HD55M3X, HD75M3X ATV 61HD90N4, HC11N4 (2) ATV 61HD90N4D, HC11N4D	VW3 A9 510	5.100
ATV 61HD90M3X ATV 61HC13N4 (2) ATV 61HC13N4D	VW3 A9 511	3.600
ATV 61HC16N4 (2) ATV 61HC16N4D ATV 61HC11Y...HC20Y (3)	VW3 A9 512	4.300
ATV 61HC22N4 (2) ATV 61HC22N4D	VW3 A9 513	4.700
ATV 61HC25N4, HC31N4 (2)	Without braking unit VW3 A9 514	4.700
ATV 61HC25N4D, HC31N4D ATV 61HC25Y...HC40Y (3)	With braking unit VW3 A9 515	4.700

(1) Power dissipated in the enclosure for dust and damp proof flush-mounting: please consult our website www.schneider-electric.com.

(2) Drives supplied as standard with a DC choke: when mounting, cut out and drill the enclosure for the choke.

(3) Drives supplied as standard with a transformer for the fan: when mounting, cut out and drill the enclosure for the transformer.



Kit for UL Type 1 conformity (mounting outside the enclosure)

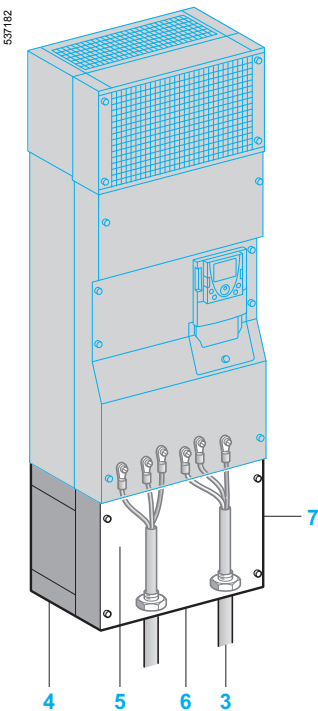
When the drive is mounted directly on a wall outside the enclosure, this kit can be used to ensure UL Type 1 conformity when connecting the cables with a tube. The shielding is connected inside the kit.

For ATV 61H●●●M3, ATV 61HD11M3X...HD45M3X, ATV 61H075N4...HD75N4, ATV 61H●●●S6X and ATV 61HU30Y...HD90Y drives, the kit comprises:

- All the mechanical parts **1** including a pre-cut plate **2** for connecting the tubes **3**
- Fixing accessories
- A manual

For ATV 61HD55M3X...HD90M3X, ATV 61HD90N4...HC31N4, ATV 61HD90N4D...HC31N4D and ATV 61HC11Y...HC40Y drives, the kit comprises:

- An IP 54 casing **4** used to maintain the IP 54 degree of protection for the power section
- An EMC plate **5**
- A UL Type 1 cover **7**
- A pre-drilled plate **6** for connecting the tubes **3**
- Fixing accessories
- A manual



UL Type 1 conformity kits

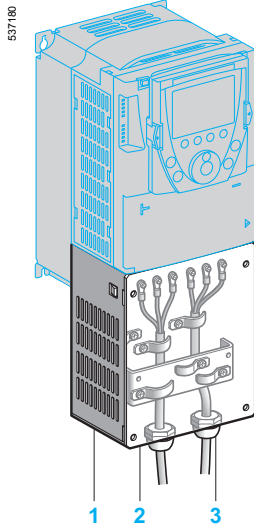
References

For drives	Reference	Weight kg
ATV 61H075M3, HU15M3 ATV 61H075N4...HU22N4	VW3 A9 201	1.300
ATV 61HU22M3...HU40M3 ATV 61HU30N4, HU40N4	VW3 A9 202	1.500
ATV 61HU55M3 ATV 61HU55N4, HU75N4	VW3 A9 203	1.800
ATV 61HU75M3 ATV 61HD11N4 ATV 61HU22S6X...U75S6X	VW3 A9 204	2.000
ATV 61HD11M3X, HD15M3X ATV 61HD15N4, HD18N4	VW3 A9 205	2.800
ATV 61HD18M3X, HD22M3X ATV 61HD22N4 ATV 61HU30Y...HD30Y	VW3 A9 206	4.000
ATV 61HD30N4, HD37N4	VW3 A9 207	5.000
ATV 61HD30M3X... HD45M3X	VW3 A9 217	7.000
ATV 61HD45N4... HD75N4 ATV 61HD37Y...HD90Y	VW3 A9 208	7.000
ATV 61HD55M3X, HD75M3X ATV 61HD90N4, HC11N4 (1) ATV 61HD90N4D, HC11N4D (2)	VW3 A9 209	9.400
ATV 61HD90M3X ATV 61HC13N4 (1) ATV 61HC13N4D (2)	VW3 A9 210	11.800
ATV 61HC16N4 (1) ATV 61HC16N4D (2) ATV 61HC11Y...HC20Y (3)	VW3 A9 211	11.600
ATV 61HC22N4 (1) ATV 61HC22N4D (2)	VW3 A9 212	14.600
ATV 61HC25N4, HC31N4 (1) Without braking unit ATV 61HC25N4, HC31N4D (2) With braking unit ATV 61HC25Y...HC40Y (3)	VW3 A9 213 VW3 A9 214	19.500 19.500

(1) Drives supplied as standard with a DC choke.

(2) Drives supplied as standard without DC choke.

(3) Drives supplied as standard with a transformer for the fan.



IP 21 conformity kit

Kit for IP 21 or IP 31 conformity (mounting outside the enclosure)

When the drive is mounted directly on a wall outside the enclosure, this kit can be used to ensure IP 21 or IP 31 degree of protection when connecting the cables with a cable gland.

The shielding is connected inside the kit.

For ATV 61H●●●M3, ATV 61HD11M3X...HD45M3X, ATV 61H075N4...HD75N4, ATV 61H●●●S6X and ATV 61HU30Y...HD90Y drives, the kit conforms to IP 21 degree of protection.

The kit comprises:

- All the mechanical parts 1 including a drilled plate 2 for attaching the cable glands 3
- Fixing accessories
- A manual

For ATV 61HD55M3X...HD90M3X, ATV 61HD90N4...HC63N4, ATV 61HD90N4D...HC63N4D and ATV 61HC11Y...HC80Y drives, the kit conforms to IP 31 degree of protection.

The kit comprises:

- An IP 54 casing 4 used to maintain the IP 54 degree of protection for the power section
- An EMC plate with cable clips 5
- An IP 31 cover 6
- Fixing accessories
- A manual

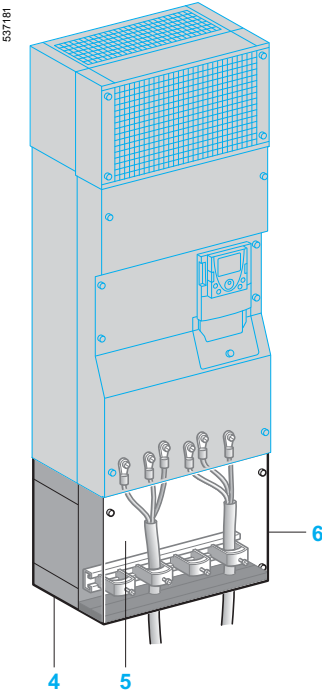
References

For drives	Degree of protection	Reference	Weight kg
ATV 61H075M3, HU15M3 ATV 61H075N4...HU22N4	IP 21	VW3 A9 101	1.300
ATV 61HU22M3...HU40M3 ATV 61HU30N4, HU40N4	IP 21	VW3 A9 102	1.500
ATV 61HU55M3 ATV 61HU55N4, HU75N4	IP 21	VW3 A9 103	1.800
ATV 61HU75M3 ATV 61HD11N4 ATV 61HU22S6X...ATV 61HU75S6X	IP 21	VW3 A9 104	2.000
ATV 61HD11M3X, HD15M3X ATV 61HD15N4, HD18N4	IP 21	VW3 A9 105	2.800
ATV 61HD18M3X, HD22M3X ATV 61HD22N4 ATV 61HU30Y...HD30Y	IP 21	VW3 A9 106	4.000
ATV 61HD30N4, HD37N4	IP 21	VW3 A9 107	5.000
ATV 61HD30M3X... HD45M3X	IP 21	VW3 A9 117	7.000
ATV 61HD45N4... HD75N4 ATV 61HD37Y...HD90Y	IP 21	VW3 A9 108	7.000
ATV 61HD55M3X, HD75M3X ATV 61HD90N4, HC11N4 (1) ATV 61HD90N4D, HC11N4D (2)	IP 31	VW3 A9 109	9.400
ATV 61HD90M3X ATV 61HC13N4 (1) ATV 61HC13N4D (2)	IP 31	VW3 A9 110	11.800
ATV 61HC16N4 (1) ATV 61HC16N4D (2) ATV 61HC11Y...HC20Y (3)	IP 31	VW3 A9 111	11.600
ATV 61HC22N4 (1) ATV 61HC22N4D (2)	IP 31	VW3 A9 112	14.600
ATV 61HC25N4, HC31N4 (1) ATV 61HC25N4, HC31N4D (2) ATV 61HC25Y...HC40Y (3)	Without braking unit IP 31 With braking unit IP 31	VW3 A9 113 VW3 A9 114	19.500 19.500
ATV 61HC40N4, HC50N4 (1) ATV 61HC40N4D, HC50N4D (2)	IP 31	VW3 A9 115	25.000
ATV 61HC63N4 (1) ATV 61HC63N4D (2) ATV 61HC50Y...HC80Y (3)	IP 31	VW3 A9 116	35.000

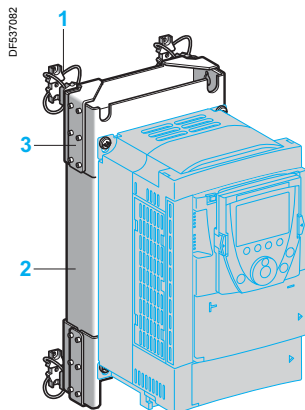
(1) Drives supplied as standard with a DC choke.

(2) Drives supplied as standard without DC choke.

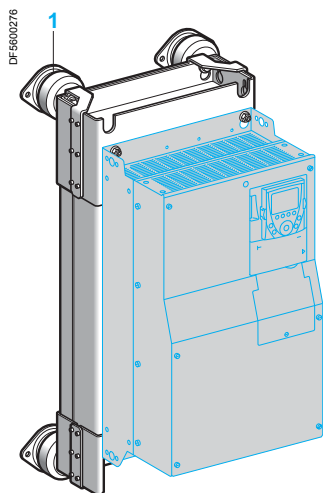
(3) Drives supplied as standard with a transformer for the fan.



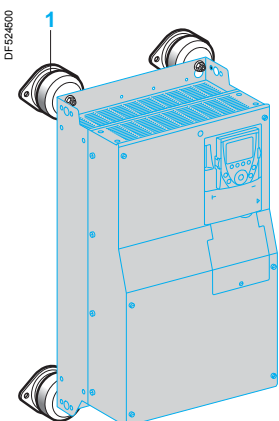
IP 31 conformity kit



ATV 61HD11M3X drive
mounted on DNV kit VW3 A9 625



ATV 61HD45N4 drive
mounted on DNV kit VW3 A9 628



ATV 61H...Y drive
mounted on DNV kit VW3 A9 64

DNV kit

This kit enables Altivar 61 variable speed drives to satisfy the requirements of the DNV certification body.

- For the following variable speed drives:
 - ATV 61H...M3
 - ATV 61HD11M3X...HD45M3X
 - ATV 61H075N4...HD75N4

The kit comprises:

- Shock-absorbing mounts **1**
- An EMC input filter **2**
- EMC filter supports **3**
- Fixing accessories

It is mounted on the back of the variable speed drive on the additional EMC filter supplied with the DNV kit as standard.

References

For drives	Reference	Weight kg
ATV 61H075M3, HU15M3 ATV 61H075N4...HU22N4	VW3 A9 621	5.400
ATV 61HU22M3...HU40M3 ATV 61HU30N4, HU40N4	VW3 A9 622	7.400
ATV 61HU55M3 ATV 61HU55N4, HU75N4	VW3 A9 623	9.800
ATV 61HU75M3 ATV 61HD11N4	VW3 A9 624	11.200
ATV 61HD11M3X, HD15M3X ATV 61HD15N4, HD18N4	VW3 A9 625	16.500
ATV 61HD18M3X, HD22M3X ATV 61HD22N4	VW3 A9 626	20.000
ATV 61HD30N4, HD37N4	VW3 A9 627	22.500
ATV 61HD30M3X... HD45M3X ATV 61HD45N4... HD75N4	VW3 A9 628	53.500

- For ATV 61HU30Y...HD30Y variable speed drives

The kit comprises:

- Shock-absorbing mounts **1**
- An EMC input filter
- Fixing accessories

The shock-absorbing mounts are mounted on the back of the variable speed drive. The EMC filter is positioned beside the unit.

Reference

For drives	Reference	Weight kg
ATV 61HU30Y...HD30Y	VW3 A9 642	9.000

- For ATV 61HD37Y...HD90Y variable speed drives

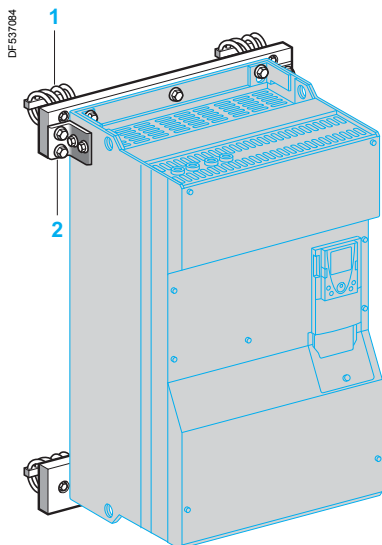
The kit comprises:

- Shock-absorbing mounts **1**
- An EMC input filter
- A line choke
- Fixing accessories

The shock-absorbing mounts are mounted on the back of the variable speed drive. The EMC filter is positioned beside the unit. The line choke must be installed upstream of the drive.

Reference

For drives	Reference	Weight kg
ATV 61HD37Y...HD90Y	VW3 A9 643	23.000



ATV 61HC11N4D drive
mounted on DNV kit VW3 A9 630

DNV kit (continued)

■ For the following variable speed drives:

- ATV 61HD55M3X...HD90M3X
- ATV 61HD90N4D...HC63N4D
- ATV 61HC11Y...HC80Y

The kit comprises:

- Shock-absorbing mounts **1**
- The mechanical fittings (rails and brackets) required for mounting **2**
- Fixing accessories

It is mounted on the back of the variable speed drive using the mechanical fittings.

References

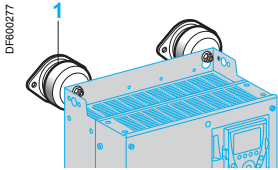
For drives		Line choke (1)	EMC filter (2)	Reference	Weight kg
ATV 61HD55M3X (3)		VW3 A4 559	VW3 A4 410	VW3 A9 629	12.500
ATV 61HD75M3X (3)		VW3 A4 568	VW3 A4 410	VW3 A9 629	12.500
ATV 61HD90N4D		VW3 A4 558	VW3 A4 410	VW3 A9 629	12.500
ATV 61HC11N4D		VW3 A4 559	VW3 A4 410	VW3 A9 630	13.000
ATV 61HD90M3X (3)		VW3 A4 569	VW3 A4 411	VW3 A9 631	15.000
ATV 61HC13N4D		VW3 A4 560	VW3 A4 410	VW3 A9 632	15.000
ATV 61HC16N4D		VW3 A4 568	VW3 A4 410	VW3 A9 634	15.000
ATV 61HC22N4D	Motor P 200 kW	VW3 A4 561	VW3 A4 411	VW3 A9 635	17.000
	Motor P 220 kW	VW3 A4 569	VW3 A4 411	VW3 A9 636	17.000
ATV 61HC25N4D		VW3 A4 569	VW3 A4 411	VW3 A9 637	20.500
ATV 61HC31N4D		VW3 A4 564	VW3 A4 411	VW3 A9 638	21.000
ATV 61HC40N4D		VW3 A4 565	VW3 A4 412	VW3 A9 639	31.000
ATV 61HC50N4D		2 x VW3 A4 569	2 x VW3 A4 412	VW3 A9 640	32.500
ATV 61HC63N4D		2 x VW3 A4 564	2 x VW3 A4 413	VW3 A9 641	37.000
ATV 61HC11Y, HC13Y (4)		VW3 A4 570	–	VW3 A9 644	14.500
ATV 61HC16Y, HC20Y (4)		VW3 A4 571	–	VW3 A9 645	15.500
ATV 61HC25Y (4)		VW3 A4 560	–	VW3 A9 646	20.500
ATV 61HC31Y, HC40Y (4)		VW3 A4 572	–	VW3 A9 647	21.500
ATV 61HC50Y (4)		2 x VW3 A4 568	–	VW3 A9 648	36.000
ATV 61HC63Y, HC80Y (4)		2 x VW3 A4 572	–	VW3 A9 649	38.000

(1) A line choke must be used. It must be ordered separately (see pages 75 and 76).

(2) An EMC filter must be used. It must be ordered separately (see page 87).

(3) If using the DNV kit, do not mount the DC choke supplied as standard with the drive.

(4) When using a DNV kit, the variable speed drive and the transformer for the fan are mounted separately, for the dimensions see our website www.schneider-electric.com.



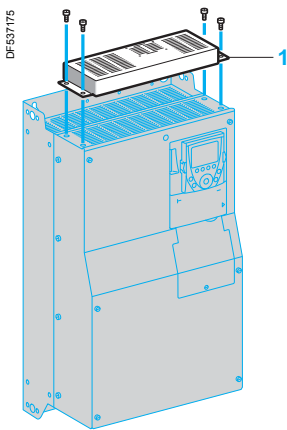
DNV shock-absorbing mounts

DNV shock-absorbing mounts

These mounts **1** are mounted on ATV 61H075N4...HD37N4 and ATV 61HU30Y...HD90Y drives. They are supplied with the fixing accessories necessary for fixing the shock-absorbing mounts on the back of the drive.

References

Description	For drives	Reference	Weight kg
DNV shock absorbing mounts 1 supplied with fixing accessories	ATV 61H075N4...HU75N4	VW3 A9 650	0.215
	ATV 61HD11N4...HD18N4	VW3 A9 651	0.345
	ATV 61HD22N4...HD37N4	VW3 A9 652	0.650
	ATV 61HU30Y...HD30Y	VW3 A9 653	2.700
	ATV 61HD37Y...HD90Y	VW3 A9 654	2.700



Control card fan kit

Control card fan kit

This kit is required for ATV 61HD18M3X...HD45M3X, ATV 61HD22N4...HD75N4 and ATV 61HU30Y...HD90Y drives. It enables the drive to operate at an ambient temperature of 50°C to 60°C, for example if it is mounted in an IP 54 enclosure. The circulation of air around the electronic cards prevents the formation of hot spots.

To ascertain the derating to be applied to the drive nominal current, consult the curves on our website www.schneider-electric.com.

The kit **1** is mounted on the upper part of the drive. It is powered by the drive. It comprises:

- A fan subassembly
- Fixing accessories
- A manual

References

For drives	Reference	Weight kg
ATV 61HD18M3X, HD22M3X ATV 61HD22N4 ATV 61HU30Y...HD30Y	VW3 A9 404	0.700
ATV 61HD30N4, HD37N4	VW3 A9 405	0.700
ATV 61HD30M3X... HD45M3X	VW3 A9 406	0.800
ATV 61HD45N4... HD75N4 ATV 61HD37Y...HD90Y	VW3 A9 407	0.900

Adaptor for 115 V ~ logic inputs

This adaptor is used to connect 115 V ~ logic signals to the logic inputs on the drive or an I/O extension card.

7 logic inputs with capacitive impedance at 60 Hz of 0.22 µF are available for connecting the logic signals:

- Maximum current: 200 mA
- Response time: 5 ms to change from state 0 to state 1, 20 ms to change from state 1 to state 0
- Logic state 0 for a voltage below 20 V, logic state 1 for a voltage between 70 V and 132 V

The power supply must be provided by a 115 V ~ external supply (min. 70 V, max. 132 V).

Reference

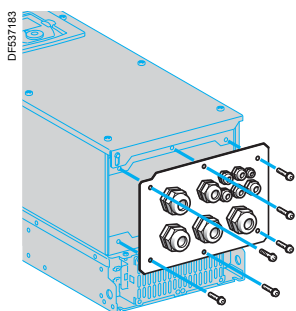
Description	Reference	Weight kg
Adaptor for 115 V ~ logic inputs	VW3 A3 101	–

Ready-assembled IP 54 base plate (for ATV 61W●●●N4 and ATV 61W●●●N4C drives)

This plate can be used to increase the number of cable connections supported by the drive as standard from 3 to 11.

It is supplied with:

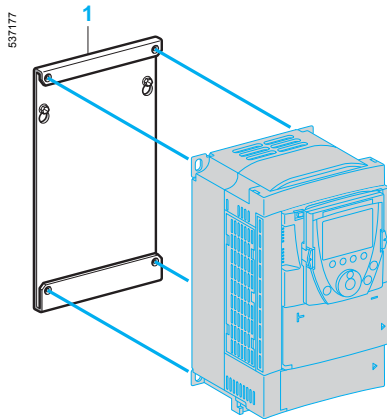
- A metal cable gland for the motor cable
- A special plastic cable gland for the network cable
- Plastic cable glands for connection of the control cable or options such as communication cards, etc.



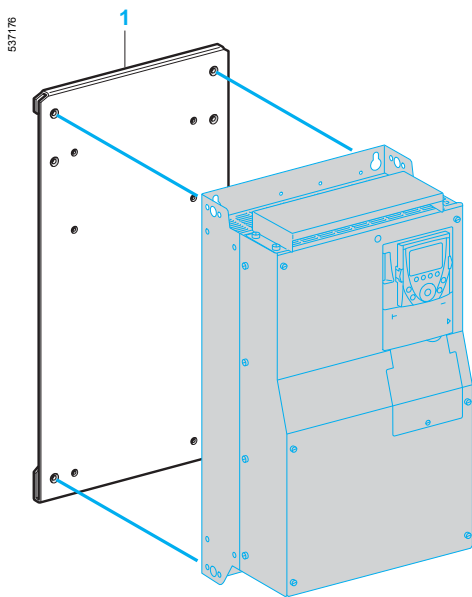
Ready-assembled IP 54 base plate

References

For drive	Type of cable gland		Reference	Weight kg
	Metal	Plastic		
ATV 61W075N4... WU55N4 ATV 61W075N4C ...WU55N4C	1 (ISO 25)	1 (ISO 12), 4 (ISO 16) 3 (ISO 20), 1 (ISO 25)	1 (ISO 32) VW3 A9 901	1.300
ATV 61WU75N4, WD11N4 ATV 61WU75N4C, WD11N4C	1 (ISO 25)	1 (ISO 12), 4 (ISO 16) 3 (ISO 20), 1 (ISO 25)	1 (ISO 32) VW3 A9 902	1.300
ATV 61WD15N4 ATV 61WD15N4C	1 (ISO 32)	1 (ISO 12), 4 (ISO 16) 1 (ISO 20), 3 (ISO 32)	1 (ISO 32) VW3 A9 903	1.300
ATV 61WD18N4, WD22N4 ATV 61WD18N4C, WD22N4C	1 (ISO 32)	1 (ISO 12), 4 (ISO 16) 1 (ISO 20), 3 (ISO 32)	1 (ISO 32) VW3 A9 904	1.300
ATV 61WD30N4 ATV 61WD30N4C	1 (ISO 40)	1 (ISO 12), 4 (ISO 16) 1 (ISO 20), 3 (ISO 40)	1 (ISO 32) VW3 A9 905	1.300
ATV 61WD37N4, WD45N4 ATV 61WD37N4C, WD45N4C	1 (ISO 40)	1 (ISO 12), 4 (ISO 16) 1 (ISO 20), 3 (ISO 50)	1 (ISO 32) VW3 A9 906	1.300
ATV 61WD55N4, WD75N4	1 (ISO 50)	1 (ISO 12), 4 (ISO 16) 1 (ISO 20), 1 (ISO 50) 1 (ISO 63)	1 (ISO 32) VW3 A9 907	1.500
ATV 61WD90N4	1 (ISO 50)	1 (ISO 12), 4 (ISO 16) 1 (ISO 20), 2 (ISO 63)	1 (ISO 32) VW3 A9 908	1.500
ATV 61WD55N4C, WD75N4C	1 (ISO 50)	1 (ISO 12), 4 (ISO 16) 1 (ISO 20), 1 (ISO 50) 2 (ISO 63)	1 (ISO 32) VW3 A9 909	1.500
ATV 61WD90N4C	1 (ISO 50)	1 (ISO 12), 4 (ISO 16) 1 (ISO 20), 3 (ISO 63)	1 (ISO 32) VW3 A9 910	1.500



VW3 A9 304



VW3 A9 312

Substitution kit for Altivar 38 drives

This kit 1 is used to install an Altivar 61 drive in place of an Altivar 38 drive using the same fixing holes. It includes the mechanical adaptors required for mounting.

References

Old drive	Motor Power		Replaced by	Reference	Weight
	kW	HP			
Replacing an Altivar 38 drive with integrated EMC filter					
Three-phase supply voltage: 380...480 V 50/60 Hz					
ATV 38HU18N4	0.75	1	ATV 61H075N4	VW3 A9 302	—
ATV 38HU29N4	1.5	2	ATV 61HU15N4	VW3 A9 302	—
ATV 38HU41N4	2.2	3	ATV 61HU22N4	VW3 A9 302	—
ATV 38HU54N4	3	—	ATV 61HU30N4	VW3 A9 304	—
ATV 38HU72N4	4	5	ATV 61HU40N4	VW3 A9 304	—
ATV 38HU90N4	5.5	7.5	ATV 61HU55N4	VW3 A9 305	—
ATV 38HD12N4	7.5	10	ATV 61HU75N4	VW3 A9 306	—
ATV 38HD16N4	11	15	ATV 61HD11N4	VW3 A9 307	—
ATV 38HD23N4	15	20	ATV 61HD15N4	VW3 A9 308	—
ATV 38HD25N4	18.5	25	ATV 61HD18N4	VW3 A9 309	—
ATV 38HD28N4	22	30	ATV 61HD22N4	VW3 A9 310	—
ATV 38HD33N4	30	40	ATV 61HD30N4	VW3 A9 310	—
ATV 38HD46N4	37	50	ATV 61HD37N4	VW3 A9 312	—
ATV 38HD54N4	45	60	ATV 61HD45N4	VW3 A9 312	—
ATV 38HD64N4	55	75	ATV 61HD55N4	VW3 A9 312	—
ATV 38HD79N4	75	100	ATV 61HD75N4	VW3 A9 312	—

Replacing an Altivar 38 drive without integrated EMC filter

Three-phase supply voltage: 380...480 V 50/60 Hz

ATV 38HD25N4X	18.5	25	ATV 61HD18N4	VW3 A9 309	—
ATV 38HD28N4X	22	30	ATV 61HD22N4	VW3 A9 310	—
ATV 38HD33N4X	30	40	ATV 61HD30N4	VW3 A9 310	—
ATV 38HD46N4X	37	50	ATV 61HD37N4	VW3 A9 312	—
ATV 38HD54N4X	45	60	ATV 61HD45N4	VW3 A9 312	—
ATV 38HD64N4X	55	75	ATV 61HD55N4	VW3 A9 312	—
ATV 38HD79N4X	75	100	ATV 61HD75N4	VW3 A9 312	—

Substitution kit for Altivar 58 drives

This kit 1 is used to install an Altivar 61 drive in place of an Altivar 58 drive for variable torque applications, using the same fixing holes.

It includes the mechanical adaptors required for mounting.

References

Old drive	Motor Power		Replaced by	Reference	Weight
	kW	HP			
Three-phase supply voltage: 500 V 50/60 Hz					
ATV 58HD28N4	22	30	ATV 61HD30Y	VW3 A9 310	—
ATV 58HD33N4	30	40	ATV 61HD37Y	VW3 A9 312	—
ATV 58HD46N4	37	50	ATV 61HD45Y	VW3 A9 312	—
ATV 58HD54N4	45	60	ATV 61HD55Y	VW3 A9 312	—
ATV 58HD64N4	55	75	ATV 61HD75Y	VW3 A9 312	—
ATV 58HD79N4	75	100	ATV 61HD90Y	VW3 A9 312	—



Remote graphic display terminal

Remote graphic display terminal

(this display terminal can be supplied with the drive or ordered separately)

This display terminal is attached to the front of the drive. It includes the integrated graphic terminal for drives ordered without a graphic display terminal (see page 25). It can be:

- Used remotely in conjunction with the appropriate accessories (see below)
- Connected to several drives using multidrop link components (see page 36)

It is used to:

- Control, adjust and configure the drive
- Display the current values (motor, input/output values, etc.)
- Save and download configurations; 4 configuration files can be saved.

The maximum operating temperature of the terminal is 60°C and it has IP 54 protection.

Description

- 1 Graphic display unit:
 - 8 lines, 240 x 160 pixels
 - Large digits that can be read from 5 m away
 - Supports display of bar charts
- 2 Assignable function keys F1, F2, F3, F4:
 - Dialogue functions: direct access, help screens, navigation
 - Application functions: "Local Remote", preset speed
- 3 "STOP/RESET" key: local control of motor stop/fault reset
- 4 "RUN" key: local control of motor operation
- 5 Navigation button:
 - Press: saves the current value (ENT)
 - Turn ±: increases or decreases the value, or goes to the next or previous line
- 6 "FWD/REV" key: reverses the direction of rotation of the motor
- 7 "ESC" key: aborts a value, a parameter or a menu to return to the previous selection

Note: Keys 3, 4 and 6 can be used to control the drive directly.



Remote mounting accessories for the graphic display terminal

Reference

Description	Item no.	Reference	Weight kg
Remote graphic display terminal	1	VW3 A1 101	0.180

Remote graphic display terminal accessories

The following accessories are available:

- A remote mounting kit 2 for mounting on an enclosure door with IP 54 degree of protection. It comprises:
 - All the mechanical fittings
 - Fixing accessories
- A transparent door 3 which attaches to the remote mounting mechanism to achieve IP 65 degree of protection
- A preassembled cordset 4 with two RJ45 connectors for connecting the graphic display terminal to the Altivar 61 drive (1, 3, 5 or 10 m cable lengths available)
- A female/female RJ45 adaptor 5 for connecting the graphic display terminal VW3 A1 101 to the remote-mounting cordset VW3 A1 104 R●●●

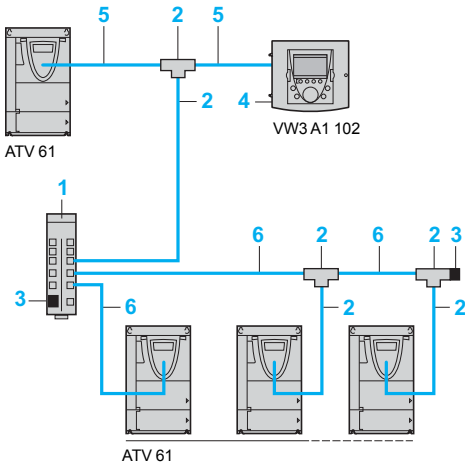
References

Description	Item no.	Length m	Degree of protection	Reference	Weight kg
Remote mounting kit	2	-	IP 54	VW3 A1 102	0.150
Provide remote-mounting cordset VW3 A1 104 R●●●					
Door for remote mounting kit	3	-	IP 65	VW3 A1 103	0.040
Remote-mounting cordsets with 2 RJ45 connectors	4	1	-	VW3 A1 104 R10	0.050
	4	3	-	VW3 A1 104 R30	0.150
	4	5	-	VW3 A1 104 R50	0.250
	4	10	-	VW3 A1 104 R100	0.500
Female/female RJ45 adaptor	5	-	-	VW3 A1 105	0.010

Variable speed drives

Altivar 61

Option: dialogue



Example of connection via multidrop link

Multidrop connection accessories

These accessories enable a graphic display terminal to be connected to several drives via a multidrop link. This multidrop link is connected to the Modbus terminal port on the front of the drive.

Connection accessories

Description	Item no.	Sold in lots of	Unit reference	Weight kg
Modbus splitter box 10 RJ45 connectors and 1 screw terminal block	1	–	LU9 GC3	0.500
Modbus T-junction boxes With integrated cable (0.3 m)	2	–	VW3 A8 306 TF03	–
With integrated cable (1 m)	2	–	VW3 A8 306 TF10	–
Modbus line terminator For RJ45 connector R = 120 Ω, C = 1 nF	3	2	VW3 A8 306 RC	0.010
Remote mounting kit For graphic display terminal VW3 A1 101	4	–	VW3 A1 102	0.150

Cordsets (equipped with 2 RJ45 connectors)

Used for	Item no.	Length m	Reference	Weight kg
Remote operation of the Altivar 61 and the graphic display terminal VW3 A1 101	5	1	VW3 A1 104 R10	0.050
	3		VW3 A1 104 R30	0.150
	5		VW3 A1 104 R50	0.250
	10		VW3 A1 104 R100	0.500
Modbus serial link	6	0.3	VW3 A8 306 R03	0.025
	1		VW3 A8 306 R10	0.060
	3		VW3 A8 306 R30	0.130



Configuration with SoMove Mobile software for mobile phones via Bluetooth®



SoMove setup software with Modbus-Bluetooth® adaptor for PC

PF100231C



Configuration with Multi-Loader tool connected to the Altivar 61 drive

SoMove Mobile software for mobile phones (1)

The SoMove Mobile software converts any compatible mobile phone (1) into a remote graphic display terminal, offering an identical Human-Machine Interface.

Particularly suitable for on-site or remote maintenance operations, SoMove Mobile software can be used to print out and save configurations, import them from a PC and export them to a PC, or a drive equipped with the Modbus-Bluetooth® adaptor (TCSW AAC13FB) via the Bluetooth® wireless link.

The SoMove Mobile software and drive configuration files can be downloaded from our website www.schneider-electric.com.

References

Description	For drives	Reference	Weight kg
SoMove Mobile software for mobile phones (1)	ATV 61●●●●●●	-	-

SoMove setup software

Presentation

SoMove setup software is used to configure, to adjust, to debug using the Oscilloscope function, and also for maintenance, like all other Schneider Electric drives and starters.

The software communicates via Bluetooth® wireless link with the drive which is equipped with the Modbus-Bluetooth® adaptor (TCSW AAC13FB).

It is compatible with Altivar 61 drives from software version 1.6 upwards.

For presentation, description and references, see page 38.

Simple Loader and Multi-Loader configuration tools

The Simple Loader tool enables one powered-up drive's configuration to be duplicated on another powered-up drive. It is connected to the drive's RJ45 communication port.

The Multi-Loader tool enables a number of configurations from a PC or drive to be copied and duplicated on another drive; the Altivar 61 drives do not need to be powered up.

References

Description	For drives	Reference	Weight kg
Simple Loader configuration tool Supplied with a cordset fitted with 2 RJ45 connectors	ATV 61●●●●●●	VW3 A8 120	-
Multi-Loader configuration tool Supplied with: - 1 cordset fitted with 2 RJ45 connectors - 1 cordset fitted with one type A USB connector and one mini B USB connector - 1 SD memory card - 1 female/female RJ45 adaptor - 4 AA/LR6 1.5 V batteries - 1 anti-shock protection - 1 carrying handle	ATV 61●●●●●●	VW3 A8 121	-

(1) SoMove Mobile software requires a mobile phone with minimum features; please consult our website www.schneider-electric.com.



SoMove start page

Presentation

SoMove is user-friendly setup software for PC designed for configuring the following Schneider Electric motor control devices:

- ATV 12, ATV 312, ATV 31, ATV 32, ATV 61 and ATV 71 drives
- ATS 22 starters
- TeSys U starter-controllers
- TeSys T motor management system
- Lexium 32 servo drives

SoMove software incorporates various functions for the device setup phases, such as:

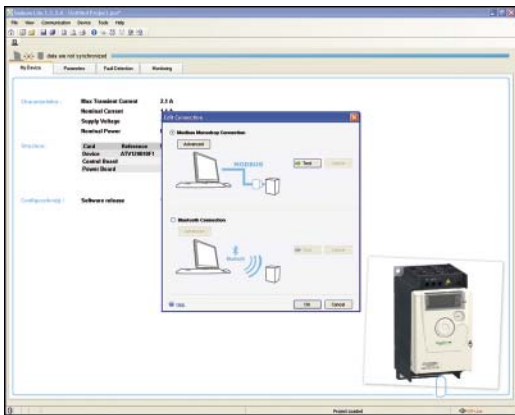
- Configuration preparation
- Start-up
- Maintenance

To facilitate setup and maintenance, SoMove software can use a direct USB/RJ45 cable link or a Bluetooth® wireless link.

SoMove software is also compatible with the Multi-Loader configuration tool and SoMove Mobile software for mobile phones.

These tools can save a significant amount of time when loading, duplicating or editing configurations on a device.

SoMove software and all the DTMs (Device Type Managers) associated with the devices can be downloaded from our website www.schneider-electric.com.



Example of connecting SoMove software to an ATV 12 drive

Functions

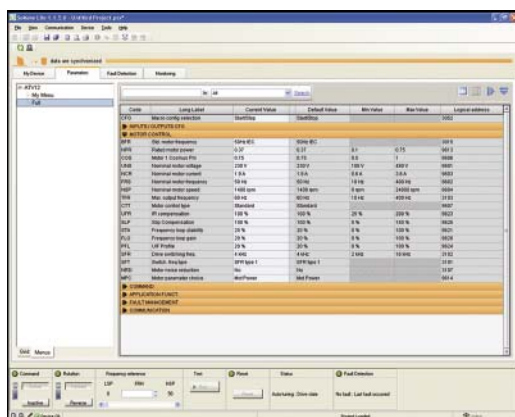
Configuration preparation in disconnected mode

SoMove software has a genuine disconnected mode which provides access to all the device parameters. This mode can be used to generate the device configuration. The configuration can be saved, printed and exported to office automation software.

SoMove software also checks the consistency of the parameters, validating the configurations created in disconnected mode.

A large number of functions are available in disconnected mode, in particular:

- The device configuration software wizard
- The configuration comparison function
- Saving, copying, printing and creating configuration files for export to Multi-Loader, SoMove Mobile or Microsoft Excel® tools, and sending configurations by e-mail



SoMove control panel

Setup

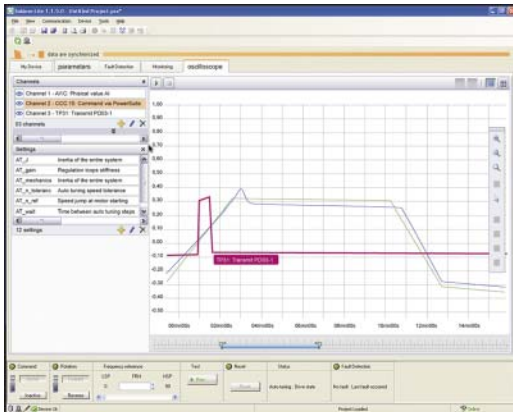
When the PC is connected to the device, SoMove software can be used for:

- Transferring the generated configuration onto the device
- Adjustment and monitoring, which includes such functions as:
 - The oscilloscope
 - Display of communication parameters
- Easy control via the control panel user interface
- Saving the final configuration

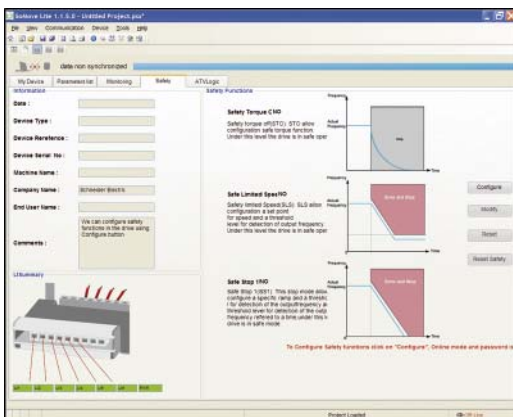
Maintenance

In order to simplify maintenance operations, SoMove software can be used to:

- Compare the configuration of a device currently being used with a configuration saved on the PC
- Transfer a configuration to a device
- Compare oscilloscope curves
- Save oscilloscope curves and faults



SoMove oscilloscope function



SoMove Safety function

Functions (continued)

User interface

SoMove software provides fast, direct access to all information on the device via five tabs:

- **My Device:** Displays all the device information (type, reference, software versions, option cards, etc.)
- **Parameters:** Displays all the device adjustment parameters, shown in a table or in the form of diagrams
- **Faults:** Displays a list of the faults that may be encountered with the device, the fault log and any current faults or alarms
- **Monitoring:** Provides a realtime display of the device status, its I/O and all the monitoring parameters. It is possible to create your own control panel by selecting your parameters and how they are to be represented.
- **Oscilloscope:** Provides a high-speed oscilloscope (for recording traces in the device) or low-speed oscilloscope (for recording traces in the software for devices that do not have an integrated oscilloscope)

SoMove's user interface automatically adapts to the specific configured device by offering additional tabs:

- **Safety:** For configuring the Safety functions on ATV 32 variable speed drives and Lexium 32 servo drives. It can also be used to:
 - Display the I/O
 - Compile and print a report
 - **ATVLogic:** For accessing the ATV 32 drive's programmable function blocks. It can also be used to:
 - Develop a program and transfer it to the drive
 - Display and debug the program already on the drive
 - **Auto-tuning:** For accessing the servo control settings for the three different operating modes of the Lexium 32 servo drive's auto-tuning function:
 - Automatic mode for quick setup, designed for simple applications
 - Semi-automatic mode for quick setup, with the option of optimizing the servo drive/servo motor combination (access to the mechanical and dynamic behaviour parameters)
 - Expert mode for optimizing the adjustment parameters, designed for complex applications

Connections

Modbus serial link

The PC running SoMove software can be connected directly via the RJ45 connector on the device and the USB port on the PC using the USB/RJ45 cable.

