Variable speed drives Altivar Process ATV600

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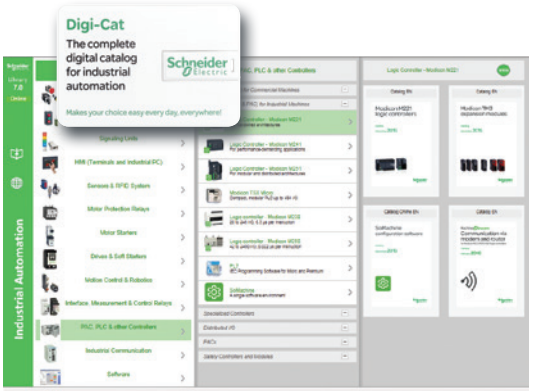

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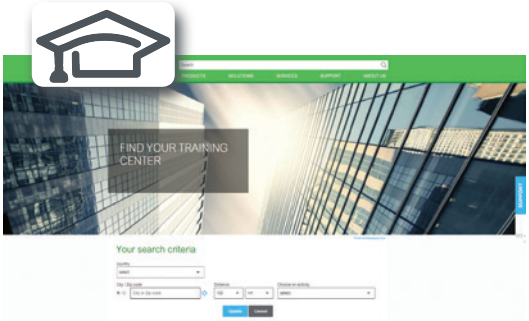

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1 - Presentation

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Variable speed drives
Altivar Process
Business optimization, real-time intelligence

1

Altivar Process
Provides the efficiency you deserve

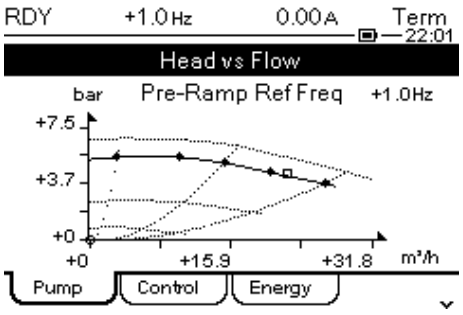
Altivar Process drives offer extensive flexibility in water & wastewater, mining, minerals & metals, oil & gas and food & beverage applications. Depending on customer requirements, Altivar Process drives are available as wall-mounting, floor standing, and optimized solutions for integration into cabinets.

Wall mounting drives
from 0.75 kW up to 315 kW
(1...500 HP)

Enclosed drives solutions
from 110 kW up to 800 kW
(150...1100 HP)

Cabinet integration drives
from 0.75 kW up to 800 kW
(1...1100 HP)

Altivar Process range

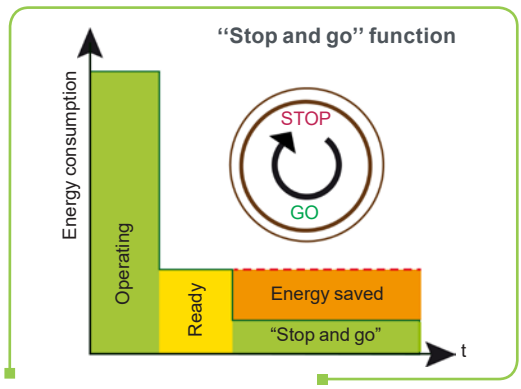


Display screen

Business optimization

Optimum monitoring of your process

> Instant reaction if pump efficiency drops thanks to the embedded pump monitoring
> Notification of critical operating points without additional sensors
> Process integration with pressure, flow, and level control including compensation of flow losses



Energy-saving drive solution

> Up to 30% energy saving when on standby due to the innovative "Stop & Go" operation without additional costs
> Smart control of the internal fans depending on operation
> Optimum energy efficiency over the whole life cycle
> Data logging and graphic display of the power consumption

Real-time intelligence

Web server and services via Ethernet

> Embedded Web server interface based on the Ethernet network gives you process monitoring with your daily working tools.
> Local and remote access to energy use and customized dashboards means your energy is visible anywhere, any time, on PC, tablet, or smartphone.

+ Saving energy with variable speed drives

Variable speed drives
Altivar Process
User-friendliness, green product

ODVA organization: supports network technologies based on EtherNet/IP

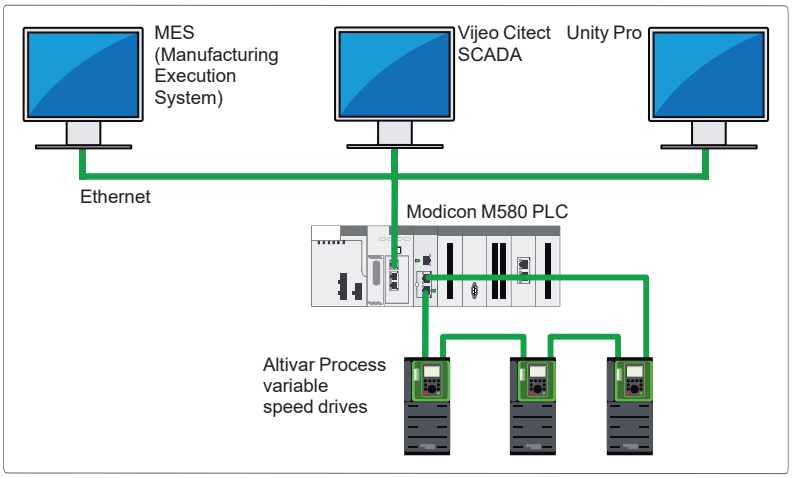
FDT Technology: an international standard with broad acceptance in the automation industry

Achilles™ Level2 certified

User-friendliness

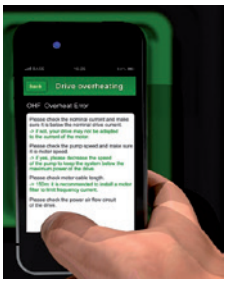
Simple integration in PLC environments

- Easy integration thanks to standardized FDT/DTM and ODVA technology
- Supported by predefined Unity Pro libraries
- Easy access via PC, tablet, or smartphone
- Robust connection via Ethernet



Integration in EcoStruxure Plant

Scanning the QR code from a smartphone or tablet



Instant access to online help

Sophisticated service concept

- Modular design provides easy spare parts logistics
- Optimized maintenance costs due to dynamic maintenance schedule, with integrated monitoring of individual components
- Simple exchange of power modules and fans
- Quick assistance with dynamic QR codes and Customer Care app

Green product

Designed to have a smaller carbon footprint

- The Green Premium product label, Schneider Electric's eco-mark, indicates your compliance with international environmental standards such as:
  - RoHS-2 according to EU directive CE 2002/95
  - REACH according to EU regulation 1907/2006
  - IEC 62635: the end-of-life instructions comply with the latest recycling rules, 70% of the product components can be recycled.

+ Best in class service concept

IP 20, IP 21, IP 55, or IP 54 variable speed drives for asynchronous and synchronous motors

Market segments		■ Water & wastewater ■ Oil & gas ■ Mining, minerals & metals ■ Food & beverage	
Mounting type		Wall mounting	
Degree of protection		IP 20 and IP 21/UL Type 1	IP 55
Power range for 50...60 Hz line supply	Three-phase: 200...240 V (kW/*HP*)	0.75...*75*/*1*...*100*	–
	Three-phase: 380...440 V (kW)	–	
	Three-phase: 380...480 V (kW/*HP*)	0.75...315/*1*...*500*	0.75...90/*1*...*125*
	Three-phase: 500...690 V (kW/*HP*)	2.2...90/*3*...*125*	–
Drive	Output frequency	0.1... 500 Hz	
	Control type – Asynchronous motor	Standard constant torque, variable standard torque, optimized torque mode	
	Control type – Synchronous motor	PM (permanent magnet) motor, Synchronous Reluctance Motor	
Functions	Advanced functions	■ Accurate measurement for monitoring system energy consumption (deviation < 5%) ■ Installation energy drift detection ■ Embedded Ethernet with direct access to system configuration and monitoring ■ Integration of actual pump curves to optimize the system operating point ■ Optimized pump monitoring based on actual operating point ■ Sensorless estimated flow rate ■ Measurements expressed in working units (e.g.: m^3/h, kWh/m^3) ■ Limitation of overvoltage at the motor terminals ■ Contextual access to technical documentation through dynamic QR code ■ Continuous and historical real-time measurements with customizable dashboards ■ Predictive and preventive maintenance tracking functions (e.g.: temperatures with PT100/1000 probe, fan monitoring)	
	Integrated safety function	1: STO (Safe Torque Off) SIL3	
	Number of preset speeds	16	
Number of integrated I/O	Analog inputs	3: Configurable as voltage (0...10 V) or current (0-20 mA/4-20 mA), 2 of them including probes (PTC, PT100, PT1000 or KTY84)	
	Digital inputs	6: Voltage 24 V ⎓ (positive or negative logic)	
	Analog outputs	2: Configurable as voltage (0...10 V) or current (0-20 mA)	
	Relay outputs	3: 1 with NO/NC contacts and 2 with NO contacts	
	Safety function inputs	2: For safety function STO	
I/O expansion modules (optional)	Analog inputs	2 differential analog inputs configurable via software as current (0-20 mA/ 4-20 mA), or for PTC, PT100, or PT1000, 2 or 3-wire	
	Digital inputs	6: Voltage 24 V ⎓ (positive or negative logic)	
	Digital outputs	2: Assignable	
Relay output module (optional)	Relay outputs	3: NO contacts	
Communication	Integrated	Modbus/TCP, Modbus serial link	
	Option modules	EtherNet/IP and Modbus/TCP Dual port, ProfiNet, CANopen RJ45 Daisy Chain, Sub-D, and screw terminals, Profibus DP V1, DeviceNet, and BACnet MS/TP	
Configuration and runtime tools		Graphic display terminal, embedded Web server, DTM (Device Type Manager), SoMove software	
Standards and certifications		UL 508C and UL61800-5-1 *(1)*, EN/IEC 61800-3, EN/IEC 61800-3 environment 1 category C2, EN/IEC 61800-3 environment 2 category C3, EN/IEC 61800-5-1, IEC 61000-3-12, IEC 60721-3, IEC 61508 DNV-GL Marine certification, ATEX 2/22, ATEX 1/21, SEMI F47-0706	
References		**ATV630●●●●●**	**ATV650●●●●●**
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(1) Evaluated UL standards may differ as per drive reference numbers. Please refer to our website for more details.

More technical information on www.schneider-electric.com

		■ Water & wastewater ■ Oil & gas ■ Mining, minerals & metals ■ Food & beverage		
Wall mounting		IP 55 with Vario disconnect switch	Floor standing	
IP 21	IP 54	–		
–		–	110...315/*150*...*500*	
110...315/*150*...*500*		0.75...90/*1*...*125*	–	
–	2.2...90/3...125	–		
0.1... 500 Hz				
Standard constant torque, variable standard torque, optimized torque mode				
PM (permanent magnet) motor, Synchronous Reluctance Motor				
■ Accurate measurement for monitoring system energy consumption (deviation < 5%) ■ Installation energy drift detection ■ Embedded Ethernet with direct access to system configuration and monitoring ■ Integration of actual pump curves to optimize the system operating point ■ Optimized pump monitoring based on actual operating point ■ Sensorless estimated flow rate ■ Measurements expressed in working units (e.g.: m^3/h, kWh/m^3) ■ Limitation of overvoltage at the motor terminals ■ Contextual access to technical documentation through dynamic QR code ■ Continuous and historical real-time measurements with customizable dashboards ■ Predictive and preventive maintenance tracking functions (e.g.: temperatures with PT100/1000 probe, fan monitoring)				
1: STO (Safe Torque Off) SIL3				
16				
3: Configurable as voltage (0...10 V) or current (0-20 mA/4-20 mA), 2 of them including probes (PTC, PT100, PT1000 or KTY84)				
6: Voltage 24 V ⎓ (positive or negative logic)				
2: Configurable as voltage (0...10 V) or current (0-20 mA)				
3: 1 with NO/NC contacts and 2 with NO contacts				
2: For safety function STO				
2 differential analog inputs configurable via software as current (0-20 mA/ 4-20 mA), or for PTC, PT100, or PT1000, 2 or 3-wire				
6: Voltage 24 V ⎓ (positive or negative logic)				
2: Assignable				
3: NO contacts				
Modbus/TCP, Modbus serial link				
EtherNet/IP and Modbus/TCP Dual port, ProfiNet, CANopen Daisy Chain RJ45, Sub-D, and screw terminals, Profibus DP V1, DeviceNet bus, and BACnet MS/TP				
Graphic display terminal, embedded Web server, DTM (Device Type Manager), SoMove software				
UL 508C and UL61800-5-1 *(1)*, EN/IEC 61800-3, EN/IEC 61800-3 environment 1 category C2, EN/IEC 61800-3 environment 2 category C3, EN/IEC 61800-5-1, IEC 60721-3, IEC 61508 DNV-GL Marine certification, ATEX 2/22, ATEX 1/21, SEMI F47-0706	EN/IEC 61800-3, EN/IEC 61800-3 environment 2 category C3, EN/IEC 61800-5-1, IEC 60721-3, IEC 61508, ATEX 2/22, ATEX 1/21			
ATV650●●●●●E	**ATV630●●●●●F**	**ATV650●●●●●F**		
2/6	2/8	2/9		

More technical information on www.schneider-electric.com

Altivar Process Modular single drives for cabinet integration

Market segments	■ Water & wastewater ■ Oil & gas ■ Mining, minerals & metals ■ Food & beverage			
Mounting type	Cabinet integration			
Degree of protection	IP 20	IP 00		
Power range for 50...60 Hz line supply	Three phase: 380…480 V (kW/*HP*)	0.75...90/*1...120*	–	
	Three-phase: 400 V (kW)	–	110...800	–
	Three-phase: 440 V (kW)	–	110...800	–
	Three-phase: 480 V (*HP*)	–		150...1100
Drive	Output frequency	0.1... 500 Hz		
	Control type / Asynchronous motor	Standard constant torque, variable standard torque, optimized torque mode		
	Synchronous motor	PM (Permanent Magnet) motor, Synchronous Reluctance Motor		
Functions	Advanced functions	Including all the advanced features of ATV600: ■ Accurate measurement for monitoring system energy consumption (deviation < 5%) ■ Installation energy drift detection ■ Embedded Ethernet with direct access to system configuration and monitoring ■ Integration of actual pump curves to optimize the system operating point ■ Optimized pump monitoring based on actual operating point ■ Sensorless estimated flow rate ■ Measurements expressed in working units (e.g.: m3/h, kWh/m3) ■ Limitation of overvoltage at the motor terminals ■ Contextual access to technical documentation through dynamic QR code ■ Continuous and historical real-time measurements with customizable dashboards ■ Predictive and preventive maintenance tracking functions (e.g.: temperatures with PT100/1000 probe, fan monitoring) Easy setting of drive identification for Altivar Process Modular drives from 110 kW up to 800 kW *(150...1100 HP)*		
	Integrated safety function	1: STO (Safe Torque Off) SIL3		
	Number of preset speeds	16		
Number of integrated I/O	Analog inputs	3: Configurable as voltage (0...10 V) or current (0-20 mA/4-20 mA), 2 of them including probes (PTC, PT100, PT1000 or KTY84)		
	Digital inputs	6: Voltage 24 V --- (positive or negative logic)		
	Digital output	–		
	Analog outputs	2: Configurable as voltage (0...10 V) or current (0-20 mA)		
	Relay outputs	3: 1 with NO/NC contacts and 2 with NO contacts		
	Safety function inputs	2: For safety function STO		
I/O extension modules (optional)	Analog inputs	2 differential analog inputs configurable via software as voltage (0...±10 V) or current (0-20 mA/ 4-20 mA), or for PTC, PT100, or PT1000, 2 or 3-wire		
	Digital inputs	6: Voltage 24 V ⎓ (positive or negative logic)		
	Digital outputs	2: Assignable		
Relay output module (optional)	Relay outputs	3: NO contacts		
Communication	Integrated	Modbus/TCP, Modbus serial link		
	Option modules	EtherNet/IP and Modbus/TCP Dual port, ProfiNet, CANopen RJ45 Daisy Chain, Sub-D, and screw terminals, Profibus DP V1, DeviceNet, and BACnet MS/TP		
Configuration and runtime tools		Graphic display terminal, embedded Web server, DTM (Device Type Manager), SoMove software		
Standards and certifications		86/188/EEC, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, EN/IEC 61800-3, EN/IEC 61800-5-1, IEC 61000-3-12, IEC 60721-3, IEC 61508, IEC 13849-1, TÜV certification, CE marking		
References		**ATV630●●●N4Z**	**ATV6AOC●●Q4**	**ATV6AOC●●R4**	**ATV6AOC●●T4**
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IP 23 and IP 54 Drive Systems for asynchronous and synchronous motors