See the product references on page 40.

Bluetooth® wireless link

SoMove software can communicate via Bluetooth® wireless link with any Bluetooth® enabled device.

If the device is not Bluetooth® enabled, use the Modbus-Bluetooth® adaptor. This adaptor is connected to the terminal port or the Modbus network port on the device. It has a 20 m range (class 2).

If the PC does not have Bluetooth® technology, use the USB-Bluetooth® adaptor.

See the product references on page 40.



SoMove setup software



TCSW AAC13FB:
Bluetooth® adaptor

References

Description	Reference	Weight kg
SoMove Lite setup software Includes: ■ SoMove setup software for PC in English, French, German, Italian, Spanish and Chinese ■ DTMs (Device Type Managers) and technical documentation for variable speed drives, starters and servo motors	(1)	–
USB/RJ45 cable Used to connect a PC to the device. This cable is 2.5 m long and has a USB connector (PC end) and an RJ45 connector (device end).	TCSM CNAM 3M002P	–
Modbus/Uni-Telway-Bluetooth® adaptor Used to enable any non-Bluetooth® device to communicate via Bluetooth® wireless link (2). Includes: ■ 1 Bluetooth® adaptor (range 20 m, class 2) with an RJ45 connector ■ For SoMove: 1 x 0.1 m cordset with 2 x RJ45 connectors ■ For TwidoSuite: 1 x 0.1 m cordset with 1 RJ45 connector and 1 mini DIN connector	TCSW AAC13FB	0.032
USB-Bluetooth® adaptor for PC Used to enable any non-Bluetooth® PC to communicate via Bluetooth® wireless link (3). It connects to a USB port on the PC. Range 10 m, class 2	VW3 A8 115	0.290

(1) Available on our website www.schneider-electric.com.

(2) Required for the following devices:

- ATV 12, ATV 312, ATV 31, ATV 61 and ATV 71 drives
- ATS 22 starters
- TeSys U starter-controllers
- TeSys T motor management system
- Lexium 32 servo drives

(3) Check the manufacturer's specification.

Compatibility of SoMove software with specific devices

Device	Range	Version of software on the device
Variable speed drive	ATV 12, ATV 312, ATV32	≥ 1.0
	ATV 31	≥ 1.1
	ATV 61, ATV 71	≥ 1.6
Starter	ATS 22	≥ 1.0
Starter-controller	TeSys U	≥ 1.0
Motor management system	TeSys T	≥ 1.0
Servo drive	Lexium 32	≥ 1.0

Environments

SoMove operates in the following PC environments and configurations:

- Microsoft Windows® 7 Professional (1)
- Microsoft Windows® XP Professional SP3
- Microsoft Windows® Vista Business SP2
- Pentium IV (or equivalent), 1 GHz, hard disk with 1 GB available space, 1 GB of RAM (minimum configuration)

(1) Please contact our Customer Care Centre.

Variable speed drives

Altivar 61

200...240 V 50/60 Hz supply voltage

Table showing possible combinations of ATV 61H●●●M3 and ATV 61●●●M3X drive options

Motor		Drive	Options					
kW	HP		DC choke	Line choke	Additional EMC input filter	IP 30 kit for EMC filter	Motor choke	IP 20 kit for motor choke
Single-phase supply voltage: 200...240 V 50/60 Hz								
0.37	0.5	ATV 61H075M3	VW3A4 503	–	VW3A4 401	–	VW3A5 101	–
0.75	1	ATV 61HU15M3	VW3A4 505	–	VW3A4 401	–	VW3A5 101	–
1.5	2	ATV 61HU22M3	VW3A4 506	–	VW3A4 402	–	VW3A5 101	–
2.2	3	ATV 61HU30M3	VW3A4 507	–	VW3A4 402	–	VW3A5 102, 103	–
3	–	ATV 61HU40M3	VW3A4 508	VW3A58501	VW3A4 402	–	VW3A5 102, 103	–
4	5	ATV 61HU55M3	VW3A4 508	VW3A58502	VW3A4 403	–	VW3A5 102, 103	–
5.5	7.5	ATV 61HU75M3	VW3A4 509	VW3A58502	VW3A4 404	–	VW3A5 102, 103	–
Three-phase supply voltage: 200...240 V 50/60 Hz								
0.75	1	ATV 61H075M3	VW3A4 503	VW3A4 551	VW3A4 401	–	VW3A5 101	–
1.5	2	ATV 61HU15M3	VW3A4 505	VW3A4 552	VW3A4 401	–	VW3A5 101	–
2.2	3	ATV 61HU22M3	VW3A4 506	VW3A4 552	VW3A4 402	–	VW3A5 101	–
3	–	ATV 61HU30M3	VW3A4 507	VW3A4 553	VW3A4 402	–	VW3A5 102, 103	–
4	5	ATV 61HU40M3	VW3A4 508	VW3A4 554	VW3A4 402	–	VW3A5 102, 103	–
5.5	7.5	ATV 61HU55M3	VW3A4 508	VW3A4 554	VW3A4 403	–	VW3A5 102, 103	–
7.5	10	ATV 61HU75M3	VW3A4 509	VW3A4 555	VW3A4 404	–	VW3A5 102, 103	–
11	15	ATV 61HD11M3X	VW3A4 510	VW3A4 555	VW3A4 405	–	VW3A5 103	–
15	20	ATV 61HD15M3X	VW3A4 510	VW3A4 556	VW3A4 405	–	VW3A5 103	–
18.5	25	ATV 61HD18M3X	VW3A4 511	VW3A4 557	VW3A4 406	–	VW3A5 103	–
22	30	ATV 61HD22M3X	VW3A4 511	VW3A4 557	VW3A4 406	–	VW3A5 103	–
30	40	ATV 61HD30M3X	VW3A4 512	VW3A4 557	VW3A4 408	–	VW3A5 104	VW3A9 612
37	50	ATV 61HD37M3X	VW3A4 512	VW3A4 557	VW3A4 408	–	VW3A5 104	VW3A9 612
45	60	ATV 61HD45M3X	VW3A4 512	VW3A4 557	VW3A4 408	–	VW3A5 104	VW3A9 612
55	75	ATV 61HD55M3X	–	VW3A4 559	VW3A4 410	VW3A9 601	VW3A5 105	VW3A9 612
75	100	ATV 61HD75M3X	–	VW3A4 558	VW3A4 410	VW3A9 601	VW3A5 105	VW3A9 612
90	125	ATV 61HD90M3X	–	VW3A4 569	VW3A4 411	VW3A9 601	VW3A5 106	VW3A9 613
Page		18	73	75	87	87	90	91

Sinus filter	Braking resistor	Kit for flush-mounting (in a dust and damp proof enclosure)	Kit for UL Type 1 conformity (without enclosure)	Kit for IP 21 or IP 31 conformity (without enclosure)	DNV kit	Control card fan kit
VW3A5 201	VW3A7 701	VW3A9 501	VW3A9 201	VW3A9 101	VW3A9 621	–
VW3A5 201	VW3A7 702	VW3A9 501	VW3A9 201	VW3A9 101	VW3A9 621	–
VW3A5 202	VW3A7 702	VW3A9 502	VW3A9 202	VW3A9 102	VW3A9 622	–
VW3A5 202	VW3A7 703	VW3A9 502	VW3A9 202	VW3A9 102	VW3A9 622	–
VW3A5 203	VW3A7 703	VW3A9 502	VW3A9 202	VW3A9 102	VW3A9 622	–
VW3A5 203	VW3A7 704	VW3A9 503	VW3A9 203	VW3A9 103	VW3A9 623	–
VW3A5 203	VW3A7 704	VW3A9 504	VW3A9 204	VW3A9 104	VW3A9 624	–
VW3A5 201	VW3A7 701	VW3A9 501	VW3A9 201	VW3A9 101	VW3A9 621	–
VW3A5 201	VW3A7 702	VW3A9 501	VW3A9 201	VW3A9 101	VW3A9 621	–
VW3A5 202	VW3A7 702	VW3A9 502	VW3A9 202	VW3A9 102	VW3A9 622	–
VW3A5 202	VW3A7 703	VW3A9 502	VW3A9 202	VW3A9 102	VW3A9 622	–
VW3A5 203	VW3A7 703	VW3A9 502	VW3A9 202	VW3A9 102	VW3A9 622	–
VW3A5 203	VW3A7 704	VW3A9 503	VW3A9 203	VW3A9 103	VW3A9 623	–
VW3A5 203	VW3A7 704	VW3A9 504	VW3A9 204	VW3A9 104	VW3A9 624	–
VW3A5 204	VW3A7 705	VW3A9 505	VW3A9 205	VW3A9 105	VW3A9 625	–
VW3A5 204	VW3A7 706	VW3A9 505	VW3A9 205	VW3A9 105	VW3A9 625	–
VW3A5 205	VW3A7 707	VW3A9 506	VW3A9 206	VW3A9 106	VW3A9 626	VW3A9 404
VW3A5 205	VW3A7 707	VW3A9 506	VW3A9 206	VW3A9 106	VW3A9 626	VW3A9 404
VW3A5 206	VW3A7 708	VW3A9 508	VW3A9 217	VW3A9 117	VW3A9 628	VW3A9 406
VW3A5 206	VW3A7 709	VW3A9 508	VW3A9 217	VW3A9 117	VW3A9 628	VW3A9 406
VW3A5 206	VW3A7 709	VW3A9 508	VW3A9 217	VW3A9 117	VW3A9 628	VW3A9 406
VW3A5 208	VW3A7 713	VW3A9 510	VW3A9 209	VW3A9 109	VW3A9 629 (1)	–
VW3A5 208	VW3A7 713	VW3A9 510	VW3A9 209	VW3A9 109	VW3A9 629 (1)	–
VW3A5 209	VW3A7 714	VW3A9 511	VW3A9 210	VW3A9 110	VW3A9 631 (1)	–
93	69	27	28	29	30	32

(1) If using a DNV kit, do not mount the DC choke supplied as standard with the drive.

Variable speed drives

Altivar 61

380...480 V 50/60 Hz supply voltage

Table showing possible combinations of ATV 61H●●●N4 drive options

Motor		Drive	Options						
kW	HP		DC choke	Line choke	Passive filter	Additional EMC input filter	IP 30 kit for EMC filter	Motor choke	IP 20 kit for motor choke
Three-phase supply voltage: 380...480 V 50/60 Hz									
0.75	1	ATV 61H075N4	VW3A4 501	VW3A4 551	VW3A4 6●1	VW3A4 401	–	VW3A5 101, 102, 103	–
1.5	2	ATV 61HU15N4	VW3A4 502	VW3A4 551	VW3A4 6●1	VW3A4 401	–	VW3A5 101, 102, 103	–
2.2	3	ATV 61HU22N4	VW3A4 503	VW3A4 552	VW3A4 6●1	VW3A4 401	–	VW3A5 101, 102, 103	–
3	–	ATV 61HU30N4	VW3A4 503	VW3A4 552	VW3A4 6●1	VW3A4 402	–	VW3A5 101, 102, 103	–
4	5	ATV 61HU40N4	VW3A4 504	VW3A4 552	VW3A4 6●2	VW3A4 402	–	VW3A5 101, 102, 103	–
5.5	7.5	ATV 61HU55N4	VW3A4 505	VW3A4 553	VW3A4 6●2	VW3A4 403	–	VW3A5 102, 103, 104	VW3A9 612
7.5	10	ATV 61HU75N4	VW3A4 506	VW3A4 553	VW3A4 6●3	VW3A4 403	–	VW3A5 102, 103, 104	VW3A9 612
11	15	ATV 61HD11N4	VW3A4 507	VW3A4 554	VW3A4 6●3	VW3A4 404	–	VW3A5 102, 103, 104	VW3A9 612
15	20	ATV 61HD15N4	VW3A4 508	VW3A4 554	VW3A4 6●4	VW3A4 405	–	VW3A5 102, 103, 104	VW3A9 612
18.5	25	ATV 61HD18N4	VW3A4 508	VW3A4 555	VW3A4 6●5	VW3A4 405	–	VW3A5 102, 103, 104	VW3A9 612
22	30	ATV 61HD22N4	VW3A4 510	VW3A4 555	VW3A4 6●6	VW3A4 406	–	VW3A5 103, 104	VW3A9 612
30	40	ATV 61HD30N4	VW3A4 510	VW3A4 556	VW3A4 6●7	VW3A4 407	–	VW3A5 103, 104	VW3A9 612
37	50	ATV 61HD37N4	VW3A4 510	VW3A4 556	VW3A4 6●7	VW3A4 407	–	VW3A5 103, 104	VW3A9 612
45	60	ATV 61HD45N4	VW3A4 511	VW3A4 556	VW3A4 6●8	VW3A4 408	–	VW3A5 104	VW3A9 612
55	75	ATV 61HD55N4	VW3A4 511	VW3A4 556	VW3A4 6●8	VW3A4 408	–	VW3A5 104	VW3A9 612
75	100	ATV 61HD75N4	VW3A4 511	VW3A4 557	VW3A4 6●9	VW3A4 408	–	VW3A5 104	VW3A9 612
90	125	ATV 61HD90N4	–	VW3A4 558 (1)	VW3A4 6●9	VW3A4 410	VW3A9 601	VW3A5 104	VW3A9 612
110	150	ATV 61HC11N4	–	VW3A4 559 (1)	VW3A4 6●0	VW3A4 410	VW3A9 601	VW3A5 105	VW3A9 612
132	200	ATV 61HC13N4	–	VW3A4 560 (1)	VW3A4 6●1	VW3A4 410	VW3A9 601	VW3A5 105	VW3A9 612
160	250	ATV 61HC16N4	–	VW3A4 568 (1)	VW3A4 6●2	VW3A4 410	VW3A9 601	VW3A5 106	VW3A9 613
200	300	ATV 61HC22N4	–	VW3A4 561 (1)	VW3A4 6●3	VW3A4 411	VW3A9 601	VW3A5 106	VW3A9 613
220	350	ATV 61HC22N4	–	VW3A4 569 (1)	VW3A4 6●3	VW3A4 411	VW3A9 601	VW3A5 106	VW3A9 613
250	400	ATV 61HC25N4	–	VW3A4 569 (1)	VW3A4 6●1	VW3A4 411	VW3A9 601	VW3A5 107	VW3A9 613
280	450	ATV 61HC31N4	–	VW3A4 564 (1)	VW3A4 6●2	VW3A4 411	VW3A9 601	VW3A5 107	VW3A9 613
315	500	ATV 61HC31N4	–	VW3A4 564 (1)	VW3A4 6●2	VW3A4 411	VW3A9 601	VW3A5 107	VW3A9 613
355	–	ATV 61HC40N4	–	VW3A4 565 (1)	VW3A4 6●2	VW3A4 412	VW3A9 602	VW3A5 107	VW3A9 613
400	600	ATV 61HC40N4	–	VW3A4 565 (1)	VW3A4 6●9	VW3A4 412	VW3A9 602	VW3A5 108	VW3A9 613
500	700	ATV 61HC50N4	–	VW3A4 569 (1)	VW3A4 6●2	VW3A4 412	VW3A9 602	VW3A5 108	VW3A9 613
560	800	ATV 61HC63N4	–	VW3A4 564 (1)	VW3A4 6●3	VW3A4 413	VW3A9 602	VW3A5 108	VW3A9 613
630	900	ATV 61HC63N4	–	VW3A4 564 (1)	VW3A4 6●3	VW3A4 413	VW3A9 602	VW3A5 108	VW3A9 613
Page		19	73	75	78	87	87	90	91

Table showing possible combinations of ATV 61Q●●●N4 drive options

Motor		Drive	Options						
kW	HP		DC choke	Line choke	Passive filter	Additional EMC input filter	IP 30 kit for EMC filter	Motor choke	IP 20 kit for motor choke
Three-phase supply voltage: 380...480 V 50/60 Hz									
110	150	ATV 61QC11N4	–	VW3A4 559 (1)	VW3A4 6●0	VW3A4 410	VW3A9 601	VW3A5 104	VW3A9 612
132	200	ATV 61QC13N4	–	VW3A4 560 (1)	VW3A4 6●1	VW3A4 410	VW3A9 601	VW3A5 105	VW3A9 612
160	250	ATV 61QC16N4	–	VW3A4 568 (1)	VW3A4 6●2	VW3A4 410	VW3A9 601	VW3A5 105	VW3A9 612
200	300	ATV 61QC20N4	–	VW3A4 561 (1)	VW3A4 6●3	VW3A4 411	VW3A9 601	VW3A5 106	VW3A9 613
220	350	ATV 61QC25N4	–	VW3A4 569 (1)	VW3A4 6●3	VW3A4 411	VW3A9 601	VW3A5 106	VW3A9 613
250	400	ATV 61QC25N4	–	VW3A4 569 (1)	VW3A4 6●1	VW3A4 411	VW3A9 601	VW3A5 106	VW3A9 613
280	450	ATV 61QC31N4	–	VW3A4 564 (1)	VW3A4 6●2	VW3A4 411	VW3A9 601	VW3A5 107	VW3A9 613
315	500	ATV 61QC31N4	–	VW3A4 564 (1)	VW3A4 6●2	VW3A4 411	VW3A9 601	VW3A5 107	VW3A9 613
355	–	ATV 61QC40N4	–	VW3A4 561 (1)	VW3A4 6●2	VW3A4 412	VW3A9 602	VW3A5 107	VW3A9 613
400	600	ATV 61QC40N4	–	VW3A4 561 (1)	VW3A4 6●9	VW3A4 412	VW3A9 602	VW3A5 107	VW3A9 613
500	700	ATV 61QC50N4	–	VW3A4 563 (1)	VW3A4 6●2	VW3A4 412	VW3A9 602	VW3A5 108	VW3A9 613
560	800	ATV 61QC63N4	–	VW3A4 573 (1)	VW3A4 6●3	VW3A4 413	VW3A9 602	VW3A5 108	VW3A9 613
630	900	ATV 61QC63N4	–	VW3A4 573 (1)	VW3A4 6●3	VW3A4 413	VW3A9 602	VW3A5 108	VW3A9 613
Page		20	–	75	81	87	87	90	91

(1) For VW3A4 558...561, 564, 565, 568 and 569 line chokes, order a drive without a DC choke, by adding a **D** at the end of the reference. Example: **ATV 61HD90N4** becomes **ATV 61HD90N4D** (see page 25).

Resistance braking unit	Braking resistor	Sinus filter	Kit for flush-mounting (in a dust and damp proof enclosure)	Kit for UL Type 1 conformity (without enclosure)	Kit for IP 21 or IP 31 conformity (without enclosure)	DNV kit	Control card fan kit
–	VW3A7 701	VW3A5 201	VW3A9 501	VW3A9 201	VW3A9 101	VW3A9 621	–
–	VW3A7 701	VW3A5 201	VW3A9 501	VW3A9 201	VW3A9 101	VW3A9 621	–
–	VW3A7 701	VW3A5 201	VW3A9 501	VW3A9 201	VW3A9 101	VW3A9 621	–
–	VW3A7 701	VW3A5 201	VW3A9 502	VW3A9 202	VW3A9 102	VW3A9 622	–
–	VW3A7 701	VW3A5 201	VW3A9 502	VW3A9 202	VW3A9 102	VW3A9 622	–
–	VW3A7 702	VW3A5 202	VW3A9 503	VW3A9 203	VW3A9 103	VW3A9 623	–
–	VW3A7 702	VW3A5 203	VW3A9 503	VW3A9 203	VW3A9 103	VW3A9 623	–
–	VW3A7 703	VW3A5 203	VW3A9 504	VW3A9 204	VW3A9 104	VW3A9 624	–
–	VW3A7 703	VW3A5 203	VW3A9 505	VW3A9 205	VW3A9 105	VW3A9 625	–
–	VW3A7 704	VW3A5 204	VW3A9 505	VW3A9 205	VW3A9 105	VW3A9 625	–
–	VW3A7 704	VW3A5 204	VW3A9 506	VW3A9 206	VW3A9 106	VW3A9 626	VW3A9 404
–	VW3A7 704	VW3A5 204	VW3A9 507	VW3A9 207	VW3A9 107	VW3A9 627	VW3A9 405
–	VW3A7 705	VW3A5 205	VW3A9 507	VW3A9 207	VW3A9 107	VW3A9 627	VW3A9 405
–	VW3A7 707	VW3A5 205	VW3A9 509	VW3A9 208	VW3A9 108	VW3A9 628	VW3A9 407
–	VW3A7 707	VW3A5 206	VW3A9 509	VW3A9 208	VW3A9 108	VW3A9 628	VW3A9 407
–	VW3A7 707	VW3A5 206	VW3A9 509	VW3A9 208	VW3A9 108	VW3A9 628	VW3A9 407
–	VW3A7 710	VW3A5 207	VW3A9 510	VW3A9 209	VW3A9 109	VW3A9 629 (1)	–
–	VW3A7 710	VW3A5 207	VW3A9 510	VW3A9 209	VW3A9 109	VW3A9 630 (1)	–
–	VW3A7 711	VW3A5 208	VW3A9 511	VW3A9 210	VW3A9 110	VW3A9 632 (1)	–
–	VW3A7 711	VW3A5 208	VW3A9 512	VW3A9 211	VW3A9 111	VW3A9 634 (1)	–
–	VW3A7 712	VW3A5 209	VW3A9 513	VW3A9 212	VW3A9 112	VW3A9 635 (1)	–
–	VW3A7 712	VW3A5 209	VW3A9 513	VW3A9 212	VW3A9 112	VW3A9 636 (1)	–
VW3A7 101	VW3A7 715	VW3A5 210	VW3A9 514, 515	VW3A9 213, 214	VW3A9 113, 114	VW3A9 637 (1)	–
VW3A7 101	VW3A7 716	VW3A5 210	VW3A9 514, 515	VW3A9 213, 214	VW3A9 113, 114	VW3A9 638 (1)	–
VW3A7 101	VW3A7 716	VW3A5 210	VW3A9 514, 515	VW3A9 213, 214	VW3A9 113, 114	VW3A9 638 (1)	–
VW3A7 102	VW3A7 717	VW3A5 210	–	–	VW3A9 115	VW3A9 639 (1)	–
VW3A7 102	VW3A7 717	VW3A5 211	–	–	VW3A9 115	VW3A9 639 (1)	–
VW3A7 102	VW3A7 717	VW3A5 211	–	–	VW3A9 115	VW3A9 640 (1)	–
VW3A7 102	VW3A7 718	VW3A5 211	–	–	VW3A9 116	VW3A9 641 (1)	–
VW3A7 102	VW3A7 718	VW3A5 211	–	–	VW3A9 116	VW3A9 641 (1)	–
68	70	93	27	28	29	30	32

Resistance braking unit	Braking resistor	Sinus filter	Kit for flush-mounting (in a dust and damp proof enclosure)	Kit for UL Type 1 conformity (without enclosure)	Kit for IP 21 or IP 31 conformity (without enclosure)	DNV kit	Control card fan kit
–	VW3A7 710	VW3A5 207	–	–	–	–	–
–	VW3A7 711	VW3A5 208	–	–	–	–	–
–	VW3A7 711	VW3A5 208	–	–	–	–	–
VW3A7 101	VW3A7 712	VW3A5 209	–	–	–	–	–
VW3A7 101	VW3A7 712	VW3A5 209	–	–	–	–	–
VW3A7 101	VW3A7 715	VW3A5 210	–	–	–	–	–
VW3A7 101	VW3A7 716	VW3A5 210	–	–	–	–	–
VW3A7 101	VW3A7 716	VW3A5 210	–	–	–	–	–
VW3A7 102	VW3A7 717	VW3A5 210	–	–	–	–	–
VW3A7 102	VW3A7 717	VW3A5 211	–	–	–	–	–
VW3A7 102	VW3A7 717	VW3A5 211	–	–	–	–	–
VW3A7 102	VW3A7 718	VW3A5 211	–	–	–	–	–
VW3A7 102	VW3A7 718	VW3A5 211	–	–	–	–	–
68	70	93	–	–	–	–	–

(1) For VW3A9 629, 630, 632 and 634...641 kits, order a drive without a DC choke, by adding a **D** at the end of the reference. Example: **ATV 61HD90N4** becomes **ATV 61HD90N4D** (see page 25).

Variable speed drives

Altivar 61

380...480 V 50/60 Hz supply voltage

Table showing possible combinations of ATV 61W●●●N4 and ATV 61W●●●N4C drive options

Motor		Drive	Options		
kW	HP		Line choke	Passive filter	Motor choke
Three-phase supply voltage: 380...480 V 50/60 Hz					
0.75	1	ATV 61W075N4 ATV 61W075N4C	VW3 A4 551	VW3 A4 6●1	VW3 A5 101, 102, 103
1.5	2	ATV 61WU15N4 ATV 61WU15N4C	VW3 A4 551	VW3 A4 6●1	VW3 A5 101, 102, 103
2.2	3	ATV 61WU22N4 ATV 61WU22N4C	VW3 A4 552	VW3 A4 6●1	VW3 A5 101, 102, 103
3	–	ATV 61WU30N4 ATV 61WU30N4C	VW3 A4 552	VW3 A4 6●1	VW3 A5 101, 102, 103
4	5	ATV 61WU40N4 ATV 61WU40N4C	VW3 A4 552	VW3 A4 6●2	VW3 A5 101, 102, 103
5.5	7.5	ATV 61WU55N4 ATV 61WU55N4C	VW3 A4 553	VW3 A4 6●2	VW3 A5 102, 103, 104
7.5	10	ATV 61WU75N4 ATV 61WU75N4C	VW3 A4 553	VW3 A4 6●3	VW3 A5 102, 103, 104
11	15	ATV 61WD11N4 ATV 61WD11N4C	VW3 A4 554	VW3 A4 6●3	VW3 A5 102, 103, 104
15	20	ATV 61WD15N4 ATV 61WD15N4C	VW3 A4 554	VW3 A4 6●4	VW3 A5 102, 103, 104
18.5	25	ATV 61WD18N4 ATV 61WD18N4C	VW3 A4 555	VW3 A4 6●5	VW3 A5 102, 103, 104
22	30	ATV 61WD22N4 ATV 61WD22N4C	VW3 A4 555	VW3 A4 6●6	VW3 A5 103, 104
30	40	ATV 61WD30N4 ATV 61WD30N4C	VW3 A4 556	VW3 A4 6●7	VW3 A5 103, 104
37	50	ATV 61WD37N4 ATV 61WD37N4C	VW3 A4 556	VW3 A4 6●7	VW3 A5 103, 104
45	60	ATV 61WD45N4 ATV 61WD45N4C	VW3 A4 556	VW3 A4 6●8	VW3 A5 104
55	75	ATV 61WD55N4	VW3 A4 556	VW3 A4 6●8	VW3 A5 104
55	75	ATV 61WD55N4C	VW3 A4 556	VW3 A4 6●8	VW3 A5 104
75	100	ATV 61WD75N4	VW3 A4 557	VW3 A4 6●9	VW3 A5 104
75	100	ATV 61WD75N4C	VW3 A4 557	VW3 A4 6●9	VW3 A5 104
90	125	ATV 61WD90N4	VW3 A4 558	VW3 A4 6●9	VW3 A5 104
90	125	ATV 61WD90N4C	VW3 A4 558	VW3 A4 6●9	VW3 A5 104
Page		21	75	78	90

Braking resistor	Ready-assembled IP 54 base plate	IP 20 kit for motor choke	Sinus filter
VW3 A7 701	VW3 A9 901	–	VW3 A5 201
VW3 A7 701	VW3 A9 901	–	VW3 A5 201
VW3 A7 701	VW3 A9 901	–	VW3 A5 201
VW3 A7 701	VW3 A9 901	–	VW3 A5 201
VW3 A7 701	VW3 A9 901	–	VW3 A5 201
VW3 A7 701	VW3 A9 901	VW3 A9 612	VW3 A5 202
VW3 A7 702	VW3 A9 902	VW3 A9 612	VW3 A5 203
VW3 A7 702	VW3 A9 902	VW3 A9 612	VW3 A5 203
VW3 A7 703	VW3 A9 903	VW3 A9 612	VW3 A5 203
VW3 A7 703	VW3 A9 904	VW3 A9 612	VW3 A5 204
VW3 A7 704	VW3 A9 904	VW3 A9 612	VW3 A5 204
VW3 A7 704	VW3 A9 905	VW3 A9 612	VW3 A5 204
VW3 A7 704	VW3 A9 906	VW3 A9 612	VW3 A5 205
VW3 A7 705	VW3 A9 906	VW3 A9 612	VW3 A5 205
VW3 A7 706	VW3 A9 907	VW3 A9 612	VW3 A5 206
VW3 A7 706	VW3 A9 909	VW3 A9 612	VW3 A5 206
VW3 A7 706	VW3 A9 907	VW3 A9 612	VW3 A5 206
VW3 A7 706	VW3 A9 909	VW3 A9 612	VW3 A5 206
VW3 A7 706	VW3 A9 908	VW3 A9 612	VW3 A5 207
VW3 A7 706	VW3 A9 910	VW3 A9 612	VW3 A5 207
70	33	91	93

Table showing possible combinations of ATV 61H●●●S6X drive options

Motor		Drive	Options		
			Line choke	Motor choke	Braking resistor
500 V	575 V				
kW	HP				
Three-phase supply voltage: 500...600 V 50/60 Hz					
2.2	3	ATV 61HU22S6X	VW3 A4 551	VW3 A5 102, 103, 104	VW3 A7 702
3	–	ATV 61HU30S6X	VW3 A4 552	VW3 A5 102, 103, 104	VW3 A7 702
4	5	ATV 61HU40S6X	VW3 A4 552	VW3 A5 102, 103, 104	VW3 A7 702
5.5	7.5	ATV 61HU55S6X	VW3 A4 552	VW3 A5 102, 103, 104	VW3 A7 702
7.5	10	ATV 61HU75S6X	VW3 A4 553	VW3 A5 102, 103, 104	VW3 A7 702
Page		23	76	91	71

**Kit for flush-mounting
(in a dust and damp proof enclosure)**

**Kit for UL Type 1 conformity
(without enclosure)**

**Kit for IP 21 or IP 31 conformity
(without enclosure)**

VW3 A9 504

VW3 A9 204

VW3 A9 104

VW3 A9 504

VW3 A9 204

VW3 A9 104

VW3 A9 504

VW3 A9 204

VW3 A9 104

VW3 A9 504

VW3 A9 204

VW3 A9 104

VW3 A9 504

VW3 A9 204

VW3 A9 104

27

28

29

Variable speed drives

Altivar 61

500...690 V 50/60 Hz supply voltage

Table showing possible combinations of ATV 61H●●●Y drive options

Motor			Drive	Options				
				Line choke	Motor choke	IP 20 kit for motor choke	Resistance braking unit	Braking resistor
500 V kW	575 V HP	690 V kW						
Three-phase supply voltage: 500...690 V 50/60 Hz								
2.2	3	3	ATV 61HU30Y	VW3 A4 551	VW3 A5 102, 103, 104	VW3 A9 612	–	VW3 A7 701
3	–	4	ATV 61HU40Y	VW3 A4 551	VW3 A5 102, 103, 104	VW3 A9 612	–	VW3 A7 701
4	5	5.5	ATV 61HU55Y	VW3 A4 551	VW3 A5 102, 103, 104	VW3 A9 612	–	VW3 A7 701
5.5	7.5	7.5	ATV 61HU75Y	VW3 A4 552	VW3 A5 102, 103, 104	VW3 A9 612	–	VW3 A7 701
7.5	10	11	ATV 61HD11Y	VW3 A4 552	VW3 A5 102, 103, 104	VW3 A9 612	–	VW3 A7 702
11	15	15	ATV 61HD15Y	VW3 A4 553	VW3 A5 103, 104	VW3 A9 612	–	VW3 A7 702
15	20	18.5	ATV 61HD18Y	VW3 A4 553	VW3 A5 103, 104	VW3 A9 612	–	VW3 A7 703
18.5	25	22	ATV 61HD22Y	VW3 A4 554	VW3 A5 103, 104	VW3 A9 612	–	VW3 A7 703
22	30	30	ATV 61HD30Y	VW3 A4 554	VW3 A5 103, 104	VW3 A9 612	–	VW3 A7 704
30	40	37	ATV 61HD37Y	VW3 A4 555	VW3 A5 104	VW3 A9 612	–	VW3 A7 704
37	50	45	ATV 61HD45Y	VW3 A4 555	VW3 A5 104	VW3 A9 612	–	VW3 A7 704
45	60	55	ATV 61HD55Y	VW3 A4 555	VW3 A5 104	VW3 A9 612	–	VW3 A7 705
55	75	75	ATV 61HD75Y	VW3 A4 556	VW3 A5 104	VW3 A9 612	–	VW3 A7 705
75	100	90	ATV 61HD90Y	VW3 A4 556	VW3 A5 104	VW3 A9 612	–	VW3 A7 707
90	125	110	ATV 61HC11Y	VW3 A4 570	VW3 A5 104	VW3 A9 612	–	VW3 A7 806
110	150	132	ATV 61HC13Y	VW3 A4 570	VW3 A5 104	VW3 A9 612	–	VW3 A7 806
132	–	160	ATV 61HC16Y	VW3 A4 571	VW3 A5 104	VW3 A9 612	–	VW3 A7 805
160	200	200	ATV 61HC20Y	VW3 A4 571	VW3 A5 105	VW3 A9 612	–	VW3 A7 805
200	250	250	ATV 61HC25Y	VW3 A4 560	VW3 A5 105	VW3 A9 612	VW3 A7 103	VW3 A7 806
250	350	315	ATV 61HC31Y	VW3 A4 572	VW3 A5 106	VW3 A9 613	VW3 A7 103	VW3 A7 716
315	450	400	ATV 61HC40Y	VW3 A4 572	VW3 A5 106	VW3 A9 613	VW3 A7 103	VW3 A7 814
400	550	500	ATV 61HC50Y	VW3 A4 568	VW3 A5 107	VW3 A9 613	VW3 A7 104	VW3 A7 717
500	700	630	ATV 61HC63Y	VW3 A4 572	VW3 A5 107	VW3 A9 613	VW3 A7 104	VW3 A7 718
630	800	800	ATV 61HC80Y	VW3 A4 572	VW3 A5 108	VW3 A9 613	VW3 A7 104	VW3 A7 816
Page			23	76	91	91	68	71

Table showing possible combinations of ATV 61H●●●Y drive options

Motor			Drive	Options				
				Line choke	Motor choke	IP 20 kit for motor choke	Resistance braking unit	Braking resistor
500 V kW	575 V HP	690 V kW						
Three-phase supply voltage: 500...690 V 50/60 Hz								
110	150	132	ATV 61QC13Y	VW3 A4 570	VW3 A5 104	VW3 A9 612	–	VW3 A7 806
132	–	160	ATV 61QC16Y	VW3 A4 571	VW3 A5 105	VW3 A9 612	–	VW3 A7 805
160	200	200	ATV 61QC20Y	VW3 A4 571	VW3 A5 105	VW3 A9 612	–	VW3 A7 805
200	250	250	ATV 61QC25Y	VW3 A4 560	VW3 A5 106	VW3 A9 612	VW3 A7 103	VW3 A7 806
250	350	315	ATV 61QC31Y	VW3 A4 572	VW3 A5 106	VW3 A9 612	VW3 A7 103	VW3 A7 716
315	450	400	ATV 61QC40Y	VW3 A4 572	VW3 A5 107	VW3 A9 613	VW3 A7 103	VW3 A7 814
400	550	500	ATV 61QC50Y	VW3 A4 568	VW3 A5 107	VW3 A9 613	VW3 A7 104	VW3 A7 717
500	700	630	ATV 61QC63Y	VW3 A4 572	VW3 A5 108	VW3 A9 613	VW3 A7 104	VW3 A7 718
630	800	800	ATV 61QC80Y	VW3 A4 572	VW3 A5 108	VW3 A9 613	VW3 A7 104	VW3 A7 816
Page			24	76	91	91	68	71

Kit for flush-mounting (in a dust and damp proof enclosure)	Kit for UL Type 1 conformity (without enclosure)	Kit for IP 21 or IP 31 conformity (without enclosure)	DNV kit	Control card fan kit
VW3 A9 506	VW3 A9 206	VW3 A9 106	VW3 A9 642	VW3 A9 404
VW3 A9 506	VW3 A9 206	VW3 A9 106	VW3 A9 642	VW3 A9 404
VW3 A9 506	VW3 A9 206	VW3 A9 106	VW3 A9 642	VW3 A9 404
VW3 A9 506	VW3 A9 206	VW3 A9 106	VW3 A9 642	VW3 A9 404
VW3 A9 506	VW3 A9 206	VW3 A9 106	VW3 A9 642	VW3 A9 404
VW3 A9 506	VW3 A9 206	VW3 A9 106	VW3 A9 642	VW3 A9 404
VW3 A9 506	VW3 A9 206	VW3 A9 106	VW3 A9 642	VW3 A9 404
VW3 A9 506	VW3 A9 206	VW3 A9 106	VW3 A9 642	VW3 A9 404
VW3 A9 506	VW3 A9 206	VW3 A9 106	VW3 A9 642	VW3 A9 404
VW3 A9 509	VW3 A9 208	VW3 A9 108	VW3 A9 643	VW3 A9 407
VW3 A9 509	VW3 A9 208	VW3 A9 108	VW3 A9 643	VW3 A9 407
VW3 A9 509	VW3 A9 208	VW3 A9 108	VW3 A9 643	VW3 A9 407
VW3 A9 509	VW3 A9 208	VW3 A9 108	VW3 A9 643	VW3 A9 407
VW3 A9 509	VW3 A9 208	VW3 A9 108	VW3 A9 643	VW3 A9 407
VW3 A9 512	VW3 A9 211	VW3 A9 111	VW3 A9 644	–
VW3 A9 512	VW3 A9 211	VW3 A9 111	VW3 A9 644	–
VW3 A9 512	VW3 A9 211	VW3 A9 111	VW3 A9 645	–
VW3 A9 512	VW3 A9 211	VW3 A9 111	VW3 A9 645	–
VW3 A9 514, 515	VW3 A9 213, 214	VW3 A9 113, 114	VW3 A9 646	–
VW3 A9 514, 515	VW3 A9 213, 214	VW3 A9 113, 114	VW3 A9 647	–
VW3 A9 514, 515	VW3 A9 213, 214	VW3 A9 113, 114	VW3 A9 647	–
–	–	VW3 A9 116	VW3 A9 648	–
–	–	VW3 A9 116	VW3 A9 649	–
–	–	VW3 A9 116	VW3 A9 649	–
27	28	29	30	32

Kit for flush-mounting (in a dust and damp proof enclosure)	Kit for UL Type 1 conformity (without enclosure)	Kit for IP 21 or IP 31 conformity (without enclosure)	DNV kit	Control card fan kit
–	–	–	–	–
–	–	–	–	–
–	–	–	–	–
–	–	–	–	–
–	–	–	–	–
–	–	–	–	–
–	–	–	–	–
–	–	–	–	–
–	–	–	–	–
–	–	–	–	–

List of options common to Altivar 61 drives

Description	Reference	Page
Logic input adaptor		
Adaptor for 115 V ~ logic inputs	VW3 A3 101	33
HMI terminal		
Remote graphic display terminal	VW3 A1 101	35
Encoder interface cards (1)		
With RS 422 compatible differential outputs	VW3 A3 401	54
With open collector outputs	VW3 A3 403, 404	54
With push-pull outputs	VW3 A3 405...407	54
I/O expansion cards (1)		
Logic	VW3 A3 201	55
Extended	VW3 A3 202	55
Multi-pump cards (1)		
Multi-pump card	VW3 A3 502	57
Water solution multi-pump card	VW3 A3 503	57
Programmable card (1)		
Controller Inside programmable card	VW3 A3 501	61
SoMove setup software		
SoMove setup software	Available on our website at www.schneider-electric.com	40

List of communication cards (1)

Description	Reference	Page
Modbus TCP Daisy Chain	VW3 A3 310D	66
EtherNet/IP	VW3 A3 316	66
DeviceNet	VW3 A3 309	66
INTERBUS	VW3 A3 304	66
CC-LINK	VW3 A3 317	66
Modbus/Uni-Telway	VW3 A3 303	66
PROFIBUS DP V0	VW3 A3 307	67
PROFIBUS DP V1	VW3 A3 307S371	67
LONWORKS	VW3 A3 312	67
METASYS N2	VW3 A3 313	67
APOGEE FLN	VW3 A3 314	67
BACnet	VW3 A3 319	67

(1) For card compatibility table, see opposite.

Card compatibility table (1)						
Type of card	Encoder interface VW3 A3 40●	Logic I/O VW3 A3 201	Extended I/O VW3 A3 202	Multi-pump VW3 A3 502, 503	Programmable Controller Inside VW3 A3 501	Communication VW3 A3 3●●
Encoder interface VW3 A3 40●						
Logic I/O VW3 A3 201						
Extended I/O VW3 A3 202						
Multi-pump VW3 A3 502, 503						
Programmable Controller Inside VW3 A3 501						
Communication VW3 A3 3●●						

Combination possible

Combination not possible

(1) Maximum combination involving two types of card is 2.

Presentation



VW3 A3 401 encoder interface card

Encoder interface cards are used for machine safety, irrespective of the control type:

- Overspeed detection
- Load slip detection

Three types of card are available depending on the encoder technology:

- RS 422 compatible differential outputs
- Open collector outputs (NPN)
- Push-pull outputs

The Altivar 61 variable speed drive can only take one encoder interface card. Please refer to the card compatibility table on page 53.

The interface encoder card is inserted in a dedicated slot.

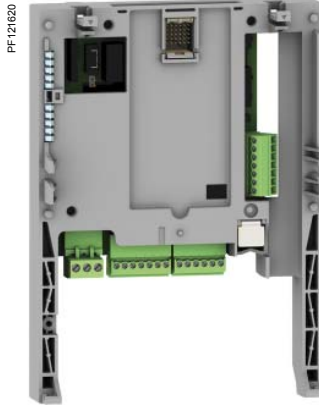
It is protected against short circuits and overloads.

References

Description	Used with encoder (1)	Voltage V	Maximum current mA	Maximum cable length m	Maximum operating frequency kHz	Reference	Weight kg
Encoder interface card with RS422 compatible differential outputs	XCC 1●●●●●●X XCC 1●●●●●●R XCC 1●●●●●●RN	5	200	50	300	VW3 A3 401	0.200
Encoder interface cards with open collector outputs	–	12	175	500	300	VW3 A3 403	0.200
		15	175	500	300	VW3 A3 404	0.200
Encoder interface cards with push-pull outputs	XCC 1●●●●●●Y XCC 1●●●●●●K XCC 1●●●●●●KN	12	175	500	300	VW3 A3 405	0.200
		15	175	500	300	VW3 A3 406	0.200
		24	100	500	300	VW3 A3 407	0.200

(1) To determine the complete encoder reference, please refer to the "Detection for automation solutions - OsiSense" catalogue or our website www.schneider-electric.com.

Presentation



VW3 A3 202 extended I/O card

Altivar 61 variable speed drives can be adapted for more complex or extensive applications by installing I/O expansion cards.

Two models are available:

- Card with logic I/O featuring:
 - 1 relay logic output ("C/O" contact)
 - 4 x 24 V $\overline{\text{---}}$ positive or negative logic inputs
 - 2 x 24 V $\overline{\text{---}}$ positive or negative logic open collector outputs
 - 1 input for 6 PTC probes (1)
- Card with extended I/O featuring:
 - 1 differential current analog input 0...20 mA
 - 1 software-configurable voltage ($\overline{\text{---}}$ 0...10 V) or current (0...20 mA) analog input
 - 2 software-configurable voltage (\pm 10 V $\overline{\text{---}}$, 0...10 V) or current (0...20 mA) analog outputs
 - 1 relay logic output
 - 4 x 24 V $\overline{\text{---}}$ positive logic (Source) or negative logic (Sink) inputs
 - 2 x 24 V $\overline{\text{---}}$ positive or negative logic open collector outputs
 - 1 input for 6 PTC probes
 - 1 frequency control input

The Altivar 61 variable speed drive can only take one I/O expansion card with the same reference.

Please refer to the card compatibility table on page 53.

References

Designation	Type of I/O						Reference	Weight kg
	Logic input	Logic output	Analog input	Analog output	Input for PTC probes (1)	Frequency control input		
Logic I/O card	4	3	–	–	1	–	VW3 A3 201	0.300
Extended I/O card	4	3	2	2	1	1	VW3 A3 202	0.300

(1) This PTC probe input must never be used to protect an ATEX motor in applications in explosive atmospheres. Please refer to the ATEX guide which is available on our website www.schneider-electric.com.

Variable speed drives

Altivar 61

Option: Multi-pump cards

Presentation

The Altivar 61 drive provides an automation solution that is ideal for the requirements of water treatment:

- It incorporates all the application functions for managing your pumps, such as sleep, wake-up, zero flow detection, fluid absence detection, underload or overload detection and PID regulator.
- It is used to adjust the operating point of pumps using control profiles.
- It protects your pumps:
motor thermal protection, PTC management, low speed detection and time delay

Multi-pump cards can adapt drive operation to the specific requirements of the installation.

They reduce costs and increase the service life of equipment by intelligently managing the operating time of each pump.

Various predefined configurable applications are sold by Schneider Electric and its partners.

In order to protect our know-how, it is not possible to transfer the program from the card to a PC.

A single multi-pump card can be installed in the Altivar 61. It can be combined with another option card (I/O expansion or communication). Please refer to the card compatibility table on page 53.

Each multi-pump card consists of:

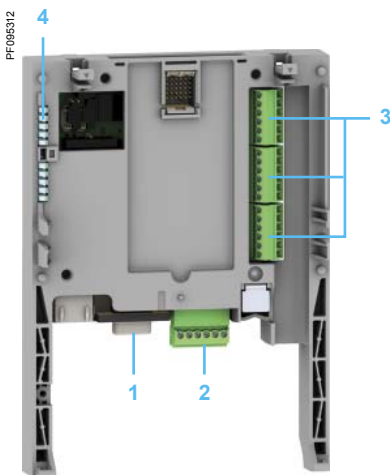
- 10 x 24 V $\bar{\bar{}}$ logic inputs, 2 of which can be used for 2 counters or 4 of which can be used for 2 incremental encoders
- 2 x 0...20 mA current analog inputs, impedance 250 Ω
- 6 x 24 V $\bar{\bar{}}$ positive logic (Source) open collector outputs
- 2 x 0...20 mA current analog outputs, impedance 500 Ω
- A master port for the CANopen machine bus

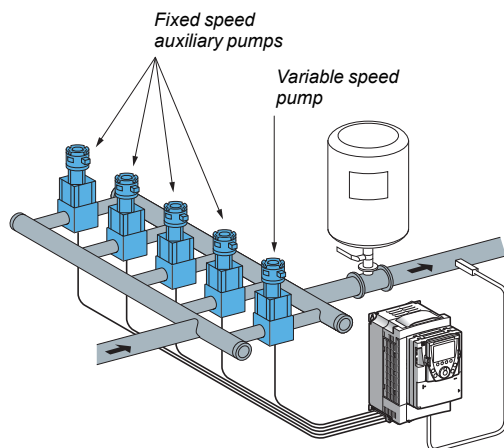
If the power consumption does not exceed 200 mA, this card can be powered by ATV 61H●●●● drives. Otherwise, an external 24 V $\bar{\bar{}}$ power supply must be used. ATV 61W●●●N4A24 drives incorporate a 24 V $\bar{\bar{}}$ power supply, allowing additional consumption of 250 mA.

Note: It is recommended that an OsiSense XM electronic pressure sensor, type XML F or XML G, is added to the installation. Please consult our "Detection for automation solutions - OsiSense" catalogue or our website www.schneider-electric.com.

Description

- 1 9-way male SUB-D connector for connection to the CANopen machine bus
- 2 Connector with removable screw terminals, 6 contacts at intervals of 3.81 for the 24 V $\bar{\bar{}}$ power supply and 4 logic inputs
- 3 3 connectors with removable screw terminals, 6 contacts at intervals of 3.81 for 6 logic inputs, 6 logic outputs, 2 analog inputs, 2 analog outputs and 2 commons
- 4 5 LEDs:
 - 1 to indicate the presence of the 24 V $\bar{\bar{}}$ power supply
 - 1 to indicate a program execution fault
 - 2 to indicate the CANopen machine bus communication status
 - 1 controlled by the application program





Example configuration of a pumping system with the VW3 A3 502 multi-pump card

VW3 A3 502 multi-pump card

The **VW3 A3 502** multi-pump card ensures compatibility of pump applications developed for an Altivar 38 drive with an Altivar 61, without reprogramming.

With this card, a complete pumping installation (up to 5 pumps) can be controlled with a single drive, providing constant pressure.

It incorporates the following operating modes:

- Single or multiple variable
 - Single or multiple variable with changeover of auxiliary pumps
 - Single or multiple variable with limitation of operating time between pumps
- These last two operating modes can be combined.

Applications

It is specially designed for applications such as:

- Constant pressure water distribution and pumping systems
- Booster stations

VW3 A3 503 Water solution multi-pump card

The **VW3 A3 503** multi-pump card is not compatible with pump applications developed for an Altivar 38 drive.

With this card, a complete pumping installation (up to 4 pumps) can be controlled with a single drive, providing constant pressure.

It incorporates the single variable function as well as the Jockey management function which is primarily used to manage booster or priming pumps. It also compensates for losses in installations.

Applications

It is specially designed for applications such as:

- Irrigation stations
- Sprinkling stations

Continuity of service for your installation

If a pump is faulty (information on the L1x logic input) it is not taken into account and the start and stop conditions are provided by the other pumps.

Each pump can:

- Display the operating time
- Reset the counter
- Save the operating times

Each card also incorporates an OFF mode, used during maintenance operations.

References

Description	Reference	Weight kg
Multi-pump card Equipped with one 9-way male SUB-D connector	VW3 A3 502	0.320
Water solution multi-pump card Equipped with one 9-way male SUB-D connector	VW3 A3 503	0.320

Variable speed drives

Altivar 61

Option: Controller Inside programmable card

Presentation

The Controller Inside programmable card is used to adapt the variable speed drive to specific applications by integrating control system functions.

Various predefined configurable applications are sold by Schneider Electric and its partners.

The PS 1131 software workshop is used for programming and debugging new applications, quickly and in an open-ended manner in accordance with standard IEC 61131-3.

It is not possible to transfer the program from the card to the PC, therefore know-how is protected.

A single Controller Inside programmable card can be installed in the Altivar 61 drive. It can be combined with another option card (I/O expansion or communication). Please refer to the card compatibility table on page 53.

The Controller Inside programmable card features:

- 10 x 24 V $\overline{\text{DC}}$ logic inputs, 2 of which can be used for 2 counters or 4 of which can be used for 1 incremental encoder and/or 3 counters
- 2 x 0...20 mA current analog inputs, impedance 500 Ω
- 6 x 24 V $\overline{\text{DC}}$ positive logic (Source) open collector outputs
- 2 x 0...20 mA current analog inputs, impedance 500 Ω
- A master port for the CANopen machine bus, for controlling other drives and communication with I/O modules and sensors
- A PC port for programming using the PS 1131 software workshop

If the power consumption does not exceed 200 mA, the Controller Inside programmable card can be powered by Altivar 61 drives. Otherwise, an external 24 V $\overline{\text{DC}}$ power supply must be used.

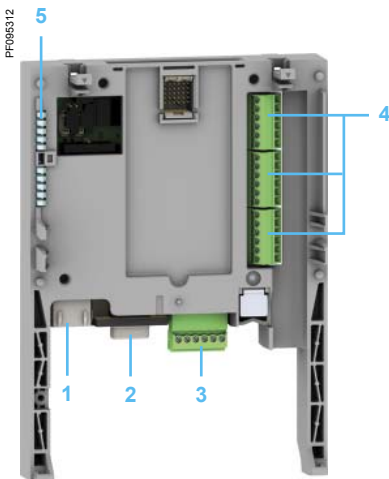
ATV 61W●●●N4A24 drives incorporate a 24 V $\overline{\text{DC}}$ power supply, allowing additional consumption of 250 mA.

The Controller Inside programmable card can also use:

- The drive I/O
- The I/O expansion card I/O
- The encoder interface card points counter
- The drive parameters (speed, current, torque, etc.)

Description

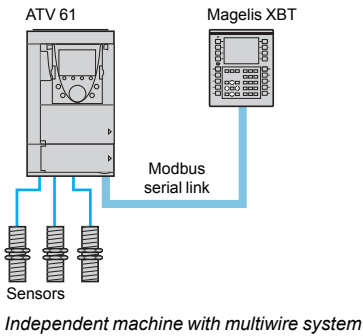
- 1 RJ45 connector for connecting the PS1131 software workshop via an RS 485 serial link
Connection to the PC is via a cable and RS 232/RS 485 converter included in the PC serial port connection kit, VW3 A8 106.
- 2 9-way male SUB-D connector for connection to the CANopen machine bus
- 3 Connector with removable screw terminals, 6 contacts at intervals of 3.81 for the 24 V $\overline{\text{DC}}$ power supply and 4 logic inputs
- 4 3 connectors with removable screw terminals, 6 contacts at intervals of 3.81 for 6 logic inputs, 6 logic outputs, 2 analog inputs, 2 analog outputs and 2 commons
- 5 5 LEDs:
 - 1 to indicate the presence of the 24 V $\overline{\text{DC}}$ power supply
 - 1 to indicate a program execution fault
 - 2 to indicate the CANopen machine bus communication status
 - 1 controlled by the application program



Variable speed drives

Altivar 61

Option: Controller Inside programmable card

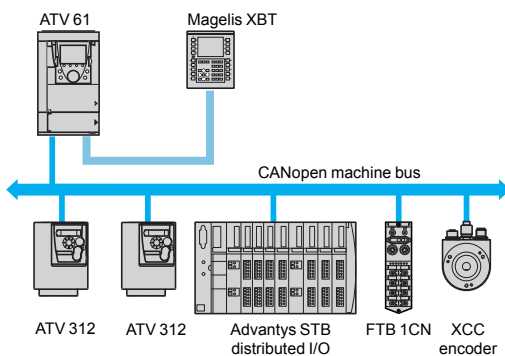


Dialogue

Human-machine dialogue with the application programmed in the Controller Inside programmable card is possible using:

- The Altivar 61 graphic display terminal: the graphic terminal has a menu dedicated to the Controller Inside programmable card. This menu can be customized by the program depending on the application.
- A Magelis industrial HMI terminal, connected to:
 - The drive's Modbus port
 - The Modbus TCP network, if the drive is equipped with a Modbus TCP communication card

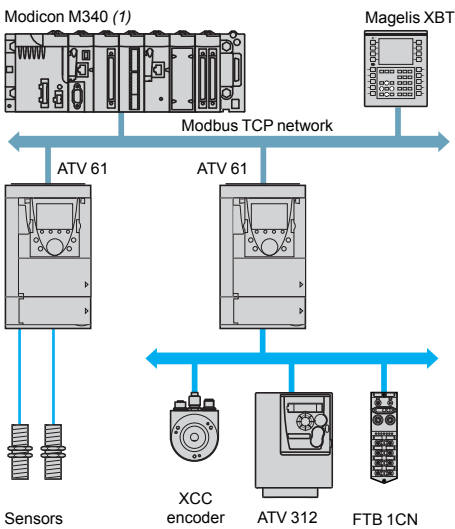
Any industrial HMI terminal which supports the Modbus protocol can be used to display and modify the Controller Inside programmable card parameters.



Master CANopen communication

The master CANopen port on the Controller Inside programmable card can be used to extend the I/O capacity and to control other CANopen slave devices.

Independent machine with CANopen bus



Communication with a PLC

An Altivar 61 drive equipped with a Controller Inside programmable card integrates easily into complex architectures. Regardless of which bus, network or serial link is being used (Modbus TCP, Modbus/Uni-Telway, PROFIBUS DP, INTERBUS, etc.), the PLC can communicate with the Controller Inside programmable card and the drive. The periodic variables can still be configured as required.

Clock

A clock backed up by a lithium battery makes it possible to keep a log of events. When the Controller Inside programmable card is installed in the drive, drive faults are automatically time and date-stamped without any special programming.

(1) Please refer to the "Modicon M340 Automation Platform" catalogue.

Variable speed drives

Altivar 61

Option: Controller Inside programmable card

PS 1131 software workshop

The PS 1131 software workshop conforms to international standard IEC/EN 61131-3 and includes all the functions for programming and setting up the Controller Inside programmable card.

It includes the CANopen configurator.

It is designed for Microsoft Windows® 98, Microsoft Windows® NT 4.0, Microsoft Windows® Millennium, Microsoft Windows® 2000 Professional and Microsoft Windows® XP operating systems.

It benefits from the user-friendly interface associated with these operating systems:

- Pop-up menus
- Function blocks
- Online help

The PS 1131 software workshop is available in both English and German.

The **programming and debugging tools** can be accessed via the application browser. This provides the user with an overview of the program and quick access to all the application components:

- Program editor
- Function blocks editor
- Variables editor
- Animation tables editor
- Runtime screens editor

Modular structured programming

The PS 1131 software workshop is used to structure an application into function modules consisting of sections (program code), animation tables and runtime screens.

Each program section has a name and is programmed in one of six available languages:

- Ladder Diagram (LD)
- Structured Text (ST)
- Grafset (SFC)
- Instruction List (IL)
- Function Block Diagram (FBD)
- Continuous Flow Chart (CFC)

To protect know-how or prevent any accidental modification, each section can be write-protected or read/write-protected.

Function blocks

The PS 1131 software workshop features pre-programmed function blocks which make up the standard library.

Exchanges with the drive are performed by a function block available in the standard library.

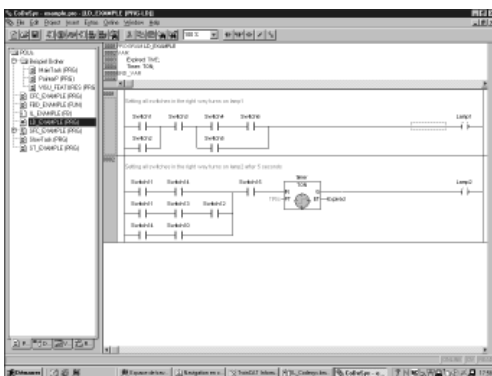
The software workshop also offers users the option of creating their own function blocks and thus creating a user library.

The user library is also a means of protecting the know-how contained in the algorithms, as it is possible to lock access to the user function blocks program.

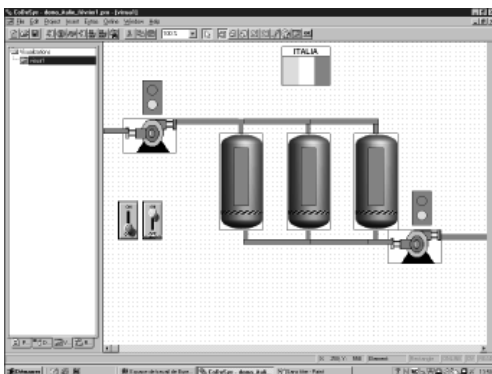
Debugging tools

The PS 1131 software workshop offers a complete set of tools for debugging the application:

- Program execution for debugging (step-by-step execution, execution of a single cycle, etc.)
- Realtime animation of the program with automatic display of the variables
- Animation tables editor with the option of saving them
- Oscilloscope (monitoring up to 20 variables)
- Application runtime screens editor (graphic objects, messages, screen backgrounds, etc.)
- Simulation function for testing the program without using the drive



Ladder language programming example

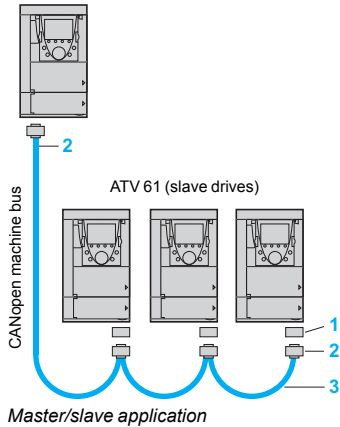


Example runtime screen

Variable speed drives

Altivar 61

Option: Controller Inside programmable card

537199
ATV 61 (master drive)
+ VW3A3 501 card

References

Card

Description	Reference	Weight kg
Controller Inside programmable card equipped with one 9-way male SUB-D connector	VW3 A3 501	0.320

Connection accessories

Description	Item no.	Length m	Weight kg
CANopen adaptor for mounting on the RJ45 socket in the drive control terminals. The adaptor provides a 9-way male SUB-D connector conforming to the CANopen standard (CIA DRP 303-1)	1	–	VW3 CAN A71
CANopen connector 9-way female SUB-D with line terminator (can be disabled)	2	–	TSX CAN KCDF 180T

Cables

CANopen cables Standard cable, CE marking. Low smoke zero halogen. Flame retardant (IEC 60332-1).	3	50	TSX CAN CA 50	4.930
		100	TSX CAN CA 100	8.800
		300	TSX CAN CA 300	24.560
CANopen cables UL certified, CE marking. Flame retardant (IEC 60332-2).	3	50	TSX CAN CB 50	3.580
		100	TSX CAN CB 100	7.840
		300	TSX CAN CB 300	21.870
CANopen cables Cable for harsh environments (1) or mobile installations, CE marking. Low smoke zero halogen. Flame retardant (IEC 60332-1).	3	50	TSX CAN CD 30	3.510
		100	TSX CAN CD 100	7.770
		300	TSX CAN CD 300	21.700

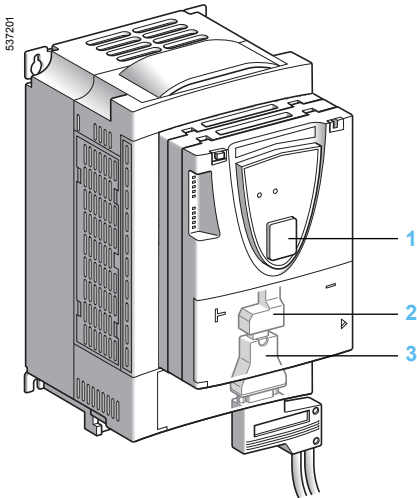
PS 1131 software workshop

Description	Reference	Weight kg
PS 1131 software workshop supplied on CD-ROM	(2)	–
PC serial port connection kit including various accessories such as: ■ One 3 m cable with two RJ45 connectors ■ One RS 232/RS 485 converter with one 9-way female SUB-D connector and one RJ45 connector	VW3 A8 106	0.350

(1) Harsh environments:

- Resistance to hydrocarbons, industrial oils, detergents, solder splashes
- Relative humidity up to 100%
- Saline atmosphere
- Significant temperature variations
- Operating temperature between -10°C and +70°C

(2) The product reference is provided during the Controller Inside programmable card training course. Consult your Customer Care Centre.



Integrated communication for Modbus and CANopen protocols

Presentation

The Altivar 61 drive has been designed to meet all the configuration requirements encountered within the context of networked industrial installations.

Integrated communication protocols

It includes Modbus and CANopen communication protocols as standard.

Two integrated communication ports enable direct access to the Modbus protocol:

- One RJ45 Modbus terminal port **1** located on the drive front panel, which is used to connect a Human Machine Interface or one of the following configuration tools:
 - Remote graphic display terminal
 - Magelis industrial HMI terminal
 - SoMove setup software
 - Simple Loader and Multi-Loader configuration tools

- One RJ45 Modbus network port **2** located on the drive's control terminals. This is assigned to control and signalling by a PLC or by another type of controller. It can also be used to connect a terminal or the SoMove setup software.

The CANopen protocol can be accessed from the Modbus network port **2** via the CANopen adaptor **3**. In this case, terminal port **1** must be used to access the Modbus protocol.

The characteristics of the communication ports for Modbus and CANopen protocols are available on our website www.schneider-electric.com.

Optional communication cards

By adding one of the communication cards available as options, the Altivar 61 drive can also be connected to other communication networks and buses used in various application areas, such as industry and building management (HVAC) (1).

Communication cards for industrial applications:

- Modbus TCP Daisy Chain
- Modbus/Uni-Telway (this card provides access to additional functions, which complement those of the integrated ports (Modbus ASCII and 4-wire RS 485))
- Ethernet/IP
- DeviceNet
- PROFIBUS DP V0 and V1
- INTERBUS
- CC-LINK

Communication cards for building applications (HVAC):

- LONWORKS
- METASYS N2
- APOGEE FLN
- BACnet

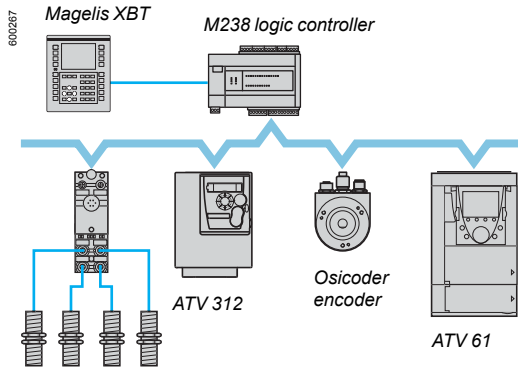
The option of powering the control part separately enables communication to be maintained (monitoring, diagnostics) even if there is no power supply to the power part.

The main communication functions of Altivar 38 drives are compatible with the Altivar 61 drive (2):

- Connection
- Communication services
- Drive behaviour (profile)
- Control and monitoring parameters
- Standard adjustment parameters

(1) Heating, Ventilation and Air Conditioning.

(2) Please refer to the ATV 38/ATV 61 Substitution Guide supplied on the documentation CD-ROM.



Sensors

Example configuration on CANopen machine bus

Functions

All drive functions can be accessed via the network:

- Configuration
- Adjustment
- Control
- Monitoring

The Altivar 61 drive's advanced functions provide excellent interfacing flexibility. They enable the different control sources (I/O, communication networks, communication cards and HMI terminal) to be assigned to control functions that satisfy the requirements of numerous, extremely complex applications.

Network configuration is simplified through the provision of configuration software (configurator for SyCon® networks, etc.).

For the integrated Modbus and CANopen ports and for communication cards for industrial applications, the Altivar 61 drive can be controlled:

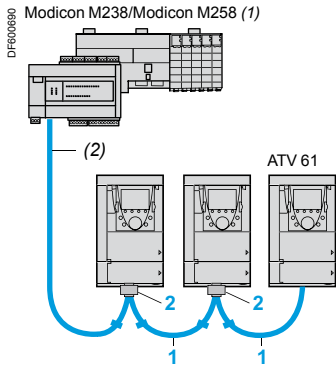
- According to the CiA 402 profile
- According to the I/O profile where control is as simple and adaptable as control via the I/O terminals

The DeviceNet card also supports CIP AC Drive and Allen-Bradley drive profiles; PROFIBUS DP V0 and V1 cards also support the PROFIdrive profile.

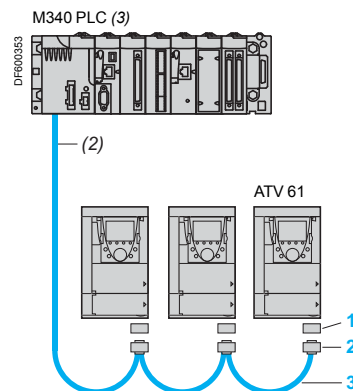
Communication is monitored according to the specific criteria for each protocol. However, regardless of the protocol, it is possible to configure the drive reaction to a communication fault:

- Freewheel stop, stop on ramp, fast stop or braked stop
- Maintain last command received
- Fallback position at a predefined speed
- Ignore the fault

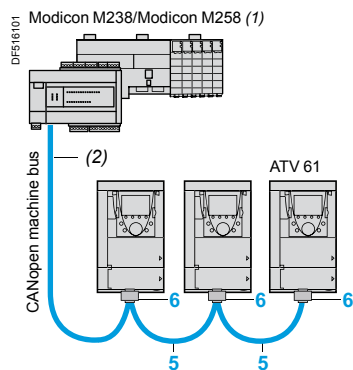
A command from the CANopen machine bus is processed with the same priority as one of the drive terminal inputs. This results in excellent response times on the network port via the CANopen adaptor.



Optimized solution for daisy chain connection to the CANopen machine bus



Example CANopen diagram with SUB-D connector



Example CANopen diagram with daisy chain tap

CANopen machine bus

Description	Item no.	Length m	Reference	Weight kg
Connection via RJ45 connector (optimized solution for daisy chain connection to the CANopen machine bus)				
CANopen cordsets equipped with 2 RJ45 connectors	1	0.3	VW3 CAN CARR03	0.050
		1	VW3 CAN CARR1	0.500
Daisy chain tap equipped with: ■ 2 RJ45 connectors for connecting the CANopen bus in a daisy chain ■ 1 cordset equipped with an RJ45 connector for connecting the drive	2	0.3	TCS CTN023F13M03	–
Connection via SUB-D connector				
CANopen adaptor for mounting on the RJ45 port on the drive control terminals. The adaptor provides a 9-way male SUB-D connector conforming to the CANopen standard (CIA DRP 303-1).	3	–	VW3 CAN A71	–
CANopen connector (4) 9-way female SUB-D with line terminator (can be disabled). 180° cable outlet for 2 CANopen cables. CAN-H, CAN-L, CAN-GND connection.	4	–	VW3 CAN KCDF 180T	–
CANopen cables (1) (2) Standard cable, CE marking Low smoke zero halogen Flame retardant (IEC 60332-1)	5	50	TSX CAN CA 50	4.930
		100	TSX CAN CA 100	8.800
		300	TSX CAN CA 300	24.560
CANopen cables (1) (2) UL certified, CE marking Flame retardant (IEC 60332-2)	5	50	TSX CAN CB 50	3.580
		100	TSX CAN CB 100	7.840
		300	TSX CAN CB 300	21.870
CANopen cables (1) (2) Cable for harsh environments (5) or mobile installations, CE marking Low smoke zero halogen Flame retardant (IEC 60332-1)	5	50	TSX CAN CD 50	3.510
		100	TSX CAN CD 100	7.770
		300	TSX CAN CD 300	21.700
Connection via terminals				
Daisy chain tap equipped with: ■ 2 spring terminal blocks for connecting the CANopen bus in a daisy chain ■ 1 cordset equipped with an RJ45 connector for connecting the drive	6	0.6	TSC CTN026M16M	–

(1) Please refer to the "Modicon M238 Logic Controller" and "M258 Logic Controller" catalogues.

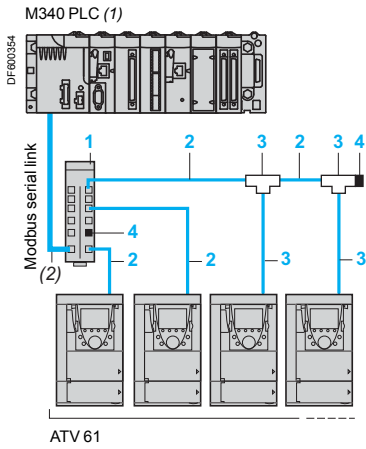
(2) Cable dependent on the type of controller or PLC.

(3) Please refer to the "Modicon M340 Automation Platform" catalogue.

(4) For ATV 61H●●M3, ATV 61HD11M3X, HD15M3X, ATV 61H075N4...HD18N4 and ATV 61H●●Y drives, this connector can be replaced by the TSX CAN KCDF 180T connector.

(5) Harsh environments:

- Resistance to hydrocarbons, industrial oils, detergents, solder splashes
- Relative humidity up to 100%
- Saline atmosphere
- Significant temperature variations
- Operating temperature between - 10°C and + 70°C.



Example Modbus diagram with connection via splitter box and RJ45 connectors

Modbus serial link

Connection accessories

Description	Item no.	Length m	Unit reference	Weight kg	
Modbus splitter box 10 RJ45 connectors and 1 screw terminal block	1	–	LU9 GC3	0.500	
Cordsets for Modbus serial link equipped with 2 RJ45 connectors	2	0.3	VW3 A8 306 R03	0.025	
	1	–	VW3 A8 306 R10	0.060	
	3	–	VW3 A8 306 R30	0.130	
Modbus T-junction boxes (with integrated cable)	3	0.3	VW3 A8 306 TF03	0.190	
	1	–	VW3 A8 306 TF10	0.210	
Line terminators for RJ45 connector (3)	R = 120 Ω	4	–	VW3 A8 306 RC	0.010
	C = 1 nF	–	–	–	–
	R = 150 Ω	4	–	VW3 A8 306 R	0.010

1) Please refer to the "Modicon M340 Automation platform" catalogue.

2) Cable depending on the type of controller or PLC.

3) Order in lots of 2.

PF121621



Communication card

Modbus TCP Daisy Chain and EtherNet/IP network (1) (2)

Description		Length m	Reference	Weight kg
Communication cards				
Modbus TCP Daisy Chain	Equipped with 2 RJ45 connectors Modbus TCP 10/100 Mbps class C20	–	VW3 A3 310D	0.300
EtherNet/IP	Equipped with 2 RJ45 connectors	–	VW3 A3 316	0.300
ConneXium Modbus TCP (VW3 A3 310D) or EtherNet/IP (VW3 A3 316) cordsets				
Straight shielded	Equipped with 2 RJ45 connectors	2	490 NTW 000 02	–
twisted pair cordsets	To be connected on a hub or on a switch	5	490 NTW 000 05	–
		12	490 NTW 000 12	–
		40	490 NTW 000 40	–
		80	490 NTW 000 80	–

DeviceNet bus (1) (2)

Description		Reference	Weight kg
Communication card			
DeviceNet	Equipped with a 5-way removable screw terminal block	VW3 A3 309	0.300

INTERBUS bus (1) (2)

Description		Reference	Weight kg
Communication card			
INTERBUS	Equipped with one 9-way male SUB-D connector and one 9-way female SUB-D connector To be connected using cordset 170 MCI ●●●00 (3)	VW3 A3 304	0.300

CC-LINK bus (1) (2)

Description		Reference	Weight kg
Communication card			
CC-LINK	Equipped with a 5-way removable screw terminal block	VW3 A3 317	0.300

Modbus/Uni-Telway network (1) (2)

Description		Length m	Reference	Weight kg
Communication card				
Modbus/Uni-Telway	Equipped with a 9-way female SUB-D connector	–	VW3 A3 303	0.300

Connection accessories for Modbus/Uni-Telway card (VW3 A3 303)

Subscriber socket	Equipped with two 15-way female SUB-D connectors and two screw terminal blocks. For 2-channel junction box, trunk cable extension and line terminator	–	TSX SCA 62	0.570
Cordset for TSX SCA 62 subscriber socket	Equipped with two 9 and 15-way male SUB-D connectors	3	VW3 A8 306 2	0.150

(1) The Altivar 61 drive can only take one communication card. See the summary tables of possible drive, option and accessory combinations on pages 42 to 53.

(2) User manuals can be downloaded from our website www.schneider-electric.com. For the DeviceNet card, the description files in gsd, eds or xif format can also be downloaded from our website www.schneider-electric.com.

(3) Please refer to the "Automation Platform Modicon Premium and Unity - PL7 Software" catalogue.

Variable speed drives

Altivar 61

Communication buses and networks

PROFIBUS DP V0/V1 (1) (2)				
Description		Length m	Reference	Weight kg
Communication cards				
PROFIBUS DP V0	Equipped with a 9-way female SUB-D connector	–	VW3 A3 307	0.300
PROFIBUS DP V1	Equipped with a 9-way female SUB-D connector	–	VW3 A3 307S371	0.300
Connection accessories for PROFIBUS DP V0 (VW3 A3 307) or V1 (VW3 A3 307S371) card				
Connectors:	For middle of line	–	490 NAD 911 04	–
9-way male SUB-D (3)	For end of line	–	490 NAD 911 03	–
Cable		100	TSX PBS CA100	–
for 490 NAD 911 ●● connector (3)		400	TSX PBS CA400	–

LONWORKS bus (1) (2)				
Description			Reference	Weight kg
Communication card				
LONWORKS	Equipped with a 3-way removable screw terminal block		VW3 A3 312	0.300

METASYS N2 bus (1) (2)				
Communication card				
METASYS N2	Equipped with a 5-way removable screw terminal block for Open Style CANopen cable		VW3 A3 312	0.300

APOGEE FLN bus (1) (2)				
Communication card				
APOGEE FLN	Equipped with a 5-way removable screw terminal block for Open Style CANopen cable		VW3 A3 312	0.300

BACnet bus (1) (2)				
Communication card				
BACnet	Equipped with a 5-way removable screw terminal block for Open Style CANopen cable		VW3 A3 312	0.300

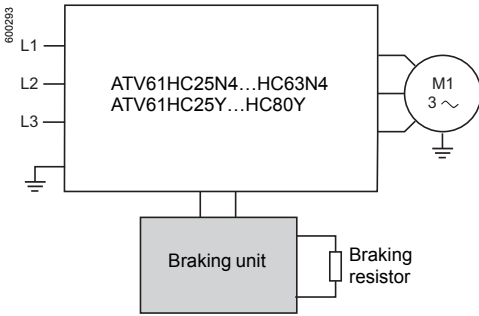
(1) The Altivar 61 drive can only take one communication card. See the summary tables of possible drive, option and accessory combinations on pages 42 to 53.

(2) User manuals can be downloaded from our website www.schneider-electric.com.

For the PROFIBUS DP and LONWORKS cards, the description files in gsd, eds or xif format can also be downloaded from our website www.schneider-electric.com.

(3) Please refer to the "Automation Platform Modicon Premium and Unity - PL7 Software" catalogue.

Presentation



Resistance braking enables the Altivar 61 drive to operate while braking to a standstill or during "generator" operation, by dissipating the energy in the braking resistor.

ATV 61H●●●M3, ATV 61H●●●M3X, ATV 61H075N4...HC22N4, ATV 61W●●●N4, ATV 61W●●●N4C, ATV 61H●●●S6X and ATV 61HU30Y...HC20Y drives have a built-in dynamic brake transistor.

For ATV 61HC25N4...HC63N4 and ATV 61HC25Y...HC80Y drives, a braking unit must be used. This is controlled by the drive:

- For ATV 61HC25N4 and HC31N4 drives, the braking unit is mounted directly on the left-hand side of the drive
- For ATV 61HC40N4...HC63N4 and ATV 61HC25Y...HC80Y drives, the braking unit is an external module

Braking units have IP 20 degree of protection. Thermal protection is provided by an integrated temperature probe.

Application

High-inertia machines.