Market segments	■ Water & wastewater ■ Oil & gas ■ Mining, minerals & metals ■ Food & beverage			
Power range for 50...60 Hz line supply	Three-phase: 315...415 V, 480 V (kW)	90...800		
Main characteristics		Compact Drive Systems with an integrated line reactor to reduce the current harmonics THDi < 48%	Low Harmonic Drive Systems with 3-level technology to reach a total distortion factor THDi of around 2 % which fulfills the requirements according to IEEE 519 of THDi < 5 %	
Variants		Compact standard offer Modular with integrated options (CTO) User-definable on request (ETO, Full ETO)	Low Harmonic standard offer Modular with integrated options (CTO) User-definable on request (ETO, Full ETO)	
Degree of protection		IP 23 IP 54 with separate air flows as an option		
Drive	Output frequency	0.1...500 Hz		
	Type of control / Asynchronous motor	Standard constant torque, variable standard torque, optimized torque mode		
	Synchronous motor	PM (permanent magnet) motor, Synchronous Reluctance Motor		
Communication	Integrated	Modbus/TCP Modbus serial link Ethernet		
	As an option	EtherNet/IP and Modbus/TCP Dual port PROFINET CANopen RJ45 Daisy Chain, SUB-D9 and screw terminals Profibus DP V1 DeviceNet		
Interfaces and runtime tools		Graphic display terminal in the enclosure door Control terminals inside the enclosure Control terminals can be extended Reading of the parameters via USB interface on the keypad Embedded Web server, DTM (Device Type Manager), SoMove software		
Standards and certifications		CE, EAC, RCM, EN/IEC 61439, EN/IEC 61800-3, EN/IEC 61800-3 environment 2 category C3, EN/IEC 61800-5-1, IEC 60721-3, IEC 61508, ATEX 2/22, ATEX 1/21	CE, EAC, RCM, EN/IEC 61439, EN/IEC 61800-3, EN/IEC 61800-3 environment 2 category C3, EN/IEC 61800-5-1, IEC 60721-3, IEC 61508, ATEX 2/22, ATEX 1/21, IEEE 519	
References		**ATV660●●●●4X1**	**ATV680●●●●4X1**	
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Variable speed drives
Altivar Process

Altivar Process range

Process

Altivar Process drives are specifically designed for meeting the requirements of the following market segments:

- Water & wastewater
- Oil & gas
- Mining, minerals & metals
- Food & beverage

Water & wastewater applications

- Pumping
- Drilling
- Suction
- Dosing
- Odor control
- Ventilation
- Gas compression
- Sludge removal

Use

- Pumping station and storage tank
- Irrigation
- Treatment plant
- Desalination plant
- Storage and booster station
- Housing
- Wastewater lift station
- Wastewater treatment
- Discharge back into the environment, land application

Variable speed drives: page 2/2
Configuration and runtime tools: page 2/14
Combinations: page 2/18
Dimensions: page 2/56

Process (continued)

Oil & gas applications

- ■ Hydrocarbon production:
- □ Drilling
- □ Offshore and onshore extraction
- □ Water treatment and re-injection
- □ Crude oil storage
- □ Separation
- □ Pipeline pumping
- □ Storage
- □ Refining
- □ DOF (digital oil field)

Use

- ■ Pumps:
- □ Submersible
- □ Hydraulic
- □ Pipeline
- □ Reverse flow
- □ Water injection
- □ Kerosene
- ■ Regasification compressors
- ■ Refining:
- □ Fans
- □ Compressors

Mining, minerals & metals applications

- ■ Flotation and thickening
- ■ Rinsing and filtration
- ■ Mine shaft pumping
- ■ Preheater fan
- ■ Waste gas evacuation
- ■ Cooling fan
- ■ Separator for vertical roller mill
- ■ Storage and loading
- ■ Water supply
- ■ Pumping
- ■ Drying fans

Use

- ■ Conveyors
- ■ Grinders
- ■ Mixers
- ■ Pumps

Food & beverage applications

- ■ Pumping
- ■ Drying fans

Use

- ■ Conveyors
- ■ Mixers
- ■ Centrifuges
- ■ Pumps

Variable speed drives: page 2/2
Configuration and runtime tools: page 2/14
Combinations: page 2/18
Dimensions: page 2/56

1

Cooling system with two separate air flows

General presentation of the offer

Altivar Process drives can help improve equipment performance and reduce operating costs by optimizing energy consumption and user comfort.
Altivar Process drives provide a wide range of integrated functions, such as:
- Safety and automation functions that meet the requirements of some of the most demanding applications
- Various optional communication modules available for seamless integration into the main automation architectures
- Numerous configurable I/O as standard to facilitate adaptation to specific applications
- Intuitive commissioning using the graphic display terminal
- Local and remote access and monitoring using the embedded Web server
- Energy savings and protection of the grid by means of integrated harmonic filters
- Installation EMC conformity by means of integrated EMC filters
- Altivar Process drives are designed for IT systems

Depending on the power range, Altivar Process is available with several mounting types and protection indices:
- Wall-mounting IP 20/21/UL Type 1 from 0.75 to 315 kW/1 to 500 HP, ready-to-use for easy integration inside or without an enclosure in an electrical room
- Wall-mounting IP 55 from 0.75 to 90 kW/1 HP to 125 HP, ready-to-use for easy integration in harsh environment and installations close to the system to reduce the length of the motor cable. The wall-mounting IP 55 offer is available with and without a disconnect switch.
- Floor-standing IP 21 and IP 54 from 110 to 315 kW, ready-to-use in high-power ranges with minimum dimensions for easy, optimized integration in an electrical room in a standard or harsh environment
- Cabinet integration from 110 kW to 800 kW/*150 to 1100 HP*, designed for easy and cost effective integration of power intensive drives into cabinets.
- Cabinet integration IP 20 from 0.75 to 90 kW/*1 to 125 HP*, for easy and cost effective drive configuration inside enclosures.

Cabinet integration

Get more than just a drive with Altivar Process Modular offer for cabinet integration:
- Standardized integration with power rating through module paralleling up to 800 kW/*1100 HP* at 480 V supply voltage
- Integrated category C3 EMC filter
- Reduced harmonics with integrated line choke
- Integrated high efficient motor filter allowing longer motor cable lengths
- Ready to connect mains terminals on top and motor terminals at the bottom
- Reduced downtime of assets thanks to easily changeable electric core components such as power module with wheel and power fan inside a drawer accessible from front face

Enclosed high-power drives solutions

The floor-standing IP 21/IP 54 fully customisable turnkey drive offers integrate:
- Drive power and control modules
- Semiconductor protection fuses
- Line chokes to limit THDi levels
- A filter to help protect the motor against the effects of dv/dt
- Accessible busbars to simplify the motor wiring and power wiring

The IP 54 variant features additional equipment, such as:
- A main switch with external handle
- A system for separating the cooling air flow between the power and control parts, allowing operation in a highly polluted environment as well as optimum management of thermal stress in the plant room

Altivar Process drives can be supplied as engineered drive system variants from 110 to 1000 kW, developed by Schneider Electric based on customer specifications. Engineered drives are available as standard with THDi level < 48% and as a low harmonic solution with THDi level < 5%.

ATV630D45Y6 equipped with IP20/UL Type 1 wall mounting kit

General presentation of the offer (continued)

Rugged

Altivar Process drives are designed to adapt to the harshest environments.

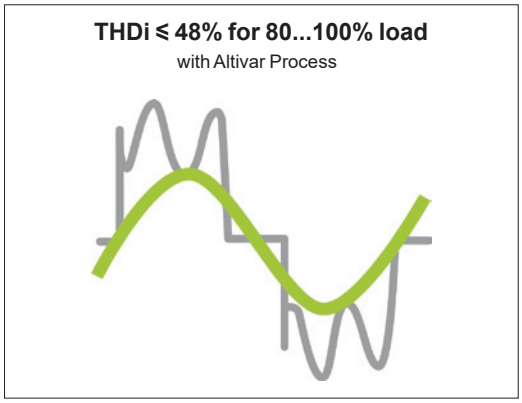
- ■ Ambient operating temperature
- □ Wall-mounting drives:
  - IP 20/21: up to 160 kW, -15...+50 °C/+ *5...122 °F* as standard, up to 60 °C/*140 °F* with derating; above 160 kW, -10...+40 °C/+ *14...104 °F* as standard, up to 60 °C/*140 °F* with derating
  - IP 55: -15...+40 °C/*5...104 °F* as standard, up to 50 °C/*122 °F* with derating
- □ Floor-standing IP 21/IP 54 and cabinet integration drives:
  - 0... 40 °C/*32...104 °F* as standard
  - 40...50 °C/*104...122 °F* with derating
- ■ Relative humidity without condensing: 5...95%
- ■ Storage and transport temperature: -40…+70 °C/*-40…+158 °F*
- ■ Operating altitude:
- □ 0…1,000 m/*0…3,281 ft* without derating
- □ 1,000...2,000 m/*3,281…6,561 ft* with derating of 1% per 100 m/*328 ft*
- ■ Withstand to harsh environments:
- □ Chemical class 3C3 conforming to IEC/EN 60721-3-3 *(1)*
- □ Mechanical class 3S3 conforming to IEC/EN 60721-3-3 *(1)*
- □ Electronic cards with protective coating
- ■ Protection to suit requirements:
- □ IP 00 for mounting in an enclosure, depending on the model
- □ IP 20/21/UL type 1 for wall mounting in a plant room and in an enclosure
- □ IP 55 for wall mounting, with protection against dust and water jets
- □ Floor-standing IP 21
- □ Floor-standing IP 54, with protection against dust and water jets

A large number of external options can be combined with the Altivar 600:

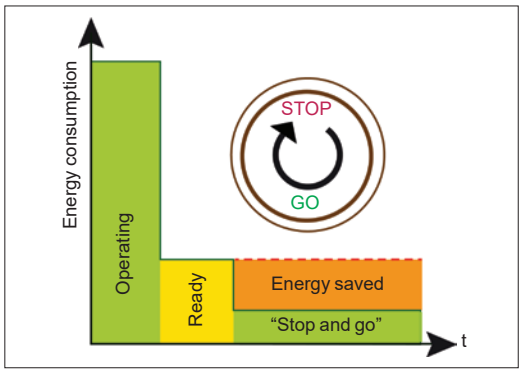
- ■ Line chokes and passive filters (see page 2/42)
- ■ Additional EMC input filters for reducing conducted emissions on the line (see pages 2/39 to 2/41)
- ■ Dv/dt filters and sinus filters for long cable runs or to remove the need for shielding (see pages 2/43 to 2/47)
- ■ Mounting options: The Altivar 600 drive can be mounted in a variety of ways to adapt to the various needs of an installation
- ■ Mounting without an enclosure: The Altivar 600 drive can be mounted directly on a wall without having to be installed inside an enclosure. IP 20/21 UL Type 1 conformity can be achieved by using kits, for drives above 110 kW at 380...480 V and for drives from 2.2 to 90 kW at 500...690 V a supply voltage (see page 2/10)
- ■ Optimized enclosures: A patented flange mounting kit allows to remove the heat generated by the power unit outside the enclosure when the variable speed drive is integrated in a cabinet (see page 2/11)

(1) Altivar Process ATV630C22...C31N4 drives are certified as chemical class 3C2 and mechanical class 3S2 conforming to IEC/EN 60721.

1



Altivar Process drive THDi



"Stop and go" function

General presentation of the offer (continued)

Energy

Altivar Process drives help to optimize power consumption by reducing the rms input current for the same load.

- ■ Standard offer:
  - □ THDi ≤ 48% for 80 to 100% load, which is used to maintain an optimum power factor on the most common operating range
  - □ Embedded low harmonic DC choke technology complying with standard IEC 61000-3-12 for 380…480 V offer
  - □ Embedded line choke for Altivar Process Modular and floor standing drives solutions
- ■ Passive filter options
- □ Low harmonic offer compatible with standard IEEE 519

In addition, thanks to the "stop and go" function, Altivar Process drives can reduce power consumption by up to 30% during system stop phases by disabling some functions automatically (the power section, fans, backlighting, etc). On a system restart request, the Altivar Process drive takes less than 2 seconds to restart the motor.

Integrated as standard, the "stop and go" function can be enabled and disabled in the drive parameters.

Environment

The Altivar Process drives offer has been developed to meet the requirements of directives regarding protection of the environment and to anticipate future changes in regulations:

- ■ RoHS-2 *(1)*
- ■ REACH *(2)* + Solution for REACH Substitute It Now (halogen-free wiring and plastics)
- ■ PEP (Product Environmental Profile) eco-passport program for reducing the carbon footprint and conserving raw materials
- ■ EoLI (End of Life Instruction) *(3)*
- □ More than 70% recyclable materials (new ruling)
- ■ Efficient energy management: 30% reduction in consumption

Electromagnetic compatibility (EMC)

Compliance with electromagnetic compatibility requirements has been incorporated into the design of the drive, which simplifies installation and provides an economical means of helping to ensure equipment meets CE marking requirements.
Altivar Process drives have a category C2 or C3 EMC filter, except ATV630U07M3...D75M3 models which can take an additional filter to meet more stringent requirements (see page 2/35).

Altivar Process Modular drives have category C3 EMC filters that allow 300 m/*984.25 ft* of shielded motor cables.

(1) European directive 2002/95/EC Restriction Of Hazardous Substances (applicable in 2016).
(2) European regulation 1907/2006.
(3) According to IEC 62635 Enhanced Guidelines.

General presentation of the offer (continued)

Installation/Maintenance

Altivar Process drives are ergonomically designed to adapt to any type of installation:

- ■ Products, systems, or integrated in iMCC
- ■ IP 00, IP 20/21, UL type 1; IP 55, IP 54
- ■ IP 00 modules that can be integrated in cabinets with an IP 21 or IP 54 protection degree as a standard integration
- ■ Easy installation of products and systems:
  - □ Cable entry equipped with Romex cable clamps to maintain an EMC connection for the power and control cable (optional for 500...690 V drives).
  - □ Color code for connections to the removable terminal blocks on the HMI block
  - □ Long cable for wall mounting : Up to 150 m with category C3 EMC filter at 380…480 V
  - □ Long cable for Altivar Process Modular and Floor Standing offer: highly efficient integrated motor filters for du/dt and common mode reduction and voltage peak limitation allows motor cable length up to 300 m/*984.25 ft* with shielded cable (category C3 environment) and 500 m/*1640 ft* with unshielded cable (category C4 environment).
- ■ Asynchronous or synchronous drive in open loop for 0.1...500 Hz output frequency
- ■ Special motors: Submersible and tapered rotor motors
- ■ Lower maintenance costs due to drive's ergonomic design:
  - □ Fans can be replaced in less than 5 minutes
  - □ No maintenance tool required
  - □ Limited number of parts
- ■ Embedded Web server:
  - □ Compatible process elements for easier implementation
  - □ Direct worldwide access to monitoring and maintenance functions:
    - Reading values
    - Modifying data
    - Configuring parameters
    - Changing controller status

1

Integrated functions

Altivar Process drives include numerous advanced functions for the more complex applications in each market segment.