References

For drives	Power		Losses	Cable (drive - braking unit)		Cable (braking unit - resistors)		Percentage of conduction time	Reference	Weight
	Contin-	Maximum	At continuous power	Cross-section	Maximum length	Cross-section	Maximum length			
	uous	kW								
Supply voltage: 380...480 V 50/60 Hz										
ATV 61HC25N4, HC31N4 ATV 61QC20N4... QC31N4	200	420	550	–	–	2 x 95	50	5% at 420 kW 15% at 320 kW 50% at 250 kW	VW3 A7 101	30.000
ATV 61HC40N4... HC63N4 ATV 61QC40N4... QC63N4	400	750	1050	2 x 150	1	2 x 150	50	5% at 750 kW 15% at 550 kW 50% at 440 kW	VW3 A7 102	80.000
Supply voltage: 500...690 V 50/60 Hz										
ATV 61HC25Y... HC40Y ATV 61QC25Y... QC40Y	300	450	650	2 x 150	1	2 x 150	50	5% at 450 kW 15% at 400 kW 50% at 350 kW	VW3 A7 103	80.000
ATV 61HC50Y... HC80Y ATV 61QC50Y... QC80Y	400	900	1150	2 x 150	1	2 x 150	50	5% at 900 kW 15% at 600 kW 50% at 500 kW	VW3 A7 104	80.000

Note: To increase the braking power, several braking resistors can be mounted in parallel on the same braking unit. In this case, do not forget to take the minimum resistance value to be associated with the braking unit into account, that is:

- 1.05 ohm for the VW3 A7 101 braking unit
- 0.7 ohm for the VW3 A7 102 braking unit
- 2 ohms for the VW3 A7 103 braking unit
- 1 ohm for the VW3 A7 104 braking unit

Presentation



VW3 A7 701

The braking resistor enables the Altivar 61 drive to operate while braking to a standstill, by dissipating the braking energy. It enables maximum transient braking torque.

The resistors are designed to be mounted on the outside of the enclosure, but should not inhibit natural cooling. Air inlets and outlets must not be obstructed in any way. The air must be free of dust, corrosive gas and condensation.

There are two resistor models, depending on the rating of the drive:

- With IP 20 casing and thermal protection provided by temperature-controlled switch or by the drive (VW3 A7 701...709)
- With IP 23 casing and thermal protection provided by thermal overload relay (VW3 A7 71● and 8●●).

The internal circuits of Altivar 61 drives rated 200 kW or less have a built-in dynamic brake transistor.

Application

Inertia machines.

Braking resistors

For drives	Degree of protection of the resistor	Ohmic value at 20°C	Average power available at 50°C (1)	Reference	Weight
		Ω	kW		kg
Supply voltage: 200...240 V 50/60 Hz					
ATV 61H075M3	IP 20	100	0.05	VW3 A7 701	1.900
ATV 61HU15M3, HU22M3	IP 20	60	0.1	VW3 A7 702	2.400
ATV 61HU30M3, HU40M3	IP 20	28	0.2	VW3 A7 703	3.500
ATV 61HU55M3, HU75M3	IP 20	15	1	VW3 A7 704	11.000
ATV 61HD11M3X	IP 20	10	1	VW3 A7 705	11.000
ATV 61HD15M3X	IP 20	8	1	VW3 A7 706	11.000
ATV 61HD18M3X, HD22M3X	IP 20	5	1.3	VW3 A7 707	11.000
ATV 61HD30M3X	IP 20	4	1	VW3 A7 708	11.000
ATV 61HD37M3X, HD45M3X	IP 20	2.5	1	VW3 A7 709	11.000
ATV 61HD55M3X, HD75M3X	IP 23	1.8	15.3	VW3 A7 713	50.000
ATV 61HD90M3X	IP 23	1.4	20.9	VW3 A7 714	63.000

(1) Load factor for resistors: the value of the average power that can be dissipated at 50°C from the resistor into the casing is determined for a load factor during braking that corresponds to the majority of normal applications:

For VW3 A7 701...709:

- 2 s braking with a 0.6 T_n braking torque for a 40 s cycle
- 0.8 s braking with a 1.5 T_n braking torque for a 40 s cycle

For VW3 A7 713 and 714:

- 10 s braking with a 2 T_n braking torque for a 30 s cycle



VW3 A7 701

Braking resistors (continued)					
For drives	Degree of protection of the resistor	Ohmic value at 20°C	Average power available at 50°C (1)	Reference	Weight
		Ω	kW		kg
Supply voltage: 380...480 V 50/60 Hz					
ATV 61H075N4...HU40N4 ATV 61W075N4...WU55N4 ATV 61W075N4C...WU55N4C	IP 20	100	0.05	VW3 A7 701	1.900
ATV 61HU55N4, HU75N4 ATV 61WU75N4, WD11N4 ATV 61WU75N4C, WD11N4C	IP 20	60	0.1	VW3 A7 702	2.400
ATV 61HD11N4, HD15N4 ATV 61WD15N4, WD18N4 ATV 61WD15N4C, WD18N4C	IP 20	28	0.2	VW3 A7 703	3.500
ATV 61HD18N4...HD30N4 ATV 61WD22N4...WD37N4 ATV 61WD22N4C...WD37N4C	IP 20	15	1	VW3 A7 704	11.000
ATV 61HD37N4 ATV 61WD45N4 ATV 61WD45N4C	IP 20	10	1	VW3 A7 705	11.000
ATV 61WD55N4, WD90N4 ATV 61WD55N4C, WD90N4C	IP 20	8	1	VW3 A7 706	11.000
ATV 61HD45N4, HD75N4	IP 20	5	1.3	VW3 A7 707	11.000
ATV 61HD90N4, HC11N4 ATV 61QC11N4	IP 23	2.75	25	VW3 A7 710	80.000
ATV 61HC13N4, HC16N4 ATV 31QC13N4, QC16N4	IP 23	2.1	37	VW3 A7 711	86.000
ATV 61HC22N4 ATV 61QC20N4	IP 23	2.1	44	VW3 A7 712	104.000
ATV 61HC25N4 ATV 61QC25N4	IP 23	1.05	56	VW3 A7 715	136.000
ATV 61HC31N4 ATV 61QC31N4	IP 23	1.05	75	VW3 A7 716	172.000
ATV 61HC40N4, HC50N4 ATV 61QC40N4, QC50N4	IP 23	0.7	112	VW3 A7 717	266.000
ATV 61HC63N4 ATV 61QC63N4	IP 23	0.7	150	VW3 A7 718	350.000

(1) Load factor for resistors: the value of the average power that can be dissipated at 50°C from the resistor into the casing is determined for a load factor during braking that corresponds to the majority of normal applications:

For VW3 A7 701...707:

- 2 s braking with a 0.6 Tn braking torque for a 40 s cycle
- 0.8 s braking with a 1.5 Tn braking torque for a 40 s cycle

For VW3 A7 710...712 and 715...718:

- 10 s braking with a 2 Tn braking torque for a 30 s cycle

Braking resistors (continued)						
For drives	Degree of protection of the resistor	Ohmic value at 20°C	Average power available at 50°C (1)	Quantity per drive	Reference	Weight
		Ω	kW			kg
Supply voltage: 500...600 V 50/60 Hz						
ATV 61HU22S6X...HU75S6X	IP 20	60	0.1	1	VW3 A7 702	2.400
Supply voltage: 500...690 V 50/60 Hz						
ATV 61HU30Y...HU75Y	IP 20	100	0.05	1	VW3 A7 701	1.900
ATV 61HD11Y, HD15Y	IP 20	60	0.1	1	VW3 A7 702	2.400
ATV 61HD18Y, HD22Y	IP 20	28	0.2	1	VW3 A7 703	3.500
ATV 61HD30Y...HD45Y	IP 20	15	1	1	VW3 A7 704	11.000
ATV 61HD55Y, HD75Y	IP 20	10	1	1	VW3 A7 705	11.000
ATV 61HD90Y	IP 20	5	1.3	1	VW3 A7 707	11.000
ATV 61HC11Y, HC13Y ATV 61QC13Y	IP 23	4.2	62	1	VW3 A7 806	126.000
ATV 61HC16Y, HC20Y ATV 61QC16Y, QC20Y	IP 23	8.1	44	2	VW3 A7 805 (2)	92.000
ATV 61HC25Y ATV 61QC25Y	IP 23	4.2	62	2	VW3 A7 806 (2)	126.000
ATV 61HC31Y ATV 61QC31Y	IP 23	1.05	75	2	VW3 A7 716 (3)	172.000
ATV 61HC40Y ATV 61QC40Y	IP 23	1.05	112	2	VW3 A7 814 (3)	280.000
ATV 61HC50Y ATV 61QC50Y	IP 23	0.7	112	2	VW3 A7 717 (3)	266.000
ATV 61HC63Y ATV 61QC63Y	IP 23	0.7	150	2	VW3 A7 718 (3)	350.000
ATV 61HC80Y ATV 61QC80Y	IP 23	0.7	225	2	VW3 A7 816 (3)	543.000

(1) Load factor for resistors: the value of the average power that can be dissipated at 50°C from the resistor into the casing is determined for a load factor during braking that corresponds to the majority of normal applications.

For VW3 A7 701...705 and 707:

- 2 s braking with a 0.6 Tn braking torque for a 40 s cycle
- 0.8 s braking with a 1.5 Tn braking torque for a 40 s cycle

For VW3 A7 716...718:

- 10 s braking with a 2 Tn braking torque for a 30 s cycle

For VW3 A7 805 and 806:

- 100 s braking with a 1 Tn braking torque for a 200 s cycle
- 20 s braking with a 1.6 Tn braking torque for a 200 s cycle

For VW3 A7 814 and 816:

- 10 s braking with a 2 Tn braking torque for a 240 s cycle
- 110 s braking with a 1.25 Tn braking torque for a 240 s cycle

(2) The two braking resistors must be connected in parallel. The dimensions of all the components must be taken into account as well as the required space of 300 mm to be left between each resistor: please consult our website www.schneider-electric.com.

(3) The two braking resistors must be connected in series. The dimensions of all the components must be taken into account as well as the required space of 300 mm to be left between each resistor: please consult our website www.schneider-electric.com.

Variable speed drives

Altivar 61: reduction of current harmonics

Option: DC chokes

Depending on the line supply, the main solutions for reducing current harmonics are as follows:

- DC chokes (1) (see below)
- Line chokes (1) (see page 74)
- 16% and 10% passive filters (1) (see page 84)
- Use of passive filters with a DC choke (see pages 80 to 83)

These five solutions can be used on the same installation (1).

It is always easier and less expensive to deal with current harmonics at installation level as a whole rather than at the level of each individual unit, particularly when using passive filters.

DC choke

DC chokes are used to reduce current harmonics in order to comply with standard IEC 61000-3-12 for drives in which the line current is more than 16 A and less than 75 A.

Using a DC choke with the drive complies with standard IEC 61000-3-12 provided that the $RSCE \geq 120$ at the point of connection to the public power supply.

It is the responsibility of the installer or the user to ensure that the device is connected correctly to a connection point with an $RSCE \geq 120$. The DC choke is connected to the drive power terminals.

The DC choke is supplied as standard with ATV 61HD55M3X...HD90M3X and ATV 61HD90N4...HC63N4 drives, and integrated in ATV 61W...N4 and ATV 61W...N4C drives.

It provides IP 20 degree of protection.

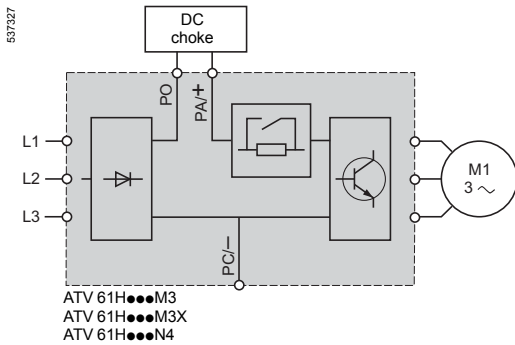
Applications

Reduction of current harmonics.

Reduction of the THDI to 5% or 10% when used with passive filters (pages 78 to 81).

Maintaining the motor torque in relation to the line choke.

(1) For ATV 61H...S6X and ATV 61HU30Y...HD90Y drives, only line chokes are recommended. They are mandatory for ATV 61HC11Y...HC80Y drives (see page 74).



Variable speed drives

Altivar 61: reduction of current harmonics

Option: DC chokes

References (1)						
For drives	Inductance value	Nominal current	Losses	THDI (2)	Reference	Weight
	mH	A	W			kg
Three-phase supply voltage: 200...240 V 50/60 Hz						
ATV 61HU75M3	6.8	8	22.5	41.27	VW3 A4 503	1.700
ATV 61HU15M3	3.2	14.3	32	42.4	VW3 A4 505	2.200
ATV 61HU22M3	2.2	19.2	33	43.33	VW3 A4 506	2.500
ATV 61HU30M3	1.6	27.4	43	43.22	VW3 A4 507	3.000
ATV 61HU40M3	1.2	44	61	43.91	VW3 A4 508	4.300
ATV 61 HU55M3	1.2	44	61	38		
ATV 61HU75M3	0.7	36	30.5	43.96	VW3 A4 509	2.500
ATV 61HD11M3X	0.52	84.5	77	38.14	VW3 A4 510	6.400
ATV 61HD15M3X	0.52	84.5	77	35		
ATV 61HD18M3X	0.22	171.2	86	38.5	VW3 A4 511	17.850
ATV 61HD22M3X	0.22	171.2	86	36.62		
ATV 61HD30M3X	0.09	195	73	43.51	VW3 A4 512	10.000
ATV 61 HD37M3X	0.09	195	73	39.24		
ATV 61HD45M3X	0.09	195	73	35.7		
Three-phase supply voltage: 380...480 V 50/60 Hz						
ATV 61HU75N4	18	2.25	7.7	44.95	VW3 A4 501	0.650
ATV 61HU15N4	10	4.3	11	45.48	VW3 A4 502	1.000
ATV 61HU22N4	6.8	8	22.5	45	VW3 A4 503	1.700
ATV 61HU30N4	6.8	8	22.5	40.08		
ATV 61HU40N4	3.9	10.7	27	44.72	VW3 A4 504	1.650
ATV 61HU55N4	3.2	14.3	32	45.19	VW3 A4 505	2.200
ATV 61HU75N4	2.2	19.2	33	42.25	VW3 A4 506	2.500
ATV 61HD11N4	1.6	27.4	43	43.1	VW3 A4 507	3.000
ATV 61HD15N4	1.2	44	57.5	43.06	VW3 A4 508	4.300
ATV 61HD18N4	1.2	44	57.5	35.23		
ATV 61HD22N4	0.52	84.5	98.3	40.4	VW3 A4 510	6.400
ATV 61HD30N4	0.52	84.5	98.3	36.99		
ATV 61HD37N4	0.52	84.5	98.3	35.13		
ATV 61HD45N4	0.22	171.2	128	45.59	VW3 A4 511	17.850
ATV 61HD55N4	0.22	171.2	128	39.29		
ATV 61HD75N4	0.22	171.2	128	36.2		

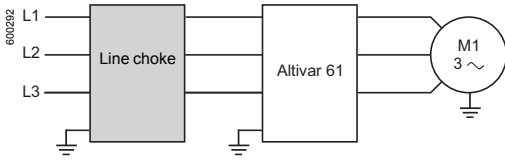
(1) The DC choke is supplied as standard with ATV 61HD55M3X...HD90M3X and ATV 61HD90N4...HC63N4 drives.
It is integrated in ATV 61W●●●N4 and ATV 61W●●●N4C drives.

(2) Total current harmonic distortion in accordance with IEC 61000-3-12.

Variable speed drives

Altivar 61: reduction of current harmonics

Option: line chokes



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.

The recommended chokes limit the line current. They have been developed in line with standard IEC 61800-5-1 (VDE 0160 level 1 high-energy overvoltages on the line supply).

The choke values are defined for a voltage drop between phases of between 3% and 5% of the nominal supply voltage. Values higher than this will cause loss of torque.

Line chokes are mandatory:

- For ATV 61HU40M3...HU75M3 drives powered by a 200...240 V 50/60 Hz single-phase supply voltage
- For ATV 61HC11Y...HC80Y drives
- For ATV 61QC13Y...QC80Y drives

Their use is recommended for ATV 61H●●●S6X and ATV 61HU30Y...HD90Y drives.

Line chokes can be used instead of a DC choke with ATV 61H●●●M3 drives powered by a 200...240V 50/60 Hz three-phase supply voltage, and ATV 61H●●●M3X and ATV 61●●●●N4 drives.

Note: ATV 61HD90N4...HC63N4 drives, supplied as standard with a DC choke, can be ordered without a choke by adding the letter D at the end of the reference (see page 25).

Chokes must be installed upstream of the drive.

Applications

The use of line chokes is recommended in particular under the following circumstances:

- Close connection of several drives in parallel
- Line supply with significant disturbance from other equipment (interference, overvoltages)
- Line supply with voltage imbalance between phases that is more than 1.8% of the nominal voltage
- Drive supplied by a line with very low impedance (in the vicinity of power transformers 10 times more powerful than the drive rating)
- Installation of a large number of frequency inverters on the same line
- Reduction of overloads on the $\cos \varphi$ correction capacitors, if the installation includes a power factor correction unit

Variable speed drives

Altivar 61: reduction of current harmonics

Option: line chokes

References								
For drives	Line supply Isc	Line choke				Quantity per drive	Reference	Weight
		Inductance value	Nominal current	Saturation current	Losses			
	kA	mH	A	A	W			kg
Single-phase supply voltage: 200...240 V 50/60 Hz								
ATV 61HU40M3 (1)	5	2	25	–	45	1	VW3 A58501	3.500
ATV 61HU55M3 (1)	5	1	45	–	50	1	VW3 A58502	3.500
ATV 61HU75M3 (1)	22	1	45	–	50	1	VW3 A58502	3.500
Three-phase supply voltage: 200...240 V 50/60 Hz								
ATV 61H075M3	5	10	4	–	45	1	VW3 A4 551	1.500
ATV 61HU15M3, HU22M3	5	4	10	–	65	1	VW3 A4 552	3.000
ATV 61HU30M3	5	2	16	–	75	1	VW3 A4 553	3.500
ATV 61HU40M3	5	1	30	–	90	1	VW3 A4 554	6.000
ATV 61HU55M3	22	1	30	–	90	1	VW3 A4 554	6.000
ATV 61HU75M3, HD11M3X	22	0.5	60	–	94	1	VW3 A4 555	11.000
ATV 61HD15M3X	22	0.3	100	–	260	1	VW3 A4 556	16.000
ATV 61HD18M3X...HD45M3X	22	0.15	230	–	400	1	VW3 A4 557	45.000
ATV 61HD55M3X	35	0.12	222	346	278	1	VW3 A4 559	35.000
ATV 61HD75M3X	35	0.085	300	474	315	1	VW3 A4 568	46.000
ATV 61HD90M3X	35	0.06	450	574	335	1	VW3 A4 569	70.000
Three-phase supply voltage: 380...480 V 50/60 Hz								
ATV 61H075N4, HU15N4 ATV 61W075N4, WU15N4 ATV 61W075N4C, WU15N4C	5	10	4	–	45	1	VW3 A4 551	1.500
ATV 61HU22N4...HU40N4 ATV 61WU22N4...WU40N4 ATV 61WU22N4C...WU40N4C	5	4	10	–	65	1	VW3 A4 552	3.000
ATV 61HU55N4, HU75N4 ATV 61WU55N4, WU75N4 ATV 61WU55N4C, WU75N4C	22	2	16	–	75	1	VW3 A4 553	3.500
ATV 61HD11N4, HD15N4 ATV 61WD11N4, WD15N4 ATV 61WD11N4C, WD15N4C	22	1	30	–	90	1	VW3 A4 554	6.000
ATV 61HD18N4, HD22N4 ATV 61WD18N4, WD22N4 ATV 61WD18N4C, WD22N4C	22	0.5	60	–	94	1	VW3 A4 555	11.000
ATV 61HD30N4...HD55N4 ATV 61WD30N4...WD55N4 ATV 61WD30N4C...WD55N4C	22	0.3	100	–	260	1	VW3 A4 556	16.000
ATV 61HD75N4 ATV 61WD75N4 ATV 61WD75N4C	22	0.15	230	–	400	1	VW3 A4 557	45.000
ATV 61HD90N4D ATV 61WD90N4 ATV 61WD90N4C	35	0.155	184	370	220	1	VW3 A4 558	31.000
ATV 61HC11N4D ATV 61QC11N4	35	0.12	222	445	278	1	VW3 A4 559	35.000
ATV 61HC13N4D ATV 61QC13N4	35	0.098	264	530	245	1	VW3 A4 560	43.000
ATV 61HC16N4D ATV 61QC16N4	50	0.085	300	570	315	1	VW3 A4 568	46.000
ATV 61HC22N4D ATV 61QC20N4	50	0.066	344	685	258	1	VW3 A4 561	47.000
ATV 61HC22N4D ATV 61HC25N4D ATV 61QC25N4	50	0.06	450	850	335	1	VW3 A4 569	70.000
ATV 61HC31N4D ATV 61QC31N4	50	0.038	613	1150	307	1	VW3 A4 564	73.000
ATV 61HC40N4D ATV 61QC40N4	50	0.032	720	1352	428	1	VW3 A4 565	82.000
ATV 61HC50N4D ATV 61QC50N4	50	0.066	344	685	258	2	VW3 A4 561	47.000
ATV 61HC50N4D ATV 61QC50N4	50	0.06	450	850	335	2	VW3 A4 569	70.000
ATV 61HC50N4D ATV 61QC50N4	50	0.038	509	855	278	2	VW3 A4 563	59.000
ATV 61HC63N4D ATV 61QC63N4	50	0.038	613	1150	307	2	VW3 A4 564	73.000
ATV 61HC63N4D ATV 61QC63N4	50	0.026	590	1180	320	2	VW3 A4 573	60.000

(1) Use of a line choke is mandatory.

Variable speed drives

Altivar 61: reduction of current harmonics

Option: line chokes

PF107632



VW3 A4 572

References (continued)									
For drives	Line supply Line Isc	Line choke				Quantity per drive	THDI (1)	Reference	Weight
		Inductance value	Nominal current	Saturation current	Losses				
	kA	mH	A	A	W				kg
Three-phase supply voltage: 500...600 V 50/60 Hz									
ATV 61HU22S6X (2)	22	10	4	–	45	1	39.6	VW3 A4 551	1.500
ATV 61HU30S6X, HU40S6X (2)	22	4	10	–	65	1	48.1	VW3 A4 552	3.000
ATV 61HU55S6X (2)	22	4	10	–	65	1	41.6	VW3 A4 552	3.000
ATV 61HU75S6X (2)	22	2	16	–	75	1	52.3	VW3 A4 553	3.500
Three-phase supply voltage: 500...690 V 50/60 Hz									
ATV 61HU30Y (2)	22	10	4	–	45	1	38.03	VW3 A4 551	1.500
ATV 61HU40Y (2)	22	10	4	–	45	1	–		
ATV 61HU55Y (2)	22	10	4	–	45	1	42.79		
ATV 61HU75Y (2)	22	4	10	–	65	1	37.36	VW3 A4 552	3.000
ATV 61HD11Y (2)	22	4	10	–	65	1	41.81		
ATV 61HD15Y (2)	22	2	16	–	75	1	35.75	VW3 A4 553	3.500
ATV 61HD18Y (2)	22	2	16	–	75	1	38.44		
ATV 61HD22Y (2)	22	1	30	–	90	1	35.31	VW3 A4 554	6.000
ATV 61HD30Y (2)	22	1	30	–	90	1	37.61		
ATV 61HD37Y (2)	22	0.5	60	–	94	1	39.39	VW3 A4 555	11.000
ATV 61HD45Y (2)	22	0.5	60	–	94	1	36.07		
ATV 61HD55Y (2)	22	0.5	60	–	94	1	37.38		
ATV 61HD75Y (2)	22	0.3	100	–	260	1	37.39	VW3 A4 556	16.000
ATV 61HD90Y (2)	22	0.3	100	–	260	1	33.24		
ATV 61HC11Y (3)	28	0.22	160	320	220	1	43.31	VW3 A4 570	28.000
ATV 61HC13Y (3) ATV 61QC13Y	28	0.22	160	320	220	1	39.73	VW3 A4 570	28.000
ATV 61HC16Y (3) ATV 61QC16Y (3)	28	0.23	230	405	330	1	36.5	VW3 A4 571	79.000
ATV 61HC20Y (3) ATV 61QC20Y (3)	35	0.23	230	405	330	1	47.13	VW3 A4 571	79.000
ATV 61HC25Y (3) ATV 61QC25Y (3)	35	0.098	264	530	245	1	41.91	VW3 A4 560	35.000
ATV 61HC31Y (3) ATV 61QC31Y (3)	35	0.1	450	770	495	1	37.61	VW3 A4 572	90.000
ATV 61HC40Y (3) ATV 61QC40Y (3)	35	0.1	450	770	495	1	44.78		
ATV 61HC50Y (3) ATV 61QC50Y (3)	35	0.085	300	570	315	2	38.08	VW3 A4 568	46.000
ATV 61HC63Y (3) ATV 61QC63Y (3)	35	0.1	450	770	495	2	35.42	VW3 A4 572	90.000
ATV 61HC80Y (3) ATV 61QC80Y (3)	42	0.1	450	770	495	2	32.04	VW3 A4 572	90.000

(1) Total current harmonic distortion in accordance with IEC 61000-3-12. The values are given for a 600 V 60 Hz three-phase supply voltage.

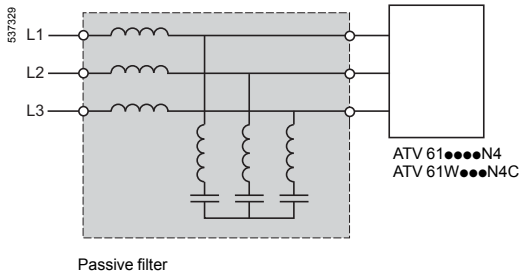
(2) Use of a line choke is recommended.

(3) Use of a line choke is mandatory.

Variable speed drives

Altivar 61: reduction of current harmonics

Option: passive filters



Passive filters

A passive filter is used to reduce current harmonics with total harmonic distortion factors of less than 16% or 10%.

These performance levels can be improved still further and the harmonic distortion reduced to less than 10% or 5% if the filter is used with a DC choke (see pages 72 and 73).

The reactive power increases at no load or low load. To eliminate this reactive power, the filter capacitors can be disconnected via the drive (see the diagrams on our website "www.schneider-electric.com" or refer to our programming manual).

The degree of protection of the passive filters is IP 20.

ATV 61H...M3, ATV 61H...Y and ATV 61H...S6X drives are not compatible with the use of passive filters. It is recommended or mandatory, depending on the rating, to use a line choke (see page 74).

Applications

Reduction of current harmonics in order to use drives in the first environment (restricted distribution, for domestic use, sale conditional on the competence of the user and the distributor in terms of reduction of current harmonics).

Variable speed drives

Altivar 61: reduction of current harmonics

Option: passive filters

Passive filters: 400 V 50 Hz three-phase power supply							
Motor rating		For ATV 61 drives	Line supply Line current	Filter In (2)	Quantity per drive	Reference	Weight
kW	HP		A	A			kg
THDI 16% with ATV 61H075N4...HD75N4 drives (1)							
0.75	1	H075N4	2.5	6	1	VW3 A4 601	15.000
1.5	2	HU15N4	3.6	6	1	VW3 A4 601	15.000
2.2	3	HU22N4	5	6	1	VW3 A4 601	15.000
3	–	HU30N4	6	6	1	VW3 A4 601	15.000
4	5	HU40N4	7.8	10	1	VW3 A4 602	19.000
5.5	7.5	HU55N4	10	10	1	VW3 A4 602	19.000
7.5	10	HU75N4	14	19	1	VW3 A4 603	21.000
11	15	HD11N4	19	19	1	VW3 A4 603	21.000
15	20	HD15N4	26	26	1	VW3 A4 604	22.000
18.5	25	HD18N4	32	35	1	VW3 A4 605	34.000
22	30	HD22N4	38	43	1	VW3 A4 606	38.000
30	40	HD30N4	52	72	1	VW3 A4 607	56.000
37	50	HD37N4	63	72	1	VW3 A4 607	56.000
45	60	HD45N4	77	101	1	VW3 A4 608	69.000
55	75	HD55N4	91	101	1	VW3 A4 608	69.000
75	100	HD75N4	126	144	1	VW3 A4 609	97.000
THDI 10% with ATV 61HD90N4...HC63N4 and ATV 61W075N4...WD90N4(C) drives							
0.75	1	W075N4, W075N4C	2.5	6	1	VW3 A4 601	15.000
1.5	2	WU15N4, WU15N4C	3.6	6	1	VW3 A4 601	15.000
2.2	3	WU22N4, WU22N4C	5	6	1	VW3 A4 601	15.000
3	–	WU30N4, WU30N4C	6	6	1	VW3 A4 601	15.000
4	5	WU40N4, WU40N4C	7.8	10	1	VW3 A4 602	19.000
5.5	7.5	WU55N4, WU55N4C	10	10	1	VW3 A4 602	19.000
7.5	10	WU75N4, WU75N4C	14	19	1	VW3 A4 603	21.000
11	15	WD11N4, WD11N4C	19	19	1	VW3 A4 603	21.000
15	20	WD15N4, WD15N4C	26	26	1	VW3 A4 604	22.000
18.5	25	WD18N4, WD18N4C	32	35	1	VW3 A4 605	34.000
22	30	WD22N4, WD22N4C	38	43	1	VW3 A4 606	38.000
30	40	WD30N4, WD30N4C	52	72	1	VW3 A4 607	56.000
37	50	WD37N4, WD37N4C	63	72	1	VW3 A4 607	56.000
45	60	WD45N4, WD45N4C	77	101	1	VW3 A4 608	69.000
55	75	WD55N4, WD55N4C	91	101	1	VW3 A4 608	69.000
75	100	WD75N4, WD75N4C	126	144	1	VW3 A4 609	97.000
90	125	HD90N4 WD90N4, WD90N4C	149	144	1	VW3 A4 609	97.000
110	150	HC11N4	182	180	1	VW3 A4 610	103.000
132	200	HC13N4	218	216	1	VW3 A4 611	112.000
160	250	HC16N4	287	289	1	VW3 A4 612	135.000
200	300	HC22N4	353.5	370	1	VW3 A4 613	155.000
220	350	HC22N4	364	370	1	VW3 A4 613	155.000
250	400	HC25N4	415	216	2	VW3 A4 611	112.000
280	450	HC31N4	485	289	2	VW3 A4 612	135.000
315	500	HC31N4	543	289	2	VW3 A4 612	135.000
355	–	HC40N4	588	289	2	VW3 A4 612	135.000
400	600	HC40N4	664	325	2	VW3 A4 619	155.000
500	700	HC50N4	840	289	3	VW3 A4 612	135.000
560	800	HC63N4	978	370	3	VW3 A4 613	155.000
630	900	HC63N4	1091	370	3	VW3 A4 613	155.000

(1) If a DC choke (see page 72) is used with ATV 61H075N4...HD75N4 drives, a THDI of $\leq 10\%$ is obtained.These reduced current harmonics are achieved as long as the total voltage harmonic distortion (THDU) is $< 2\%$, the short-circuit ratio (RSCE) is $> 66\%$, and only for the nominal current of the passive filter.

(2) In: nominal filter current.

Passive filters: 400 V 50 Hz three-phase power supply (continued)							
Motor rating		For ATV 61 drives	Line supply Line current	Filter In (1)	Quantity per drive	Reference	Weight
kW	HP		A	A			kg
THDI 10% with ATV 61QC11N4...QC63N4 drives							
110	150	QC11N4	182	180	1	VW3 A4 610	103.000
132	200	QC13N4	218	216	1	VW3 A4 611	112.000
160	250	QC16N4	287	289	1	VW3 A4 612	135.000
200	300	QC20N4	353.5	370	1	VW3 A4 613	155.000
220	350	QC25N4	364	370	1	VW3 A4 613	155.000
250	400	QC25N4	415	216	2	VW3 A4 611	112.000
280	450	QC31N4	485	289	2	VW3 A4 612	135.000
315	500	QC31N4	543	289	2	VW3 A4 612	135.000
355	–	QC40N4	588	289	2	VW3 A4 612	135.000
400	600	QC40N4	664	325	2	VW3 A4 619	155.000
500	700	QC50N4	840	289	3	VW3 A4 612	135.000
560	800	QC63N4	978	370	3	VW3 A4 613	155.000
630	900	QC63N4	1091	370	3	VW3 A4 613	155.000

(1) In: Nominal filter current.

Variable speed drives

Altivar 61: reduction of current harmonics

Option: passive filters

Passive filters: 400 V 50 Hz three-phase power supply (continued)							
Motor rating		For ATV 61 drives	Line supply Line current	Filter In (2)	Quantity per drive	Reference	Weight
kW	HP		A	A			kg
THDI 10% with ATV 61H075N4...HD75N4 drives (1)							
0.75	1	H075N4	2.5	6	1	VW3 A4 621	21.000
1.5	2	HU15N4	3.6	6	1	VW3 A4 621	21.000
2.2	3	HU22N4	5	6	1	VW3 A4 621	21.000
3	–	HU30N4	6	6	1	VW3 A4 621	21.000
4	5	HU40N4	7.8	10	1	VW3 A4 622	27.000
5.5	7.5	HU55N4	10	10	1	VW3 A4 622	27.000
7.5	10	HU75N4	14	19	1	VW3 A4 623	28.000
11	15	HD11N4	19	19	1	VW3 A4 623	28.000
15	20	HD15N4	26	26	1	VW3 A4 624	40.000
18.5	25	HD18N4	32	35	1	VW3 A4 625	49.000
22	30	HD22N4	38	43	1	VW3 A4 626	52.000
30	40	HD30N4	52	72	1	VW3 A4 627	88.000
37	50	HD37N4	63	72	1	VW3 A4 627	88.000
45	60	HD45N4	77	101	1	VW3 A4 628	150.000
55	75	HD55N4	91	101	1	VW3 A4 628	150.000
75	100	HD75N4	126	144	1	VW3 A4 629	167.000
THDI 5% with ATV 61HD90N4...HC63N4 and ATV 61W075N4...WD90N4(C) drives (1)							
0.75	1	W075N4, W075N4C	2.5	6	1	VW3 A4 621	21.000
1.5	2	WU15N4, WU15N4C	3.6	6	1	VW3 A4 621	21.000
2.2	3	WU22N4, WU22N4C	5	6	1	VW3 A4 621	21.000
3	–	WU30N4, WU30N4C	6	6	1	VW3 A4 621	21.000
4	5	WU40N4, WU40N4C	7.8	10	1	VW3 A4 622	27.000
5.5	7.5	WU55N4, WU55N4C	10	10	1	VW3 A4 622	27.000
7.5	10	WU75N4, WU75N4C	14	19	1	VW3 A4 623	28.000
11	15	WD11N4, WD11N4C	19	19	1	VW3 A4 623	28.000
15	20	WD15N4, WD15N4C	26	26	1	VW3 A4 624	40.000
18.5	25	WD18N4, WD18N4C	32	35	1	VW3 A4 625	49.000
22	30	WD22N4, WD22N4C	38	43	1	VW3 A4 626	52.000
30	40	WD30N4, WD30N4C	52	72	1	VW3 A4 627	88.000
37	50	WD37N4, WD37N4C	63	72	1	VW3 A4 627	88.000
45	60	WD45N4, WD45N4C	77	101	1	VW3 A4 628	150.000
55	75	WD55N4, WD55N4C	91	101	1	VW3 A4 628	150.000
75	100	WD75N4, WD75N4C	126	144	1	VW3 A4 629	167.000
90	125	HD90N4 WD90N4, WD90N4C	149	144	1	VW3 A4 629	167.000
110	150	HC11N4	182	180	1	VW3 A4 630	178.000
132	200	HC13N4	218	216	1	VW3 A4 631	224.000
160	250	HC16N4	287	289	1	VW3 A4 632	271.000
200	300	HC22N4	353.5	370	1	VW3 A4 633	320.000
220	350	HC22N4	364	370	1	VW3 A4 633	320.000
250	400	HC25N4	415	216	2	VW3 A4 631	224.000
280	450	HC31N4	485	289	2	VW3 A4 632	271.000
315	500	HC31N4	543	289	2	VW3 A4 632	271.000
355	–	HC40N4	588	289	2	VW3 A4 632	271.000
400	600	HC40N4	664	325	2	VW3 A4 639	284.000
500	700	HC50N4	840	289	3	VW3 A4 632	271.000
560	800	HC63N4	918	370	3	VW3 A4 633	320.000
630	900	HC63N4	1091	370	3	VW3 A4 633	320.000

(1) If a DC choke (see page 72) is used with ATV 61H075N4...HD75N4 drives, a THDI of $\leq 5\%$ is obtained.

These reduced current harmonics are achieved as long as the total voltage harmonic distortion (THDU) is $< 2\%$, the short-circuit ratio (RSCE) is $> 66\%$, and only for the nominal current of the passive filter.

(2) In: nominal filter current.

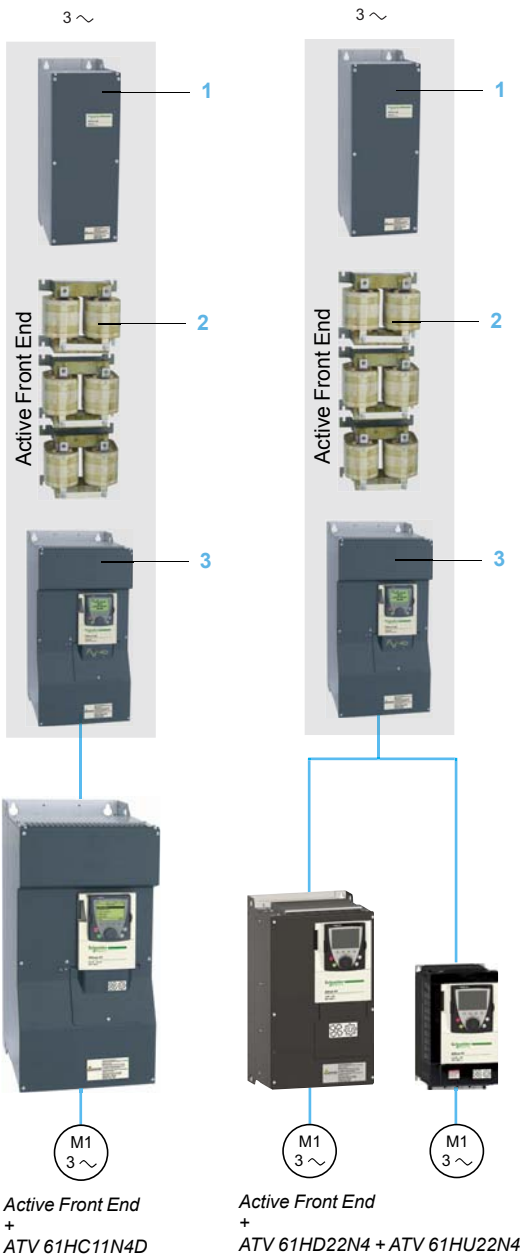
Passive filters: 400 V 50 Hz three-phase power supply (continued)							
Motor rating		For ATV 61 drives	Line supply Line current	Filter In (1)	Quantity per drive	Reference	Weight
kW	HP		A	A			kg
THDI 5% with ATV 61QC11N4...QC63N4 drives							
110	150	QC11N4	182	180	1	VW3 A4 630	178.000
132	200	QC13N4	218	216	1	VW3 A4 631	224.000
160	250	QC16N4	287	289	1	VW3 A4 632	271.000
200	300	QC20N4	353.5	370	1	VW3 A4 633	320.000
220	350	QC25N4	364	370	1	VW3 A4 633	320.000
250	400	QC25N4	415	216	2	VW3 A4 631	224.000
280	450	QC31N4	485	289	2	VW3 A4 632	271.000
315	500	QC31N4	543	289	2	VW3 A4 632	271.000
355	–	QC40N4	588	289	2	VW3 A4 632	271.000
400	600	QC40N4	664	325	2	VW3 A4 639	284.000
500	700	QC50N4	840	289	3	VW3 A4 632	271.000
560	800	QC63N4	918	370	3	VW3 A4 633	320.000
630	900	QC63N4	1091	370	3	VW3 A4 633	320.000

(1) In: Nominal filter current.

Variable speed drives

Altivar 61: reduction of current harmonics

Option: Active Front End



Presentation

The Active Front End allows the Altivar 61 drive to be used in applications requiring a particularly low harmonic level (THDI < 4%). It complies with standard IEEE 519-1992.

It is available for a range of drives between 0.75 kW and 800 kW with three types of 50/60 Hz power supply:
 380...440 V three-phase
 480 V three-phase
 500...690 V three-phase
 It has been developed to comply with European directives and to obtain CE marking.

Apart from the possibility of significantly reducing the level of harmonics, this technology offers several benefits:

- Increased application dynamics
- Operation on unstable line supplies
- Amplification of the input voltage
- Reduced EMC emissions

The Active Front End consists of a set of three modules installed upstream of the drive between the line supply and the motor.

It is made up of the following elements:

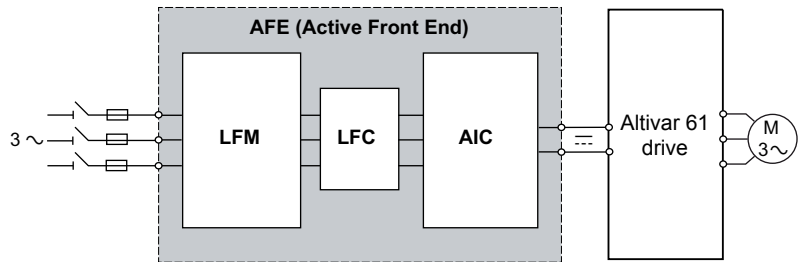
A **line filter module (LFM) 1**, used at the input, incorporating:

- A charging circuit
- A line contactor
- An EMC filter

A **line filter choke (LFC) 2**, consisting of three single-phase chokes, connected between the line filter module (LFM) and the active infeed converter (AIC)

An **active infeed converter (AIC) 3**

The Active Front End allows the Altivar 61 drive to be powered via the common DC bus, while limiting the total current distortion factor (THDI) to less than 4%. It can also supply direct current to several drives of different power ratings, operating in parallel, should the installation require this.



The Active Front End offers IP 00 protection. The ambient air temperature during operation must be between - 10°C and + 45°C (without derating, + 60°C with derating).

It is imperative that the protection of the Active Front End on the line supply side is supplemented by fuses for semi-conductors (to protect against short-circuits or a system failure).

The DC bus output only requires fuse protection if Active Front End modules are used in parallel.

Applications

- Applications requiring a very low harmonic level
- Applications with high inertia and strong dynamics
- Applications on unstable line supplies

Variable speed drives

Altivar 61: reduction of current harmonics

Option: Active Front End

References								
For drives	Motor	Line supply	DC bus		Active Front End (1) (2)	Quantity per drive	Reference	Weight
	Power indicated on rating plate	Nominal line current 400 V	Maximum current	Continuous power 400 V				
	kW	A	A	kW				
Three-phase supply voltage: 380...440 V 50/60 Hz								
ATV 61H075N4... HD90N4	0.75...90	177	185	120	AIC	1	VW3 A7 250	60.000
					LFC	1	VW3 A7 265	54.000
					LFM	1	VW3 A7 260	60.000
ATV 61HC11N4D	110	177	185	120	AIC	1	VW3 A7 250	60.000
					LFC	1	VW3 A7 265	54.000
					LFM	1	VW3 A7 260	60.000
ATV 61HC13N4D	132	212	220	143	AIC	1	VW3 A7 251	74.000
					LFC	1	VW3 A7 266	69.000
					LFM	1	VW3 A7 261	80.000
ATV 61HC16N4D	160	255	265	172	AIC	1	VW3 A7 252	80.000
					LFC	1	VW3 A7 266	69.000
					LFM	1	VW3 A7 261	80.000
ATV 61HC22N4D	220	348	366	238	AIC	1	VW3 A7 253	110.000
					LFC	1	VW3 A7 267	132.000
					LFM	1	VW3 A7 262	125.000
ATV 61HC25N4D	250	395	412	268	AIC	1	VW3 A7 254	140.000
					LFC	1	VW3 A7 267	132.000
					LFM	1	VW3 A7 262	125.000
ATV 61H31N4D	315	495	517	336	AIC	1	VW3 A7 255	140.000
					LFC	1	VW3 A7 267	132.000
					LFM	1	VW3 A7 262	125.000
ATV 61HC40N4D	400	628	654	425	AIC	1	VW3 A7 256	215.000
					LFC	2	VW3 A7 267	132.000
					LFM	2	VW3 A7 262	125.000
ATV 61HC50N4D	500	780	815	530	AIC	1	VW3 A7 257	225.000
					LFC	2	VW3 A7 267	132.000
					LFM	2	VW3 A7 262	125.000
ATV 61HC63N4D	630	980	1023	665	AIC	1	VW3 A7 258	300.000
					LFC	2	VW3 A7 267	132.000
					LFM	2	VW3 A7 262	125.000
Dimensions (overall)								
Active infeed converter (AIC)							W x H x D	
							mm	
VW3 A7 250							310 x 680 x 377	
VW3 A7 251							350 x 782 x 377	
VW3 A7 252							330 x 950 x 377	
VW3 A7 253							430 x 950 x 377	
VW3 A7 254							585 x 950 x 377	
VW3 A7 255							585 x 950 x 377	
VW3 A7 256							880 x 1150 x 377	
VW3 A7 257							880 x 1150 x 377	
VW3 A7 258							1110 x 1150 x 377	
Line filter choke (LFC)								
							W x H x D	
							mm	
VW3 A7 265							835 x 210 x 185	
VW3 A7 266							835 x 295 x 195	
VW3 A7 267							1270 x 360 x 255	
Line filter module (LFM)								
							W x H x D	
							mm	
VW3 A7 260							240 x 630 x 377	
VW3 A7 261							290 x 730 x 377	
VW3 A7 262							290 x 1100 x 377	

(1) For more information about the Active Front End, please refer to the programming manual or visit our website www.schneider-electric.com.

(2) AIC = active infeed converter; LFC = line filter choke; LFM = line filter module.

Variable speed drives

Altivar 61: reduction of current harmonics

Option: Active Front End

References								
For drives	Motor	Line supply	DC bus		Active Front End (1) (2)	Quantity per drive	Reference	Weight
	Power indicated on rating plate	Nominal line current 480 V	Maximum current	Continuous power 480 V				
	HP	A	A	kW				kg
Three-phase supply voltage: 480 V 50/60 Hz								
ATV 61H075N4... HD90N4	1...125	177	185	120	AIC	1	VW3 A7 250	60.000
					LFC	1	VW3 A7 265	54.000
					LFM	1	VW3 A7 260	60.000
ATV 61HC11N4D	150	177	185	120	AIC	1	VW3 A7 250	60.000
					LFC	1	VW3 A7 265	54.000
					LFM	1	VW3 A7 260	60.000
ATV 61HC13N4D	200	212	220	143	AIC	1	VW3 A7 251	74.000
					LFC	1	VW3 A7 266	69.000
					LFM	1	VW3 A7 261	80.000
ATV 61HC16N4D	250	265	265	172	AIC	1	VW3 A7 252	80.000
					LFC	1	VW3 A7 266	69.000
					LFM	1	VW3 A7 261	80.000
ATV 61HC22N4D	350	348	366	238	AIC	1	VW3 A7 283	110.000
					LFC	1	VW3 A7 267	132.000
					LFM	1	VW3 A7 262	125.000
ATV 61HC25N4D	400	395	412	268	AIC	1	VW3 A7 254	140.000
					LFC	1	VW3 A7 267	132.000
					LFM	1	VW3 A7 262	125.000
ATV 61H31N4D	500	495	517	336	AIC	1	VW3 A7 255	140.000
					LFC	1	VW3 A7 267	132.000
					LFM	1	VW3 A7 262	125.000
ATV 61HC40N4D	600	628	654	425	AIC	1	VW3 A7 286	215.000
					LFC	2	VW3 A7 267	132.000
					LFM	2	VW3 A7 262	125.000
ATV 61HC50N4D	700	780	815	530	AIC	1	VW3 A7 287	225.000
					LFC	2	VW3 A7 267	132.000
					LFM	2	VW3 A7 262	125.000
ATV 61HC63N4D	900	980	1023	665	AIC	1	VW3 A7 258	300.000
					LFC	2	VW3 A7 267	132.000
					LFM	2	VW3 A7 262	125.000

Dimensions (overall)**Active infeed converter (AIC)**

	W x H x D mm
VW3 A7 250	310 x 680 x 377
VW3 A7 251	350 x 782 x 377
VW3 A7 252	330 x 950 x 377
VW3 A7 283	585 x 950 x 377
VW3 A7 254	585 x 950 x 377
VW3 A7 255	585 x 950 x 377
VW3 A7 286	1110 x 1150 x 377
VW3 A7 287	1110 x 1150 x 377
VW3 A7 258	1110 x 1150 x 377

Line filter choke (LFC)

	W x H x D mm
VW3 A7 265	835 x 210 x 185
VW3 A7 266	835 x 295 x 195
VW3 A7 267	1270 x 360 x 255

Line filter module (LFM)

	W x H x D mm
VW3 A7 260	240 x 630 x 377
VW3 A7 261	290 x 730 x 377
VW3 A7 262	290 x 1100 x 377

(1) For more information about the Active Front End, please refer to the programming manual or visit our website www.schneider-electric.com.

(2) AIC = active infeed converter; LFC = line filter choke; LFM = line filter module.

Variable speed drives

Altivar 61: reduction of current harmonics

Option: Active Front End

References										
For drives	Motor	Line supply	DC bus			Active Front End (1) (2)	Quantity per drive	Reference	Weight	
	Power indicated on rating plate	Maximum nominal line current 500 V...690 V	Maximum current	Continuous power						
				500 V	600 V					690 V
	kW	A	A	kW	kW	kW			kg	
Three-phase supply voltage: 500...690 V 50/60 Hz										
ATV 61HC11Y	110	120	130	102	123	142	AIC	1	VW3 A7 270	110.000
							LFC	1	VW3 A7 268	99.000
							LFM	1	VW3 A7 263	80.000
ATV 61HC13Y	132	120	130	102	123	142	AIC	1	VW3 A7 270	110.000
							LFC	1	VW3 A7 268	99.000
							LFM	1	VW3 A7 263	80.000
ATV 61HC16Y	160	150	156	127	153	172	AIC	1	VW3 A7 271	110.000
							LFC	1	VW3 A7 268	99.000
							LFM	1	VW3 A7 263	80.000
ATV 61HC20Y	200	185	195	157	188	215	AIC	1	VW3 A7 272	110.000
							LFC	1	VW3 A7 268	99.000
							LFM	1	VW3 A7 263	80.000
ATV 61HC25Y	250	228	244	193	230	268	AIC	1	VW3 A7 273	190.000
							LFC	1	VW3 A7 269	210.000
							LFM	1	VW3 A7 264	125.000
ATV 61HC31Y	315	285	305	242	290	335	AIC	1	VW3 A7 274	190.000
							LFC	1	VW3 A7 269	210.000
							LFM	1	VW3 A7 264	125.000
ATV 61HC40Y	400	360	386	305	365	424	AIC	1	VW3 A7 275	190.000
							LFC	1	VW3 A7 269	210.000
							LFM	1	VW3 A7 264	125.000
ATV 61HC50Y	500	450	481	382	460	528	AIC	1	VW3 A7 276	400.000
							LFC	2	VW3 A7 269	210.000
							LFM	2	VW3 A7 264	125.000
ATV 61HC63Y	630	563	604	478	575	663	AIC	1	VW3 A7 277	400.000
							LFC	2	VW3 A7 269	210.000
							LFM	2	VW3 A7 264	125.000
ATV 61HC80Y	800	715	765	607	730	842	AIC	1	VW3 A7 278	400.000
							LFC	2	VW3 A7 269	210.000
							LFM	2	VW3 A7 264	125.000
Dimensions (overall)										
Active infeed converter (AIC)									W x H x D	
									mm	
VW3 A7 270									330 x 1190 x 377	
VW3 A7 271									330 x 1190 x 377	
VW3 A7 272									330 x 1190 x 377	
VW3 A7 273									585 x 1190 x 377	
VW3 A7 274									585 x 1190 x 377	
VW3 A7 275									585 x 1190 x 377	
VW3 A7 276									1110 x 1390 x 377	
VW3 A7 277									1110 x 1390 x 377	
VW3 A7 278									1110 x 1390 x 377	
Line filter choke (LFC)									W x H x D	
									mm	
VW3 A7 268									835 x 295 x 210	
VW3 A7 269									985 x 540 x 250	
Line filter module (LFM)									W x H x D	
									mm	
VW3 A7 263									290 x 730 x 377	
VW3 A7 264									290 x 1100 x 397	

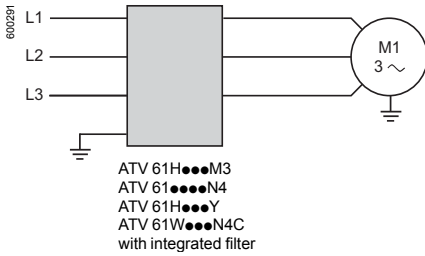
(1) For more information about the Active Front End, please refer to the programming manual or visit our website www.schneider-electric.com.

(2) AIC = active infeed converter; LFC = line filter choke; LFM = line filter module.

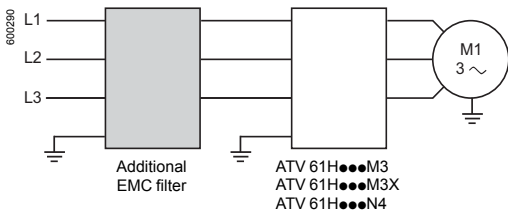
Variable speed drives

Altivar 61: EMC filters

Integrated filters and optional additional filters



Altivar 61 drive with integrated EMC filter



Altivar 61 drive with additional EMC filter



Mounting the EMC filter beside the Altivar 61 drive



Mounting the EMC filter under the Altivar 61 drive

Integrated EMC filters

Altivar 61 drives, except for the ATV 61H●●●M3X, have built-in radio interference input filters to meet the EMC standard for variable speed electrical power drive “products” IEC/EN 61800-3, edition 2, category C2 or C3 in environment 1 or 2 and to comply with the European directive on EMC (electromagnetic compatibility).

IP 20 drives

Drives	Maximum length of shielded cable (1) according to			
	EN 55011 class A Gr1		EN 55011 class A Gr2	
	IEC/EN 61800-3 cat. C2		IEC/EN 61800-3 cat. C3	
	LF (2) (3)	HF (2) (3)	LF (2) (3)	HF (2) (3)
	m	m	m	m
ATV 61H075M3...HU22M3	10	5	–	–
ATV 61HU30M3...HU75M3	–	–	10	5
ATV 61H075N4...HU40N4	10	5	–	–
ATV 61HU55N4...HD15N4	–	–	10	5
ATV 61HD18N4...HC63N4	–	–	50	25
ATV 61HU30Y...HD90Y	–	–	25	25
ATV 61HC11Y...HC80Y	–	–	50	25

IP 54 drives

Drives	Maximum length of shielded cable (1) according to					
	EN 55011 class A Gr1			EN 55011 class B Gr1		
	IEC/EN 61800-3 cat. C2			IEC/EN 61800-3 cat. C1		
	LF (2)	HF (2)	16 kHz	LF (2)	HF (2)	16 kHz
	m	m	m	m	m	m
ATV 61W●●●N4	80	50	50	–	–	–
ATV 61W075N4C...WU40N4C	–	–	–	20	20	20
ATV 61WU40N4C, WU55N4C	–	–	–	50	50	50
ATV 61WU75N4C, WD11N4C	–	–	–	20	20	20
ATV 61WD15N4C...WD22N4C	–	–	–	50	50	50
ATV 61WD30N4C...WD45N4C	–	–	–	20	50	20
ATV 61WD55N4C...WD90N4C	–	–	–	20	20	20

Additional EMC input filters

Applications

When used with ATV 61H●●●M3, H●●●M3X and ATV 61H●●●N4 drives, additional EMC input filters can be used to meet more stringent requirements and are designed to reduce conducted emissions on the line supply below the limits of standards EN 55011 group 1, class A or B and IEC/EN 61800-3 category C1 or C2.

For ATV 61H075M3...HD45M3X and ATV 61H075N4...HD75N4 drives, the additional EMC filters can be mounted beside or under the device. They act as a support for the drives and are attached to them via tapped holes.

For ATV 61HD55M3X...HD90M3X and ATV 61HD90N4...HC63N4 drives, the additional EMC filters can only be mounted beside the drive.

Use according to the type of line supply

These additional filters can only be used on TN (neutral connection) and TT (neutral to earth) type systems.

Standard IEC/EN 61800-3, appendix D2.1, states that on IT systems (isolated or impedance earthed neutral), filters can cause permanent insulation monitors to operate in a random manner.

If a machine has to be installed on an IT system, one solution is to insert an isolation transformer and connect the machine locally on a TN or TT system.

(1) If motors are connected in parallel, it is the total length that should be taken into account.

(2) LF: low switching frequency. HF: high switching frequency.

(3) See note (5) on the next page.

Variable speed drives

Altivar 61: EMC filters

Option: additional input filters



VW3 A4 400

Additional EMC input filters for ATV 61H●●●M3, H●●●M3X and H●●●N4 drives

Drives	Maximum length of shielded cable (1)				In (2)	If (3)	Loss (4)	Reference	Weight
	EN 55011 class A Gr1 IEC/EN 61800-3 category C2 LF (5) HF (5)		EN 55011 class B Gr1 IEC/EN 61800-3 category C1 LF (5) HF (5)						
	m	m	m	m	A	mA	W		kg
Three-phase supply voltage: 200...240 V 50/60 Hz									
ATV 61H075M3, HU15M3	100	50	50	20	12	4	10	VW3 A4 401	2.200
ATV 61HU22M3...HU40M3	100	50	50	20	26	4.4	18	VW3 A4 402	4.000
ATV 61HU55M3	100	50	50	20	35	3	24	VW3 A4 403	5.800
ATV 61HU75M3	100	50	50	20	46	10	19	VW3 A4 404	7.000
ATV 61HD11M3X, HD15M3X	200	100	50	25	72	33	34	VW3 A4 405	12.000
ATV 61HD18M3X, HD22M3X	200	100	50	25	90	33	34	VW3 A4 406	15.000
ATV 61HD30M3X...HD45M3X	200	100	50	25	180	80	58	VW3 A4 408	40.000
ATV 61HD55M3X, HD75M3X	100	50	50	25	273	285	60	VW3 A4 410	22.000
ATV 61HD90M3X	100	50	50	25	336	500	125	VW3 A4 411	22.000

Three-phase supply voltage: 380...480 V 50/60 Hz

ATV 61H075N4...HU22N4	100	50	50	20	12	7	5	VW3 A4 401	2.200
ATV 61HU30N4, HU40N	100	50	50	20	26	8	6	VW3 A4 402	4.000
ATV 61HU55N4, HU75N4	100	50	50	20	35	7	14	VW3 A4 403	5.800
ATV 61HD11N4	100	50	50	20	46	14	13	VW3 A4 404	7.000
ATV 61HD15N4 (6), HD18N4	300	200	100	100	72	60	14	VW3 A4 405	12.000
ATV 61HD22N4	300	200	100	100	90	60	11	VW3 A4 406	15.000
ATV 61HD30N4, HD37N4	300	200	100	100	92	60	30	VW3 A4 407	17.000
ATV 61HD45N4...HD75N4	300	200	100	100	180	140	58	VW3 A4 408	40.000
ATV 61HD90N4...HC16N4 ATV 61QC11N4...QC16N4	300	150	50	25	273	500	60	VW3 A4 410	22.000
ATV 61HC22N4...HC31N4 ATV 61QC20N4...QC31N4	300	150	50	25	546	500	125	VW3 A4 411	25.000
ATV 61HC40N4, HC50N4 ATV 61QC40N4, QC50N4	300	150	50	25	728	500	210	VW3 A4 412	25.000
ATV 61HC63N4 ATV 61QC63N4	300	150	50	25	1456	200	380	VW3 A4 413	34.000

IP 30 protection kit

VW3 A4 410...413 additional input filters provide IP 00 degree of protection as standard. This kit can be used to provide IP 30 degree of protection.

Note: The degree of protection of VW3 A4 401...409 filters is IP 20 (IP 41 on the upper part).

Description	For filters	Reference	Weight kg
Mechanical device consisting of an IP 30 cover and cable clips	VW3 A4 410, 411	VW3 A9 601	–
	VW3 A4 412, 413	VW3 A9 602	–

(1) The maximum lengths are given as examples only, as they vary depending on the stray capacitance of the motors and the cables used. If motors are connected in parallel, the sum of the cable lengths must be taken into account.

(2) Filter nominal current.

(3) Maximum earth leakage current at 230 V and at 400 V 50 Hz on a TT system.

(4) Via thermal dissipation.

(5) LF: low switching frequency. HF: high switching frequency. These frequencies depend on the drive rating:

For drives	Switching frequency with integrated EMC filter		Switching frequency with additional EMC filter	
	LF kHz	HF kHz	LF kHz	HF kHz
ATV 61H●●●M3 ATV 61H075N4...HD11N4	4	4.1...16	4	4.1...16
ATV 61HD15N4...HD30N4	4	4.1...16	3.5...4	4.1...12
ATV 61HD11M3X, HD15M3X	–	–	3.5...4	4.1...12
ATV 61HD18M3X...HD45M3X	–	–	2...2.5	2.6...12
ATV 61HD37N4...HD75N4	2...2.5	2.6...12	2...2.5	2.6...12
ATV 61HD55M3X...HD90M3X	–	–	2.5...4	4.1...8
ATV 61HD90N4...HC63N4 ATV 61QC11N4...QC63N4	2...4	4.1...8	2...4	4.1...8
ATV 61HU30Y...HD30Y	2.5...4	4.1...6	–	–
ATV 61HD37Y...HC80Y	2.5	2.6...4.9	–	–

(6) It is possible to use a special filter VW3 A4 409 with a leakage current If (3) of 14 mA which enables a maximum motor cable length of 100 m.

The Altivar 61 drive includes as standard a software function used to limit overvoltages at the motor terminals.
Depending on the cable lengths or the type of application, it may be necessary to use output filters:

- Motor chokes used to limit the dv/dt
- Sinus filters that are particularly effective for long cable runs or to reduce electromagnetic motor noise

Cable length (1)	0...10 m	10...30 m	30...50 m	50...100 m	100...150 m	150...250 m	250...300 m	300...400 m	400...600 m
Shielded cable									
ATV 61H●●●M3 ATV 61H075N4...HD15N4 ATV 61W075N4...WD15N4 ATV 61W075N4C...WD15N4C	Software function (2)			Motor choke			-		
ATV 61H●●●M3X ATV 61HD18N4...HC63N4 ATV 61WD18N4...WD90N4 ATV 61WD18N4C...WD90N4C	Software function (2)			Motor choke			-		
ATV 61HU22S6X...HU75S6X	Software function (2)		Motor choke		2 motor chokes in series		-		
ATV 61HU30Y...HD11Y	Software function (2)		Motor choke		-				
ATV 61HD15Y...HD30Y	Software function (2)		Motor choke		2 motor chokes in series		-		
ATV 61HU37Y...HD90Y	Software function (2)		Motor choke		2 motor chokes in series		-		
ATV 61HC11Y...HC80Y	Software function (2)		Motor choke		2 motor chokes in series		-		
Unshielded cable									
ATV 61H075M3, HU15M3 ATV 61H075N4...HU22N4 ATV 61W075N4...WU22N4 ATV 61W075N4C...WU22N4C	Software function (2)			Motor choke or sinus filter			-		
ATV 61HU22M3, HU30M3 ATV 61HU30N4...HU55N4 ATV 61WU30N4...WU55N4 ATV 61WU30N4C...WU55N4C	Software function (2)			Motor choke			Sinus filter		
ATV 61HU40M3...HU75M3 ATV 61HU75N4...HD15N4 ATV 61WU75N4...WD15N4 ATV 61WU75N4C...WD15N4C	Software function (2)			Motor choke			Sinus filter (300...1000 m)		
ATV 61HD11M3X...HD45M3X ATV 61HD18N4...HD75N4 ATV 61WD18N4...WD90N4 ATV 61WD18N4C...WD90N4C	Software function (2)			Motor choke			Sinus filter (300...1000 m)		
ATV 61HD55M3X...HD90M3X ATV 61HD90N4...HC63N4	Software function (2)			Motor choke			2 motor chokes in series		
ATV 61HU22S6X...HU75S6X	Software function (2)		Motor choke		2 motor chokes in series		-		
ATV 61HU30Y...HD11Y	Software function (2)		Motor choke (above 20 m)		2 motor chokes in series		-		
ATV 61HD15Y...HD30Y	Software function (2)		Motor choke (above 20 m)		2 motor chokes in series		-		
ATV 61HU37Y...HD90Y	Software function (2)		Motor choke (above 20 m)		2 motor chokes in series		-		
ATV 61HC11Y...HC80Y	Software function (2)		Motor choke		2 motor chokes in series		-		

(1) The cable length varies depending on the combination of variable speed drive/motor choke or sinus filter (see pages 90, 91 and 93).

For an application with several motors connected in parallel, the cable length must include all cabling.

Recommended cable types:

■ Shielded cables: "GORSE" cable, type GUOSTV-LS/LH; "PROTOFLEX" cable, type EMV2YSL CY

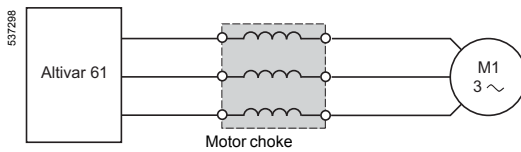
■ Unshielded cables: "GORSE" cable, type H07 RN-F4GXX; "BELDEN" cable, type 2950X

(2) The software function limits the overvoltage at the motor terminals to twice the DC bus voltage.

For any application with braking cycles, the DC bus voltage rises to more than the supply voltage multiplied by $\sqrt{2}$.

The electrical characteristics of the motor must be checked before using this function.

Motor chokes



Altivar 61 drives have been developed to operate with the following maximum motor cable lengths:

For drives	Maximum length of motor cable		
	For a maximum switching frequency	Shielded cable	Unshielded cable
	kHz	m	m
ATV 61H●●●M3 ATV 61HD11M3X, HD15M3X ATV 61H075N4...HD18N4 ATV 61W075N4...WD18N4 ATV 61W075N4C...WD18N4C	4	50	100
ATV 61HD18M3X...HD90M3X ATV 61HD37N4...HC63N4 ATV 61QC11N4...QC63N4	2.5	100	200
ATV 61HD22N4, HD30N4 ATV 61WD22N4...WD90N4 ATV 61WD22N4C...WD90N4C	4	100	200
ATV 61H●●●S6X	4	30	50
ATV 61HU30Y...HD30Y	4	10	20
ATV 61HD37Y...HD90Y	2.5	10	20
ATV 61HC11Y...HC80Y ATV 61QC13Y...QC80Y	2.5	15	30

The motor choke enables operation with motor cables above these maximum lengths and/or limits the dv/dt at the motor terminals:

- To 500 V/μs for 200...400 V and 380...480 V three-phase line supplies
- To 750 V/μs for 500 V three-phase line supplies
- To 1000 V/μs for 690 V three-phase line supplies

It is also used to:

- Limit overvoltages at the motor terminals to:
 - 1000 V at 400 V ~ (rms value)
 - 1300 V at 500 V ~ (rms value)
 - 1600 V at 690 V ~ (rms value)
- Filter interference caused by opening a contactor placed between the filter and the motor
- Reduce the motor earth leakage current

Choke performance is ensured by not exceeding the cable lengths given on pages 90 and 91. For an application with several motors connected in parallel, the cable length must include all cabling. If a cable longer than that recommended is used, the motor chokes may overheat.

Variable speed drives

Altivar 61: output filters

Option: motor chokes

PF 121624



VW3 A5 101

Motor chokes															
For drives	Maximum length of motor cable			Losses	Nominal current	Sold in lots of	Unit reference	Weight							
	Maximum switching frequency	Shielded	Unshielded												
		kHz	m						m						
Three-phase supply voltage: 200...240 V 50/60 Hz															
ATV 61H075M3...HU22M3	4	150	300	150	12	—	VW3 A5 101	5.500							
ATV 61HU30M3...HU75M3	4	200	260	250	48	—	VW3 A5 102	8.000							
		300	300	350	90	—	VW3 A5 103	10.000							
ATV 61HD11M3X, HD15M3X	4	150	300	350	90	—	VW3 A5 103	10.000							
ATV 61HD18M3X, HD22M3X	2.5	150	300	350	90	—	VW3 A5 103	10.000							
ATV 61HD30M3X...HD45M3X	2.5	150	300	430	215	3	VW3 A5 104	15.500							
ATV 61HD55M3X, HD75M3X	2.5	150	300	475	314	3	VW3 A5 105	32.000							
ATV 61HD90M3X	2.5	250	300	530	481	3	VW3 A5 106	58.000							
Three-phase supply voltage: 380...480 V 50/60 Hz															
ATV 61H075N4...HU40N4	4	75	90	150	12	—	VW3 A5 101	5.500							
ATV 61W075N4...WU40N4		85	95	250	48	—	VW3 A5 102	8.000							
ATV 61W075N4C...WU40N4C			160	200	350	90	—	VW3 A5 103	10.000						
ATV 61HU55N4...HD18N4	4	85	95	250	48	—	VW3 A5 102	8.000							
ATV 61WU55N4...WD18N4									160	200	350	90	—	VW3 A5 103	10.000
ATV 61WU55N4C...WD18N4C															
ATV 61HD22N4, HD30N4	4	140	170	350	90	—	VW3 A5 103	10.000							
ATV 61WD22N4, WD30N4									150	300	430	215	3	VW3 A5 104	15.500
ATV 61WD22N4C, WD30N4C															
ATV 61WD37N4	4	97	166	350	90	—	VW3 A5 103	10.000							
ATV 61WD37N4C									200	300	430	215	3	VW3 A5 104	15.500
ATV 61WD45N4...WD75N4	4	150	300	430	215	3	VW3 A5 104	15.500							
ATV 61WD45N4C...WD75N4C	4	200	300	430	215	3	VW3 A5 104	15.500							
ATV 61WD90N4	4	200	300	430	215	3	VW3 A5 104	15.500							
ATV 61WD90N4C	4	200	300	430	215	3	VW3 A5 104	15.500							
ATV 61HD37N4	2.5	97	166	350	90	—	VW3 A5 103	10.000							
		200	300	430	215	3	VW3 A5 104	15.500							
ATV 61HD45N4...HD75N4	2.5	150	300	430	215	3	VW3 A5 104	15.500							
ATV 61HD90N4	2.5	200	300	430	215	3	VW3 A5 104	15.500							
ATV 61QC11N4	2.5	150	250	475	314	3	VW3 A5 105	32.000							
ATV 61HC11N4, HC13N4	2.5	150	250	475	314	3	VW3 A5 105	32.000							
ATV 61QC13N4, QC16N4															
ATV 61HC16N4, HC22N4	2.5	250	300	530	481	3	VW3 A5 106	58.000							
ATV 61QC20N4, QC25N4															
ATV 61HC25N4, HC31N4	2.5	200	250	598	759	3	VW3 A5 107	93.000							
ATV 61QC31N4															
ATV 61HC40N4	2.5	200	250	598	759	3	VW3 A5 107	93.000							
	2.5	250	300	682	1188	3	VW3 A5 108	120.000							
ATV 61QC40N4	2.5	200	250	598	759	3	VW3 A5 107	93.000							
ATV 61HC50N4, HC63N4	2.5	250	300	682	1188	3	VW3 A5 108	120.000							
ATV 61QC50N4, QC63N4															

Motor chokes (continued)								
For drives	Maximum length of motor cable			Losses	Nominal current	Sold in lots of	Unit reference	Weight
	Maximum switching frequency	Shielded	Unshielded					
	kHz	m	m	W	A			kg
Three-phase supply voltage: 500...600 V 50/60 Hz (1)								
ATV 61HU22S6X... HU75S6X	4	50	100	250	48	–	VW3 A5 102	8.000
		75	150	350	90	–	VW3 A5 103	10.000
		150	250	700	90	–	2 x VW3 A5 103	20.000
		150	250	430	215	3	VW3 A5 104	15.500
		250	400	860	215	3	2 x VW3 A5 104	31.000
Three-phase supply voltage: 500...690 V 50/60 Hz (2)								
ATV 61HU30Y...HD11Y	4	45	70	250	48	–	VW3 A5 102	8.000
		65	100	350	90	–	VW3 A5 103	10.000
		100	150	700	90	–	2 x VW3 A5 103	20.000
		100	150	430	215	3	VW3 A5 104	15.500
ATV 61HD15Y...HD30Y	4	65	100	350	90	–	VW3 A5 103	10.000
		100	150	700	90	–	2 x VW3 A5 103	20.000
		100	150	430	215	3	VW3 A5 104	15.500
		150	250	860	215	3	2 x VW3 A5 104	31.000
ATV 61HD37Y...HD90Y	2.5	150	250	430	215	3	VW3 A5 104	15.500
		250	300	860	215	3	2 x VW3 A5 104	31.000
ATV 61HC11Y... HC16Y ATV 61QC13Y	2.5	150	250	430	215	3	VW3 A5 104	15.500
		250	400	860	215	3	2 x VW3 A5 104	31.000
ATV 61HC20Y, HC25Y ATV 61QC16Y, QC20Y	2.5	150	250	475	314	3	VW3 A5 105	32.000
		250	400	950	314	3	2 x VW3 A5 105	64.000
ATV 61HC31Y, HC40Y ATV 61QC25Y, QC31Y	2.5	150	250	530	481	3	VW3 A5 106	58.000
		250	400	1060	481	3	2 x VW3 A5 106	116.000
ATV 61HC50Y, HC63Y ATV 61QC40Y, QC50Y	2.5	150	250	598	759	3	VW3 A5 107	93.000
		250	400	1196	759	3	2 x VW3 A5 107	186.000
ATV 61HC80Y ATV 61QC63Y, QC80Y	2.5	150	250	682	1188	3	VW3 A5 108	120.000
		250	400	1364	1188	3	2 x VW3 A5 108	240.000

IP 20 protection kits

Description	For motor chokes	Reference	Weight kg
Mechanical kit including an IP 20 cover and cable clips	VW3 A5 104, 105	VW3 A9 612	–
	VW3 A5 106...108	VW3 A9 613	–

(1) Maximum length given for a 600 V 60 Hz three-phase supply voltage.

(2) Maximum length given for a 690 V 50 Hz three-phase supply voltage.

Sinus filters

Sinus filters allow Altivar 61 drives to operate with long motor cables or significant motor noise reduction.

For ATV 61H●●●M3, ATV 61HD11M3X...HD45M3X, ATV 61H075N4...HD75N4, ATV 61W075N4...WD90N4 and ATV 61W075N4C...WD90N4C drives, they also enable unshielded cables to be used, while still complying with the standards on radiated EMC emissions (EN 55011 class A Gr1 and IEC/EN 61800-3 category C2).

Sinus filters only operate with a voltage/frequency drive ratio.

Sinus filters are never compatible with the voltage sensorless flux vector control profile.

Applications

For ATV 61H●●●M3, ATV 61HD11M3X...HD45M3X and ATV 61H075N4...HD75N4 drives, applications requiring:

- Long cable runs
- Mechanical restrictions preventing the use of shielded cables
- An intermediate transformer between the drive and the motor
- A reduction in motor noise
- Motors connected in parallel

For ATV 61HD55M3X...HD90M3X and ATV 61HD90N4...HD75N4 drives, applications requiring:

- An intermediate transformer between the drive and the motor
- A reduction in electromagnetic motor noise

Variable speed drives

Altivar 61: output filters

Option: sinus filters

Sinus filters					
For drives	Nominal current	Losses at 100 Hz	Reference	Weight	
	A	W			kg
Three-phase supply voltage: 200...240 V 50/60 Hz					
ATV 61H075M3, HU15M3 (1)	11	50	VW3 A5 201	8.000	
ATV 61HU22M3, HU30M3	16	70	VW3 A5 202	11.000	
ATV 61HU40M3... HU75M3	33	120	VW3 A5 203	22.000	
ATV 61HD11M3X, HD15M3X	66	180	VW3 A5 204	45.000	
ATV 61HD18M3X, HD22M3X	95	250	VW3 A5 205	60.000	
ATV 61HD30M3X... HD45M3X	180	400	VW3 A5 206	120.000	
ATV 61HD55M3X, HD75M3X	300	1360	VW3 A5 208	165.000	
ATV 61HD90M3X	400	1900	VW3 A5 209	190.000	
Three-phase supply voltage: 380...480 V 50/60 Hz					
ATV 61H075N4...HU40N4 (1) ATV 61W075N4...WU40N4 ATV 61W075N4C...WU40N4C	11	50	VW3 A5 201	8.000	
ATV 61HU55N4 ATV 61WU55N4 ATV 61WU55N4C	16	70	VW3 A5 202	11.000	
ATV 61HU75N4...HD15N4 ATV 61WU75N4...WD15N4 ATV 61WU75N4C...WD15N4C	33	120	VW3 A5 203	22.000	
ATV 61HD18N4...HD30N4 ATV 61WD18N4...WD30N4 ATV 61WD18N4C...WD30N4C	66	180	VW3 A5 204	45.000	
ATV 61HD37N4, HD45N4 ATV 61WD37N4, WD45N4 ATV 61WD37N4C, WD45N4C	95	250	VW3 A5 205	60.000	
ATV 61HD55N4, HD75N4 ATV 61WD55N4, WD75N4 ATV 61WD55N4C, WD75N4C	180	400	VW3 A5 206	120.000	
ATV 61HD90N4, HC11N4 ATV 61WD90N4 ATV 61WD90N4C ATV 61QC11N4	200	945	VW3 A5 207	130.000	
ATV 61HC13N4, HC16N4 ATV 61QC13N4, QC16N4	300	1360	VW3 A5 208	165.000	
ATV 61HC22N4 ATV 61QC20N4	400	1900	VW3 A5 209	190.000	
ATV 61HC25N4 ATV 61QC25N4	600	2370	VW3 A5 210	260.000	
ATV 61HC31N4 ATV 61QC31N4	600	2370	VW3 A5 210	260.000	
ATV 61HC40N4 ATV 61QC40N4	Motor P 355 kW	600	2370	VW3 A5 210	260.000
	Motor P 400 kW	1200	5150	VW3 A5 211	600.000
ATV 61HC50N4 ATV 61QC50N4	1200	5150	VW3 A5 211	600.000	
ATV 61HC63N4 ATV 61QC63N4	1200	5150	VW3 A5 211	600.000	

(1) For ATV 61H075M3, HU15M3, ATV 61H075N4 and HU15N4 drives, it is advisable to use a lower power motor with a sinus filter.

Applications

Circuit-breaker/contactor/drive combinations can be used to ensure continuous service of the installation with optimum safety.

The type of circuit-breaker/contactor coordination selected can reduce maintenance costs in the event of a motor short-circuit by minimizing the time required to make the necessary repairs and the cost of replacement equipment. The suggested combinations provide type 1 or type 2 coordination depending on the drive rating.

Type 2 coordination: A motor short-circuit will not damage the device or affect its settings. The motor starter should be able to operate once the electrical fault has been removed. The electrical isolation provided by the circuit-breaker will not be affected by the short-circuit. Welding of the contactor contacts is permissible if they can be separated easily.

Type 1 coordination: The electrical isolation provided by the circuit-breaker will not be affected by the incident and no other elements apart from the contactor are damaged as a result of the motor short-circuit.

The drive controls the motor, provides protection against short-circuits between the drive and the motor and protects the motor cable against overloads. Overload protection is provided by the drive's motor thermal protection. If this protection is removed, external thermal protection must be provided. Before restarting the installation, the cause of the trip must be removed.