Advanced functions

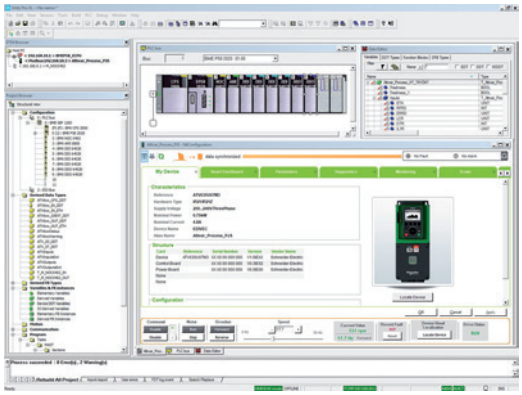
- Accurate measurement for monitoring system energy consumption (deviation < 5%)
- Installation energy drift detection
- Embedded Ethernet with direct access to system configuration and monitoring
- Integration of actual pump curves to optimize the system operating point
- Optimized pump monitoring based on actual operating point
- Sensorless estimated flow rate
- Measurements expressed in working units (e.g.: m^3/h, kWh/m^3)
- Limitation of overvoltage at the motor terminals
- Contextual access to technical documentation through dynamic QR code
- Continuous and historical real-time measurements with customizable dashboards
- Predictive and preventive maintenance tracking functions (e.g.: temperatures with PT100/1000 probe, fan monitoring)

Power measurement function

Altivar Process drives integrate a power measurement function accurate to within 5%, based on measurement of the motor voltage and the power supply:

- Process drift detection for installation reliability throughout its entire service life
- Useful system performance information provided by comparing the energy used with the energy produced:
  - Typical KPIs:
    - Specific energy consumption
    - kWh/m^3
    - $kWh/mWc/m^3$

Users are therefore able to monitor and analyze input power, energy produced, and the KPIs directly from the drive or from the process management system.



Altivar Process DTM in Unity Pro

Safety and monitoring functions

The Safety function STO and numerous monitoring functions are provided to help protect personnel and equipment.

- Advantages:
  - Time savings in terms of installation design and compliance
  - Fewer components and cables
  - Optimum space
  - Simplified setup of machines
  - Improved maintenance performance; limited machine intervention time and installation downtime
  - Optimized conditions for maintenance operations
- Conformity to standards EN/IEC 61508, EN/ISO 13849, IEC 61800-5-2
- Integrated STO (Safe Torque Off) function, SIL3/PIe
- Monitoring function to help protect against premature wear:
  - Monitoring of pumping cycles
  - Start-stop of centrifugal pumps
  - Monitoring of start cycles (number of starts per hour)
  - Monitoring function to help protect against water hammer
  - Cleaning of pumps by reversing the flow (anti-clogging)

Integration

Communication protocols

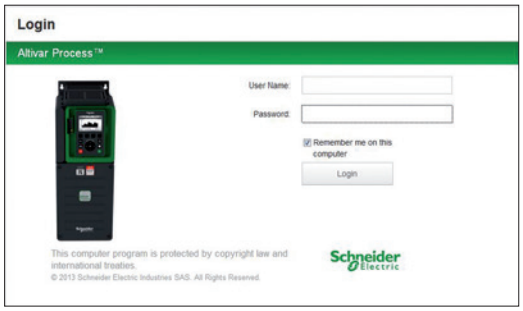
- ■ Modbus/TCP, EtherNet/IP, and Modbus serial link:
- □ Standard Modbus and Ethernet protocols
- □ Connection of configuration and runtime tools
- □ Control and supervision of the Altivar Process in process architectures (controllers, SCADA systems, HMIs, etc.) in industrial networks (read/write data)
- □ Diagnostic, supervision, and fieldbus management functions
- ■ Ethernet services:
- □ SNMP, SNTP, BootP & DHCP, IP v6, cybersecurity services, FDR
- □ Open Ethernet topologies

Integration of configuration and runtime tools

- ■ FDT/DTM technology (see page 2/17):
- □ Drive configuration, diagnostics, and control using Unity Pro software

Configuration and runtime tools

- ■ Graphic display terminal (see page 2/14):
- □ Drive control, adjustment, and configuration
- □ Display of current values (motor, I/O, etc.)
- □ Configuration storage and download
- □ Duplication of one drive configuration on another drive from a PC or another drive
- □ Remote use by means of appropriate accessories (see page 2/15)
- □ Connection to several drives using multidrop link components (see page 2/15)
- ■ Embedded Web server (see page 2/16):
- □ Easily accessible from any PC, iPhone, iPad, Android system, and major web browsers
- □ Network diagnostics in real time
- □ Read/write values
- ■ SoMove software (see page 2/17):
- □ Advanced functions for configuration, setup, and maintenance of Altivar Process drives



Embedded Web server login screen

Integrated services

Altivar Process drives feature integrated services to achieve optimum time savings:

- ■ Simplified communication:
- □ Ethernet port with embedded Web server
- ■ Energy management (integrated power measurement)
- ■ Dynamic predictive maintenance
- ■ 3 QR codes:

1: Access to the Customer Care Center application and product data sheet
2: Direct access to description of the functions
3: QR code generated in the event of a detected error (red screen): Identification of the detected error, probable causes, and remedies

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Variable speed drives
Altivar Process

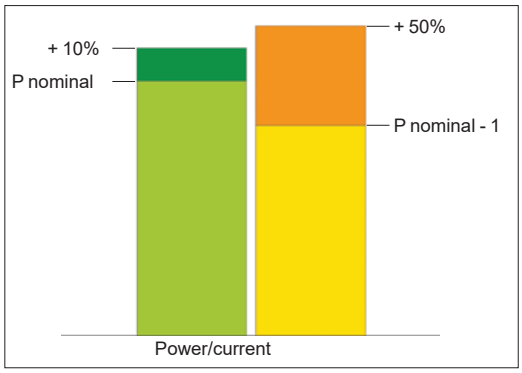
ATV630●●●N4F, ATV630●●●M3, ATV630●●●Y6, ATV650●●●N4, ATV650●●●N4E

Extensive offer

The Altivar Process wall mounting and floor standing products offer covers motor power ratings from 0.75...315 kW/*1...500 HP* for three-phase voltages between 200...240 V, 380...480 V and 500...690 V.

Three-phase power supply	Motor power	Degree of protection	Reference
200...240 V	0.75 kW...75 kW *1...100 HP*	IP 21 UL type 1	**ATV630U07M3...D75M3**
380...480 V	0.75 kW...315 kW *1...500 HP*	IP 21 UL type 1 IP 55 IP 55	**ATV630U07N4...C31N4** **ATV650U07N4...D90N4** **ATV650U07N4E...D90N4E** *(1)*
380...440 V	110 kW...315 kW *150...500 HP*	IP 21 IP 54	**ATV630C11N4F...C31N4F** **ATV650C11N4F...C31N4F**
500...690 V	2.2...90 kW *3...125 HP*	IP 20 UL Type 1	**ATV630U22Y6...D90Y6**

(1) Integrated with disconnect switch.



Normal duty and Heavy duty modes

Altivar Process variable speed drives are designed for use in two operating modes that can optimize the drive nominal rating according to the system constraints.

These two modes are:
- Normal duty (ND): Dedicated mode for applications requiring a slight overload (up to 110%) with a motor power no higher than the drive nominal power
- Heavy duty (HD): Dedicated mode for applications requiring a significant overload (up to 150%) with a motor power no higher than the drive nominal power derated by one rating

Accessories and options

Altivar Process drives are designed to take numerous accessories and options to increase their functionality and also their capacity for integration and adaptation.

Accessories

- ■ Drive:
- □ Fan kit (see page 2/10)
- ■ Graphic display terminal:
- □ Remote mounting kit for mounting on enclosure door (see page 2/15)
- □ Multidrop connection accessories for connecting several drives to the RJ45 terminal port (see page 2/15)

Options

- ■ Modules (see page 2/24):
- □ I/O expansion:
  - 2 analog inputs
  - 6 digital inputs
  - 2 digital outputs
- □ With relay output:
  - 3 NO contacts
- □ Communication:
  - EtherNet/IP and Modbus TCP Dual port
  - CANopen bus: RJ45 daisy chain, SUB-D, 5-way screw terminals
  - PROFINET bus
  - Profibus DP V1 bus
  - DeviceNet bus
  - BACnet MS/TP
- ■ Passive filters (see page 2/34)
- ■ Additional EMC input filters for reducing conducted emissions on the line (see page 2/39)
- ■ Output filters:
- □ dv/dt filters (see page 2/44)
- □ Sinus filters (see page 2/46)

Motor starters

Schneider Electric offers combinations of circuit breakers and contactors to be able to use Altivar Process drives in optimum conditions (see page 2/50).

Variable speed drives
Altivar Process
Three-phase supply voltage: 200...240 V 50/60 Hz
Wall-mounting drives

ATV630D11M3

ATV630D15M3

ATV630D30M3

ATV630D75M3

200...240 V IP 21/UL Type 1 drives (1)

Motor			Line supply				Altivar Process			
Power indicated on rating plate (2)			Line current (3)		Apparent power	Maximum prospective line Isc	Maximum continuous current (2)	Max. transient current for 60 s	Reference (1)	Weight
			200 V	240 V	240 V					
ND:	Normal duty (4)									
HD:	Heavy duty (5)									
	kW	HP	A	A	kVA	kA	A	A		kg/lb
THDi ≤ 44% at 100% load in Normal duty (4)										
ND	0.75	1	3	2.6	1.1	50	4.6	5.1	**ATV630U07M3**	4.300/9.480
HD	*0.37*	*0.5*	*1.7*	*1.5*	*0.6*	*50*	*3.3*	*5*		
ND	1.5	2	5.9	5	2.1	50	8	8.8	**ATV630U15M3**	4.300/9.480
HD	*0.75*	*1*	*3.3*	*3*	*1.2*	*50*	*4.6*	*6.9*		
ND	2.2	3	8.4	7.2	3	50	11.2	12.3	**ATV630U22M3**	4.500/9.921
HD	*1.5*	*2*	*6*	*5.3*	*2.2*	*50*	*8*	*12*		
ND	3	–	11.5	9.9	4.1	50	13.7	15.1	**ATV630U30M3**	4.500/9.921
HD	*2.2*	*3*	*8.7*	*7.6*	*3.2*	*50*	*11.2*	*16.8*		
ND	4	5	15.1	12.9	5.4	50	18.7	20.6	**ATV630U40M3**	4.600/10.141
HD	*3*	–	*11.7*	*10.2*	*4.2*	*50*	*13.7*	*20.6*		
ND	5.5	7.5	20.2	17.1	7.1	50	25.4	27.9	**ATV630U55M3**	7.700/16.976
HD	*4*	*5*	*15.1*	*13*	*5.4*	*50*	*18.7*	*28.1*		
ND	7.5	10	27.1	22.8	9.5	50	32.7	36	**ATV630U75M3**	13.800/30.424
HD	*5.5*	*7.5*	*20.2*	*17.1*	*7.1*	*50*	*25.4*	*38.1*		
ND	11	15	39.3	32.9	13.7	50	46.8	51.5	**ATV630D11M3**	13.800/30.424
HD	*7.5*	*10*	*27.2*	*23.1*	*9.6*	*50*	*32.7*	*49.1*		
ND	15	20	52.6	45.5	18.9	50	63.4	69.7	**ATV630D15M3**	27.300/60.186
HD	*11*	*15*	*40.1*	*34.3*	*14.3*	*50*	*46.8*	*70.2*		
ND	18.5	25	66.7	54.5	22.7	50	78.4	86.2	**ATV630D18M3**	27.300/60.186
HD	*15*	*20*	*53.1*	*44.9*	*18.7*	*50*	*63.4*	*95.1*		
ND	22	30	76.0	64.3	26.7	50	92.6	101.9	**ATV630D22M3**	27.300/60.186
HD	*18.5*	*25*	*64.8*	*54.5*	*22.7*	*50*	*78.4*	*117.6*		
ND	30	40	104.7	88.6	36.8	50	123	135.3	**ATV630D30M3**	56.600/124.781
HD	*22*	*30*	*78.3*	*67.1*	*27.9*	*50*	*92.6*	*138.9*		
ND	37	50	128.0	107.8	44.8	50	149	163.9	**ATV630D37M3**	56.600/124.781
HD	*30*	*40*	*104.7*	*88.6*	*36.8*	*50*	*123*	*184.5*		
ND	45	60	155.1	130.4	54.2	50	176	193.6	**ATV630D45M3**	56.600/124.781
HD	*37*	*50*	*128.5*	*108.5*	*45.1*	*50*	*149*	*223.5*		
ND	55	75	189	161	61.1	50	211	232.1	**ATV630D55M3** (6)	84.000/185.188
HD	*45*	*60*	*156*	*134*	*50*	*50*	*176*	*264*		
ND	75	100	256	215	83.7	50	282	310.2	**ATV630D75M3** (6)	84.000/185.188
HD	*55*	*75*	*189*	*161*	*61.1*	*50*	*211*	*316.5*		

*(1) Altivar Process **ATV630U07M3...D75M3** drives have been designed without an EMC filter. An additional filter can be added to help meet more stringent requirements and reduce electromagnetic emissions.*

*(2) These values are given for a nominal switching frequency of 4 kHz up to **ATV630D22M3** or 2.5 kHz for **ATV630D30M3...D75M3**, for use in continuous operation.*
The switching frequency is adjustable from 2…12 kHz for all ratings.
Above 2.5 or 4 kHz (depending on the rating), the drive will automatically reduce the switching frequency in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current (see the derating curves on our website www.schneider-electric.com).

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

(4) Values given for applications requiring a slight overload (up to 110%).

(5) Values given for applications requiring a significant overload (up to 150%).

(6) Product supplied as IP 00 for mounting in an enclosure. For IP 21 wall mounting, order the IP 21/UL Type 1 conformity kit VW3A9704 separately.