+



+



GV2 L20

+
LC1 D25●●

+
ATV 61HU22M3

Motor starters for IP 20 drives

Motor Power (1)		Drive Reference	Circuit-breaker Reference (2)	Rating	I _{rm}	Line contactor Reference (3) (4)
kW	HP			A	A	
Single-phase supply voltage: 200...240 V 50/60 Hz. Type 2 coordination						
0.37	0.5	ATV 61H075M3	GV2 L14	10	–	LC1 D09●●
0.75	1	ATV 61HU15M3	GV2 L16	14	–	LC1 D18●●
1.5	2	ATV 61HU22M3	GV2 L20	18	–	LC1 D25●●
2.2	3	ATV 61HU30M3	GV2 L32	32	–	LC1 D32●●
3	–	ATV 61HU40M3 (5)	GV2 L32	32	–	LC1 D32●●
4	5	ATV 61HU55M3 (5)	GV3 L40	40	–	LC1 D40A●●
5.5	7.5	ATV 61HU75M3 (5)	GV3 L50	50	–	LC1 D50A●●
Single-phase supply voltage: 200...240 V 50/60 Hz. Type 1 coordination						
0.37	0.5	ATV 61H075M3	GV2 L14	10	–	LC1 D09●●
0.75	1	ATV 61HU15M3	GV2 L16	14	–	LC1 D09●●
1.5	2	ATV 61HU22M3	GV2 L20	18	–	LC1 D09●●
2.2	3	ATV 61HU30M3	GV2 L32	32	–	LC1 D18●●
3	–	ATV 61HU40M3 (5)	GV2 L32	32	–	LC1 D18●●
4	5	ATV 61HU55M3 (5)	GV3 L40	40	300	LC1 D32●●
5.5	7.5	ATV 61HU75M3 (5)	GV3 L50	50	300	LC1 D38●●

(1) Standard power ratings for 230 V 50/60 Hz 4-pole motors.
The values expressed in HP conform to the NEC (National Electrical Code).

(2) Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	I _{cu} (kA) for 240 V
GV2 L14, GV2 L16	130

GV2 L20, GV2 L32	50
GV3 L40, GV3 L50	

(3) Composition of contactors:
LC1 D09 to LC1 D50A: 3 poles + 1 N/O auxiliary contact and 1 N/C auxiliary contact.

(4) Replace ●● with the control circuit voltage reference indicated in the table below:

	Volts ~	24	48	110	220	230	240
LC1 D●●	50 Hz	B5	E5	F5	M5	P5	U5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please contact our Customer Care Centre.

(5) A line choke must be added (see page 74).



GV3 L40
+
LC1 D40A●●
+
ATV 61HU55M3

Motor starters for IP 20 drives

Motor Power (1)	Drive Reference	Drive	Circuit-breaker Reference (2)	Rating	I _{rm}	Line contactor Reference (3) (4)
kW	HP			A	A	
Three-phase supply voltage: 200...240 V 50/60 Hz. Type 2 coordination						
0.75	1	ATV 61H075M3	GV2 L10	6.3	–	LC1 D09●●
1.5	2	ATV 61HU15M3	GV2 L16	14	–	LC1 D18●●
2.2	3	ATV 61HU22M3	GV2 L20	18	–	LC1 D18●●
3	–	ATV 61HU30M3	GV2 L22	25	–	LC1 D25●●
4	5	ATV 61HU40M3	GV2 L32	32	–	LC1 D25●●
5.5	7.5	ATV 61HU55M3	GV3 L40	40	–	LC1 D40A●●
7.5	10	ATV 61HU75M3	GV3 L50	50	–	LC1 D50A●●
11	15	ATV 61HD11M3X	GV3 L65	65	–	LC1 D65A●●
15	20	ATV 61HD15M3X	NS80HMA80	80	480	LC1 D80●●
18.5	25	ATV 61HD18M3X	NS80HMA80	80	480	LC1 D80●●
22	30	ATV 61HD22M3X	NSX100●MA100	100	600	LC1 D95●●
30	40	ATV 61HD30M3X	NSX160●MA150	150	1350	LC1 D150●●
37	50	ATV 61HD37M3X	NSX160●MA150	150	1350	LC1 D150●●
45	60	ATV 61HD45M3X	NSX250●MA220	220	1980	LC1 F185●●
55	75	ATV 61HD55M3X	NSX250●MA220	220	1980	LC1 F225●●
75	100	ATV 61HD75M3X	NSX400● Micrologic 1.3M	320	1920	LC1 F265●●
90	125	ATV 61HD90M3X	NSX630● Micrologic 1.3M	500	3000	LC1 F330●●

Three-phase supply voltage: 200...240 V 50/60 Hz. Type 1 coordination

0.75	1	ATV 61H075M3	GV2 L10	6.3	–	LC1 D09●●
1.5	2	ATV 61HU15M3	GV2 L16	14	–	LC1 D09●●
2.2	3	ATV 61HU22M3	GV2 L20	18	–	LC1 D09●●
3	–	ATV 61HU30M3	GV2 L22	25	–	LC1 D18●●
4	5	ATV 61HU40M3	GV2 L32	32	–	LC1 D18●●
5.5	7.5	ATV 61HU55M3	GV3 L40	40	–	LC1 D25●●
7.5	10	ATV 61HU75M3	GV3 L50	50	–	LC1 D32●●
11	15	ATV 61HD11M3X	GV3 L65	65	–	LC1 D40A●●
15	20	ATV 61HD15M3X	NS80HMA80	80	480	LC1 D50A●●
18.5	25	ATV 61HD18M3X	NS80HMA80	80	480	LC1 D50A●●
22	30	ATV 61HD22M3X	NSX100●MA100	100	600	LC1 D80●●
30	40	ATV 61HD30M3X	NSX160●MA150	150	1350	LC1 D95●●
37	50	ATV 61HD37M3X	NSX160●MA150	150	1350	LC1 D115●●
45	60	ATV 61HD45M3X	NSX250●MA220	220	1980	LC1 D115●●
55	75	ATV 61HD55M3X	NSX250●MA220	220	1980	LC1 D115●●
75	100	ATV 61HD75M3X	NSX400● Micrologic 1.3M	320	1920	LC1 F185●●
90	125	ATV 61HD90M3X	NSX630● Micrologic 1.3M	500	3000	LC1 F265●●

(1) Standard power ratings for 230 V 50/60 Hz 4-pole motors.

The values expressed in HP conform to the NEC (National Electrical Code).

(2) For references to be completed, replace the dot with the letter corresponding to the circuit-breaker breaking performance (B, F, N, H, S or L).

Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	I _{cu} (kA) for 240 V					
	B	F	N	H	S	L
GV2 L10	130	–	–	–	–	–
GV2 L16...L32 GV3 L40...L65	50	–	–	–	–	–
NS80HMA	100	–	–	–	–	–
NSX100●MA...NSX250●MA	–	40	85	90	100	120
NSX400●, NSX630●	–	–	40	85	100	120

(3) Composition of contactors:

LC1 D09 to LC1 D150: 3 poles + 1 N/O auxiliary contact and 1 N/C auxiliary contact.

LC1 F185 to LC1 F330: 3 poles. To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalogue.

(4) Replace ●● with the control circuit voltage reference indicated in the table below:

Line contactor	Volts ~	24	48	110	220	230	240
		B5	E5	F5	M5	P5	U5
LC1 D09...D150	50 Hz	B5	E5	F5	M5	P5	U5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F185, F225	50 Hz (LX1 coil)	B5	E5	F5	M5	P5	U5
	60 Hz (LX1 coil)	–	E6	F6	M6	–	U6
	40...400 Hz (LX9 coil)	–	E7	F7	M7	P7	U7
LC1 F265, LC1 F330	40...400 Hz (LX1 coil)	B7	E7	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please contact our Customer Care Centre.



NSX160●MA150
+
LC1 D115●●
+
ATV 61HD45N4

Motor starters for IP 20 drives

Motor		Drive	Circuit-breaker		Line contactor	
Power (1)	Reference	Reference (2)	Rating	I _{rm}	Reference (4) (5)	
kW	HP		A	A		
Three-phase supply voltage: 380...415 V 50/60 Hz. Type 2 coordination						
0.75	1	ATV 61H075N4	GV2 L08	4	–	LC1 D09●●
1.5	2	ATV 61HU15N4	GV2 L10	6.3	–	LC1 D09●●
2.2	3	ATV 61HU22N4	GV2 L14	10	–	LC1 D25●●
3	–	ATV 61HU30N4	GV2 L16	14	–	LC1 D25●●
4	5	ATV 61HU40N4	GV2 L16	14	–	LC1 D25●●
5.5	7.5	ATV 61HU55N4	GV2 L22	25	–	LC1 D25●●
7.5	10	ATV 61HU75N4	GV3 L32	32	–	LC1 D40A●●
11	15	ATV 61HD11N4	GV3 L40	40	–	LC1 D50A●●
15	20	ATV 61HD15N4	GV3 L50	50	–	LC1 D65A●●
18.5	25	ATV 61HD18N4	GV3 L50	50	–	LC1 D65A●●
22	30	ATV 61HD22N4	GV3 L65	65	–	LC1 D65A●●
30	40	ATV 61HD30N4	NS80HMA80	80	480	LC1 D80●●
37	50	ATV 61HD37N4	NSX100●MA100	100	600	LC1 D95●●
45	60	ATV 61HD45N4	NSX160●MA150	150	1350	LC1 D115●●
55	75	ATV 61HD55N4	NSX160●MA150	150	1350	LC1 D150●●
75	100	ATV 61HD75N4	NSX250●MA220	220	1980	LC1 F185●●
90	125	ATV 61HD90N4	NSX250●MA220	220	1980	LC1 F185●●
110	150	ATV 61HC11N4	NSX250●MA220	220	1980	LC1 F225●●
132	200	ATV 61HC13N4	NSX400● Micrologic 1.3M	320	1920	LC1 F265●●
160	250	ATV 61HC16N4	NSX400● Micrologic 1.3M	320	1920	LC1 F330●●
200	300	ATV 61HC22N4	NSX630● Micrologic 1.3M	500	3000	LC1 F400●●
220	350	ATV 61HC22N4	NSX630● Micrologic 1.3M	500	3000	LC1 F400●●
250	400	ATV 61HC25N4	NSX630● Micrologic 1.3M	500	3000	LC1 F500●●
280	450	ATV 61HC31N4	NSX630● Micrologic 1.3M	500	3000	LC1 F500●●
315	500	ATV 61HC31N4	NS800L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
355	–	ATV 61HC40N4	NS800L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
400	600	ATV 61HC40N4	NS800L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F800●●
500	700	ATV 61HC50N4	NS1000L Micrologic 2 or 5 (LR OFF)	1000	2000	LC1 BL●●
560	800	ATV 61HC63N4	NS1000L Micrologic 2 or 5 (LR OFF)	1000	2000	LC1 BM●●

(1) Standard power ratings for 400 V 50/60 Hz 4-pole motors.
The values expressed in HP conform to the NEC (National Electrical Code).
(2) For references to be completed, replace the dot with the letter corresponding to the circuit-breaker breaking performance (B, F, N, H, S or L).
Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	I _{cu} (kA) for 400 V					
	B	F	N	H	S	L
GV2 L08...L16 (3)	130	–	–	–	–	–
GV2 L16 (3), GV2 L22 GV3 L32...L65	50	–	–	–	–	–
NS80HMA	70	–	–	–	–	–
NSX100●MA...NSX250●MA	–	25	36	50	70	100
NSX400●, NSX630●	–	–	36	50	70	100
NS800L Micrologic 2 or 5 NS1000L Micrologic 2 or 5	–	–	–	–	–	150

(3) GV2 L16: I_{cu} of 130 when combined with an ATV 61HU30N4, I_{cu} of 50 when combined with an ATV 61HU40N4.
(4) Composition of contactors:
LC1 D09 to LC1 D150: 3 poles + 1 N/O auxiliary contact and 1 N/C auxiliary contact.
LC1 F●●●, LC1 BL and LC1 BM: 3 poles. To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalogue.
(5) Replace ●● with the control circuit voltage reference indicated in the table below:

	Volts ~	24	48	110	220	230	240
	LC1 D09...D150	50 Hz	B5	E5	F5	M5	P5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F185, F225	50 Hz (LX1 coil)	B5	E5	F5	M5	P5	U5
	60 Hz (LX1 coil)	–	E6	F6	M6	–	U6
	40...400 Hz (LX9 coil)	–	E7	F7	M7	P7	U7
LC1 F265, F330	40...400 Hz (LX1 coil)	B7	E7	F7	M7	P7	U7
LC1 F400...F800	40...400 Hz (LX1 coil)	–	E7	F7	M7	P7	U7
LC1 BL, LC1 BM	50...400 Hz (WB1 coil)	–	–	F	M	P	U

For other voltages available between 24 V and 660 V, or a DC control circuit, please contact our Customer Care Centre.



NSX100●MA100
+
LC1 D95●●
+
ATV 61HD37N4

Motor starters for IP 20 drives

Motor Power (1)		Drive Reference	Circuit-breaker Reference (2)	Rating I _{rm}		Line contactor Reference (3) (4)
kW	HP			A	A	
Three-phase supply voltage: 380...415 V 50/60 Hz. Type 1 coordination						
0.75	1	ATV 61H075N4	GV2 L08	4	–	LC1 D09●●
1.5	2	ATV 61HU15N4	GV2 L10	6.3	–	LC1 D09●●
2.2	3	ATV 61HU22N4	GV2 L14	10	–	LC1 D09●●
3	–	ATV 61HU30N4	GV2 L16	14	–	LC1 D09●●
4	5	ATV 61HU40N4	GV2 L16	14	–	LC1 D18●●
5.5	7.5	ATV 61HU55N4	GV2 L22	25	–	LC1 D25●●
7.5	10	ATV 61HU75N4	GV3 L32	32	–	LC1 D40A●●
11	15	ATV 61HD11N4	GV3 L40	40	–	LC1 D40A●●
15	20	ATV 61HD15N4	GV3 L50	50	–	LC1 D50A●●
18.5	25	ATV 61HD18N4	GV3 L50	50	–	LC1 D50A●●
22	30	ATV 61HD22N4	GV3 L65	65	–	LC1 D65A●●
30	40	ATV 61HD30N4	NS80HMA80	80	480	LC1 D65A●●
37	50	ATV 61HD37N4	NSX100●MA100	100	600	LC1 D95●●
45	60	ATV 61HD45N4	NSX160●MA150	150	1350	LC1 D115●●
55	75	ATV 61HD55N4	NSX160●MA150	150	1350	LC1 D115●●
75	100	ATV 61HD75N4	NSX250●MA220	220	1980	LC1 F185●●
90	125	ATV 61HD90N4	NSX250●MA220	220	1980	LC1 F185●●
110	150	ATV 61HC11N4	NSX250●MA220	220	1980	LC1 F225●●
132	200	ATV 61HC13N4	NSX400● Micrologic 1.3M	320	1920	LC1 F265●●
160	250	ATV 61HC16N4	NSX400● Micrologic 1.3M	320	1920	LC1 F330●●
200	300	ATV 61HC22N4	NSX630● Micrologic 1.3M	500	3000	LC1 F400●●
220	350	ATV 61HC22N4	NSX630● Micrologic 1.3M	500	3000	LC1 F400●●
250	400	ATV 61HC25N4	NSX630● Micrologic 1.3M	500	3000	LC1 F500●●
280	450	ATV 61HC31N4	NSX630● Micrologic 1.3M	500	3000	LC1 F500●●
315	500	ATV 61HC31N4	NS800L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
355	–	ATV 61HC40N4	NS800L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
400	600	ATV 61HC40N4	NS800L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
500	700	ATV 61HC50N4	NS1000L Micrologic 2 or 5 (LR OFF)	1000	2000	LC1 F630●●
560	800	ATV 61HC63N4	NS1000L Micrologic 2 or 5 (LR OFF)	1000	2000	LC1 F630●●
630	900	ATV 61HC63N4	NS1250 Micrologic 2 or 5 (LR OFF)	1000	2000	LC1 F630●●

(1) Standard power ratings for 400 V 50/60 Hz 4-pole motors.

The values expressed in HP conform to the NEC (National Electrical Code).

(2) For references to be completed, replace the dot with the letter corresponding to the circuit-breaker breaking performance (B, F, N, H, S or L).

Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	I _{cu} (kA) for 400 V						
	B	F	N	H	S	L	
GV2 L08...L14	130	–	–	–	–	–	
GV2 L16, GV2 L22 GV3 L32...L65	50	–	–	–	–	–	
NS80HMA	70	–	–	–	–	–	
NSX100●MA...NSX250●MA	–	25	36	50	100	150	
NSX400●, NSX630●	–	–	36	50	100	150	
NS800L Micrologic 2 or 5 NS1000L Micrologic 2 or 5	–	–	–	–	–	150	
NS1250 Micrologic 2 or 5	–	–	–	50	65	–	

(3) Composition of contactors:

LC1 D09 to LC1 D115: 3 poles + 1 N/O auxiliary contact and 1 N/C auxiliary contact.

LC1 F185 to F630: 3 poles. To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalogue.

(4) Replace ●● with the control circuit voltage reference indicated in the table below:

	Volts ~	24	48	110	220	230	240
LC1 D09...D115	50 Hz	B5	E5	F5	M5	P5	U5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F185, F225	50 Hz (LX1 coil)	B5	E5	F5	M5	P5	U5
	60 Hz (LX1 coil)	–	E6	F6	M6	–	U6
	40...400 Hz (LX9 coil)	–	E7	F7	M7	P7	U7
LC1 F265, F330	40...400 Hz (LX1 coil)	B7	E7	F7	M7	P7	U7
LC1 F400...F630	40...400 Hz (LX1 coil)	–	E7	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please contact our Customer Care Centre.



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+



NSX160●MA150
+
LC1 D115●●
+
ATV 61WD55N4

Motor starters for IP 54 drives

Motor Power (1)	Drive Reference	Circuit-breaker Reference (2)	Rating A	I _{rm} A	Line contactor Reference (3) (4)
kW	HP				
Three-phase supply voltage: 380...415 V 50/60 Hz. Type 2 coordination					
0.75	1	ATV 61W075N4 ATV 61W075N4C	2.5	–	LC1 D09●●
1.5	2	ATV 61WU15N4 ATV 61WU15N4C	4	–	LC1 D09●●
2.2	3	ATV 61WU22N4 ATV 61WU22N4C	6.3	–	LC1 D09●●
3	–	ATV 61WU30N4 ATV 61WU30N4C	10	–	LC1 D25●●
4	5	ATV 61WU40N4 ATV 61WU40N4C	10	–	LC1 D25●●
5.5	7.5	ATV 61WU55N4 ATV 61WU55N4C	14	–	LC1 D25●●
7.5	10	ATV 61WU75N4 ATV 61WU75N4C	32	–	LC1 D40A●●
11	15	ATV 61WD11N4 ATV 61WD11N4C	40	–	LC1 D40A●●
15	20	ATV 61WD15N4 ATV 61WD15N4C	50	–	LC1 D50A●●
18.5	25	ATV 61WD18N4 ATV 61WD18N4C	50	–	LC1 D50A●●
22	30	ATV 61WD22N4 ATV 61WD22N4C	65	–	LC1 D65A●●
30	40	ATV 61WD30N4 ATV 61WD30N4C	80	480	LC1 D80●●
37	50	ATV 61WD37N4 ATV 61WD37N4C	80	480	LC1 D80●●
45	60	ATV 61WD45N4 ATV 61WD45N4C	100	600	LC1 D95●●
55	75	ATV 61WD55N4 ATV 61WD55N4C	150	1350	LC1 D115●●
75	100	ATV 61WD75N4 ATV 61WD75N4C	150	1350	LC1 D150●●
90	125	ATV 61WD90N4 ATV 61WD90N4C	220	1980	LC1 F185●●

(1) Standard power ratings for 400 V 50/60 Hz 4-pole motors.

The values expressed in HP conform to the NEC (National Electrical Code).

(2) For references to be completed, replace the dot with the letter corresponding to the circuit-breaker breaking performance (B, F, N, H, S or L).

Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	I _{cu} (kA) for 400 V						
	B	F	N	H	S	L	
GV2 L07...L14	130	–	–	–	–	–	
GV2 L16	50	–	–	–	–	–	
GV3 L32...L65	–	–	–	–	–	–	
NS80HMA	70	–	–	–	–	–	
NSX100●MA ...250●MA	–	25	36	50	70	100	

(3) Composition of contactors:

LC1 D09 to LC1 D150: 3 poles + 1 N/O auxiliary contact and 1 N/C auxiliary contact.

LC1 F185: 3 poles. To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalogue.

(4) Replace ●● with the control circuit voltage reference given in the table below:

	Volts ~	24	48	110	220	230	240
LC1 D09...D150	50 Hz	B5	E5	F5	M5	P5	U5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F185	50 Hz (LX1 coil)	B5	E5	F5	M5	P5	U5
	60 Hz (LX1 coil)	–	E6	F6	M6	–	U6
	40...400 Hz (LX9 coil)	–	E7	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please contact our Customer Care Centre.



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+



GV2 L07
+
LC1 D09●●
+
ATV 61W075N4

Motor starters for IP 54 drives						
Motor Power (1)	Drive Reference	Circuit-breaker Reference (2)	Rating A	I _{rm} A	Line contactor Reference (3) (4)	
kW	HP					
Three-phase supply voltage: 380...415 V 50/60 Hz. Type 1 coordination						
0.75	1	ATV 61W075N4 ATV 61W075N4C	GV2 L07	2.5	–	LC1 D09●●
1.5	2	ATV 61WU15N4 ATV 61WU15N4C	GV2 L08	4	–	LC1 D09●●
2.2	3	ATV 61WU22N4 ATV 61WU22N4C	GV2 L10	6.3	–	LC1 D09●●
3	–	ATV 61WU30N4 ATV 61WU30N4C	GV2 L14	10	–	LC1 D09●●
4	5	ATV 61WU40N4 ATV 61WU40N4C	GV2 L14	10	–	LC1 D18●●
5.5	7.5	ATV 61WU55N4 ATV 61WU55N4C	GV2 L16	14	–	LC1 D18●●
7.5	10	ATV 61WU75N4 ATV 61WU75N4C	GV3 L32	32	–	LC1 D25●●
11	15	ATV 61WD11N4 ATV 61WD11N4C	GV3 L40	40	–	LC1 D40A●●
15	20	ATV 61WD15N4 ATV 61WD15N4C	GV3 L50	40	–	LC1 D50A●●
18.5	25	ATV 61WD18N4 ATV 61WD18N4C	GV3 L50	50	–	LC1 D50A●●
22	30	ATV 61WD22N4 ATV 61WD22N4C	GV3 L65	65	–	LC1 D65A●●
30	40	ATV 61WD30N4 ATV 61WD30N4C	NS80HMA80	80	480	LC1 D65A●●
37	50	ATV 61WD37N4 ATV 61WD37N4C	NS80HMA80	80	480	LC1 D80●●
45	60	ATV 61WD45N4 ATV 61WD45N4C	NSX100●MA100	100	600	LC1 D80●●
55	75	ATV 61WD55N4 ATV 61WD55N4C	NSX160●MA150	150	1350	LC1 D115●●
75	100	ATV 61WD75N4 ATV 61WD75N4C	NSX160●MA150	150	1350	LC1 D150●●
90	125	ATV 61WD90N4 ATV 61WD90N4C	NSX250●MA220	220	1980	LC1 F185●●

(1) Standard power ratings for 400 V 50/60 Hz 4-pole motors.

The values expressed in HP conform to the NEC (National Electrical Code).

(2) For references to be completed, replace the dot with the letter corresponding to the circuit-breaker breaking performance (B, F, N, H, S or L).

Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	I _{cu} (kA) for 400 V						
	B	F	N	H	S	L	
GV2 L07...L14	130	–	–	–	–	–	
GV2 L16	50	–	–	–	–	–	
GV3 L32...L65	–	–	–	–	–	–	
NS80HMA	70	–	–	–	–	–	
NSX100●MA... NSX250●MA	–	25	36	50	70	100	

(3) Composition of contactors:

LC1 D09 to LC1 D150: 3 poles + 1 N/O auxiliary contact and 1 N/C auxiliary contact.

LC1 F185: 3 poles. To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalogue.

Replace ●● with the control circuit voltage reference indicated in the table below:

	Volts ~	24	48	110	220	230	240
		LC1 D09...D150	50 Hz	B5	E5	F5	M5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F185	50 Hz (LX1 coil)	B5	E5	F5	M5	P5	U5
	60 Hz (LX1 coil)	–	E6	F6	M6	–	U6
	40...400 Hz (LX9 coil)	–	E7	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please contact our Customer Care Centre.



NSX100●MA150
+
LC1 D115●●
+
ATV 61HD45N4

Motor starters for IP 20 drives						
Motor Power (1)	Drive Reference	Circuit-breaker Reference (2)	Rating	I _{rm}	Line contactor Reference (4) (5)	
kW	HP		A	A		
Three-phase supply voltage: 440...480 V 50/60 Hz. Type 2 coordination						
0.75	1	ATV 61H075N4	GV2 L08	4	–	LC1 D25●●
1.5	2	ATV 61HU15N4	GV2 L10	6.3	–	LC1 D25●●
2.2	3	ATV 61HU22N4	GV2 L14	10	–	LC1 D25●●
3	–	ATV 61HU30N4	GV2 L14	10	–	LC1 D25●●
4	5	ATV 61HU40N4	GV2 L16	14	–	LC1 D25●●
5.5	7.5	ATV 61HU55N4	GV2 L20	18	–	LC1 D25●●
7.5	10	ATV 61HU75N4	GV3 L25	25	–	LC1 D32●●
11	15	ATV 61HD11N4	GV3 L32	32	–	LC1 D40A●●
15	20	ATV 61HD15N4	GV3 L50	50	–	LC1 D50A●●
18.5	25	ATV 61HD18N4	GV3 L50	50	–	LC1 D50A●●
22	30	ATV 61HD22N4	GV3 L50	50	–	LC1 D65A●●
30	40	ATV 61HD30N4	GV3 L65	65	–	LC1 D65A●●
37	50	ATV 61HD37N4	NS80HMA80	80	480	LC1 D80●●
45	60	ATV 61HD45N4	NSX100●MA100	100	600	LC1 D115●●
55	75	ATV 61HD55N4	NSX160●MA150	150	1350	LC1 D115●●
75	100	ATV 61HD75N4	NSX250●MA220	220	1980	LC1 F185●●
90	125	ATV 61HD90N4	NSX250●MA220	220	1980	LC1 F185●●
110	150	ATV 61HC11N4	NSX250●MA220	220	1980	LC1 F185●●
132	200	ATV 61HC13N4	NSX250●MA220	220	1980	LC1 F265●●
160	250	ATV 61HC16N4	NSX400● Micrologic 1.3M	320	1920	LC1 F265●●
200	300	ATV 61HC22N4	NSX630● Micrologic 1.3M	500	3000	LC1 F400●●
220	350	ATV 61HC22N4	NSX630● Micrologic 1.3M	500	3000	LC1 F400●●
250	400	ATV 61HC25N4	NSX630● Micrologic 1.3M	500	3000	LC1 F500●●
280	450	ATV 61HC31N4	NSX630● Micrologic 1.3M	500	3000	LC1 F500●●
315	500	ATV 61HC31N4	NS800L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
355	–	ATV 61HC40N4	NS800L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
400	600	ATV 61HC40N4	NS800L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F780●●
500	700	ATV 61HC50N4	NS1000L Micrologic 2 or 5 (LR OFF)	1000	2000	LC1 F780●●
560	800	ATV 61HC63N4	NS1000L Micrologic 2 or 5 (LR OFF)	1000	2000	LC1 F780●●
630	900	ATV 61HC63N4	NS1000L Micrologic 2 or 5 (LR OFF)	1000	2000	LC1 F780●●

- (1) Standard power ratings for 400 V 50/60 Hz 4-pole motors.
The values expressed in HP conform to the NEC (National Electrical Code).
(2) For references to be completed, replace the dot with the letter corresponding to the circuit-breaker breaking performance (B, F, N, H, S or L).
Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	I _{cu} (kA) for 440 V					
	B	F	N	H	S	L
GV2 L08...GV2 L14 (3)	130	–	–	–	–	–
GV2 L14 (3)...L20	20	–	–	–	–	–
GV3 L25...L65	50	–	–	–	–	–
NS80HMA	65	–	–	–	–	–
NSX100●MA... NSX250●MA	–	20	35	50	65	130
NSX400●MA...NSX630●MA	–	–	30	42	65	130
NS800L Micrologic 2 or 5 NS1000L Micrologic 2 or 5	–	–	–	–	–	130

- (3) GV2 L14: I_{cu} of 130 when combined with an ATV 61HU22N4, I_{cu} of 20 when combined with an ATV 61HU30N4.
(4) Composition of contactors:
LC1 D25 to LC1 D115: 3 poles + 1 N/O auxiliary contact and 1 N/C auxiliary contact.
LC1 F185 to LC1 F780: 3 poles. To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalogue.
(5) Replace ●● with the control circuit voltage reference given in the table below:

	Volts ~	24	48	110	220	230	240
		LC1 D25...D115	50 Hz	B5	E5	F5	M5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F185	50 Hz (LX1 coil)	B5	E5	F5	M5	P5	U5
	60 Hz (LX1 coil)	–	E6	F6	M6	–	U6
	40...400 Hz (LX9 coil)	–	E7	F7	M7	P7	U7
LC1 F265	40...400 Hz (LX1 coil)	B7	E7	F7	M7	P7	U7
LC1 F400...F630	40...400 Hz (LX1 coil)	–	E7	F7	M7	P7	U7
LC1 F780	40...400 Hz (LX1 coil)	–	–	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please contact our Customer Care Centre.



NSX160●MA150
+
LC1 D115●●
+
ATV 61HD55N4

Motor starters for IP 20 drives						
Motor Power (1)	Drive Reference	Circuit-breaker Reference (2)		Rating I _{rm}		Line contactor Reference (4) (5)
kW	HP			A	A	
Three-phase supply voltage: 440...480 V 50/60 Hz. Type 1 coordination						
0.75	1	ATV 61H075N4	GV2 L08	4	–	LC1 D09●●
1.5	2	ATV 61HU15N4	GV2 L10	6.3	–	LC1 D09●●
2.2	3	ATV 61HU22N4	GV2 L14	10	–	LC1 D09●●
3	–	ATV 61HU30N4	GV2 L14	10	–	LC1 D09●●
4	5	ATV 61HU40N4	GV2 L16	14	–	LC1 D09●●
5.5	7.5	ATV 61HU55N4	GV2 L20	18	–	LC1 D09●●
7.5	10	ATV 61HU75N4	GV3 L25	25	–	LC1 D25●●
11	15	ATV 61HD11N4	GV3 L32	32	–	LC1 D32●●
15	20	ATV 61HD15N4	GV3 L50	50	–	LC1 D40A●●
18.5	25	ATV 61HD18N4	GV3 L50	50	–	LC1 D40A●●
22	30	ATV 61HD22N4	GV3 L50	50	–	LC1 D50A●●
30	40	ATV 61HD30N4	GV3 L65	65	–	LC1 D65A●●
37	50	ATV 61HD37N4	NS80HMA80	80	480	LC1 D80●●
45	60	ATV 61HD45N4	NSX100●MA100	100	600	LC1 D95●●
55	75	ATV 61HD55N4	NSX160●MA150	150	1350	LC1 D115●●
75	100	ATV 61HD75N4	NSX250●MA220	220	1980	LC1 D115●●
90	125	ATV 61HD90N4	NSX250●MA220	220	1980	LC1 D150●●
110	150	ATV 61HC11N4	NSX250●MA220	220	1980	LC1 D150●●
132	200	ATV 61HC13N4	NSX250●MA220	220	1980	LC1 F225●●
160	250	ATV 61HC16N4	NSX400● Micrologic 1.3M	320	1920	LC1 F225●●
200	300	ATV 61HC22N4	NSX630● Micrologic 1.3M	500	3000	LC1 F330●●
220	350	ATV 61HC22N4	NSX630● Micrologic 1.3M	500	3000	LC1 F330●●
250	400	ATV 61HC25N4	NSX630● Micrologic 1.3M	500	3000	LC1 F400●●
280	450	ATV 61HC31N4	NSX630● Micrologic 1.3M	500	3000	LC1 F500●●
315	500	ATV 61HC31N4	NS800L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F500●●
355	–	ATV 61HC40N4	NS800L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
400	600	ATV 61HC40N4	NS800L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
500	700	ATV 61HC50N4	NS1000L Micrologic 2 or 5 (LR OFF)	800	1600	LC1 F630●●
560	800	ATV 61HC63N4	NS1000L Micrologic 2 or 5 (LR OFF)	1000	2000	LC1 F630●●
630	900	ATV 61HC63N4	NS1000L Micrologic 2 or 5 (LR OFF)	1000	2000	LC1 F630●●

(1) Standard power ratings for 400 V 50/60 Hz 4-pole motors.

The values expressed in HP conform to the NEC (National Electrical Code).

(2) For references to be completed, replace the dot with the letter corresponding to the circuit-breaker breaking performance (B, F, N, H, S or L).

Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	Icu (kA) for 440 V						
		B	F	N	H	S	L
GV2 L08...L14 (3)	130	–	–	–	–	–	–
GV2 L14 (3)...L20	20	–	–	–	–	–	–
GV3 L25...L65	50	–	–	–	–	–	–
NS80HMA	65	–	–	–	–	–	–
NSX100●MA ... NSX250●MA	–	20	35	50	65	90	130
NSX400●, NSX630●	–	–	30	42	65	90	130
NS800L Micrologic 2 or 5	–	–	–	–	–	–	130
NS1000L Micrologic 2 or 5	–	–	–	–	–	–	130

(3) GV2 L14: Icu of 130 when combined with an ATV 61HU22N4, Icu of 20 when combined with an ATV 61HU30N4.

(4) Composition of contactors:

LC1 D09 to LC1 D150: 3 poles + 1 N/O auxiliary contact and 1 N/C auxiliary contact.

LC1 F225 to LC1 F630: 3 poles. To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalogue.

(5) Replace ●● with the control circuit voltage reference given in the table below:

LC1 D09...D150	Volts ~	24	48	110	220	230	240
		50 Hz	B5	E5	F5	M5	P5
LC1 F265, LC1 F330	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F400...F630	40...400 Hz (LX1 coil)	B7	E7	F7	M7	P7	U7
LC1 F400...F630	40...400 Hz (LX1 coil)	–	E7	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please contact our Customer Care Centre.



NSX100●MA150
+
LC1 D115●●
+
ATV 61WD55N4

Motor starters for IP 54 drives

Motor Power (1)		Drive Reference	Circuit-breaker Reference (2)	Rating		Line contactor Reference (4) (5)
kW	HP			A	A	
Three-phase supply voltage: 440...480 V 50/60 Hz. Type 2 coordination						
0.75	1	ATV 61W075N4 ATV 61W075N4C	GV2 L07	2.5	–	LC1 D09●●
1.5	2	ATV 61WU15N4 ATV 61WU15N4C	GV2 L08	4	–	LC1 D09●●
2.2	3	ATV 61WU22N4 ATV 61WU22N4C	GV2 L10	6.3	–	LC1 D09●●
3	–	ATV 61WU30N4 ATV 61WU30N4C	GV2 L10	6.3	–	LC1 D09●●
4	5	ATV 61WU40N4 ATV 61WU40N4C	GV2 L14	10	–	LC1 D25●●
5.5	7.5	ATV 61WU55N4 ATV 61WU55N4C	GV2 L14	10	–	LC1 D25●●
7.5	10	ATV 61WU75N4 ATV 61WU75N4C	GV3 L32	32	–	LC1 D40A●●
11	15	ATV 61WD11N4 ATV 61WD11N4C	GV3 L40	40	–	LC1 D40A●●
15	20	ATV 61WD15N4 ATV 61WD15N4C	GV3 L50	50	–	LC1 D50A●●
18.5	25	ATV 61WD18N4 ATV 61WD18N4C	GV3 L50	50	–	LC1 D50A●●
22	30	ATV 61WD22N4 ATV 61WD22N4C	GV3 L65	65	–	LC1 D65A●●
30	40	ATV 61WD30N4 ATV 61WD30N4C	NS80HMA50	50	300	LC1 D80●●
37	50	ATV 61WD37N4 ATV 61WD37N4C	NS80HMA80	80	480	LC1 D80●●
45	60	ATV 61WD45N4 ATV 61WD45N4C	NS80HMA80	80	480	LC1 D80●●
55	75	ATV 61WD55N4 ATV 61WD55N4C	NSX100●MA100	100	600	LC1 D115●●
75	100	ATV 61WD75N4 ATV 61WD75N4C	NSX160●MA150	150	1350	LC1 D150●●
90	125	ATV 61WD90N4 ATV 61WD90N4C	NSX250●MA220	220	1980	LC1 F185●●

- (1) Standard power ratings for 400 V 50/60 Hz 4-pole motors.
The values expressed in HP conform to the NEC (National Electrical Code).
- (2) For references to be completed, replace the dot with the letter corresponding to the circuit-breaker breaking performance (B, F, N, H, S or L).
Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	Icu (kA) for 440 V					
	B	F	N	H	S	L
GV2 L07...L14 (3)	130	–	–	–	–	–
GV2 L14 (3)	50	–	–	–	–	–
GV3 L32...L65	–	–	–	–	–	–
NS80HMA	70	–	–	–	–	–
NSX100●MA... NSX250●MA	–	20	35	50	65	90

- (3) GV2 L14: Icu of 130 when combined with an ATV 61WU40N4, Icu of 50 when combined with an ATV 61WU55N4.
- (4) Composition of contactors:
LC1 D09 to LC1 D150: 3 poles + 1 N/O auxiliary contact and 1 N/C auxiliary contact.
LC1 F185: 3 poles. To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalogue.
- (5) Replace ●● with the control circuit voltage reference given in the table below:

	Volts ~	24	48	110	220	230	240
		LC1 D09...D150	50 Hz	B5	E5	F5	M5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F185	50 Hz (LX1 coil)	B5	E5	F5	M5	P5	U5
	60 Hz (LX1 coil)	–	E6	F6	M6	–	U6
	40...400 Hz (LX9 coil)	–	E7	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please contact our Customer Care Centre.



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NS80HMA80
+
LC1 D80●●
+
ATV 61WD45N4

Motor starters for IP 54 drives						
Motor Power (1)	Drive Reference	Circuit-breaker Reference (2)	Rating	I _{rm}	Line contactor Reference (4) (5)	
kW	HP		A	A		
Three-phase supply voltage: 440...480 V 50/60 Hz. Type 1 coordination						
0.75	1	ATV 61W075N4 ATV 61W075N4C	GV2 L07	2.5	–	LC1 D09●●
1.5	2	ATV 61WU15N4 ATV 61WU15N4C	GV2 L08	4	–	LC1 D09●●
2.2	3	ATV 61WU22N4 ATV 61WU22N4C	GV2 L10	6.3	–	LC1 D09●●
3	–	ATV 61WU30N4 ATV 61WU30N4C	GV2 L10	6.3	–	LC1 D09●●
4	5	ATV 61WU40N4 ATV 61WU40N4C	GV2 L14	10	–	LC1 D18●●
5.5	7.5	ATV 61WU55N4 ATV 61WU55N4C	GV2 L14	10	–	LC1 D18●●
7.5	10	ATV 61WU75N4 ATV 61WU75N4C	GV3 L32	32	–	LC1 D25●●
11	15	ATV 61WD11N4 ATV 61WD11N4C	GV3 L40	40	–	LC1 D40A●●
15	20	ATV 61WD15N4 ATV 61WD15N4C	GV3 L50	50	–	LC1 D50A●●
18.5	25	ATV 61WD18N4 ATV 61WD18N4C	GV3 L50	50	–	LC1 D50A●●
22	30	ATV 61WD22N4 ATV 61WD22N4C	GV3 L65	65	–	LC1 D65A●●
30	40	ATV 61WD30N4 ATV 61WD30N4C	NS80HMA50	50	300	LC1 D65A●●
37	50	ATV 61WD37N4 ATV 61WD37N4C	NS80HMA80	80	480	LC1 D65A●●
45	60	ATV 61WD45N4 ATV 61WD45N4C	NS80HMA80	80	480	LC1 D80●●
55	75	ATV 61WD55N4 ATV 61WD55N4C	NSX100●MA100	100	600	LC1 D115●●
75	100	ATV 61WD75N4 ATV 61WD75N4C	NSX160●MA150	150	1350	LC1 D150●●
90	125	ATV 61WD90N4 ATV 61WD90N4C	NSX250●MA220	220	1980	LC1 F185●●

(1) Standard power ratings for 400 V 50/60 Hz 4-pole motors.

The values expressed in HP conform to the NEC (National Electrical Code).

(2) For references to be completed, replace the dot with the letter corresponding to the circuit-breaker breaking performance (B, F, N, H, S or L).

Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	I _{cu} (kA) for 440 V	I _{cu} (kA) for 440 V					
		B	F	N	H	S	L
GV2 L07...L14 (3)	130	–	–	–	–	–	–
GV2 L14 (3)	50	–	–	–	–	–	–
GV3 L32...L65							
NS80HMA	70	–	–	–	–	–	–
NSX100●MA... NSX250●MA	–	20	35	50	65	90	130

(3) GV2 L14: I_{cu} of 130 when combined with an ATV 61WU40N4 (C) and I_{cu} of 50 when combined with an ATV 61WU55N4 (C).

(4) Composition of contactors:

LC1 D09 to LC1 D150: 3 poles + 1 N/O auxiliary contact and 1 N/C auxiliary contact.

LC1 F185: 3 poles. To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalogue.

(5) Replace ●● with the control circuit voltage reference given in the table below:

	Volts ~	24	48	110	220	230	240
LC1 D09...D150	50 Hz	B5	E5	F5	M5	P5	U5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F185	50 Hz (LX1 coil)	B5	E5	F5	M5	P5	U5
	60 Hz (LX1 coil)	–	E6	F6	M6	–	U6
	40...400 Hz (LX9 coil)	–	E7	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please contact our Customer Care Centre.



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GV2 L20
+
LC1 D40A●●
+
ATV 61HD11Y

Motor starters for IP 20 drives						
Motor	Drive	Circuit-breaker		Line contactor		
Power (1)	Reference	Reference (2)	Rating	I _{rm}	Reference (3) (4)	
kW			A	A		
Three-phase supply voltage: 690 V 50/60 Hz. Type 2 coordination						
3	ATV 61HU30Y	GV2 L10	6.3	–	LC1 D25●●	
4	ATV 61HU40Y	GV2 L14	10	–	LC1 D25●●	
5.5	ATV 61HU55Y	GV2 L14	10	–	LC1 D25●●	
7.5	ATV 61HU75Y	GV2 L16	14	–	LC1 D25●●	
11	ATV 61HD11Y	GV2 L20	18	–	LC1 D40A●●	
15	ATV 61HD15Y	GV2 L22	25	–	LC1 D40A●●	
18.5	ATV 61HD18Y	GV3 L25	25	–	LC1 D40A●●	
22	ATV 61HD22Y	GV3 L32	32	–	LC1 D65A●●	
30	ATV 61HD30Y	GV3 L40	40	–	LC1 D80●●	
37	ATV 61HD37Y	GV3 L50	50	–	LC1 D80●●	
45	ATV 61HD45Y	GV3 L65	65	–	LC1 D115●●	
55	ATV 61HD55Y	NS100LMA100	100	1100	LC1 D115●●	
75	ATV 61HD75Y	NS100LMA100	100	1100	LC1 D115●●	
90	ATV 61HD90Y	NS400LMA320	320	2880	LC1 F265●●	
110	ATV 61HC11Y	NS400LMA320	320	2880	LC1 F265●●	
132	ATV 61HC13Y	NS400LMA320	320	2880	LC1 F265●●	
160	ATV 61HC16Y	NS400LMA320	320	2880	LC1 F265●●	
200	ATV 61HC20Y	NS400LMA320	320	2880	LC1 F330●●	
250	ATV 61HC25Y	NS630bLB Micrologic 2 or 5 (LR OFF)	630	2880	LC1 F630●●	
315	ATV 61HC31Y	NS630bLB Micrologic 2 or 5 (LR OFF)	630	4500	LC1 F630●●	
400	ATV 61HC40Y	NS630bLB Micrologic 2 or 5 (LR OFF)	630	4500	LC1 F630●●	
500	ATV 61HC50Y	NS630bLB Micrologic 2 or 5 (LR OFF)	630	4500	LC1 F630●●	
630	ATV 61HC63Y	NS800LB Micrologic 2 or 5 (LR OFF)	800	5670	LC1 F780●●	

(1) Standard power ratings for 690 V 50 Hz 4-pole motors.

(2) Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	I _{cu} (kA) for 690 V
GV2 L10...L22	4
GV3 L25, GV3 L32	5
GV3 L40...L65	5
NS●●●LMA	75
NS630bLB Micrologic 2 or 5	
NS800LB Micrologic 2 or 5	

(3) Composition of contactors:

LC1 D25 to LC1 D115: 3 poles + 1 N/O auxiliary contact and 1 N/C auxiliary contact.

LC1 F265 to LC1 F780: 3 poles. To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalogue.

(4) Replace ●● with the control circuit voltage reference given in the table below:

	Volts ~	24	48	110	220	230	240
LC1 D25...D115	50 Hz	B5	E5	F5	M5	P5	U5
	60 Hz	B6	E6	F6	M6	–	U6
	50/60 Hz	B7	E7	F7	M7	P7	U7
LC1 F265, LC1 F330	40...400 Hz (LX1 coil)	B7	E7	F7	M7	P7	U7
LC1 F630	40...400 Hz (LX1 coil)	–	E7	F7	M7	P7	U7
LC1 F780	40...400 Hz (LX1 coil)	–	–	F7	M7	P7	U7

For other voltages available between 24 V and 660 V, or a DC control circuit, please contact our Customer Care Centre.



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NSX630LMA500
+
LC1 F400●●
+
ATV 61HC25Y

Motor starters for IP 20 drives

Motor Power (1) kW	Drive Reference	Circuit-breaker Reference (2)	Rating A	I _{rm} A	Line contactor Reference (3) (4)
Three-phase supply voltage: 690 V 50/60 Hz. Type 1 coordination					
250	ATV 61HC25Y	NS630bLB Micrologic 2 or 5 (LR OFF)	630	–	LC1 F400●●
315	ATV 61HC31Y	NS630bLB Micrologic 2 or 5 (LR OFF)	630	–	LC1 F500●●
400	ATV 61HC40Y	NS630bLB Micrologic 2 or 5 (LR OFF)	630	–	LC1 F630●●
500	ATV 61HC50Y	NS630bLB Micrologic 2 or 5 (LR OFF)	630	–	LC1 BL33●●
630	ATV 61HC63Y	NS800LB Micrologic 5 (LR OFF)	800	–	LC1 BL34●●

(1) Standard power ratings for 690 V 50 Hz 4-pole motors.
(2) Breaking capacity of circuit-breakers according to standard IEC 60947-2:

Circuit-breaker	I _{cu} (kA) for 690 V
NS630bLB Micrologic 2 or 5	75
NS800LB Micrologic 5	

(3) Composition of contactors:
LC1 F400 to LC1 F630, LC1 BL3●: 3 poles. To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalogue.
(4) Replace ●● with the control circuit voltage reference given in the table below:

	Volts ~	24	48	110	220	230	240
LC1 F●●●	40...400 Hz (LX1 coil)	–	E7	F7	M7	P7	U7
LC1 BL●●	50...400 Hz (WB1 coil)	–	–	F	M	D	U

For other voltages available between 24 V and 660 V, or a DC control circuit, please contact our Customer Care Centre.

Variable speed drives

Altivar 61

Pre-equipped IP 54 floor-standing enclosure kit



IP 54 floor-standing enclosure kit

Presentation

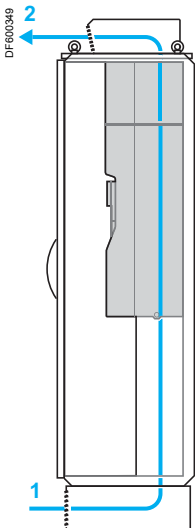
The pre-equipped kit solution is used to create an IP 54 certified floor-standing enclosure for 110 kW to 630 kW IP 20 Altivar 61 variable speed drives for a 380...480 V three-phase supply voltage.

This kit has been designed to:

- Reduce the setup time with:
 - Simplified assembly
 - Optimized thermal and mechanical dimensioning

The cooling systems used enable the equipment to be installed in difficult and dusty environments.

The temperature must not exceed + 45°C outside the enclosure or +50°C inside the enclosure; the temperature is monitored by a thermostat which can shut down the equipment if these limits are exceeded.



Cooling system with a single air circuit

Cooling systems

There are two types of cooling, depending on the model:

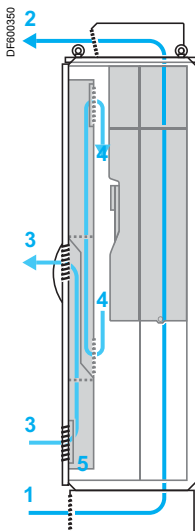
■ **VW3 A9 541 and VW3 A9 542** enclosure kits with a single air circuit for the power section:

- Air inlet via the plinth **1**
- Air outlet on the enclosure roof **2**

■ **VW3 A9 543...548** enclosure kits with three separate air circuits:

- One for the power section:
 - Air inlet via the plinth **1**
 - Air outlet on the enclosure roof **2**
- Two for the control section with cooling system using an air/air exchanger:
 - External air circuit **3** for cooling the heat exchanger **5**
 - Internal air circuit **4** cooled by the heat exchanger **5**

This system makes it possible to isolate the air circulating in the power section from the control section, thereby ensuring better protection against the entry of contaminants (in hostile and dusty environments).



Cooling system with three separate air circuits

Options

There are two additional 600 and 800 mm empty enclosure kits **VW3 A9 55●** for adding accessories or options.

The additional empty enclosure kit must be installed on the left side of the pre-equipped IP 54 enclosure kit. In this case, the left-hand panel of the pre-equipped IP 54 enclosure kit is mounted on the left side of the additional empty enclosure kit, which is supplied without side panels.

Description



The kit consists of:

- Air/air heat exchanger (except for enclosure kits **VW3 A9 541** or **VW3 A9 542**) **1**
- IP 65 graphic display terminal remote mounting kit **2**
- Handle with a pushbutton-operated opening mechanism **3**
- Document holder **4**
- Plinth **5**
- Lower air duct **6**
- EMC plate **7**
- Drive support rack **8**
- Roof extension **9**
- Upper air duct
- 24 V $\overline{\text{---}}$ 600 mA supplementary power supply
- Fixing accessories, seals
- Technical documentation containing parts lists, electrical diagrams and mechanical assembly drawings

References

Description	For use with	Dimensions	Reference	Weight
		W x H x D		
Pre-equipped IP 54 floor-standing enclosure kit	ATV 61HC11N4 (1)	600 x 2362 x 642	VW3 A9 541	220.000
	ATV 61HC13N4 (1)	600 x 2362 x 642	VW3 A9 542	220.000
	ATV 61HC16N4 (1)	600 x 2362 x 642	VW3 A9 543	252.000
	ATV 61HC22N4 (1)	600 x 2362 x 642	VW3 A9 544	252.000
	ATV 61HC25N4 (1) without braking unit ATV 61HC31N4 (1) without braking unit	800 x 2362 x 642	VW3 A9 545	300.000
	ATV 61HC25N4 (1) with braking unit VW3 A7 101 (2) ATV 61HC31N4 (1) with braking unit VW3 A7 101 (2)	800 x 2362 x 642	VW3 A9 546	300.000
	ATV 61HC40N4 (1) without braking unit ATV 61HC50N4 (1) without braking unit	1000 x 2362 x 642	VW3 A9 547	360.000
	ATV 61HC63N4 (1) without braking unit	1200 x 2362 x 642	VW3 A9 548	470.000
	VW3 A7 102 braking unit	600 x 2362 x 642	VW3 A9 549 (3)	252.000
	Additional empty enclosure kit 600 mm	Options and accessories (4)	600 x 2209 x 642	VW3 A9 550
Additional empty enclosure kit 800 mm	Options and accessories (4)	800 x 2209 x 642	VW3 A9 551	210.000

(1) Drive to be ordered separately (see page 19).

(2) Braking unit for drives ATV 61HC25N4, HC31N4, to be ordered separately (see page 68).

(3) Enclosure kit VW3 A9 549 is designed to take braking unit VW3 A7 102 for high-power drives ATV 61HC40N4...HC63N4; it is mounted on the left of enclosure kit VW3 A9 547 or VW3 A9 548. The braking unit must be ordered separately (see page 68).

(4) For any additional information, please contact our Customer Care Centre.

Variable speed drives

Altivar 61 Plus

“Ready to use” IP 54 floor-standing enclosure

PF068305



“Ready to use” IP 54 floor-standing enclosure

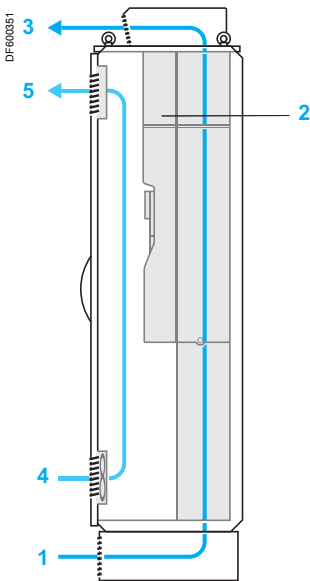
Presentation

Altivar 61 variable speed drives can also be supplied in a “ready to use” IP 54 certified floor-standing enclosure, which makes it possible to achieve an IP 54 degree of protection for IP 20 Altivar 61 drives.

The range has been designed to offer a simple and economical “ready to use” solution, with setup time reduced to a minimum. The enclosures are supplied ready-assembled and ready to connect, making wiring fast and easy.

This standardized version enables the equipment to be made available very quickly.

It covers motor power ratings from 90 kW to 630 kW for a 380...415 V three-phase supply.



Cooling system with two separate air circuits

Cooling system

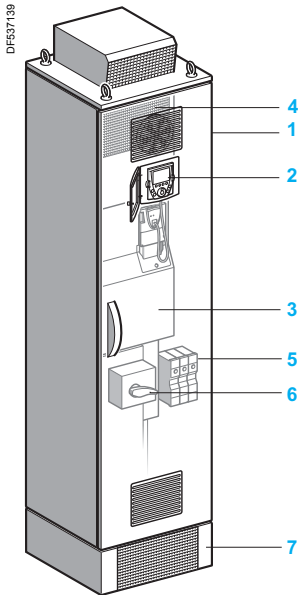
The cooling system used ensures optimum ventilation of the equipment, even in difficult and dusty environments.

Cooling is provided by two separate air circuits:

- One for the power section:
 - Air entry via an intake grille on the plinth **1**
 - Air outlet via a metal cover with protection against water splashes on the enclosure roof **3**
- One for the control section:
 - Air entry via an intake grille with fan (fitted with a filter) on the enclosure door **4**
 - Air outlet through a filter **5**

The incoming air temperature must be 0...+ 40°C.

The temperature is monitored by a thermostat which can shut down the equipment.



Description

The offer comprises:

- A wired, ready-assembled Sarel “Spacial SF” enclosure **1**
- A drive on heatsink ATV 61HD90N4...HC63N4 **3**
- An IP 65 remote mounting kit for graphic display terminal **2**
- A DC choke **4**
- Motor terminals **5**
- A magnetic circuit-breaker **6**
- A plinth **7**

References

Degree of protection	Line supply Max. prospective line Isc (1) kA	With drive	Dimensions W x H x D	Reference	Weight kg
Three-phase supply voltage 380...415 V 50/60 Hz					
IP 54	50	ATV 61HD90N4	600 x 2362 x 642	ATV 61ES5D90N4	300.000
		ATV 61HC11N4	600 x 2362 x 642	ATV 61ES5C11N4	300.000
		ATV 61HC13N4	600 x 2362 x 642	ATV 61ES5C13N4	300.000
		ATV 61HC16N4	600 x 2362 x 642	ATV 61ES5C16N4	320.000
		ATV 61HC22N4	600 x 2362 x 642	ATV 61ES5C22N4	330.000
		ATV 61HC25N4	800 x 2362 x 642	ATV 61ES5C25N4	440.000
		ATV 61HC31N4	800 x 2362 x 642	ATV 61ES5C31N4	440.000
		ATV 61HC40N4	1400 x 2362 x 642	ATV 61ES5C40N4	700.000
		ATV 61HC50N4	1400 x 2362 x 642	ATV 61ES5C50N4	720.000
ATV 61HC63N4	1600 x 2362 x 642	ATV 61ES5C63N4	850.000		

(1) These values are given for use with upstream fuses (see the characteristics on our website www.schneider-electric.com).

Variable speed drives

Altivar 61 Plus - LH

“Ready to use” IP 23 or IP 54 floor-standing enclosure with harmonic filtering



“Ready to use” IP 23 or IP 54 floor-standing enclosure with harmonic filtering

Presentation

The Altivar 61 Plus - LH (Low Harmonic) offer has been designed with harmonic filtering to suit applications requiring a very low harmonic level (THDI \leq 5%). They comply with the conditions imposed by standard IEEE 519 - 1992.

Altivar 61 drives are supplied in an IP 23 or IP 54 certified floor-standing enclosure, which makes it possible to achieve an IP 23 or IP 54 degree of protection for IP 20 Altivar 61 drives.

The enclosures are supplied ready-assembled and ready to connect, thus offering a simple and economical “ready to use” solution which keeps setup time to a minimum. Wiring is fast and easy, the setup parameters are factory-set. This standardized version enables the equipment to be made available very quickly.

The standard offer is supplemented by a wide selection of options depending on the drive rating (see pages 122 to 125).

The offer covers motor power ratings from 55 kW to 630 kW for a 380...415 V, 50/60 Hz three-phase supply voltage.

The incoming air temperature must be between 0 and + 40°C.

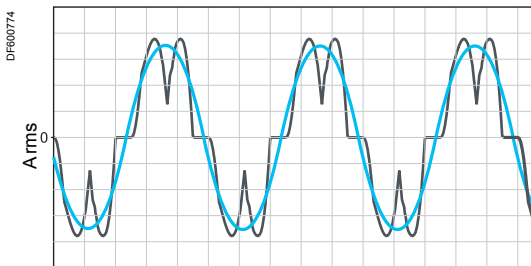
The internal temperature is monitored by a thermostat which can shut down the equipment.

Harmonic filtering

The harmonic filtering system is used to keep the harmonic level to less than 5%. Its design optimizes motor efficiency and reduces energy consumption by significantly decreasing harmonic distortions.

It also offers the following advantages:

- Maximum motor power maintained in the event of a weak line supply by boosted DC voltage
- Power factor ($\cos \phi \sim 1$) independent of load or of return energy
- Reduction in drive electromagnetic emissions in accordance with standard IEC/EN 61800-3 category C3 due to the integrated filter
- Configurable energy recovery onto the line supply, for example for an installation with diesel generator
- Line supply short-circuits tolerated up to 100 kA

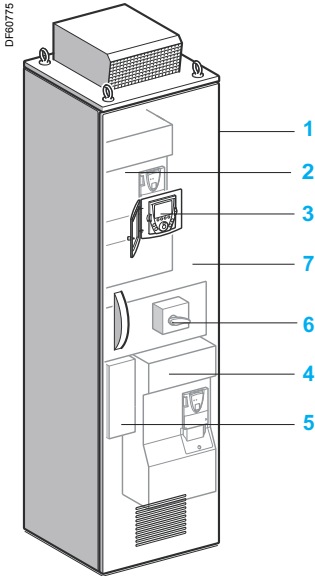


— Harmonic level without harmonic filtering (THDI \sim 48%)
 — Harmonic level with harmonic filtering (THDI \leq 5%)

Variable speed drives

Altivar 61 Plus - LH

“Ready to use” IP 23 or IP 54 floor-standing enclosure with harmonic filtering



Description

The offer comprises:

- A wired, ready-assembled Sarel “Spacial SF” enclosure **1**
- A drive on heatsink ATV 61HD55N4...HC63N4 **2**
- An IP 65 remote mounting kit for graphic display terminal **3**
- An active infeed converter **4**
- Filter components including EMC filter **5**
- A switch, fast-acting fuses and motor terminals **6**
- A slot for optional motor choke **7**

References

Degree of protection	Line supply Max. prospective line Isc (1) kA	With drive	Dimensions W x H x D	Reference	Weight kg
Three-phase supply voltage 380...415 V 50/60 Hz					
IP 23	100	ATV 61HD55N4	400 x 2157 x 642	ATV 61EXC2D55N4H	370.000
		ATV 61HD75N4	600 x 2157 x 642	ATV 61EXC2D75N4H	465.000
		ATV 61HD90N4	600 x 2157 x 642	ATV 61EXC2D90N4H	465.000
		ATV 61HC11N4	600 x 2157 x 642	ATV 61EXC2C11N4H	480.000
		ATV 61HC13N4	800 x 2157 x 642	ATV 61EXC2C13N4H	605.000
		ATV 61HC16N4	800 x 2157 x 642	ATV 61EXC2C16N4H	610.000
		ATV 61HC22N4	1200 x 2157 x 642	ATV 61EXC2C22N4H	820.000
		ATV 61HC25N4	1600 x 2157 x 642	ATV 61EXC2C25N4H	980.000
		ATV 61HC31N4	1600 x 2157 x 642	ATV 61EXC2C31N4H	980.000
		ATV 61HC40N4	2000 x 2157 x 642	ATV 61EXC2C40N4H	1455.000
ATV 61HC50N4	2000 x 2157 x 642	ATV 61EXC2C50N4H	1455.000		
ATV 61HC63N4	2400 x 2157 x 642	ATV 61EXC2C63N4H	1755.000		
IP 54	100	ATV 61HD55N4	400 x 2237 x 642	ATV 61EXC5D55N4H	370.000
		ATV 61HD75N4	600 x 2237 x 642	ATV 61EXC5D75N4H	465.000
		ATV 61HD90N4	600 x 2237 x 642	ATV 61EXC5D90N4H	465.000
		ATV 61HC11N4	600 x 2237 x 642	ATV 61EXC5C11N4H	480.000
		ATV 61HC13N4	800 x 2237 x 642	ATV 61EXC5C13N4H	600.000
		ATV 61HC16N4	800 x 2237 x 642	ATV 61EXC5C16N4H	605.000
		ATV 61HC22N4	1200 x 2237 x 642	ATV 61EXC5C22N4H	810.000
		ATV 61HC25N4	1600 x 2237 x 642	ATV 61EXC5C25N4H	995.000
		ATV 61HC31N4	1600 x 2237 x 642	ATV 61EXC5C31N4H	995.000
		ATV 61HC40N4	2000 x 2237 x 642	ATV 61EXC5C40N4H	1470.000
ATV 61HC50N4	2000 x 2237 x 642	ATV 61EXC5C50N4H	1480.000		
ATV 61HC63N4	2400 x 2237 x 642	ATV 61EXC5C63N4H	1770.000		

(1) These values are given for use with a circuit-breaker, which is available as an option, or fuses placed upstream (see the characteristics on our website www.schneider-electric.com).

Variable speed drives

Altivar 61 Plus

IP 23 or IP 54 floor-standing enclosure
with separate air flows

Presentation

The Altivar 61 Plus offer with separate air flows has been designed to meet requirements for harsh and highly polluted environments (such as in tunnels, subways, smoke extraction and pumping applications, etc.).

Altivar 61 variable speed drives are supplied in an IP 23 or IP 54 ready-assembled floor-standing enclosure to facilitate their installation and setup, while ensuring optimum ventilation.

The enclosures are supplied ready to connect.

The offer comprises two versions:

■ The **ATV 61EXS5●●●●●** version consists of a single enclosure providing IP 54 protection.

It covers motor power ratings from 90 kW to 800 kW with three types of power supply:

- 380...415 V three-phase, 90 kW to 630 kW (**ATV 61EXS5●●●●N4**)
- 500 V three-phase, 90 kW to 630 kW (**ATV 61EXS5●●●●N**)
- 690 V three-phase, 110 kW to 800 kW (**ATV 61EXS5●●●●Y**)

Optimum enclosure ventilation is ensured by two separate cooling circuits for the control section and the power section.

■ The **ATV 61EXA●●●●●** version consists of a set of 4 or more enclosures providing IP 23 or IP 54 protection, depending on the model.

It covers motor power ratings from 630 kW to 2400 kW with three types of power supply:

- 380...415 V three-phase, 630 kW to 1400 kW (**ATV 61EXA●●●●N4**)
- 500 V three-phase, 630 kW to 1800 kW (**ATV 61EXA●●●●N**)
- 690 V three-phase, 800 kW to 2400 kW (**ATV 61EXA●●●●Y**)

Enclosure ventilation is also ensured by two separate cooling circuits, one for the control section and one for the power section.

In addition, a water circuit integrated in the power enclosure ensures excellent cooling of the power electronics.

The incoming air temperature must be between 0°C and +40°C (-10°C and +40°C with enclosure heater) and may reach +50°C with derating (class 3K3 according to IEC/EN 60721-3-3).

The internal temperature is monitored by a thermostat which can shut down the equipment.

The entire range includes the choice of:

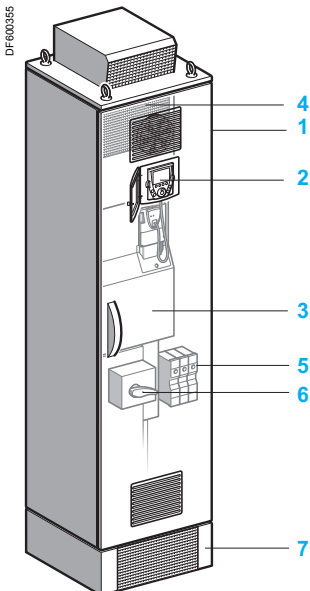
- A standard offer
- A modular offer, in which a wide selection of options can be incorporated depending on the drive rating

The standard ATV 61EXS5●●●●● offer

This consists of:

- A wired, ready-assembled Sarel "Spacial SF" enclosure **1**
- A drive on heatsink ATV 61HD90N4...HC63N4 or ATV 61HC11Y...ATV 61HC80Y **3**
- An IP 65 remote mounting kit for graphic display terminal **2**
- A DC choke **4** (ATV 61EXS5●●●●N4) or a line choke in an additional enclosure (ATV 61EXS5●●●●N and ATV 61EXS5●●●●Y)
- Motor terminals **5**
- A switch and fast-acting fuses **6**
- A plinth **7**

See pages 114 and 115.



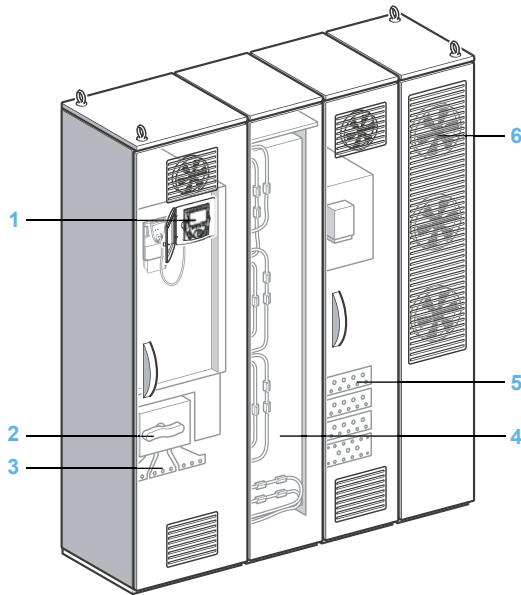
Standard ATV 61EXS5●●●●● offer

Variable speed drives

Altivar 61 Plus

IP 23 or IP 54 floor-standing enclosure
with separate air flows

DF504387



Standard ATV 61EXA●●●●● offer

The standard ATV 61EXA●●●●● offer

The ATV 61EXA●●●●● offer is supplied in wired, ready-assembled Sarel "Spatial SF" enclosures.

Configuration example for a standard ATV 61EXA●●●●● offer:

- An enclosure for the power supply with an IP 65 remote mounting kit for graphic display terminal 1, a switch 2, terminals 3 and fast-acting fuses
- An enclosure for the power section cooled by an integrated water circuit 4
- An enclosure with motor connection terminals 5
- An enclosure for the power section cooling circuit with heat exchanger and fans 6

See pages 114 and 115.

Modular offer

This consists of:

- The standard separate air flow offer ATV 61EXS5●●●●● or ATV 61EXA●●●●●
- One or more options (see pages 120 to 127)

As well as these specific options, all the options available for Altivar 61 drives can be used, at the same rating, with the enclosed drives offer (see the summary tables of possible drive, option and accessory combinations on pages 44, 45 and 50 to 53).

For any configuration other than those shown on pages 120 to 127, please contact our Customer Care Centre.

Common options

These options can be integrated, whatever the enclosure model, without any need for modifications to the enclosure:

- Adaptor for 115 V ~ logic inputs
- Encoder interface cards
- I/O expansion cards
- Multipump cards and "Controller Inside" programmable card
- Modbus TCP Daisy Chain, EtherNet/IP, DeviceNet, INTERBUS, CC-Link, Modbus/Uni-Telway, PROFIBUS DP V0 or V1, LonWORKS, METASYS N2, APOGEE FLN, BACnet communication cards
- "Preventa type AC" or "Preventa type ATE" fault relay
- PTC relays, PT100 relays
- Motor heater
- Additional 24 V $\overline{\text{---}}$ power supply
- Enclosure lighting
- Emergency stop button
- Key switch (Local/Remote)
- Power supply circuit for external fan

See pages 120 and 121. For all other options, please contact our Customer Care Centre.

Options dependent on the drive rating

These options depend on the drive rating. Some may lead to modification of the size of the enclosure:

- Braking unit
- Isolating handle for switch
- Circuit-breaker
- Line contactor
- Control transformer
- Ammeter
- Enclosure heater
- Motor choke
- Sinus filter
- Air conditioning

See pages 122 to 127. For all other options, please contact our Customer Care Centre.

Variable speed drives

Altivar 61 Plus

IP 23 or IP 54 floor-standing enclosure
with separate air flows



ATV 61EXS5●●●●●●

IP 23 or IP 54 floor-standing enclosure with separate air flows

Degree of protection	Line supply Max. prospective line Isc (2)	With drive	Dimensions W x H x D	Reference (1)	Weight kg
Three-phase supply voltage 380...415 V 50/60 Hz					
IP 54	50	ATV 61HD90N4	600 x 2362 x 642	ATV 61EXS5D90N4	310.000
		ATV 61HC11N4	600 x 2362 x 642	ATV 61EXS5C11N4	310.000
		ATV 61HC13N4	600 x 2362 x 642	ATV 61EXS5C13N4	335.000
		ATV 61HC16N4	600 x 2362 x 642	ATV 61EXS5C16N4	345.000
		ATV 61HC22N4	600 x 2362 x 642	ATV 61EXS5C22N4	395.000
		ATV 61HC25N4	800 x 2362 x 642	ATV 61EXS5C25N4	480.000
		ATV 61HC31N4	800 x 2362 x 642	ATV 61EXS5C31N4	480.000
		ATV 61HC40N4	1000 x 2362 x 642	ATV 61EXS5C40N4	745.000
		ATV 61HC50N4	1000 x 2362 x 642	ATV 61EXS5C50N4	765.000
		ATV 61HC63N4	1200 x 2362 x 642	ATV 61EXS5C63N4	900.000
IP 23 or IP 54	100	ATV 61EC63N4 (3)	1800 x 2009 x 642	ATV 61EXA●C63N4	950.000
		ATV 61EC71N4 (3)	1800 x 2009 x 642	ATV 61EXA●C71N4	950.000
		ATV 61EC90N4 (3)	3400 x 2009 x 642	ATV 61EXA●C90N4	1825.000
		ATV 61EM11N4 (3)	3400 x 2009 x 642	ATV 61EXA●M11N4	1825.000
		ATV 61EM13N4 (3)	3400 x 2009 x 642	ATV 61EXA●M13N4	1825.000
		ATV 61EM14N4 (3)	3400 x 2009 x 642	ATV 61EXA●M14N4	1825.000

Three-phase supply voltage 500 V 50/60 Hz

IP 54	50	ATV 61HC11Y	600 x 2362 x 642	ATV 61EXS5D90N	446.000
		ATV 61HC13Y	600 x 2362 x 642	ATV 61EXS5C11N	446.000
		ATV 61HC16Y	600 x 2362 x 642	ATV 61EXS5C13N	497.000
		ATV 61HC20Y	600 x 2362 x 642	ATV 61EXS5C16N	497.000
		ATV 61HC25Y	800 x 2362 x 642	ATV 61EXS5C20N	573.000
		ATV 61HC31Y	800 x 2362 x 642	ATV 61EXS5C25N	623.000
		ATV 61HC40Y	800 x 2362 x 642	ATV 61EXS5C31N	623.000
		ATV 61HC50Y	1200 x 2362 x 642	ATV 61EXS5C40N	912.000
		ATV 61HC63Y	1200 x 2362 x 642	ATV 61EXS5C50N	1000.000
		ATV 61HC80Y	1200 x 2362 x 642	ATV 61EXS5C63N	1000.000
IP 23 or IP 54	100	ATV 61EC80Y (3)	1800 x 2009 x 642	ATV 61EXA●C63N	950.000
		ATV 61EM10Y (3)	1800 x 2009 x 642	ATV 61EXA●C80N	950.000
		ATV 61EM12Y (3)	1800 x 2009 x 642	ATV 61EXA●C90N	950.000
		ATV 61EM15Y (3)	3400 x 2009 x 642	ATV 61EXA●M11N	1825.000
		ATV 61EM18Y (3)	3400 x 2009 x 642	ATV 61EXA●M13N	1825.000
		ATV 61EM21Y (3)	3400 x 2009 x 642	ATV 61EXA●M15N	1825.000
ATV 61EM24Y (3)	3400 x 2009 x 642	ATV 61EXA●M18N	1825.000		

(1) To obtain the complete enclosure reference, replace the ● with a 2 for IP 23 protection or a 5 for IP 54 protection.

Example for IP 23 protection: ATV 61EXA●C63N4 becomes **ATV 61EXA2C63N4**.

(2) These values are given for use with upstream fuses (see the characteristics on our website www.schneider-electric.com).

(3) Reference of the drive mounted in the enclosure; this reference cannot be ordered on its own.

Variable speed drives

Altivar 61 Plus

IP 23 or IP 54 floor-standing enclosure
with separate air flows

PF065306



ATV 61EXA●●●●●

IP 23 or IP 54 floor-standing enclosure with separate air flows
(continued)

Three-phase supply voltage 690 V 50/60 Hz

Degree of protection	Line supply Max. prospective line Isc (2)	With drive	Dimensions	Reference (1)		Weight
	kA		W x H x D			kg
IP 54	50	ATV 61HC11Y	600 x 2362 x 642	ATV 61EXS5C11Y	446.000	
		ATV 61HC13Y	600 x 2362 x 642	ATV 61EXS5C13Y	446.000	
		ATV 61HC16Y	600 x 2362 x 642	ATV 61EXS5C16Y	497.000	
		ATV 61HC20Y	600 x 2362 x 642	ATV 61EXS5C20Y	497.000	
		ATV 61HC25Y	800 x 2362 x 642	ATV 61EXS5C25Y	573.000	
		ATV 61HC31Y	800 x 2362 x 642	ATV 61EXS5C31Y	623.000	
		ATV 61HC40Y	800 x 2362 x 642	ATV 61EXS5C40Y	623.000	
		ATV 61HC50Y	1200 x 2362 x 642	ATV 61EXS5C50Y	912.000	
		ATV 61HC63Y	1200 x 2362 x 642	ATV 61EXS5C63Y	1000.000	
		ATV 61HC80Y	1200 x 2362 x 642	ATV 61EXS5C80Y	1000.000	
IP 54 or IP 23	100	ATV 61EC80Y (3)	1800 x 2009 x 642	ATV 61EXA●C80Y	950.000	
		ATV 61EM10Y (3)	1800 x 2009 x 642	ATV 61EXA●M10Y	950.000	
		ATV 61EM12Y (3)	1800 x 2009 x 642	ATV 61EXA●M12Y	950.000	
		ATV 61EM15Y (3)	3400 x 2009 x 642	ATV 61EXA●M15Y	1825.000	
		ATV 61EM18Y (3)	3400 x 2009 x 642	ATV 61EXA●M18Y	1825.000	
		ATV 61EM21Y (3)	3400 x 2009 x 642	ATV 61EXA●M21Y	1825.000	
		ATV 61EM24Y (3)	3400 x 2009 x 642	ATV 61EXA●M24Y	1825.000	

(1) To obtain the complete enclosure reference, replace the ● with a 2 for IP 23 protection or a 5 for IP 54 protection.

Example for IP 23 protection: ATV 61EXA●C63N4 becomes **ATV 61EXA2C63N4**.

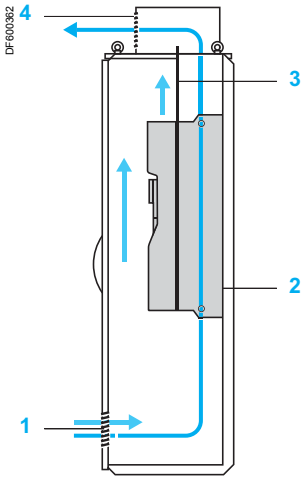
(2) These values are given for use with upstream fuses (see the characteristics on our website www.schneider-electric.com).

(3) Reference of the drive mounted in the enclosure; this reference cannot be ordered on its own.

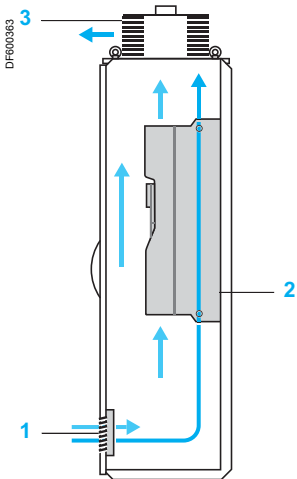
Variable speed drives

Altivar 61 Plus

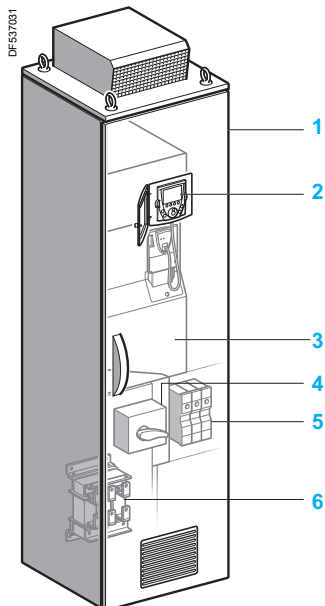
IP 23 or IP 54 floor-standing enclosure compact version



IP 23 cooling circuit



IP 54 cooling circuit



The standard ATV 61EXC..... offer

Presentation

The ATV 61EXC..... offer consists of a compact floor-standing enclosure providing IP 23 or IP 54 protection for industrial environments and infrastructures (tunnels, subways, smoke extraction and pumping, etc.).

Altivar 61 variable speed drives are supplied in an IP 23 or IP 54 ready-assembled enclosure to facilitate installation and setup and, in particular, to ensure optimum ventilation.

The enclosure is supplied ready to connect.

One common air circuit provides enclosure ventilation, cooling the power section and the control section. A fan 2 integrated in the drive provides ventilation for the power section.

■ IP 23 air circuit:

- Air intake 1 is via a grille on the lower part of the enclosure door.
- Air outlet 4 is via a metal cover with protection against water splashes on the enclosure roof.
- A separating plate 3 prevents internal turbulence.

■ IP 54 air circuit:

- The grille 1 on the lower part of the door is fitted with a protective filter.
- The air outlet 3 on the enclosure roof is fitted with a fan with filter.

The incoming air temperature must be between 0°C and 40°C (- 10°C and 40°C with enclosure heater) and may reach + 50°C with derating (class 3K3 according to IEC/EN 60721-3-3).

The internal temperature is monitored by a thermostat which can shut down the equipment.

The ATV 61EXC..... offer covers motor power ratings from 90 kW to 800 kW with three types of power supply:

- 380...415 V three-phase, 90 kW to 630 kW (ATV 61EXC.....N4)
- 500 V three-phase, 90 kW to 630 kW (ATV 61EXC.....N)
- 690 V three-phase, 110 kW to 800 kW (ATV 61EXC.....Y)

It includes the choice of:

- A standard compact offer
- A modular offer, in which a wide selection of options can be incorporated depending on the drive rating

The standard compact offer

This consists of:

- A wired, ready-assembled Sarel "Spacial SF" enclosure 1
- A drive on heatsink ATV 61HD90N4D...HC63N4D or ATV 61HC11Y...HC80Y 3
- An IP 65 remote mounting kit for graphic display terminal 2
- A switch and fast-acting fuses 4
- Motor terminals 5
- A line choke 6

See pages 118 and 119.