***Note**: Consult the summary tables of possible drive, option, and accessory combinations (see page 2/18).*

Variable speed drives
Altivar Process
Three-phase supply voltage: 380...480 V 50/60 Hz
Wall-mounting Drives

ATV630D15N4

ATV630D30N4

380...480 V IP 21/UL Type 1 drives

Motor			Line supply				Altivar Process			
Power indicated on rating plate *(1)*			Line current *(2)*		Apparent power	Maximum prospective line Isc	Max. continuous current *(1)*	Max. transient current for 60 s	Reference *(5)*	Weight
			380 V	480 V	380 V					
ND:	Normal duty *(3)*									
HD:	*Heavy duty (4)*									
	kW	*HP*	A	A	kVA	kA	A	A		kg/ *lb*
With category C2 integrated EMC filter										
ND	0.75	*1*	1.5	1.3	1.1	50	2.2	2.4	**ATV630U07N4**	4.500/ *9.921*
HD	*0.37*	*0.5*	*0.9*	*0.8*	*0.7*	*50*	*1.5*	*2.3*		
ND	1.5	*2*	3	2.6	2.2	50	4	4.4	**ATV630U15N4**	4.500/ *9.921*
HD	*0.75*	*1*	*1.7*	*1.5*	*1.2*	*50*	*2.2*	*3.3*		
ND	2.2	*3*	4.3	3.8	3.2	50	5.6	6.2	**ATV630U22N4**	4.500/ *9.921*
HD	*1.5*	*2*	*3.1*	*2.9*	*2.4*	*50*	*4*	*6*		
ND	3	–	5.8	5.1	4.2	50	7.2	7.9	**ATV630U30N4**	4.600/ *10.141*
HD	*2.2*	*3*	*4.5*	*4*	*3.3*	*50*	*5.6*	*8.4*		
ND	4	*5*	7.6	6.7	5.6	50	9.3	10.2	**ATV630U40N4**	4.600/ *10.141*
HD	*3*	–	*6*	*5.4*	*4.5*	*50*	*7.2*	*10.8*		
ND	5.5	*7.5*	10.4	9.1	7.6	50	12.7	14	**ATV630U55N4**	4.700/ *10.362*
HD	*4*	*5*	*8*	*7.2*	*6.0*	*50*	*9.3*	*14*		
ND	7.5	*10*	13.8	11.9	9.9	50	16.5	18.2	**ATV630U75N4**	7.700/ *16.976*
HD	*5.5*	*7.5*	*10.5*	*9.2*	*7.6*	*50*	*12.7*	*19.1*		
ND	11	*15*	19.8	17	14.1	50	23.5	25.9	**ATV630D11N4**	7.700/ *16.976*
HD	*7.5*	*10*	*14.1*	*12.5*	*10.4*	*50*	*16.5*	*24.8*		
ND	15	*20*	27	23.3	19.4	50	31.7	34.9	**ATV630D15N4**	13.600/ *29.983*
HD	*11*	*15*	*20.6*	*18.1*	*15.0*	*50*	*23.5*	*35.3*		
ND	18.5	*25*	33.4	28.9	24	50	39.2	43.1	**ATV630D18N4**	14.200/ *31.306*
HD	*15*	*20*	*27.7*	*24.4*	*20.3*	*50*	*31.7*	*47.6*		
ND	22	*30*	39.6	34.4	28.6	50	46.3	50.9	**ATV630D22N4**	14.300/ *31.526*
HD	*18.5*	*25*	*34.1*	*29.9*	*24.9*	*50*	*39.2*	*58.8*		
ND	30	*40*	53.3	45.9	38.2	50	61.5	67.7	**ATV630D30N4**	28.000/ *61.729*
HD	*22*	*30*	*40.5*	*35.8*	*29.8*	*50*	*46.3*	*69.5*		
ND	37	*50*	66.2	57.3	47.6	50	74.5	82	**ATV630D37N4**	28.200/ *62.170*
HD	*30*	*40*	*54.8*	*48.3*	*40.2*	*50*	*61.5*	*92.3*		
ND	45	*60*	79.8	69.1	57.4	50	88	96.8	**ATV630D45N4**	28.700/ *63.273*
HD	*37*	*50*	*67.1*	*59.0*	*49.1*	*50*	*74.5*	*111.8*		

(1) These values are given for use in continuous operation with a nominal switching frequency of 4 kHz (ATV630U07N4...D45N4).
The switching frequency is adjustable from 2…12 kHz (ATV630U07N4...D45N4).
Above the nominal switching frequency, the drive will automatically reduce it in the event of an excessive temperature rise.
For continuous operation above the nominal switching frequency, nominal drive current should be derated according to the derating curves available on www.schneider-electric.com.
(2) Typical value for the indicated motor power and for the maximum prospective line Isc.
(3) Values given for applications requiring a slight overload (up to 110%).
(4) Values given for applications requiring a significant overload (up to 150%).
(5) For cabinet integration ATV630●●●N4Z products, see pages 3/4 and 3/5 in the Cabinet integration chapter.

Note: Consult the summary tables of possible drive, option, and accessory combinations (see page 2/18).

Variable speed drives
Altivar Process
Three-phase supply voltage: 380...480 V 50/60 Hz
Wall-mounting drives

ATV630D55N4

ATV630C25N4

380...480 V IP 21/UL Type 1 drives

Motor			Line supply				Altivar Process			
Power indicated on rating plate *(1)*			Line current *(2)*		Apparent power	Maximum prospective line Isc	Max. continuous current *(1)*	Max. transient current for 60 s	Reference *(6)*	Weight
			380 V	480 V	380 V					
ND:	Normal duty *(3)*									
HD:	*Heavy duty (4)*									
	kW	*HP*	A	A	kVA	kA	A	A		kg/ *lb*
With category C3 integrated EMC filter										
ND	55	*75*	97.2	84.2	70	50	106	116.6	**ATV630D55N4**	56.500/ *124.561*
HD	*45*	*60*	*81.4*	*71.8*	*59.7*	*50*	*88*	*132*		
ND	75	*100*	131.3	112.7	93.7	50	145	159.5	**ATV630D75N4**	58.000/ *127.868*
HD	*55*	*75*	*98.9*	*86.9*	*72.2*	*50*	*106*	*159*		
ND	90	*125*	156.2	135.8	112.9	50	173	190.3	**ATV630D90N4**	58.500/ *128.970*
HD	*75*	*100*	*134.3*	*118.1*	*98.2*	*50*	*145*	*217.5*		
ND	110	*150*	201	165	121.8	50	211	232.1	**ATV630C11N4** *(5)*	82.000/ *180.779*
HD	*90*	*125*	*170*	*143*	*102.6*	*50*	*173*	*259.5*		
ND	132	*200*	237	213	161.4	50	250	275	**ATV630C13N4** *(5)*	82.000/ *180.779*
HD	*110*	*150*	*201*	*165*	*121.8*	*50*	*211*	*317*		
ND	160	*250*	284	262	201.3	50	302	332.2	**ATV630C16N4** *(5)*	82.000/ *180.779*
HD	*132*	*200*	*237*	*213*	*161.4*	*50*	*250*	*375*		
ND	220	*350*	397	324	247	50	427	470	**ATV630C22N4** *(5)*	163.000/ *359.353*
HD	*160*	*250*	*296*	*246*	*187*	*50*	*302*	*453*		
ND	250	*400*	451	366	279	50	481	529	**ATV630C25N4** *(5)*	207.000/ *456.357*
HD	*220*	*300*	*365*	*301*	*229*	*50*	*387*	*581*		
ND	315	*500*	569	461	351	50	616	678	**ATV630C31N4** *(5)*	207.000/ *456.357*
HD	*250*	*400*	*457*	*375*	*286*	*50*	*481*	*722*		

(1) These values are given for use in continuous operation with a nominal switching frequency of 2.5 kHz (ATV630D55N4...C31N4).
The switching frequency is adjustable from 2…8 kHz (ATV630D55N4...C31N4).
Above the nominal switching frequency, the drive will automatically reduce it in the event of an excessive temperature rise.
For continuous operation above the nominal switching frequency, nominal drive current should be derated according to the derating curves available on www.schneider-electric.com.

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

(3) Values given for applications requiring a slight overload (up to 110%).

(4) Values given for applications requiring a significant overload (up to 150%).

(5) Product supplied as IP 00 for mounting in an enclosure. For IP 21/UL Type1 wall mounting, an adaptation kit should be ordered separately (see page 2/11).

(6) For cabinet integration ATV630●●●N4Z products, see pages 3/4 and 3/5 in the Cabinet integration chapter.

Note: Consult the summary tables of possible drive, option, and accessory combinations (see page 2/18).

Variable speed drives
Altivar Process
Three-phase supply voltage: 380...480 V 50/60 Hz
Wall-mounting drives

ATV650D15N4

ATV650D30N4

ATV650D55N4

380...480 V IP 55 drives with category C2 or C3 integrated EMC filter (1)

Motor			Line supply				Altivar Process			
Power indicated on rating plate (2)			Line current (3)		Apparent power	Maximum prospective line Isc	Maximum continuous current (2)	Max. transient current for 60 s	Reference (6)	Weight
			380 V	480 V	380 V					
ND:	Normal duty (4)									
HD:	Heavy duty (5)									
	kW	HP	A	A	kVA	kA	A	A		kg/lb
THDi ≤ 44% at 100% load in Normal duty (4)										
ND	0.75	1	1.5	1.3	1.1	50	2.2	2.4	ATV650U07N4	10.500/23.149
HD	0.37	0.5	0.9	0.8	0.7	50	1.5	2.3		
ND	1.5	2	3	2.6	2.2	50	4	4.4	ATV650U15N4	10.500/23.149
HD	0.75	1	1.7	1.5	1.2	50	2.2	3.3		
ND	2.2	3	4.3	3.8	3.2	50	5.6	6.2	ATV650U22N4	10.500/23.149
HD	1.5	2	3.1	2.9	2.4	50	4	6		
ND	3	–	5.8	5.1	4.2	50	7.2	7.9	ATV650U30N4	10.600/23.369
HD	2.2	3	4.5	4	3.3	50	5.6	8.4		
ND	4	5	7.6	6.7	5.6	50	9.3	10.2	ATV650U40N4	10.600/23.369
HD	3	–	6	5.4	4.5	50	7.2	10.8		
ND	5.5	7.5	10.4	9.1	7.6	50	12.7	14	ATV650U55N4	10.700/23.589
HD	4	5	8	7.2	6.0	50	9.3	14		
ND	7.5	10	13.8	11.9	9.9	50	16.5	18.2	ATV650U75N4	13.700/30.203
HD	5.5	7.5	10.5	9.2	7.6	50	12.7	19.1		
ND	11	15	19.8	17	14.1	50	23.5	25.9	ATV650D11N4	13.700/30.203
HD	7.5	10	14.1	12.5	10.4	50	16.5	24.8		
ND	15	20	27	23.3	19.4	50	31.7	34.9	ATV650D15N4	19.600/43.211
HD	11	15	20.6	18.1	15	50	23.5	35.3		
ND	18.5	25	33.4	28.9	24	50	39.2	43.1	ATV650D18N4	20.600/45.415
HD	15	20	27.7	24.4	20.3	50	31.7	47.6		
ND	22	30	39.6	34.4	28.6	50	46.3	50.9	ATV650D22N4	20.600/45.415
HD	18.5	25	34.1	29.9	24.9	50	39.2	58.8		
ND	30	40	53.3	45.9	38.2	50	61.5	67.7	ATV650D30N4	50.000/110.231
HD	22	30	40.5	35.8	29.8	50	46.3	69.5		
ND	37	50	66.2	57.3	47.6	50	74.5	82	ATV650D37N4	50.000/110.231
HD	30	40	54.8	48.3	40.2	50	61.5	92.3		
ND	45	60	79.8	69.1	57.4	50	88	96.8	ATV650D45N4	50.000/110.231
HD	37	50	67.1	59	49.1	50	74.5	111.8		
ND	55	75	97.2	84.2	70	50	106	116.6	ATV650D55N4	87.000/191.802
HD	45	60	81.4	71.8	59.7	50	88	132		
ND	75	100	131.3	112.7	93.7	50	145	159.5	ATV650D75N4	87.000/191.802
HD	55	75	98.9	86.9	72.2	50	106	159		
ND	90	125	156.2	135.8	112.9	50	173	190.3	ATV650D90N4	87.000/191.802
HD	75	100	134.3	118.1	98.2	50	145	217.5		

*(1) Category C2 EMC filter for **ATV650U07N4...D45N4**. Category C3 EMC filter above **ATV650D45N4**.*
*(2) These values are given for a nominal switching frequency of 4 kHz adjustable from 2...12 kHz up to **ATV650D45N4** or 2.5 kHz adjustable from 2…8 kHz for **ATV650D55N4...D90N4**, for use in continuous operation.*
Above 2.5 or 4 kHz (depending on the rating), the drive will automatically reduce the switching frequency in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current (see the derating curves on our website www.schneider-electric.com).
(3) Typical value for the indicated motor power and for the maximum prospective line Isc.
(4) Values given for applications requiring a slight overload (up to 110%).
(5) Values given for applications requiring a significant overload (up to 150%).
(6) Supplied with cable gland.

***Note**: Consult the summary tables of possible drive, option and accessory combinations (see page 2/18).*

Variable speed drives
Altivar Process
Three-phase supply voltage: 380...480 V 50/60 Hz
Wall-mounting drives

ATV650D15N4E

ATV650D30N4E

ATV650D55N4E

380...480 V IP 55 drives with Vario disconnect switch and category C2 or C3 integrated EMC filter *(1)*

Motor			Line supply				Altivar Process			
Power indicated on rating plate *(2)*			Line current *(3)*		Apparent power	Maximum prospective line Isc	Maximum continuous current *(2)*	Max. transient current for 60 s	Reference *(6)*	Weight
			380 V	480 V	380 V					
ND:	Normal duty *(4)*									
HD:	*Heavy duty (5)*									
	kW	*HP*	A	A	kVA	kA	A	A		kg/ *lb*
THDi ≤ 44% at 100% load in Normal duty *(4)*										
ND	0.75	*1*	1.5	1.3	1.1	50	2.2	2.4	**ATV650U07N4E**	10.500/ *23.149*
HD	*0.37*	*0.5*	*0.9*	*0.8*	*0.7*	*50*	*1.5*	*2.3*		
ND	1.5	*2*	3	2.6	2.2	50	4	4.4	**ATV650U15N4E**	10.500/ *23.149*
HD	*0.75*	*1*	*1.7*	*1.5*	*1.2*	*50*	*2.2*	*3.3*		
ND	2.2	*3*	4.3	3.8	3.2	50	5.6	6.2	**ATV650U22N4E**	10.500/ *23.149*
HD	*1.5*	*2*	*3.1*	*2.9*	*2.4*	*50*	*4*	*6*		
ND	3	–	5.8	5.1	4.2	50	7.2	7.9	**ATV650U30N4E**	10.600/ *23.369*
HD	*2.2*	*3*	*4.5*	*4*	*3.3*	*50*	*5.6*	*8.4*		
ND	4	*5*	7.6	6.7	5.6	50	9.3	10.2	**ATV650U40N4E**	10.600/ *23.369*
HD	*3*	–	*6*	*5.4*	*4.5*	*50*	*7.2*	*10.8*		
ND	5.5	*7.5*	10.4	9.1	7.6	50	12.7	14	**ATV650U55N4E**	10.700/ *23.589*
HD	*4*	*5*	*8*	*7.2*	*6.0*	*50*	*9.3*	*14*		
ND	7.5	*10*	13.8	11.9	9.9	50	16.5	18.2	**ATV650U75N4E**	13.700/ *30.203*
HD	*5.5*	*7.5*	*10.5*	*9.2*	*7.6*	*50*	*12.7*	*19.1*		
ND	11	*15*	19.8	17	14.1	50	23.5	25.9	**ATV650D11N4E**	13.700/ *30.203*
HD	*7.5*	*10*	*14.1*	*12.5*	*10.4*	*50*	*16.5*	*24.8*		
ND	15	*20*	27	23.3	19.4	50	31.7	34.9	**ATV650D15N4E**	19.600/ *43.211*
HD	*11*	*15*	*20.6*	*18.1*	*15*	*50*	*23.5*	*35.3*		
ND	18.5	*25*	33.4	28.9	24	50	39.2	43.1	**ATV650D18N4E**	20.600/ *45.415*
HD	*15*	*20*	*27.7*	*24.4*	*20.3*	*50*	*31.7*	*47.6*		
ND	22	*30*	39.6	34.4	28.6	50	46.3	50.9	**ATV650D22N4E**	20.600/ *45.415*
HD	*18.5*	*25*	*34.1*	*29.9*	*24.9*	*50*	*39.2*	*58.8*		
ND	30	*40*	53.3	45.9	38.2	50	61.5	67.7	**ATV650D30N4E**	50.000/ *110.231*
HD	*22*	*30*	*40.5*	*35.8*	*29.8*	*50*	*46.3*	*69.5*		
ND	37	*50*	66.2	57.3	47.6	50	74.5	82	**ATV650D37N4E**	50.000/ *110.231*
HD	*30*	*40*	*54.8*	*48.3*	*40.2*	*50*	*61.5*	*92.3*		
ND	45	*60*	79.8	69.1	57.4	50	88	96.8	**ATV650D45N4E**	50.000/ *110.231*
HD	*37*	*50*	*67.1*	*59*	*49.1*	*50*	*74.5*	*111.8*		
ND	55	*75*	97.2	84.2	70	50	106	116.6	**ATV650D55N4E**	87.000/ *191.802*
HD	*45*	*60*	*81.4*	*71.8*	*59.7*	*50*	*88*	*132*		
ND	75	*100*	131.3	112.7	93.7	50	145	159.5	**ATV650D75N4E**	87.000/ *191.802*
HD	*55*	*75*	*98.9*	*86.9*	*72.2*	*50*	*106*	*159*		
ND	90	*125*	156.2	135.8	112.9	50	173	190.3	**ATV650D90N4E**	87.000/ *191.802*
HD	*75*	*100*	*134.3*	*118.1*	*98.2*	*50*	*145*	*217.5*		

*(1) Category C2 EMC filter for **ATV650U07N4E...D45N4E**. Category C3 EMC filter above **ATV650D45N4E**.*
*(2) These values are given for a nominal switching frequency of 4 kHz adjustable from 2...12 kHz up to **ATV650D45N4E** or 2.5 kHz adjustable from 2…8 kHz for **ATV650D55N4E...D90N4E**, for use in continuous operation.*
Above 2.5 or 4 kHz (depending on the rating), the drive will automatically reduce the switching frequency in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current (see the derating curves on our website www.schneider-electric.com).
(3) Typical value for the indicated motor power and for the maximum prospective line Isc.
(4) Values given for applications requiring a slight overload (up to 110%).
(5) Values given for applications requiring a significant overload (up to 150%).
(6) Supplied with cable gland.

***Note**: Consult the summary tables of possible drive, option, and accessory combinations (see page 2/18).*

Variable speed drives
Altivar Process
Three-phase supply voltage: 500...690 V 50/60 Hz
Wall-mounting drives

ATV630U22Y6

ATV630D37Y6

500...690 V IP 00 drives *(1)*

Motor					Line supply				Altivar Process			
Power indicated on rating plate *(2)*					Line current *(3)*		Apparent power	Maximum prospective line Isc	Max. continuous current *(2)*	Max. transient current for 60 s	Reference	Weight
ND:	Normal duty *(4)*				500 V	690 V	690 V					
HD:	*Heavy duty (5)*											
Supply voltage	500 V		690 V									
	kW	*HP*	kW	*HP*	A	A	kVA	kA	A	A		kg/ *lb*
With category C3 integrated EMC filter												
ND	1.5	2	2.2	3	3.4	3.6	4.3	70	3.1	3.4	**ATV630U22Y6**	22.000/ *48.502*
HD	*1.1*	*1.5*	*1.5*	*2*	*2.6*	*2.6*	*3.1*	*70*	*2.4*	*3.6*		
ND	2.2	3	3	–	4.7	4.8	5.7	70	4.2	4.6	**ATV630U30Y6**	22.000/ *48.502*
HD	*1.5*	*2*	*2.2*	*3*	*3.4*	*3.6*	*4.3*	*70*	*3.1*	*4.7*		
ND	3	–	4	5	6.2	6.1	7.3	70	5.4	5.9	**ATV630U40Y6**	22.000/ *48.502*
HD	*2.2*	*3*	*3*	–	*4.7*	*4.8*	*5.7*	*70*	*4.2*	*6.3*		
ND	4	5	5.5	7.5	7.9	8	9.6	70	7.2	7.9	**ATV630U55Y6**	22.000/ *48.502*
HD	*3*	–	*4*	*5*	*6.2*	*6.1*	*7.3*	*70*	*5.4*	*8.1*		
ND	5.5	7.5	7.5	10	10.4	10.5	12.5	70	9.5	10.5	**ATV630U75Y6**	22.000/ *48.502*
HD	*4*	*5*	*5.5*	*7.5*	*7.9*	*8*	*9.6*	*70*	*7.2*	*10.8*		
ND	7.5	10	11	15	13.6	14.7	17.6	70	13.5	14.9	**ATV630D11Y6**	22.000/ *48.502*
HD	*5.5*	*7.5*	*7.5*	*10*	*10.4*	*10.5*	*12.5*	*70*	*9.5*	*14.3*		
ND	11	15	15	20	18.4	19.2	22.9	70	18	19.8	**ATV630D15Y6**	22.000/ *48.502*
HD	*7.5*	*10*	*11*	*15*	*13.6*	*14.7*	*17.6*	*70*	*13.5*	*20.3*		
ND	15	20	18.5	25	23.1	23	27.5	70	24	26.4	**ATV630D18Y6**	22.000/ *48.502*
HD	*11*	*15*	*15*	*20*	*18.4*	*19.2*	*22.9*	*70*	*18*	*27.0*		
ND	18.5	25	22	30	27.6	26	31.1	70	29	31.9	**ATV630D22Y6**	22.000/ *48.502*
HD	*15*	*20*	*18.5*	*25*	*23.2*	*23*	*27.5*	*70*	*24*	*36.0*		
ND	22	30	30	40	32.1	32.8	39.2	70	34	37.4	**ATV630D30Y6**	22.000/ *48.502*
HD	*18.5*	*25*	*22*	*30*	*27.6*	*26*	*31.1*	*70*	*29*	*43.5*		
ND	30	40	37	50	47.2	46.2	55.2	70	45	49.5	**ATV630D37Y6**	53.000/ *116.845*
HD	*22*	*30*	*30*	*40*	*37.7*	*38.5*	*46.0*	*70*	*34*	*51.0*		
ND	37	50	45	60	55.6	54.4	65.0	70	55	60.5	**ATV630D45Y6**	53.000/ *116.845*
HD	*30*	*40*	*37*	*50*	*47.2*	*46.2*	*55.2*	*70*	*45*	*67.5*		
ND	45	60	55	75	65.5	62.5	74.7	70	66	72.6	**ATV630D55Y6**	53.000/ *116.845*
HD	*37*	*50*	*45*	*60*	*55.6*	*54.4*	*65.0*	*70*	*55*	*82.5*		
ND	55	75	75	100	82.7	87.7	104.8	70	83	91.3	**ATV630D75Y6**	53.000/ *116.845*
HD	*45*	*60*	*55*	*75*	*71*	*68.5*	*81.9*	*70*	*66*	*99.0*		
ND	75	100	90	125	108.3	99.4	118.8	70	108	118.8	**ATV630D90Y6**	53.000/ *116.845*
HD	*55*	*75*	*75*	*100*	*82.7*	*87.7*	*104.8*	*70*	*83*	*124.5*		

(1) Product supplied as IP 00 for mounting in an enclosure. For IP 20/UL Type1 wall mounting, an adaptation kit should be ordered separately (see page 2/11).

*(2) These values are given for use in continuous operation with a nominal switching frequency between 2.5 kHz (**ATV630D37Y6**...**D90Y6**) and 4 kHz (**ATV630U22Y6**...**D30Y6**). The switching frequency is adjustable from 1…4.9 kHz (**ATV630D37Y6**...**D90Y6**) to 2…8 kHz (**ATV630U22Y6**...**D30Y6**).*
Above the nominal switching frequency, the drive will automatically reduce it in the event of an excessive temperature rise.
For continuous operation above the nominal switching frequency, nominal drive current should be derated according to the derating curves available on www.schneider-electric.com.

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

(4) Values given for applications requiring a slight overload (up to 110%).

(5) Values given for applications requiring a significant overload (up to 150%).

***Note:** Consult the summary tables of possible drive, option, and accessory combinations (see page 2/18).*

Variable speed drives

Altivar Process

Three-phase supply voltage: 380...440 V 50/60 Hz,
Floor-standing drives without braking unit

ATV630C16N4F

380...440 V IP 21 drives with category C3 integrated EMC filter *(5)*

Motor			Line supply				Altivar Process			
Power indicated on rating plate *(1)*			Line current *(2)*		Apparent power	Maximum prospective line Isc	Maximum continuous current *(1)*	Max. transient current for 60 s	Reference	Weight
			380 V	400 V	380 V					
ND:	Normal duty *(3)*									
HD:	*Heavy duty (4)*									
	kW	*HP*	A	A	kVA	kA	A	A		kg/ *lb*
THDi ⩽ 44% at 100% load in Normal duty *(3)*										
ND	*110*	–	*207*	*195*	*135*	50	*211*	*232*	**ATV630C11N4F**	300.000/ *661.386*
HD	*90*	–	*174*	*164*	*113*	*50*	*173*	*259*		
ND	*132*	–	*250*	*232*	*161*	50	*250*	*275*	**ATV630C13N4F**	300.000/ *661.386*
HD	*110*	–	*207*	*197*	*136*	*50*	*211*	*316*		
ND	*160*	–	*291*	*277*	*192*	50	*302*	*332*	**ATV630C16N4F**	300.000/ *661.386*
HD	*132*	–	*244*	*232*	*161*	*50*	*250*	*375*		
ND	200	–	369	349	242	50	370	407	**ATV630C20N4F**	400.000/ *881.848*
HD	*160*	–	*302*	*286*	*198*	*50*	*302*	*453*		
ND	250	–	453	432	299	50	477	524	**ATV630C25N4F**	400.000/ *881.848*
HD	*200*	–	*369*	*353*	*244*	*50*	*370*	*555*		
ND	315	–	566	538	373	50	590	649	**ATV630C31N4F**	400.000/ *881.848*
HD	*250*	–	*453*	*432*	*299*	*50*	*477*	*715*		

(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…8 kHz for all ratings.
Above 2.5 kHz, the drive will automatically reduce the switching frequency in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current (see the 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) Values given for applications requiring a slight overload (up to 110%).

(4) Values given for applications requiring a significant overload (up to 150%).

(5) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3 and an unshielded cable length up to 450 m/1,476 ft in category C4.

***Note**: Consult the summary tables of possible drive, option, and accessory combinations (see page 2/18).*

Variable speed drives

Altivar Process

Three-phase supply voltage: 380...440 V 50/60 Hz,
Floor-standing drives without braking unit

ATV650C31N4F

380...440 V IP 54 drives with switch and category C3 integrated EMC filter *(5)*

Motor			Line supply				Altivar Process			
Power indicated on rating plate *(1)*			Line current *(2)*		Apparent power	Maximum prospective line Isc	Maximum continuous current *(1)*	Max. transient current for 60 s	Reference	Weight
			380 V	400 V	380 V					
ND:	Normal duty *(3)*									
HD:	*Heavy duty (4)*									
	kW	*HP*	A	A	kVA	kA	A	A		kg/ *lb*
THDi ≤ 44% at 100% load in Normal duty *(3)*										
ND	*110*	–	*207*	*195*	*135*	50	*211*	*232*	**ATV650C11N4F**	310.000/ *683.433*
HD	*90*	–	*174*	*164*	*113*	*50*	*173*	*259*		
ND	*132*	–	*250*	*232*	*161*	50	*250*	*275*	**ATV650C13N4F**	310.000/ *683.433*
HD	*110*	–	*207*	*197*	*136*	*50*	*211*	*316*		
ND	*160*	–	*291*	*277*	*192*	50	*302*	*332*	**ATV650C16N4F**	310.000/ *683.433*
HD	*132*	–	*244*	*232*	*161*	*50*	*250*	*375*		
ND	*200*	–	*369*	*349*	*242*	50	*370*	*407*	**ATV650C20N4F**	420.000/ *925.941*
HD	*160*	–	*302*	*286*	*198*	*50*	*302*	*453*		
ND	*250*	–	*453*	*432*	*299*	50	*477*	*524*	**ATV650C25N4F**	420.000/ *925.941*
HD	*200*	–	*369*	*353*	*244*	*50*	*370*	*555*		
ND	*315*	–	*566*	*538*	*373*	50	*590*	*649*	**ATV650C31N4F**	420.000/ *925.941*
HD	*250*	–	*453*	*432*	*299*	*50*	*477*	*715*		

(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…8 kHz for all ratings. Above 2.5 kHz, the drive will automatically reduce the switching frequency in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current (see the 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) Values given for applications requiring a slight overload (up to 110%).

(4) Values given for applications requiring a significant overload (up to 150%).

(5) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3 and an unshielded cable length up to 450 m/1,476 ft in category C4.

***Note**: Consult the summary tables of possible drive, option, and accessory combinations (see page 2/18).*

Variable speed drives
Altivar Process
Replacement parts

F19_FAN_CPSCT17001

VX5VPS3002

F19_FAN_CPSCT17002

VX5VPS5002

Replacement parts

Description	For drive	Reference	Weight kg/*lb*
Fan kit for wall-mounting drives			
Power fan for IP 21 and IP 55 drives, bracket, instruction sheets	ATV630U07M3...U40M3, ATV630U07N4...U55N4, ATV650U07N4...U55N4, ATV650U07N4E...U55N4E	**VX5VPS1001**	–
	ATV630U55M3, ATV630U75N4...D11N4, ATV650U75N4...D11N4, ATV650U75N4E...D11N4E	**VX5VPS2001**	–
	ATV630U75M3...D11M3, ATV630D15N4...D22N4, ATV650D15N4...D22N4, ATV650D15N4E...D22N4E	**VX5VPS3001**	–
	ATV630U22Y6...D30Y6	**VX5VPS3002**	–
	ATV630D15M3...D22M3, ATV630D30N4...D45N4, ATV650D30N4...D45N4, ATV650D30N4E...D45N4E	**VX5VPS4001**	–
	ATV630D30M3...D45M3, ATV630D30M3C...D45M3C, ATV630D55N4...D90N4, ATV650D55N4...D90N4, ATV650D55N4E...D90N4E	**VX5VPS5001**	–
	ATV630D37Y6...D90Y6	**VX5VPS5002**	–
	ATV630D55M3C...D75M3C, ATV630C11N4...C16N4	**VX5VPS6001**	–
	ATV630C22N4...C31N4	**VZ3V1212** *(1)*	–
		VZ3V1213 *(2)*	–
Control fan for IP 55 drives, bracket, instruction sheets	ATV650U07N4...D22N4, ATV650U07N4E...D22N4E	**VX5VP50A001**	–
	ATV650D30N4...D90N4, ATV650D30N4E...D90N4E	**VX5VP50BC001**	–
Fan kit for floor-standing drives			
Power fan, bracket, instruction sheets	ATV630C11N4F...C31N4F, ATV650C11N4F...C31N4F	**VX5VPM001**	–
Door fan, bracket, instruction sheets	ATV630C11N4F...C31N4F, ATV650C11N4F...C31N4F	**VX5VPM002**	–
Enclosure grid filter pads			
223 x 223 mm/ *8.78 x 8.78 in.* enclosure grid filter pad	ATV650C11N4F...C16N4F	**NSYCAF223**	–
291 x 291 mm/ *11.46 x 11.46 in.* enclosure grid filter pad	ATV650C20N4F...C31N4F	**NSYCAF291**	–

(1) Fan power electronic for drive, with 1 unit for ATV630C22N4, 2 units for ATV630C25N4, and 3 units for ATV630C31N4.

(2) Internal fan for drive, with 1 unit for ATV630C22N4, 2 units for ATV630C25N4, and 3 units for ATV630C31N4.

Presentation: page 1/8 | Configuration and runtime tools: page 2/14 | Combinations: page 2/18 | Dimensions: page 2/56

F19_ACC_CPSCT17009

VW3A95116

Accessories for flange-mounting

Description	For use with (1)	Enclosure max.height (mm/in.)	Enclosure max. width (mm/in.)	Reference	Weight kg/lb
Mounting bracket for flange-mounting kit	NSYPTDS1, NSYPTDS2, NSYPTDS3	–	–	**NSYAEFPFPTD**	–
Flange-mounting kit for separate air flow (2)	ATV630U07M3...U40M3, ATV630U07N4...U55N4	360/*14.17*	235/*9.25*	**NSYPTDS1**	
	ATV630U55M3, ATV630U75N4...D11N4	420/*16.54*	265/*10.43*	**NSYPTDS2**	–
	ATV630U75M3...D11M3, ATV630D15N4...D22N4	555/*21.85*	295/*11.61*	**NSYPTDS3**	–
	ATV630D15M3...D22M3, ATV630D30N4...D45N4	800/*31.50*	385/*15.16*	**NSYPTDS4**	–
	ATV630D30M3…D45M3 ATV630D55N4…D90N4	975/*38.39*	427/*16.81*	**NSYPTDS5**	–
	ATV630C11N4…C16N4 ATV630D55M3...D75M3	–	–	**VW3A95116**	–
	ATV630C22N4	–	–	**VW3A9513**	–
	ATV630C25N4 ATV630C31N4	–	–	**VW3A9514**	–

F19_ACC_CPSCT17006

IP 20 and IP 21/UL Type 1 conformity kits

Description	For use with	Reference	Weight kg/lb
IP 20/UL Type 1 conformity kit	ATV630U22Y6...D30Y6	**VW3A9705**	–
	ATV630D37Y6...D90Y6	**VW3A9706**	–
IP 21/UL Type 1 conformity kit	ATV630D55M3…D75M3 ATV630C11N4…C16N4	**VW3A9704**	–
UL Type 1 conformity kit	ATV630C22N4	**VW3A9212**	–
	ATV630C25N4 ATV630C31N4	**VW3A9213**	–

VW3A9705

IP 31 conformity kits

Description	For use with	Reference	Weight kg/lb
IP 31 conformity kit	ATV630C22N4	**VW3A9112**	–
	ATV630C25N4 ATV630C31N4	**VW3A9113**	–

(1) All accessories designed for use with N4 suffix articles ATV630U07N4...U75N4 and ATV630D11N4...D90N4 can also be used with their ...N4Z suffix articles equivalent.