Modular offer

This consists of:

- The standard compact offer
- One or more options (see pages 120 to 127)

As well as these specific options, all the options available for Altivar 61 drives can be used, at the same rating, with the enclosed drives offer (see the summary tables of possible drive, option and accessory combinations on pages 44, 45 and 50 to 53).

For any configuration other than those shown on pages 120 to 127, please contact our Customer Care Centre.

Common options

These options can be integrated, whatever the enclosure model, without any need for modifications to the enclosure:

- Adaptor for 115 V ~ logic inputs
- Encoder interface cards
- I/O expansion cards
- Multipump cards and “Controller Inside” programmable card
- Modbus TCP, EtherNet/IP, DeviceNet, INTERBUS, CC-Link, Modbus/Uni-Telway, PROFIBUS DP V0 or V1, LonWORKS, METASYS N2, APOGEE FLN, BACnet communication cards
- “Preventa type AC” or “Preventa type ATE” fault relay
- PTC relays, PT100 relays
- Motor heater
- Additional 24 V --- power supply
- Emergency stop button
- Enclosure lighting
- Key switch (Local/Remote)
- Power supply circuit for external fan

See pages 120 and 121. For all other options, please contact our Customer Care Centre.

Options dependent on the drive rating

These options depend on the drive rating. Some may lead to modification of the size of the enclosure:

- Braking unit
- Isolating handle for switch
- Circuit-breaker
- Line contactor
- Control transformer
- Ammeter
- Enclosure heater
- Motor choke
- Sinus filter
- Plinth

See pages 122 to 127. For all other options, please contact our Customer Care Centre.

Variable speed drives

Altivar 61 Plus

IP 23 or IP 54 floor-standing enclosure compact version



ATV 61EXC2●●●●●

IP 23 or IP 54 floor-standing enclosure compact version					
Degree of protection	Line supply Max. prospective line Isc (1)	With drive	Dimensions	Reference	Weight
	kA		W x H x D		kg
Three-phase supply voltage 380...415 V 50/60 Hz					
IP 23	100	ATV 61HD90N4D	600 x 2162 x 642	ATV 61EXC2D90N4	315.000
		ATV 61HC11N4D	600 x 2162 x 642	ATV 61EXC2C11N4	315.000
		ATV 61HC13N4D	600 x 2162 x 642	ATV 61EXC2C13N4	335.000
		ATV 61HC16N4D	600 x 2162 x 642	ATV 61EXC2C16N4	350.000
		ATV 61HC22N4D	800 x 2162 x 642	ATV 61EXC2C22N4	380.000
		ATV 61HC25N4D	800 x 2162 x 642	ATV 61EXC2C25N4	485.000
		ATV 61HC31N4D	800 x 2162 x 642	ATV 61EXC2C31N4	485.000
		ATV 61HC40N4D	1200 x 2162 x 642	ATV 61EXC2C40N4	640.000
		ATV 61HC50N4D	1200 x 2162 x 642	ATV 61EXC2C50N4	680.000
		ATV 61HC63N4D	1200 x 2162 x 642	ATV 61EXC2C63N4	805.000
IP 54	100	ATV 61HD90N4D	600 x 2262 x 642	ATV 61EXC5D90N4	325.000
		ATV 61HC11N4D	600 x 2262 x 642	ATV 61EXC5C11N4	325.000
		ATV 61HC13N4D	600 x 2262 x 642	ATV 61EXC5C13N4	345.000
		ATV 61HC16N4D	600 x 2262 x 642	ATV 61EXC5C16N4	360.000
		ATV 61HC22N4D	800 x 2262 x 642	ATV 61EXC5C22N4	385.000
		ATV 61HC25N4D	800 x 2262 x 642	ATV 61EXC5C25N4	485.000
		ATV 61HC31N4D	800 x 2262 x 642	ATV 61EXC5C31N4	485.000
		ATV 61HC40N4D	1200 x 2262 x 642	ATV 61EXC5C40N4	660.000
		ATV 61HC50N4D	1200 x 2262 x 642	ATV 61EXC5C50N4	700.000
		ATV 61HC63N4D	1200 x 2262 x 642	ATV 61EXC5C63N4	835.000
Three-phase supply voltage 500 V 50/60 Hz					
IP 23	100	ATV 61HC11Y	600 x 2162 x 642	ATV 61EXC2D90N	361.000
		ATV 61HC13Y	600 x 2162 x 642	ATV 61EXC2C11N	361.000
		ATV 61HC16Y	600 x 2162 x 642	ATV 61EXC2C13N	412.000
		ATV 61HC20Y	600 x 2162 x 642	ATV 61EXC2C16N	412.000
		ATV 61HC25Y	800 x 2162 x 642	ATV 61EXC2C20N	503.000
		ATV 61HC31Y	800 x 2162 x 642	ATV 61EXC2C25N	553.000
		ATV 61HC40Y	800 x 2162 x 642	ATV 61EXC2C31N	553.000
		ATV 61HC50Y	1200 x 2162 x 642	ATV 61EXC2C40N	828.000
		ATV 61HC63Y	1200 x 2162 x 642	ATV 61EXC2C50N	916.000
		ATV 61HC80Y	1200 x 2162 x 642	ATV 61EXC2C63N	916.000
IP 54	100	ATV 61HC11Y	600 x 2262 x 642	ATV 61EXC5D90N	371.000
		ATV 61HC13Y	600 x 2262 x 642	ATV 61EXC5C11N	371.000
		ATV 61HC16Y	600 x 2262 x 642	ATV 61EXC5C13N	422.000
		ATV 61HC20Y	600 x 2262 x 642	ATV 61EXC5C16N	422.000
		ATV 61HC25Y	800 x 2262 x 642	ATV 61EXC5C20N	503.000
		ATV 61HC31Y	800 x 2262 x 642	ATV 61EXC5C25N	553.000
		ATV 61HC40Y	800 x 2262 x 642	ATV 61EXC5C31N	553.000
		ATV 61HC50Y	1200 x 2262 x 642	ATV 61EXC5C40N	858.000
		ATV 61HC63Y	1200 x 2262 x 642	ATV 61EXC5C50N	946.000
		ATV 61HC80Y	1200 x 2262 x 642	ATV 61EXC5C63N	946.000

(1) These values are given for use with upstream fuses (see the characteristics on our website www.schneider-electric.com).

Variable speed drives

Altivar 61 Plus

IP 23 or IP 54 floor-standing enclosure compact version

IP 23 or IP 54 floor-standing enclosure compact version
(continued)

Degree of protection	Line supply Max. prospective line Isc (1)	With drive	Dimensions	Reference	Weight
	kA		W x H x D		kg
Three-phase supply voltage 690 V 50/60 Hz					
IP 23	100	ATV 61HC11Y	600 x 2162 x 642	ATV 61EXC2C11Y	361.000
		ATV 61HC13Y	600 x 2162 x 642	ATV 61EXC2C13Y	361.000
		ATV 61HC16Y	600 x 2162 x 642	ATV 61EXC2C16Y	412.000
		ATV 61HC20Y	600 x 2162 x 642	ATV 61EXC2C20Y	412.000
		ATV 61HC25Y	800 x 2162 x 642	ATV 61EXC2C25Y	503.000
		ATV 61HC31Y	800 x 2162 x 642	ATV 61EXC2C31Y	553.000
		ATV 61HC40Y	800 x 2162 x 642	ATV 61EXC2C40Y	553.000
		ATV 61HC50Y	1200 x 2162 x 642	ATV 61EXC2C50Y	828.000
		ATV 61HC63Y	1200 x 2162 x 642	ATV 61EXC2C63Y	916.000
ATV 61HC80Y	1200 x 2162 x 642	ATV 61EXC2C80Y	916.000		
IP 54	100	ATV 61HC11Y	600 x 2262 x 642	ATV 61EXC5C11Y	371.000
		ATV 61HC13Y	600 x 2262 x 642	ATV 61EXC5C13Y	371.000
		ATV 61HC16Y	600 x 2262 x 642	ATV 61EXC5C16Y	422.000
		ATV 61HC20Y	600 x 2262 x 642	ATV 61EXC5C20Y	422.000
		ATV 61HC25Y	800 x 2262 x 642	ATV 61EXC5C25Y	503.000
		ATV 61HC31Y	800 x 2262 x 642	ATV 61EXC5C31Y	553.000
		ATV 61HC40Y	800 x 2262 x 642	ATV 61EXC5C40Y	553.000
		ATV 61HC50Y	1200 x 2262 x 642	ATV 61EXC5C50Y	858.000
		ATV 61HC63Y	1200 x 2262 x 642	ATV 61EXC5C63Y	946.000
ATV 61HC80Y	1200 x 2262 x 642	ATV 61EXC5C80Y	946.000		

(1) These values are given for use with upstream fuses (see the characteristics on our website www.schneider-electric.com).

Variable speed drives

Altivar 61 Plus

Floor-standing enclosure with separate air flows or

compact version

Common options

Common options without modification of the enclosure (1)		
Description	Reference	Weight kg
Adaptor for 115 V ~ logic inputs	VW3 A3E 101 (2)	0.200
Encoder interface cards with RS 422, 5 V compatible differential outputs	VW3 A3E 401 (3)	0.200
Encoder interface card with 12 V open collector outputs	VW3 A3E 403 (3)	0.200
Encoder interface card with 15 V open collector outputs	VW3 A3E 404 (3)	0.200
Encoder interface card with 12 V push-pull outputs	VW3 A3E 405 (3)	0.200
Encoder interface card with 15 V push-pull outputs	VW3 A3E 406 (3)	0.200
Encoder interface card with 24 V push-pull outputs	VW3 A3E 407 (3)	0.200
Logic I/O expansion card	VW3 A3E 201 (4)	0.320
Extended I/O expansion card	VW3 A3E 202 (4)	0.300
Multi-pump card	VW3 A3E 502 (5) (6)	0.320
“Water solution” multi-pump card	VW3 A3E 503 (5) (6)	0.320
“Controller Inside” programmable card	VW3 A3E 501 (6) (7)	0.300
Modbus TCP Daisy Chain communication card	VW3 A3E 310D (8)	0.300
EtherNet/IP communication card	VW3 A3E 316 (8)	0.300
DeviceNet communication card	VW3 A3E 309 (8)	0.300
INTERBUS COMMUNICATION CARD	VW3 A3E 304 (8)	0.300
CC-Link communication card	VW3 A3E 317 (8)	0.320
Modbus/Uni-Telway communication card	VW3 A3E 303 (8)	0.300
PROFIBUS DP V0 communication card	VW3 A3E 307 (8)	0.300
PROFIBUS DP V1 communication card	VW3 A3E 307S371 (8)	0.300
LONWORKS COMMUNICATION CARD	VW3 A3E 312 (8)	0.300
METASYS N2 communication card	VW3 A3E 313 (8)	0.300
APOGEE FLN communication card	VW3 A3E 314 (8)	0.300
BACnet communication card	VW3 A3E 319 (8)	0.300

(1) For any other configuration, please contact our Customer Care Centre.

(2) The characteristics of the VW3 A3E 101 adaptor are identical to those of the VW3 A3 101 adaptor (see page 33 or consult our website www.schneider-electric.com).

(3) The characteristics of the VW3 A3E 401 and 403...407 encoder interface cards are identical to those of the VW3 A3 401 and 403...407 encoder interface cards (see page 54 or consult our website www.schneider-electric.com).

(4) The characteristics of the VW3 A3E 201 and VW3 A3E 202 I/O expansion cards are identical to those of the VW3 A3 201 and VW3 A3 202 expansion cards (see page 55 or consult our website www.schneider-electric.com).

(5) The characteristics of the VW3 A3E 502 and VW3 A3E 503 I/O multi-pump cards are identical to those of the VW3 A3 502 and VW3 A3 503 multi-pump cards (see pages 56 and 57 or consult our website www.schneider-electric.com).

(6) If the power consumption does not exceed 200 mA, this card can be powered by the drive. For a power consumption in excess of 200 mA, the additional 24 V ~ power supply option, reference VW3 AE 1401, should be ordered separately (see page 121).

(7) The characteristics of the VW3 A3E 501 Controller Inside programmable card are identical to those of the VW3 A3 501 Controller Inside programmable card (see pages 58 to 61 or consult our website www.schneider-electric.com).

(8) The characteristics of the VW3 A3E 303...319 communication cards are identical to those of the VW3 A3 303...319 communication cards (see page 62 to 67 or consult our website www.schneider-electric.com).

Variable speed drives

Altivar 61 Plus

Floor-standing enclosure with separate air flows or compact version

Common options

Common options without modification of the enclosure (continued) (1)		
Description	Reference	Weight kg
Remote control terminals X12	VW3 AE 1201	0.700
Remote option card terminals X13 (2) for I/O expansion cards VW3 A3E 201 and 202	VW3 AE 1202	0.900
External 230 V ~ supply terminals	VW3 AE 1301	0.100
Additional 24 V = power supply, nominal current 2 A (3)	VW3 AE 1401	2.200
External 24 V = supply terminals	VW3 AE 1402	0.100
Emergency stop button	VW3 AE 1501	0.100
“Preventa type AC” fault relay	VW3 AE 1502	0.100
“Preventa type ATE” fault relay	VW3 AE 1503	0.100
Enclosure lighting	VW3 AE 1601	1.500
Key switch (Local/Remote)	VW3 AE 1801	0.200
Additional electrical input isolation	VW3 AE 1901	0.100
Additional electrical output isolation	VW3 AE 1902	0.100
PTC relay	VW3 AE 2001	0.100
PTC relay with PTB (ATEX) certification (4)	VW3 AE 2002	0.100
PT100 relay for motor winding	VW3 AE 2003	0.300
PT100 relay for motor bearings	VW3 AE 2004	0.300
PT100 relay for line supply transformer	VW3 AE 2005	0.300
Motor heater 200 W, 230 V	VW3 AE 2101	0.200
Power supply circuit with protection for 1000 W external fan	VW3 AE 2102	0.200
Relay for logic output	VW3 AE 2201	0.100
Voltmeter three-phase supply voltage 380...415 V	VW3 AE 2301	0.400
Voltmeter three-phase supply voltage 500 V	VW3 AE 2302	0.400
Voltmeter three-phase supply voltage 690 V	VW3 AE 2303	0.400
Insulation monitoring device on an IT system	VW3 AE 2601	5.000
Selector for IT system	VW3 AE 2701	–

(1) For any other configuration, please contact our Customer Care Centre.

(2) The X13 terminals, reference VW3 AE 1202, include the X12 terminals, reference VW3 AE 1201.

(3) Essential if the power consumption of the option cards exceeds 200 mA.

(4) ATEX: Please refer to the ATEX guide which is available on our website www.schneider-electric.com.

Variable speed drives

Altivar 61 Plus

Floor-standing enclosure with separate air flows or compact version

Options dependent on the drive rating

Options dependent on the drive rating (1)

Three-phase supply voltage 380...415 V 50/60 Hz

Description	For ATV 61 enclosure	Reference	Weight kg	
Resistance braking unit	EXC●C25N4, C31N4	VW3 A7E 101 (3)	31.000	
	EXS5C25N4, C31N4			
	EXC●C40N4...C63N4	VW3 AE 1003 (2)	190.000	
	EXS5C40N4...C63N4			
Isolating handle for switch	EXC●D55N4H	VW3 AE 0190	0.500	
	EXC●D90N4...C13N4	VW3 AE 0103	1.000	
	EXC●D75N4H...C13N4H			
	EXS5D90N4...C13N4	VW3 AE 0104	2.000	
	EXC●C16N4...C31N4			
	EXC●C16N4H...C31N4H			
	EXS5C16N4...C31N4			
	Circuit-breaker (4)	EXC●C40N4...C63N4	VW3 AE 0105	2.000
		EXC●C40N4H...C63N4H		
		EXS5C40N4...C63N4	VW3 AE 0106	-
		EXA●C63N4...M14N4		
		EXC●D90N4...C13N4		
EXS5D90N4...C13N4				
EXC●C16N4	VW3 AE 0107	1.400		
EXS5C16N4				
EXC●C22N4	VW3 AE 0108	1.400		
EXS5C22N4				
EXC●C25N4	VW3 AE 0109	1.400		
EXS5C25N4				
EXC●C31N4	VW3 AE 0110	9.400		
EXS5C31N4				
EXC●C40N4	VW3 AE 0111	-		
EXS5C40N4				
EXC●C50N4	VW3 AE 0112	-		
EXS5C50N4				
EXC●C63N4	VW3 AE 0113	-		
EXS5C63N4				
EXA●C63N4, C71N4	VW3 AE 0166	-		
EXA●C90N4				
EXA●M11N4				
EXA●M13N4, M14N4				
EXC●D75N4H	VW3 AE 0141	0.500		
EXC●D90N4H...C13N4H	VW3 AE 0142	-		
EXC●C16N4H	VW3 AE 0146	1.400		
EXC●C22N4H, C25N4H	VW3 AE 0147	1.400		
EXC●C31N4H	VW3 AE 0148	1.400		
EXC●C40N4H, C50N4H	VW3 AE 0151	-		
EXC●C63N4H	VW3 AE 0169	-		
Door handle for circuit-breaker	EXC●D90N4...C13N4	VW3 AE 0114	1.000	
	EXC●D75N4H...C13N4H			
	EXS5D90N4...C13N4	VW3 AE 0115	2.000	
	EXC●C16N4...C25N4			
	EXC●C16N4H...C31N4H			
	EXS5C16N4...C25N4			
	EXC●C31N4...C63N4	VW3 AE 0116	2.000	
	EXC●C40N4H...C63N4H			
EXS5C31N4...C63N4				
EXA●C63N4, C71N4				

(1) For any other configuration, please contact our Customer Care Centre.

(2) This option depends on the drive rating and may lead to modification of the size of the enclosure. Please refer to the dimensions on our website www.schneider-electric.com.(3) The characteristics of the VW3 A7E 101 and VW3 A7E 102 braking units are identical to those of the VW3 A7 101 and VW3 A7 102 braking units (see page 68 or consult our website www.schneider-electric.com).

(4) The circuit-breaker replaces the switch in the standard offer.

Variable speed drives

Altivar 61 Plus

Floor-standing enclosure with separate air flows or compact version

Options dependent on the drive rating

Options dependent on the drive rating (continued) (1)

Three-phase supply voltage 380...415 V 50/60 Hz (continued)

Description	For ATV 61 enclosure	Reference	Weight kg	
Line contactor	EXC●D90N4 EXS5D90N4	VW3 AE 0206	7.000	
	EXC●C11N4 EXS5C11N4	VW3 AE 0207	7.000	
	EXC●C13N4 EXS5C13N4	VW3 AE 0218	10.000	
	EXC●C16N4 EXS5C16N4	VW3 AE 0208	11.000	
	EXC●C22N4	VW3 AE 0209	12.000	
	EXS5C22N4...C31N4	VW3 AE 0216	10.000	
	EXC●C25N4	VW3 AE 0210	14.000	
	EXC●C31N4, C40N4 EXS5C40N4	VW3 AE 0211	21.000	
	EXC●C50N4 EXS5C50N4	VW3 AE 0213	28.000	
	EXC●C63N4 EXS5C63N4	VW3 AE 0214	42.000	
	EXA●C63N4, C71N4 (2)	VW3 AE 0227	42.000	
	EXA●C90N4...M14N4	VW3 AE 0224	84.000	
	Switch for 12-pulse input	EXA●C63N4, C71N4	VW3 AE 2416	–
		EXA●C90N4	VW3 AE 2418	–
		EXA●M11N4	VW3 AE 2419	–
EXA●M13N4, M14N4		VW3 AE 2420	–	
Line choke	EXA●C63N4, C71N14	VW3 AE 2501	132.000	
	EXA●C90N4	VW3 AE 2502 (3)	202.000	
	EXA●M11N4...M14N14	VW3 AE 2503 (3)	264.000	
500 VA ~ control transformer, 230 V ~ output	EXC●D90N4...C22N4 EXS5D90N4...C22N4	VW3 AE 0302	8.000	
800 VA ~ control transformer, 230 V ~ output	EXC●C25N4...C63N4 EXS5C25N4...C63N4	VW3 AE 0303	11.000	
Ammeter	EXC●D90N4 EXC●D75N4H, D90N4H EXS5D90N4	VW3 AE 0404	0.200	
	EXC●C11N4...C16N4 EXC●C11N4H...C16N4H EXS5C11N4...C16N4	VW3 AE 0406	0.200	
	EXC●C22N4, C25N4 EXC●C22N4H...C31N4H EXS5C22N4, C25N4	VW3 AE 0426	0.200	
	EXC●C31N4, C40N4 EXC●C40N4H...C50N4H EXS5C31N4, C40N4	VW3 AE 0409	0.200	
	EXC●C50N4 EXC●C63N4H EXS5C50N4	VW3 AE 0427	0.200	
	EXC●C63N4 EXS5C63N4	VW3 AE 0411	0.200	
	EXA●C63N4, C71N4	VW3 AE 0411 (4) VW3 AE 0421 (5)	0.200	
	EXA●C90N4	VW3 AE 0413 (4) VW3 AE 0421 (5)	0.200	
	EXA●M11N4	VW3 AE 0414 (4) VW3 AE 0429 (5)	0.200	
	EXA●M13N4, M14N4	VW3 AE 0415 (4) VW3 AE 0423 (5)	0.200	

(1) For any other configuration, please contact our Customer Care Centre.

(2) If a line contactor and choke are used, order reference VW3 AE 0225 (50.000 kg) (see note 3).

(3) These options depend on the drive rating and may lead to modification of the size of the enclosure. Please refer to the dimensions on our website www.schneider-electric.com.

(4) For 6-pulse mounting.

(5) For 12-pulse mounting.

Variable speed drives

Altivar 61 Plus

Floor-standing enclosure with separate air flows or compact version

Options dependent on the drive rating

Options dependent on the drive rating (continued) (1)

Three-phase supply voltage 380...415 V 50/60 Hz (continued)

Description	For ATV 61 enclosure	Reference	Weight kg	
Enclosure heater	EXC●D90N4...C31N4 EXC●D75N4H...C31N4H EXS5D90N4...C31N4	VW3 AE 0501	0.500	
	EXC●C40N4...C63N4 EXC●C40N4H...C63N4H EXS5C40N4...C63N4 EXA●C63N4, C71N4	VW3 AE 0502	1.000	
	EXA●C90N4...M14N4	VW3 AE 0503	1.500	
Motor choke	EXC●D90N4 EXC●D55N4H...D90N4H EXS5D90N4	VW3 AE 0603	17.000	
	EXC●C11N4, C13N4 EXC●C11N4H, C13N4H	VW3 AE 0615	37.000	
	EXS5C11N4	VW3 AE 0604	35.000	
	EXS5C13N4	VW3 AE 0616	55.000	
	EXC●C16N4, C22N4 EXC●C16N4H, C22N4H	VW3 AE 0617	55.000	
	EXS5C16N4	VW3 AE 0605	64.000	
	EXS5C22N4	VW3 AE 0618 (2)	154.000	
	EXC●C25N4, C31N4 EXC●C25N4H, C31N4H	VW3 AE 0619 (2)	157.000	
	EXS5C25N4, C31N4	VW3 AE 0606	102.000	
	EXC2C40N4 EXC●C40N4H	VW3 AE 0621 (2)	192.000	
	EXC5C40N4	VW3 AE 0608 (2)	222.000	
	EXS5C40N4	VW3 AE 0612 (2)	222.000	
	EXC2C50N4 EXC●C50N4H	VW3 AE 0623 (2)	222.000	
	EXC5C50N4	VW3 AE 0609 (2)	228.000	
	EXS5C50N4	VW3 AE 0613 (2)	228.000	
	EXC2C63N4 EXC●C63N4H	VW3 AE 0624 (2)	228.000	
	EXC5C63N4	VW3 AE 0610 (2)	234.000	
	EXS5C63N4	VW3 AE 0614 (2)	234.000	
	EXA●C63N4, C71N4 EXA●C90N4...M14N4	VW3 AE 0625 (2)	234.000	
	EXA●C63N4, C71N4	VW3 AE 0635	132.000	
	EXA●C90N4...M14N4	VW3 AE 0636	264.000	
	Sinus filter (2) (3)	EXC2D90N4, C11N4 EXC5D90N4, C11N4 EXS5D90N4, C11N4	VW3 AE 0641	318.000
		EXC2C13N4	VW3 AE 0653	348.000
		EXC5C13N4	VW3 AE 0665	318.000
		EXS5C13N4	VW3 AE 0643	357.000
		EXC2C16N4	VW3 AE 0655	357.000
		EXC5C16N4	VW3 AE 0667	357.000
		EXS5C16N4	VW3 AE 0644	365.000
		EXC2C22N4	VW3 AE 0656	365.000
EXC5C22N4		VW3 AE 0668	365.000	
EXS5C22N4		VW3 AE 0646	384.000	
EXC2C25N4, C31N4 EXC5C25N4, C31N4		VW3 AE 0658	384.000	
EXS5C25N4, C31N4		VW3 AE 0670	384.000	
EXC2C40N4		VW3 AE 0648	434.000	
EXC5C40N4		VW3 AE 0660	434.000	
EXS5C40N4		VW3 AE 0672	434.000	
EXC2C50N4		VW3 AE 0650	870.000	
EXC5C50N4		VW3 AE 0662	870.000	
EXS5C50N4		VW3 AE 0674	870.000	
EXC2C63N4		VW3 AE 0651	870.000	
EXC5C63N4		VW3 AE 0663	900.000	
EXS5C63N4		VW3 AE 0675	900.000	
EXC2C63N4 EXC5C63N4		VW3 AE 0652	900.000	
EXS5C63N4		VW3 AE 0664	930.000	
EXS5C63N4		VW3 AE 0676	930.000	

(1) For any other configuration, please contact our Customer Care Centre.

(2) These options depend on the drive rating and may lead to modification of the size of the enclosure. Please refer to the dimensions on our website www.schneider-electric.com.

(3) The sinus filter option is not compatible with the motor choke option.

Variable speed drives

Altivar 61 Plus

Floor-standing enclosure with separate air flows or compact version

Options dependent on the drive rating

Options dependent on the drive rating (continued) (1)					
Three-phase supply voltage 380...415 V 50/60 Hz (continued)					
Description		For ATV 61 enclosure	Reference	Weight kg	
200 mm plinth	Without motor choke	EXC●D55N4H	VW3 AE 0807	9.000	
		EXC●D90N4...C22N4	VW3 AE 0801	11.000	
		EXC●D75N4H...C11N4H			
		EXC●C25N4, C31N4	VW3 AE 0802	13.000	
		EXC●C13N4H, C16N4H			
		EXC●C22N4H	VW3 AE 0827	22.000	
		EXC●C25N4H, C31N4H	VW3 AE 0828	26.000	
		EXC●C40N4, C50N4	VW3 AE 0803	15.000	
		EXC●C40N4H, C50N4H	VW3 AE 0829	30.000	
		EXC●C63N4	VW3 AE 0804	17.000	
		EXC●C63N4H	VW3 AE 0830	34.000	
		EXA●C63N4, C71N4	VW3 AE 0820 (2)	38.000	
		EXA●C90N4...M14N4	VW3 AE 0822	69.000	
		With motor choke	EXC●D55N4H	VW3 AE 0807	9.000
			EXC●D90N4...C22N4	VW3 AE 0801	11.000
	EXC●D75N4H...C11N4H				
	EXC●C25N4, C31N4		VW3 AE 0802	13.000	
	EXC●C13N4H, C16N4H				
	EXC●C22N4H		VW3 AE 0827	22.000	
	EXC●C25N4H, C31N4H		VW3 AE 0828	26.000	
	EXC●C40N4, C50N4		VW3 AE 0805	24.000	
	EXC●C40N4H, C50N4H		VW3 AE 0831	39.000	
	EXC●C63N4		VW3 AE 0806	26.000	
	EXC●C63N4H		VW3 AE 0832	43.000	
	EXA●C63N4, C71N4		VW3 AE 0820 (2)	38.000	
	EXA●C90N4...M14N4		VW3 AE 0822	69.000	
	With line choke		EXA●C63N4, C71N4	VW3 AE 0820 (2)	38.000
			EXA●C90N4...M14N4	VW3 AE 0824	78.000
	Plinth for braking unit		EXC●C40N4...C63N4	VW3 AE 0810	9.000
	Plinth for sinus filter		EXC●D90N4...C31N4	VW3 AE 0816	11.000
		EXC●C40N4...C63N4	VW3 AE 0817	13.000	

(1) For any other configuration, please contact our Customer Care Centre.

(2) If a line choke and a line contactor are used, order reference VW3 AE 821 (40.000 kg).

Variable speed drives

Altivar 61 Plus

Floor-standing enclosure with separate air flows or compact version

Options dependent on the drive rating

Options dependent on the drive rating (continued) (1)

Three-phase supply voltage 500 V and 690 V 50/60 Hz

Description	For ATV 61 enclosure		Reference	Weight kg	
	500 V	690 V			
Resistance braking unit	EXC●C20N...C31N	EXC●C25Y...C40Y	VW3 AE 1004 (2)	190.000	
	EXS5C20N...C31N	EXS5C25Y...C40Y	VW3 A7E 103 (2) (3)	205.000	
	EXC●C40N...C63N	EXC●C50Y...C80Y	VW3 AE 1005 (2)	190.000	
	EXS5C40N...C63N	EXS5C50Y...C80Y	VW3 A7E 104 (2) (3)	205.000	
Isolating handle for switch	EXC●D90N...C16N	EXC●C11Y...C20Y	VW3 AE 0103	1.000	
	EXS5D90N...C16N	EXS5C11Y...C20Y			
	EXC●C20N...C31N	EXC●C25Y...C40Y	VW3 AE 0104	2.000	
	EXS5C20N...C31N	EXS5C25Y...C40Y			
	EXC●C40N...C63N	EXC●C50Y...C80Y	VW3 AE 0105	2.000	
	EXS5C40N...C63N	EXS5C50Y...C80Y			
Circuit-breaker (4)	EXA●C63N...M18N	EXA●C80Y...M24Y			
	EXC●D90N, EXS5D90N	–	VW3 AE 0141	–	
	EXC●C11N, EXS5C11N	–	VW3 AE 0142	–	
	–	EXC●C11Y, C13Y EXS5C11Y, C13Y	VW3 AE 0143	4.000	
	EXC●C13N, EXS5C13N	–	VW3 AE 0144	–	
	EXC●C16N EXS5C16N	EXC●C16Y, C20Y EXS5C16Y, C20Y	VW3 AE 0145	4.000	
	EXC●C20N, EXS5C20N	–	VW3 AE 0146	1.400	
	EXC●C25N EXS5C25N	EXC●C25Y...C40Y EXS5C25Y...C40Y	VW3 AE 0147	1.400	
	EXC●C31N, EXS5C31N	–	VW3 AE 0148	1.400	
	EXC●C40N EXS5C40N	EXC●C50Y, C63Y EXS5C50Y, C63Y	VW3 AE 0150	–	
	EXC●C50N EXS5C50N	EXC●C80Y EXS5C80Y	VW3 AE 0151	–	
	EXC●C63N, EXS5C63N	–	VW3 AE 0152	–	
	EXA●C63N	EXA●C80Y	VW3 AE 0169	–	
	EXA●C80N, C90N	EXA●M10Y, M12Y	VW3 AE 0170	–	
	EXA●M11N	EXA●M15Y	VW3 AE 0171	–	
	EXA●M13N	EXA●M18Y	VW3 AE 0172	–	
	EXA●M15N, M18N	EXA●M21Y, M24Y	VW3 AE 0173	–	
	Door handle for circuit-breaker	EXC●C11N, C13N EXS5C11N, C13N	–	VW3 AE 0114	1.000
		EXC●C16N...C31N EXS5C16N...C31N	EXC●C11Y...C40Y EXS5C11Y...C40Y	VW3 AE 0115	2.000
		EXC●C40N...C63N EXS5C40N...C63N	EXC●C50Y, C63Y EXS5C50Y, C63Y	VW3 AE 0116	2.000
EXA●C63N...C90N		EXA●C80Y...M12Y			
EXC●D90N, EXS5D90N		–	VW3 AE 0205	4.000	
EXC●C11N, EXS5C11N		–	VW3 AE 0206	7.000	
Line contactor	EXC●C13N, C16N EXS5C13N, C16N	EXC●C11Y...C16Y EXS5C11Y...C16Y	VW3 AE 0218	10.000	
	–	EXC●C20Y, EXS5C20Y	VW3 AE 0208	11.000	
	EXC●C20N, EXS5C20N	EXC●C25Y, EXS5C25Y	VW3 AE 0209	12.000	
	EXC●C25N, C31N EXS5C25N, C31N	EXC●C31Y EXS5C31Y	VW3 AE 0210	14.000	
	–	EXC●C40Y, EXS5C40Y	VW3 AE 0211	21.000	
	EXC●C40N, EXS5C40N	EXC●C50Y, EXS5C50Y	VW3 AE 0212	24.000	
	EXC●C50N, C63N EXS5C50N, C63N	EXC●C63Y, C80Y EXS5C20Y, C80Y	VW3 AE 0213	28.000	
	EXA●C63N...C90N	EXA●C80Y...M12Y	VW3 AE 0227 (5)	42.000	
	EXA●M11N...M18N	EXA●M15Y...M24Y	VW3 AE 0226	84.000	
	Switch for 12-pulse input	EXA●C63N	EXA●C80Y	VW3 AE 2415	–
		EXA●C80N, C90N	EXA●M10Y, M12Y	VW3 AE 2416	–
		EXA●M11N	EXA●M15Y	VW3 AE 2418	–
		EXA●M13N	EXA●M18Y	VW3 AE 2419	–
EXA●M15N, M18N		EXA●M21Y, M24Y	VW3 AE 2420	–	

(1) For any other configuration, please contact our Customer Care Centre.

(2) These options depend on the drive rating and may lead to modification of the size of the enclosure. Please refer to the dimensions on our website www.schneider-electric.com.(3) The characteristics of the VW3 A7E 103 and VW3 A7E 104 braking units are identical to those of the VW3 A7 103 and VW3 A7 104 braking units (see page 68 or consult our website www.schneider-electric.com).

(4) The circuit-breaker replaces the switch in the standard offer.

(5) If a line contactor and choke are used, order reference VW3 AE 0225 (50.000 kg) (see note 2).

Variable speed drives

Altivar 61 Plus

Floor-standing enclosure with separate air flows or compact version

Options dependent on the drive rating

Options dependent on the drive rating (continued) (1)

Three-phase supply voltage 500 V and 690 V 50/60 Hz (continued)						
Description	For ATV 61 enclosure		Reference	Weight kg		
	500 V	690 V				
Line choke	EXA●C63N	EXA●C80Y	VW3 AE 2504	154.000		
	EXA●C80N	EXA●M10Y	VW3 AE 2505	121.000		
	EXA●C90N	EXA●M12Y	VW3 AE 2506	136.000		
	EXA●M11N	EXA●M15Y	VW3 AE 2507 (2)	308.000		
	EXA●M13N, M15N	EXA●M18Y, M21Y	VW3 AE 2508 (2)	242.000		
	EXA●M18N	EXA●M24Y	VW3 AE 2509 (2)	273.000		
Ammeter	EXC●D90N, C11N	EXC●C11Y... C16Y	VW3 AE 0404	0.200		
	EXS5D90N, C11N	EXS5C11Y... C16Y				
	EXC●C13N...C20N	EXC●C20Y... C31Y	VW3 AE 0406	0.200		
	EXS5C13N...C20N	EXS5C20Y... C31Y				
	EXC●C25N, C31N	EXC●C40Y	VW3 AE 0426	0.200		
	EXS5C25N, C31N	EXS5C40Y				
	EXC●C40N, C50N	EXC●C50Y...C80Y	VW3 AE 0409	0.200		
	EXS5C40N, C50N	EXS5C50Y...C80Y				
	EXC●C63N	–	VW3 AE 0427	0.200		
	EXS5C63N					
	EXA●C63N	–	VW3 AE 0427 (3) VW3 AE 0428 (4)	0.200		
	–	EXA●C80Y	VW3 AE 0409 (3) VW3 AE 0428 (4)	0.200		
	EXA●C80N, C90N	EXA●M10Y, M12Y	VW3 AE 0411 (3) VW3 AE 0421 (4)	0.200		
	EXA●M11N	EXA●M15Y	VW3 AE 0413 (3) VW3 AE 0421 (4)	0.200		
	EXA●M13N, M15N	EXA●M18Y, M21Y	VW3 AE 0414 (3) VW3 AE 0429 (4)	0.200		
	EXA●M18N	EXA●M18Y	VW3 AE 0415 (3) VW3 AE 0423 (4)	0.200		
Enclosure heater	EXC●D90N...C31N	EXC●C11Y...C40Y	VW3 AE 0501	0.500		
	EXS5D90N...C31N					
	EXC●C40N...C63N	EXC●C50Y...C80Y	VW3 AE 0502	1.000		
	EXS5C40N...C63N	EXA●C80Y...M12Y				
	EXA●C63N...C90N					
EXA●M11N...M18N	EXA●M15Y...M24Y	VW3 AE 0503	1.500			
Motor choke	EXC●D90N, C11N	EXC●C11Y, C13Y	VW3 AE 0603	17.000		
	EXS5D90N, C11N	EXS5C11Y, C13Y				
	EXC●C13N, C16N	EXC●C16Y, C20Y	VW3 AE 0604	35.000		
	EXS5C13N, C16N	EXS5C16Y, C20Y				
	EXC●C20N, C25N	EXC●C25Y, C31Y	VW3 AE 0605	64.000		
	EXS5C20N, C25N	EXS5C25Y, C31Y				
	EXC●C31N	EXC●C40Y	VW3 AE 0606	102.000		
	EXS5C31N	EXS5C40Y				
	EXC2C40N	EXC2C50Y	VW3 AE 0626 (2)	192.000		
	EXC5C40N	EXC5C50Y	VW3 AE 0628 (2)	192.000		
	EXS5C40N	EXS5C50Y	VW3 AE 0630 (2)	197.000		
	EXC2C50N, C63N	EXC2C63Y, C80Y	VW3 AE 0627 (2)	234.000		
	EXC5C50N, C63N	EXC5C63Y, C80Y	VW3 AE 0629 (2)	234.000		
	EXS5C50N, C63N	EXS5C63Y, C80Y	VW3 AE 0631 (2)	234.000		
	EXA●C63N...C90N	EXA●C80Y...M12Y	VW3 AE 0635	132.000		
	EXA●M11N...M18N	EXA●M15Y...M24Y	VW3 AE 0636	264.000		
	200 mm plinth	Without option	EXC●D90N...C16N	EXC●C11Y...C20Y	VW3 AE 0801	11.000
EXC●C20N...C31N			EXC●C25Y...C40Y	VW3 AE 0802	13.000	
EXC●C40N...C63N			EXC●C50Y...C80Y	VW3 AE 0804	17.000	
EXA●C63N...C90N			EXA●C80Y...M12Y	VW3 AE 0820 (5)	38.000	
EXA●M11N...M18N			EXA●M15Y...M24Y	VW3 AE 0822	69.000	
EXC●D90N...C16N			EXC●C11Y...C20Y	VW3 AE 0801	11.000	
With motor choke		EXC●C20N...C31N	EXC●C25Y...C45Y	VW3 AE 0802	13.000	
		EXC●C40N...C63N	EXC●C50Y...C80Y	VW3 AE 0806	26.000	
		EXA●C63N...C90N	EXA●C80Y...M12Y	VW3 AE 0820 (5)	38.000	
		EXA●M11N...M18N	EXA●M15Y...M24Y	VW3 AE 0822	69.000	
		With line choke	EXA●C63N...C90N	EXA●C80Y...M12Y	VW3 AE 0820 (5)	38.000
			EXA●M11N...M18N	EXA●M15Y...M24Y	VW3 AE 0824	78.000
Plinth for braking unit	EXC●C20N...C63N	EXC●C25Y...C80Y	VW3 AE 0810	9.000		

(1) For any other configuration, please contact our Customer Care Centre.

(2) These options may lead to modification of the size of the enclosure. Please refer to the dimensions on our website www.schneider-electric.com.

(3) For 6-pulse mounting.

(4) For 12-pulse mounting.

(5) If a line contactor and choke are used, order reference VW3 AE 0821 (40.000 kg).

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