(2) RUE-2192 patented system.

Presentation: page 1/8
Configuration and runtime tools: page 2/14
Combinations: page 2/18
Dimensions: page 2/56

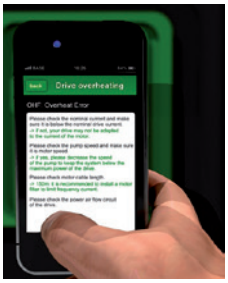
Variable speed drives
Altivar Process
Option: Configuration and runtime tools

Graphic display terminal
(example shows dynamic pump operation in relation to its optimum operation)

Detected fault: The screen's red backlight is activated automatically

Embedded dynamic QR codes for contextual, instantaneous access to online help

Scanning the QR code from a smartphone or tablet



Instant access to online help

Graphic display terminal (supplied with the drive)

This terminal can be:
- Connected and mounted on the front of the drive
- Connected and mounted on an enclosure door using a remote mounting accessory
- Connected to a PC to exchange files via a Mini USB/USB connection *(1)*
- Connected to several drives in multidrop mode (see page 2/15)

This terminal is used to:
- Control, adjust, and configure the drive
- Display current values (motor, I/O, and process data)
- Display graphic dashboards such as the energy consumption monitoring dashboard
- Store and download configurations (several configuration files can be stored in the 16 MB memory)
- Duplicate the configuration of one powered-up drive on another powered-up drive
- Copy configurations from a PC or drive and duplicate them on another drive (the drives must be powered on for the duration of the duplication operations)

Other characteristics:
- Up to 24 languages (complete alphabets) covering the majority of countries around the world (languages can be removed, added, and updated according to user requirements; please consult our website www.schneider-electric.com)
- 2-color backlit display (white and red); if an error is detected, the red backlight is activated automatically (function can be disabled)
- Operating range: -15…50 °C/*+5…122 °F*
- Degree of protection: IP 65
- Trend curves: Graphic display of changes over time in monitoring variables, energy data, and process data
- Graphic display of a pump's dynamic operation in relation to its optimum operation
- Embedded dynamic QR codes for contextual, instantaneous access to online help (diagnostics and settings, etc.) using a smartphone or tablet
- Real-time clock with 10-year backup battery providing data acquisition and event timestamping functions even when the drive is stopped

Description

Display:
- 8 lines, 240 x 160 pixels
- Displays bar charts, gauges, and trend charts
- 4 function keys to facilitate navigation and provide contextual links for enabling functions
- "STOP/RESET" button: Local control of motor stop command/clearing detected faults
- "RUN" button: Local control of motor run command
- Navigation buttons:
  - OK button: Saves the current value (ENT)
  - Turn ±: Increases or decreases the value, goes to the next or previous line
  - "ESC" button: Aborts a value, parameter, or menu to return to the previous selection
  - Home: Root menu
  - Information (i): Contextual help

References

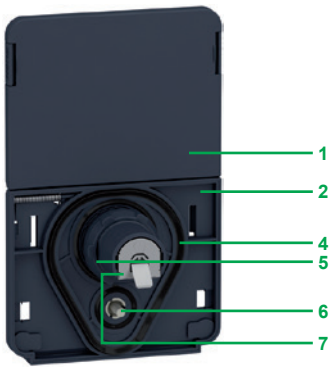
Description	Reference	Weight kg/ *lb*
Graphic display terminal	**VW3A1111**	0.200/ *0.441*

Communication accessory

Description	Reference	Weight kg/ *lb*
IP 20 Wi-Fi dongle Remote mounting of the Ethernet port for connection of Wi-Fi equipment (PC, tablet, smartphone, etc.) powered by internal rechargeable battery	**TCSEGWB13FA0**	0.350/ *0.772*

(1) Graphic display terminal used only as a handheld terminal.

Remote mounting kit for mounting graphic display terminal on enclosure door (front panel)



Remote mounting kit for graphic display terminal (rear panel)

Accessories for graphic display terminal

■ Remote mounting kit for mounting on enclosure door with IP 65/UL Type 12 degree of protection as standard

The kit comprises:
- Tightening tool (also sold separately under the reference ZB5AZ905)

1 Cover plate to maintain IP 65 protection when there is no terminal connected
2 Mounting plate
3 RJ45 port for the graphic display terminal
4 Seal
5 Fixing nut
6 Anti-rotation pin
7 RJ45 port for connecting the remote-mounting cordset (10 m/*32.81 ft* maximum) Cordsets should be ordered separately depending on the length required.
8 Grounding connector

Drilling a hole with a standard Ø 22 tool, as used for a pushbutton, allows the unit to be mounted without needing a cut-out in the enclosure (Ø 22.5 mm/*Ø 0.89 in.* drill hole).

References

Description	Length m/ *ft*	IP	Reference	Weight kg/ *lb*
Remote mounting kit Order with remote-mounting cordset VW3A1104R●●●	–	65/UL Type 12	**VW3A1112**	–
Tightening tool for remote mounting kit	–	–	**ZB5AZ905**	0.016/ *0.035*
Remote-mounting cordset equipped with 2 RJ45 connectors	1/ *3.28*	–	**VW3A1104R10**	0.050/ *0.110*
	3/ *9.84*	–	**VW3A1104R30**	0.150/ *0.331*
	5/ *16.40*	–	**VW3A1104R50**	0.250/ *0.551*
	10/ *32.81*	–	**VW3A1104R100**	0.500/ *1.102*
USB/Mini B USB cable for connecting the display terminal to a PC	–	–	**TCSXCNAMUM3P**	–
IP 65 remote mounting kit for Ethernet port *(1)* Ø 22 RJ45 female/female adapter with seal	–	65	**VW3A1115**	0.200/ *0.441*
Set of 10 x IP55 shutters for ATV650: to keep IP55 protection level when the graphic display terminal is removed	–	55	**VW3A1116**	0.640/ *1.411*

Multidrop connection accessories

These accessories are used to connect a graphic display terminal to several drives via a multidrop link. This multidrop connection uses the RJ45 terminal port on the front of the drive.

Connection accessories

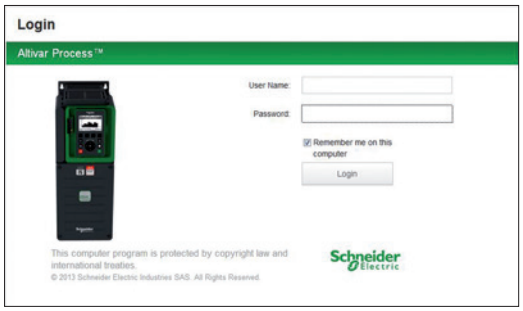
Description			Sold in lots of	Unit reference	Weight kg/ *lb*
Modbus splitter box 10 RJ45 connectors and 1 screw terminal block			–	**LU9GC3**	0.500/ *1.102*
Modbus T-junction boxes	With 0.3 m/*0.98 ft integrated cable*		–	**VW3A8306TF03**	0.190/ *0.419*
	With 1 m/3.28 ft integrated cable		–	**VW3A8306TF10**	0.210/ *0.463*
Modbus line terminator	For RJ45 connector	R = 120 Ω C = 1 nf	2	**VW3A8306RC**	0.010/ *0.022*

Cordsets (equipped with 2 RJ45 connectors)

Used for	Length m/ *ft*	Reference	Weight kg/ *lb*
Serial link	0.3/ *0.98*	**VW3A8306R03**	0.025/ *0.055*
	1/ *3.28*	**VW3A8306R10**	0.060/ *0.132*
	3/ *9.84*	**VW3A8306R30**	0.130/ *0.287*

(1) Used to connect a remote PC to the RJ45 port on an IP 21 drive mounted in an enclosure or on a wall. Drill hole with a standard Ø 22 tool, as used for a pushbutton.(Requires a remote-mounting cordset VW3A1104R●0● equipped with 2 RJ45 connectors).

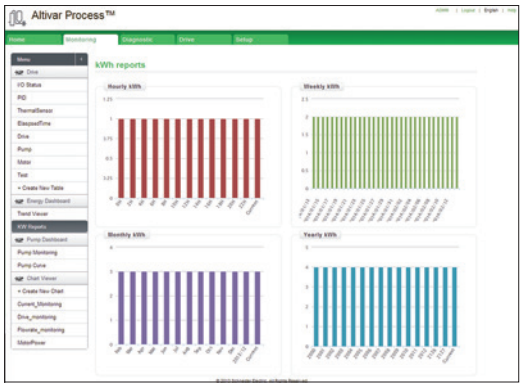
Variable speed drives
Altivar Process
Option: Configuration and runtime tools



Login screen

Customizable widgets

Pump curves



Energy dashboard

Web server

Presentation

- The Web server can be accessed:
  - For a drive not connected to an Ethernet network:
    - Via an Ethernet cable or the Schneider Electric Wi-Fi dongle (the drive then appears as a network device)
  - For a drive connected to an Ethernet network:
    - From any point on the network by entering the drive IP address

- The Web server is used for:
  - Commissioning the drive (setting configuration parameters and enabling the main functions)
  - Monitoring energy and process data, as well as drive and motor data
  - Diagnostics (drive status, file transfer, detected error and warning logs)

Description

The Web server is structured around 5 tabs.

- "My dashboard" tab:
  - Configurable using a wide choice of widgets; groups all the information and dashboards selected by the user on one page

- "Display" tab:
  - Monitors energy indicators, efficiency, and performance
  - Displays process data such as optimum pump operation
  - Monitors drive parameters and status
  - Shows the I/O state and assignment

- "Diagnostics" tab:
  - Drive status
  - Time and date-stamped warning and detected error logs
  - Network diagnostics
  - Access to drive self-tests

- "Drive" tab:
  - Access to the main drive adjustment parameters with contextual help

- "Setup" tab:
  - Network configuration
  - Access management
  - Transferring and retrieving drive configurations
  - Exporting data acquisition files and logs
  - Customizing pages (colors, logos, etc.)

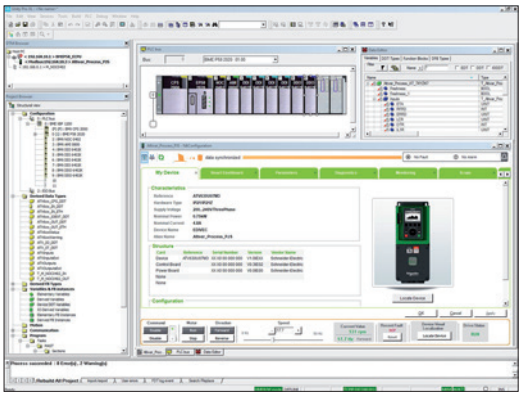
Other characteristics:
- Ease of connection via the RJ45 port or Wi-Fi connection
- Password-protected authentication (modifiable password; access rights can be configured by administrator)
- No downloads or installation necessary
- Web server can be disabled
- Works in a similar way on PCs, iPhones, iPads, Android systems, and the major web browsers:
  - Internet Explorer® (version 8 or higher)
  - Google Chrome® (version 11 or higher)
  - Mozilla Firefox® (version 4 or higher)
  - Safari® (version 5.1.7 or higher)

Variable speed drives
Altivar Process
Option: Configuration and runtime tools

DTM

Presentation

Using FDT/DTM technology it is possible to configure, control, and diagnose Altivar Process drives directly in Unity Pro and SoMove software by means of the same software brick (DTM).
FDT/DTM technology standardizes the communication interface between field devices and host systems. The DTM contains a uniform structure for managing drive access parameters.



Altivar Process DTM in Unity

Specific functions of the Altivar Process DTM

- Offline or online access to drive data
- Drive firmware updates
- Transfer of configuration files from and to the drive
- Customization (dashboard, My Menu, etc.)
- Access to drive parameters and option cards
- Oscilloscope function
- Graphic interface to assist with configuration of the Altivar Process pump functions
- Energy and process dashboards
- Graphic display of system operation and comparison with optimum operation (pump curves)
- Detected error and warning logs (with time-stamping)

Advantages of the DTM library in Unity Pro:
- Single tool for configuration, setup, and diagnostics
- Network scan for automatic recognition of network configuration
- Ability to add/remove, copy/paste configuration files from other drives in the same architecture
- Single input point for all parameters shared between the ePAC (programmable controller) and the Altivar Process drive
- Creation of drive profiles for implicit communication with the ePAC as well as dedicated profiles for programs with DFBs (derived function blocks)
- Integration in the fieldbus topology
- Drive configuration is an integral part of the Unity Pro project file (STU) and the archive file (STA)

Advantages of the DTM library in SoMove:
- Drive-oriented software environment
- Wired connection to the Ethernet communication port
- Standard cable (file transfer performance)
- Function block library for Unity Pro
- Display blocks for Vijeo Citect

- Third-party software and downloads:

The Altivar Process DTM library is a flexible, open, and interactive tool that can be used in a third-party FDT.
DTMs can be downloaded from our website www.schneider-electric.com.

SoMove software

SoMove software

Presentation

SoMove software for PC is used to configure, set up, and maintain Altivar Process drives.

In addition to the functions offered by the Web server, SoMove software features the oscilloscope function for accurate display of data samples, as well as access to multi-drive applications.

The software can be connected to Altivar Process variable speed drives via:
- A Bluetooth® wireless connection with the Bluetooth/Modbus adapter TCSWAAC13FB
- Ethernet Modbus and Wi-Fi connection with the Wi-Fi dongle TCSEGWB13FA0
- Ethernet Modbus TCP connection

For more information on SoMove setup software, please consult the “SoMove: Setup Software” catalog available on our website www.schneider-electric.com.

Variable speed drives
Altivar Process

Options for ATV630●●●M3, ATV630●●●N4, ATV630●●●N4Z and ATV630●●●Y6

Motor		Drive	Wear parts			Options												
						Passive filters (50 Hz)		Passive filters (60 Hz)		Line chokes	EMC filters	IP 21 kit for EMC filter	dv/dt filters	IP 20 and IP 21 kit for dv/dt filter	Sinus filter	IP 21 kit for sinus filter	Common mode filter *(3)*
kW	*HP*		Fan kit	UL Type 1 (IP21) conformity kit	Flange-mounting kit	THDi < 10%	THDi < 5%	THDi < 10%	THDi < 5%	THDi < 48%							
Three-phase supply voltage: 200…240 V 50/60 Hz - IP 21/UL Type 1																	
0.75	*1*	**ATV630U07M3**	VX5VPS1001	–	NSYPTDS1	–	–	–	–	–	VW3A4701	VW3A47901	VW3A5301	VW3A53902	VW3A5401	VW3A53901	VW3A5502
1.5	*2*	**ATV630U15M3**	VX5VPS1001	–	NSYPTDS1	–	–	–	–	–	VW3A4701	VW3A47901	VW3A5302	VW3A53902	VW3A5402	VW3A53901	VW3A5502
2.2	*3*	**ATV630U22M3**	VX5VPS1001	–	NSYPTDS1	–	–	–	–	–	VW3A4702	VW3A47902	VW3A5302	VW3A53902	VW3A5402	VW3A53901	VW3A5502
3	–	**ATV630U30M3**	VX5VPS1001	–	NSYPTDS1	–	–	–	–	–	VW3A4702	VW3A47902	VW3A5302	VW3A53902	VW3A5402	VW3A53901	VW3A5502
4	*5*	**ATV630U40M3**	VX5VPS1001	–	NSYPTDS1	–	–	–	–	–	VW3A4703	VW3A47903	VW3A5303	VW3A53902	VW3A5403	VW3A53902	VW3A5502
5.5	*7.5*	**ATV630U55M3**	VX5VPS2001	–	NSYPTDS2	–	–	–	–	–	VW3A4703	VW3A47903	VW3A5304	VW3A53903	VW3A5404	VW3A53903	VW3A5502
7.5	*10*	**ATV630U75M3**	VX5VPS3001	–	NSYPTDS3	–	–	–	–	–	VW3A4703	VW3A47903	VW3A5304	VW3A53903	VW3A5404	VW3A53903	VW3A5504
11	*15*	**ATV630D11M3**	VX5VPS3001	–	NSYPTDS3	–	–	–	–	–	VW3A4704	VW3A47904	VW3A5304	VW3A53903	VW3A5404	VW3A53903	VW3A5504
15	*20*	**ATV630D15M3**	VX5VPS4001	–	NSYPTDS4	–	–	–	–	–	VW3A4705	VW3A47905	VW3A5305	VW3A53905	VW3A5405	VW3A53904	VW3A5504
18.5	*25*	**ATV630D18M3**	VX5VPS4001	–	NSYPTDS4	–	–	–	–	–	VW3A4706	VW3A47906	VW3A5305	VW3A53905	VW3A5405	VW3A53904	VW3A5504
22	*30*	**ATV630D22M3**	VX5VPS4001	–	NSYPTDS4	–	–	–	–	–	VW3A4706	VW3A47906	VW3A5305	VW3A53905	VW3A5405	VW3A53904	VW3A5504
30	*40*	**ATV630D30M3**	VX5VPS5001	–	NSYPTDS5	–	–	–	–	–	VW3A4707	VW3A47907	VW3A5306	–	VW3A5406	–	VW3A5504
37	*50*	**ATV630D37M3**	VX5VPS5001	–	NSYPTDS5	–	–	–	–	–	VW3A4707	VW3A47907	VW3A5306	–	VW3A5406	–	VW3A5504
45	*60*	**ATV630D45M3**	VX5VPS5001	–	NSYPTDS5	–	–	–	–	–	VW3A4708	VW3A47908	VW3A5306	–	VW3A5406	–	VW3A5504
55	*75*	**ATV630D55M3**	VX5VPS6001	VW3A9704	VW3A95116	–	–	–	–	–	VW3A4709	–	VW3A5307	–	–	–	VW3A5506
75	*100*	**ATV630D75M3**	VX5VPS6001	VW3A9704	VW3A95116	–	–	–	–	–	VW3A4710	–	VW3A5307	–	VW3A5407 *(1)*	–	VW3A5506
Three-phase supply voltage: 380...480 V 50/60 Hz - IP 21/UL Type 1																	
0.75	*1*	**ATV630U07N4**	VX5VPS1001	–	NSYPTDS1	VW3A46101	VW3A46120	VW3A46139	VW3A46158	–	VW3A4701	VW3A47901	VW3A5301	VW3A53902	VW3A5401	VW3A53901	VW3A5502
1.5	*2*	**ATV630U15N4**	VX5VPS1001	–	NSYPTDS1	VW3A46101	VW3A46120	VW3A46139	VW3A46158	–	VW3A4701	VW3A47901	VW3A5301	VW3A53902	VW3A5401	VW3A53901	VW3A5502
2.2	*3*	**ATV630U22N4**	VX5VPS1001	–	NSYPTDS1	VW3A46101	VW3A46120	VW3A46139	VW3A46158	–	VW3A4701	VW3A47901	VW3A5301	VW3A53902	VW3A5401	VW3A53901	VW3A5502
3	–	**ATV630U30N4**	VX5VPS1001	–	NSYPTDS1	VW3A46101	VW3A46120	VW3A46139	VW3A46158	–	VW3A4702	VW3A47902	VW3A5302	VW3A53902	VW3A5402	VW3A53901	VW3A5502
4	*5*	**ATV630U40N4**	VX5VPS1001	–	NSYPTDS1	VW3A46102	VW3A46121	VW3A46140	VW3A46159	–	VW3A4702	VW3A47902	VW3A5302	VW3A53902	VW3A5402	VW3A53901	VW3A5502
5.5	*7.5*	**ATV630U55N4**	VX5VPS1001	–	NSYPTDS1	VW3A46102	VW3A46121	VW3A46140	VW3A46159	–	VW3A4702	VW3A47902	VW3A5302	VW3A53902	VW3A5402	VW3A53901	VW3A5502
7.5	*10*	**ATV630U75N4**	VX5VPS2001	–	NSYPTDS2	VW3A46103	VW3A46122	VW3A46141	VW3A46160	–	VW3A4703	VW3A47903	VW3A5303	VW3A53902	VW3A5403	VW3A53902	VW3A5502
11	*15*	**ATV630D11N4**	VX5VPS2001	–	NSYPTDS2	VW3A46104	VW3A46123	VW3A46142	VW3A46161	–	VW3A4703	VW3A47903	VW3A5303	VW3A53902	VW3A5403	VW3A53902	VW3A5502
15	*20*	**ATV630D15N4**	VX5VPS3001	–	NSYPTDS3	VW3A46105	VW3A46124	VW3A46143	VW3A46162	–	VW3A4703	VW3A47903	VW3A5304	VW3A53903	VW3A5404	VW3A53903	VW3A5504
18.5	*25*	**ATV630D18N4**	VX5VPS3001	–	NSYPTDS3	VW3A46106	VW3A46125	VW3A46144	VW3A46163	–	VW3A4704	VW3A47904	VW3A5304	VW3A53903	VW3A5404	VW3A53903	VW3A5504
22	*30*	**ATV630D22N4**	VX5VPS3001	–	NSYPTDS3	VW3A46107	VW3A46126	VW3A46145	VW3A46164	–	VW3A4704	VW3A47904	VW3A5304	VW3A53903	VW3A5404	VW3A53903	VW3A5504
30	*40*	**ATV630D30N4**	VX5VPS4001	–	NSYPTDS4	VW3A46108	VW3A46127	VW3A46146	VW3A46165	–	VW3A4705	VW3A47905	VW3A5305	VW3A53905	VW3A5405	VW3A53904	VW3A5504
37	*50*	**ATV630D37N4**	VX5VPS4001	–	NSYPTDS4	VW3A46109	VW3A46128	VW3A46147	VW3A46166	–	VW3A4706	VW3A47906	VW3A5305	VW3A53905	VW3A5405	VW3A53904	VW3A5504
45	*60*	**ATV630D45N4**	VX5VPS4001	–	NSYPTDS4	VW3A46110	VW3A46129	VW3A46148	VW3A46167	–	VW3A4706	VW3A47906	VW3A5305	VW3A53905	VW3A5405	VW3A53904	VW3A5504
55	*75*	**ATV630D55N4**	VX5VPS5001	–	NSYPTDS5	VW3A46111	VW3A46130	VW3A46149	VW3A46168	–	VW3A4707	VW3A47907	VW3A5306	–	VW3A5406	–	VW3A5504
75	*100*	**ATV630D75N4**	VX5VPS5001	–	NSYPTDS5	VW3A46112	VW3A46131	VW3A46150	VW3A46169	–	VW3A4708	VW3A47908	VW3A5306	–	VW3A5406	–	VW3A5504
90	*125*	**ATV630D90N4**	VX5VPS5001	–	NSYPTDS5	VW3A46113	VW3A46132	VW3A46151	VW3A46170	–	VW3A4708	VW3A47908	VW3A5306	–	VW3A5406	–	VW3A5504
110	*150*	**ATV630C11N4**	VX5VPS6001	VW3A9704	VW3A95116	VW3A46114	VW3A46133	VW3A46152	VW3A46171	–	VW3A4709	–	VW3A5307	–	VW3A5407 *(1)*	–	VW3A5506
132	*200*	**ATV630C13N4**	VX5VPS6001	VW3A9704	VW3A95116	VW3A46115	VW3A46134	VW3A46153	VW3A46172	–	VW3A4709	–	VW3A5307	–	VW3A5407 *(1)*	–	VW3A5506
160	*250*	**ATV630C16N4**	VX5VPS6001	VW3A9704	VW3A95116	VW3A46116	VW3A46135	VW3A46154	VW3A46173	–	VW3A4710	–	VW3A5307	–	VW3A5407 *(1)*	–	VW3A5506
220	*350*	**ATV630C22N4**	VZ3V1212 *(2)*	VW3A9212	VW3A9513	VW3A46118	VW3A46137	VW3A46155	VW3A46174	–	VW3A4411	VW3A9601	VW3A5106	–	VW3A5209	–	–
250	*400*	**ATV630C25N4**	VZ3V1212 *(2)*	VW3A9213	VW3A9514	VW3A46119	VW3A46138	VW3A46157	VW3A46176	–	VW3A4411	VW3A9601	VW3A5107	–	VW3A5210	–	–
315	*500*	**ATV630C31N4**	VZ3V1212 *(2)*	VW3A9213	VW3A9514	VW3A46116 x 2	VW3A46135 x 2	VW3A46153 x 2	VW3A46172 x 2	–	VW3A4411	VW3A9601	VW3A5107	–	VW3A5210	–	–
Three-phase supply voltage: 500…690 V 50/60 Hz - IP 00																	
2.2	*3*	**ATV630U22Y6**	VX5VPS3002	VW3A9705	–	–	–	–	–	VW3A4551	*(4)*	–	VW3A5103 / VW3A5104	VW3A9612	VW3A5215	–	–
3	–	**ATV630U30Y6**	VX5VPS3002	VW3A9705	–	–	–	–	–	VW3A4551	*(4)*	–	VW3A5103 / VW3A5104	VW3A9612	VW3A5215	–	–
4	*5*	**ATV630U40Y6**	VX5VPS3002	VW3A9705	–	–	–	–	–	VW3A4551	*(4)*	–	VW3A5103 / VW3A5104	VW3A9612	VW3A5215	–	–
5.5	*7.5*	**ATV630U55Y6**	VX5VPS3002	VW3A9705	–	–	–	–	–	VW3A4552	*(4)*	–	VW3A5103 / VW3A5104	VW3A9612	VW3A5215	–	–
7.5	*10*	**ATV630U75Y6**	VX5VPS3002	VW3A9705	–	–	–	–	–	VW3A4552	*(4)*	–	VW3A5103 / VW3A5104	VW3A9612	VW3A5215	–	–
11	*15*	**ATV630D11Y6**	VX5VPS3002	VW3A9705	–	–	–	–	–	VW3A4553	*(4)*	–	VW3A5103 / VW3A5104	VW3A9612	VW3A5216	–	–
15	*20*	**ATV630D15Y6**	VX5VPS3002	VW3A9705	–	–	–	–	–	VW3A4553	*(4)*	–	VW3A5104	VW3A9612	VW3A5216	–	–
18.5	*25*	**ATV630D18Y6**	VX5VPS3002	VW3A9705	–	–	–	–	–	VW3A4554	*(4)*	–	VW3A5104	VW3A9612	VW3A5216	–	–
22.0	*30*	**ATV630D22Y6**	VX5VPS3002	VW3A9705	–	–	–	–	–	VW3A4554	*(4)*	–	VW3A5104	VW3A9612	VW3A5216	–	–
30.0	*40*	**ATV630D30Y6**	VX5VPS3002	VW3A9705	–	–	–	–	–	VW3A4555	*(4)*	–	VW3A5104	VW3A9612	VW3A5217	–	–
37.0	*50*	**ATV630D37Y6**	VX5VPS5002	VW3A9706	–	–	–	–	–	VW3A4555	*(4)*	–	VW3A5104	VW3A9612	VW3A5217	–	–
45.0	*60*	**ATV630D45Y6**	VX5VPS5002	VW3A9706	–	–	–	–	–	VW3A4555	*(4)*	–	VW3A5104	VW3A9612	VW3A5218	–	–
55.0	*75*	**ATV630D55Y6**	VX5VPS5002	VW3A9706	–	–	–	–	–	VW3A4556	*(4)*	–	VW3A5104	VW3A9612	VW3A5218	–	–
75.0	*100*	**ATV630D75Y6**	VX5VPS5002	VW3A9706	–	–	–	–	–	VW3A4556	*(4)*	–	VW3A5104	VW3A9612	VW3A5219	–	–
90.0	*125*	**ATV630D90Y6**	VX5VPS5002	VW3A9706	–	–	–	–	–	VW3A4556	*(4)*	–	VW3A5104	VW3A9612	VW3A5219	–	–

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(1) In "Normal Duty", apply a derating of 1 to the drive nominal power with a minimum switching frequency of 4 kHz.
For example: an ATV630D75M3 drive with sinus filter can be used on a 55 kW motor.
*(2) Fan power electronic for drive, with 1 unit for **ATV630C22N4**, 2 units for **ATV630C25N4**, and 3 units for **ATV630C31N4**.*
(3) This combination table is given for a maximum length of 300 m with an unshielded cable. For other lengths, or for shielded cables, see page 2/48.
(4) Please, consult our Customer Care Center.

Table showing possible combinations of options for ATV650●●●N4 and ATV650●●●N4E drives

Motor		Drive	Wear parts			Options				EMC filters	IP 21 kit for EMC filter	dv/dt filters	IP 20 and IP 21 kit for dv/dt filter	Sinus filter	IP 21 kit for sinus filter	Common mode filter *(2)*
						Passive filters (50 Hz)		Passive filters (60 Hz)								
kW	*HP*		Fan kit	UL Type 1 conformity kit	Flange-mounting kit	THDi < 10%	THDi < 5%	THDi < 10%	THDi < 5%							
Three-phase supply voltage: 380...480 V 50/60 Hz - IP 55																
0.75	*1*	**ATV650U07N4**	VX5VPS1001	–	–	VW3A46101 *(1)*	VW3A46120 *(1)*	VW3A46139 *(1)*	VW3A46158 *(1)*	VW3A4701	–	VW3A5301	–	VW3A5401 *(1)*	–	VW3A5502
1.5	*2*	**ATV650U15N4**	VX5VPS1001	–	–	VW3A46101 *(1)*	VW3A46120 *(1)*	VW3A46139 *(1)*	VW3A46158 *(1)*	VW3A4701	–	VW3A5301	–	VW3A5401 *(1)*	–	VW3A5502
2.2	*3*	**ATV650U22N4**	VX5VPS1001	–	–	VW3A46101 *(1)*	VW3A46120 *(1)*	VW3A46139 *(1)*	VW3A46158 *(1)*	VW3A4701	–	VW3A5301	–	VW3A5401 *(1)*	–	VW3A5502
3	–	**ATV650U30N4**	VX5VPS1001	–	–	VW3A46101 *(1)*	VW3A46120 *(1)*	VW3A46139 *(1)*	VW3A46158 *(1)*	VW3A4702	–	VW3A5302	–	VW3A5402 *(1)*	–	VW3A5502
4	*5*	**ATV650U40N4**	VX5VPS1001	–	–	VW3A46102 *(1)*	VW3A46121 *(1)*	VW3A46140 *(1)*	VW3A46159 *(1)*	VW3A4702	–	VW3A5302	–	VW3A5402 *(1)*	–	VW3A5502
5.5	*7.5*	**ATV650U55N4**	VX5VPS1001	–	–	VW3A46102 *(1)*	VW3A46121 *(1)*	VW3A46140 *(1)*	VW3A46159 *(1)*	VW3A4702	–	VW3A5302	–	VW3A5402 *(1)*	–	VW3A5502
7.5	*10*	**ATV650U75N4**	VX5VPS2001	–	–	VW3A46103 *(1)*	VW3A46122 *(1)*	VW3A46141 *(1)*	VW3A46160 *(1)*	VW3A4703	–	VW3A5303	–	VW3A5403 *(1)*	–	VW3A5502
11	*15*	**ATV650D11N4**	VX5VPS2001	–	–	VW3A46104 *(1)*	VW3A46123 *(1)*	VW3A46142 *(1)*	VW3A46161 *(1)*	VW3A4703	–	VW3A5303	–	VW3A5403 *(1)*	–	VW3A5502
15	*20*	**ATV650D15N4**	VX5VPS3001	–	–	VW3A46105 *(1)*	VW3A46124 *(1)*	VW3A46143 *(1)*	VW3A46162 *(1)*	VW3A4703	–	VW3A5304	–	VW3A5404 *(1)*	–	VW3A5504
18.5	*25*	**ATV650D18N4**	VX5VPS3001	–	–	VW3A46106 *(1)*	VW3A46125 *(1)*	VW3A46144 *(1)*	VW3A46163 *(1)*	VW3A4704	–	VW3A5304	–	VW3A5404 *(1)*	–	VW3A5504
22	*30*	**ATV650D22N4**	VX5VPS3001	–	–	VW3A46107 *(1)*	VW3A46126 *(1)*	VW3A46145 *(1)*	VW3A46164 *(1)*	VW3A4704	–	VW3A5304	–	VW3A5404 *(1)*	–	VW3A5504
30	*40*	**ATV650D30N4**	VX5VPS4001	–	–	VW3A46108 *(1)*	VW3A46127 *(1)*	VW3A46146 *(1)*	VW3A46165 *(1)*	VW3A4705	–	VW3A5305	–	VW3A5405 *(1)*	–	VW3A5504
37	*50*	**ATV650D37N4**	VX5VPS4001	–	–	VW3A46109 *(1)*	VW3A46128 *(1)*	VW3A46147 *(1)*	VW3A46166 *(1)*	VW3A4706	–	VW3A5305	–	VW3A5405 *(1)*	–	VW3A5504
45	*60*	**ATV650D45N4**	VX5VPS4001	–	–	VW3A46110 *(1)*	VW3A46129 *(1)*	VW3A46148 *(1)*	VW3A46167 *(1)*	VW3A4706	–	VW3A5305	–	VW3A5405 *(1)*	–	VW3A5504
55	*75*	**ATV650D55N4**	VX5VPS5001	–	–	VW3A46111 *(1)*	VW3A46130 *(1)*	VW3A46149 *(1)*	VW3A46168 *(1)*	VW3A4707	–	VW3A5306	–	VW3A5406 *(1)*	–	VW3A5504
75	*100*	**ATV650D75N4**	VX5VPS5001	–	–	VW3A46112 *(1)*	VW3A46131 *(1)*	VW3A46150 *(1)*	VW3A46169 *(1)*	VW3A4708	–	VW3A5306	–	VW3A5406 *(1)*	–	VW3A5504
90	*125*	**ATV650D90N4**	VX5VPS5001	–	–	VW3A46113 *(1)*	VW3A46132 *(1)*	VW3A46151 *(1)*	VW3A46170 *(1)*	VW3A4708	–	VW3A5306	–	VW3A5406 *(1)*	–	VW3A5504
Three-phase supply voltage: 380...480 V 50/60 Hz - IP 55 with Vario disconnect switch																
0.75	*1*	**ATV650U07N4E**	VX5VPS1001	–	–	VW3A46101 *(1)*	VW3A46120 *(1)*	VW3A46139 *(1)*	VW3A46158 *(1)*	VW3A4701	–	VW3A5301	–	VW3A5401 *(1)*	–	VW3A5502
1.5	*2*	**ATV650U15N4E**	VX5VPS1001	–	–	VW3A46101 *(1)*	VW3A46120 *(1)*	VW3A46139 *(1)*	VW3A46158 *(1)*	VW3A4701	–	VW3A5301	–	VW3A5401 *(1)*	–	VW3A5502
2.2	*3*	**ATV650U22N4E**	VX5VPS1001	–	–	VW3A46101 *(1)*	VW3A46120 *(1)*	VW3A46139 *(1)*	VW3A46158 *(1)*	VW3A4701	–	VW3A5301	–	VW3A5401 *(1)*	–	VW3A5502
3	–	**ATV650U30N4E**	VX5VPS1001	–	–	VW3A46101 *(1)*	VW3A46120 *(1)*	VW3A46139 *(1)*	VW3A46158 *(1)*	VW3A4702	–	VW3A5302	–	VW3A5402 *(1)*	–	VW3A5502
4	*5*	**ATV650U40N4E**	VX5VPS1001	–	–	VW3A46102 *(1)*	VW3A46121 *(1)*	VW3A46140 *(1)*	VW3A46159 *(1)*	VW3A4702	–	VW3A5302	–	VW3A5402 *(1)*	–	VW3A5502
5.5	*7.5*	**ATV650U55N4E**	VX5VPS1001	–	–	VW3A46102 *(1)*	VW3A46121 *(1)*	VW3A46140 *(1)*	VW3A46159 *(1)*	VW3A4702	–	VW3A5302	–	VW3A5402 *(1)*	–	VW3A5502
7.5	*10*	**ATV650U75N4E**	VX5VPS2001	–	–	VW3A46103 *(1)*	VW3A46122 *(1)*	VW3A46141 *(1)*	VW3A46160 *(1)*	VW3A4703	–	VW3A5303	–	VW3A5403 *(1)*	–	VW3A5502
11	*15*	**ATV650D11N4E**	VX5VPS2001	–	–	VW3A46104 *(1)*	VW3A46123 *(1)*	VW3A46142 *(1)*	VW3A46161 *(1)*	VW3A4703	–	VW3A5303	–	VW3A5403 *(1)*	–	VW3A5502
15	*20*	**ATV650D15N4E**	VX5VPS3001	–	–	VW3A46105 *(1)*	VW3A46124 *(1)*	VW3A46143 *(1)*	VW3A46162 *(1)*	VW3A4703	–	VW3A5304	–	VW3A5404 *(1)*	–	VW3A5504
18.5	*25*	**ATV650D18N4E**	VX5VPS3001	–	–	VW3A46106 *(1)*	VW3A46125 *(1)*	VW3A46144 *(1)*	VW3A46163 *(1)*	VW3A4704	–	VW3A5304	–	VW3A5404 *(1)*	–	VW3A5504
22	*30*	**ATV650D22N4E**	VX5VPS3001	–	–	VW3A46107 *(1)*	VW3A46126 *(1)*	VW3A46145 *(1)*	VW3A46164 *(1)*	VW3A4704	–	VW3A5304	–	VW3A5404 *(1)*	–	VW3A5504
30	*40*	**ATV650D30N4E**	VX5VPS4001	–	–	VW3A46108 *(1)*	VW3A46127 *(1)*	VW3A46146 *(1)*	VW3A46165 *(1)*	VW3A4705	–	VW3A5305	–	VW3A5405 *(1)*	–	VW3A5504
37	*50*	**ATV650D37N4E**	VX5VPS4001	–	–	VW3A46109 *(1)*	VW3A46128 *(1)*	VW3A46147 *(1)*	VW3A46166 *(1)*	VW3A4706	–	VW3A5305	–	VW3A5405 *(1)*	–	VW3A5504
45	*60*	**ATV650D45N4E**	VX5VPS4001	–	–	VW3A46110 *(1)*	VW3A46129 *(1)*	VW3A46148 *(1)*	VW3A46167 *(1)*	VW3A4706	–	VW3A5305	–	VW3A5405 *(1)*	–	VW3A5504
55	*75*	**ATV650D55N4E**	VX5VPS5001	–	–	VW3A46111 *(1)*	VW3A46130 *(1)*	VW3A46149 *(1)*	VW3A46168 *(1)*	VW3A4707	–	VW3A5306	–	VW3A5406 *(1)*	–	VW3A5504
75	*100*	**ATV650D75N4E**	VX5VPS5001	–	–	VW3A46112 *(1)*	VW3A46131 *(1)*	VW3A46150 *(1)*	VW3A46169 *(1)*	VW3A4708	–	VW3A5306	–	VW3A5406 *(1)*	–	VW3A5504
90	*125*	**ATV650D90N4E**	VX5VPS5001	–	–	VW3A46113 *(1)*	VW3A46132 *(1)*	VW3A46151 *(1)*	VW3A46170 *(1)*	VW3A4708	–	VW3A5306	–	VW3A5406 *(1)*	–	VW3A5504
Three phase supply voltage: 380…480 V 50/60 Hz - IP20/UL Type 1																
0.75	*1*	**ATV630U07N4Z**	VX5VPS1001	–	NSYPTDS1	VW3A46101	VW3A46120	VW3A46139	VW3A46158	VW3A4701	VW3A47901	VW3A5301	VW3A53902	VW3A5401	VW3A53901	VW3A5502
1.5	*2*	**ATV630U15N4Z**	VX5VPS1001	–	NSYPTDS1	VW3A46101	VW3A46120	VW3A46139	VW3A46158	VW3A4701	VW3A47901	VW3A5301	VW3A53902	VW3A5401	VW3A53901	VW3A5502
2.2	*3*	**ATV630U22N4Z**	VX5VPS1001	–	NSYPTDS1	VW3A46101	VW3A46120	VW3A46139	VW3A46158	VW3A4701	VW3A47901	VW3A5301	VW3A53902	VW3A5401	VW3A53901	VW3A5502
3	–	**ATV630U30N4Z**	VX5VPS1001	–	NSYPTDS1	VW3A46101	VW3A46120	VW3A46139	VW3A46158	VW3A4702	VW3A47902	VW3A5302	VW3A53902	VW3A5402	VW3A53901	VW3A5502
4	*5*	**ATV630U40N4Z**	VX5VPS1001	–	NSYPTDS1	VW3A46102	VW3A46121	VW3A46140	VW3A46159	VW3A4702	VW3A47902	VW3A5302	VW3A53902	VW3A5402	VW3A53901	VW3A5502
5.5	*7.5*	**ATV630U55N4Z**	VX5VPS1001	–	NSYPTDS1	VW3A46102	VW3A46121	VW3A46140	VW3A46159	VW3A4702	VW3A47902	VW3A5302	VW3A53902	VW3A5402	VW3A53901	VW3A5502
7.5	*10*	**ATV630U75N4Z**	VX5VPS2001	–	NSYPTDS2	VW3A46103	VW3A46122	VW3A46141	VW3A46160	VW3A4703	VW3A47903	VW3A5303	VW3A53902	VW3A5403	VW3A53902	VW3A5502
11	*15*	**ATV630D11N4Z**	VX5VPS2001	–	NSYPTDS2	VW3A46104	VW3A46123	VW3A46142	VW3A46161	VW3A4703	VW3A47903	VW3A5303	VW3A53902	VW3A5403	VW3A53902	VW3A5502
15	*20*	**ATV630D15N4Z**	VX5VPS3001	–	NSYPTDS3	VW3A46105	VW3A46124	VW3A46143	VW3A46162	VW3A4703	VW3A47903	VW3A5304	VW3A53903	VW3A5404	VW3A53903	VW3A5504
18.5	*25*	**ATV630D18N4Z**	VX5VPS3001	–	NSYPTDS3	VW3A46106	VW3A46125	VW3A46144	VW3A46163	VW3A4704	VW3A47904	VW3A5304	VW3A53903	VW3A5404	VW3A53903	VW3A5504
22	*30*	**ATV630D22N4Z**	VX5VPS3001	–	NSYPTDS3	VW3A46107	VW3A46126	VW3A46145	VW3A46164	VW3A4704	VW3A47904	VW3A5304	VW3A53903	VW3A5404	VW3A53903	VW3A5504
Three phase supply voltage: 380…480 V 50/60 Hz - IP00/UL Type 1																
30	*40*	**ATV630D30N4Z**	VX5VPS4001	–	NSYPTDS4	VW3A46108	VW3A46127	VW3A46146	VW3A46165	VW3A4705	VW3A47905	VW3A5305	VW3A53905	VW3A5405	VW3A53904	VW3A5504
37	*50*	**ATV630D37N4Z**	VX5VPS4001	–	NSYPTDS4	VW3A46109	VW3A46128	VW3A46147	VW3A46166	VW3A4706	VW3A47906	VW3A5305	VW3A53905	VW3A5405	VW3A53904	VW3A5504
45	*60*	**ATV630D45N4Z**	VX5VPS1001	–	NSYPTDS4	VW3A46110	VW3A46129	VW3A46148	VW3A46167	VW3A4706	VW3A47906	VW3A5305	VW3A53905	VW3A5405	VW3A53904	VW3A5504
55	*75*	**ATV630D55N4Z**	VX5VPS5001	–	NSYPTDS5	VW3A46111	VW3A46130	VW3A46149	VW3A46168	VW3A4707	VW3A47907	VW3A5306	–	VW3A5406	–	VW3A5504
75	*100*	**ATV630D75N4Z**	VX5VPS5001	–	NSYPTDS5	VW3A46112	VW3A46131	VW3A46150	VW3A46169	VW3A4708	VW3A47908	VW3A5306	–	VW3A5406	–	VW3A5504
90	*125*	**ATV630D90N4Z**	VX5VPS5001	–	NSYPTDS5	VW3A46113	VW3A46132	VW3A46151	VW3A46170	VW3A4708	VW3A47908	VW3A5306	–	VW3A5406	–	VW3A5504
Pages			2/2	2/10	2/11	2/11	2/35	2/36	2/37	2/38	2/39	2/41	2/44	2/45	2/46	2/47	2/48

(1) When used with ATV650U07N4/N4E...D90N4/N4E drives, the filter must be mounted in a separate enclosure to maintain IP 55 protection for the installation.
(2) This combination table is given for a maximum length of 300 m with an unshielded cable. For other lengths, or for shielded cables, see page 2/48.

I/O expansion modules

Description	Reference	Page
Module with digital and analog I/O	VW3A3203	2/25
Module with relay outputs	VW3A3204	2/25

List of communication modules *(1)*

Description	Reference	Page
EtherNet/IP and Modbus TCP dual port	VW3A3720	2/29
EtherNet/IP, Modbus TCP and MD-Link dual port	VW3A3721	2/29
CANopen Daisy chain	VW3A3608	2/30
CANopen SUB-D	VW3A3618	2/30
CANopen screw terminal block	VW3A3628	2/31
PROFINET	VW3A3627	2/32
PROFIBUS DP V1	VW3A3607	2/32
POWERLINK Network	VW3A3619	2/32
DeviceNet	VW3A3609	2/33
BACnet MS/TP	VW3A3725	2/33

(1) For module compatibility table, see opposite.
(2) Maximum combination involving two types of module is 2.
(3) Maximum combination involving two types of module is 1.

Module compatibility table

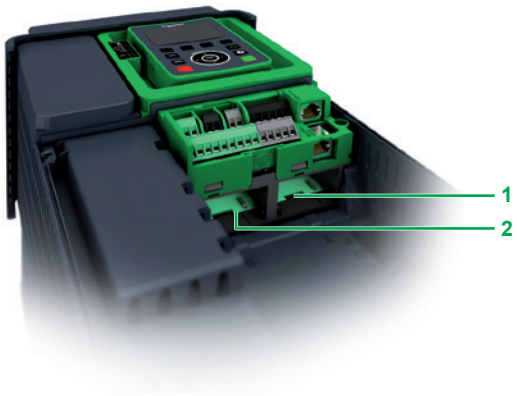
Module type	Digital and analog I/O VW3A3203 *(2)*	Relay outputs VW3A3204 *(2)*	Communication VW3A372● and VW3A36●● *(3)*
Digital and analog I/O VW3A3203		■	■
Relay outputs VW3A3204	■		■
Communication VW3A372● and VW3A36●●	■	■	

■ *Combination possible*

■ *Combination impossible*

Variable speed drives
Altivar Process
Option: I/O expansion modules

PF140354



I/O expansion modules

Presentation

By installing I/O expansion modules Altivar Process drives can be adapted to meet the needs of applications that manage additional sensors or specific sensors.

2 expansion modules are available:
- Module with digital and analog I/O
- Module with relay outputs

These modules are inserted in slots A and B on Altivar Process drives:
1 Slot A for I/O expansion or communication modules
2 Slot B for I/O expansion modules

Module with digital and analog I/O

- 2 differential analog inputs configurable via software as current 0-20 mA/4-20 mA), or for PTC, PT100 or PT1000, 2 or 3-wire
- 14-bit resolution
- 6 x 24 V ⎓ positive or negative digital inputs
- Sampling: 1 ms max
- 2 assignable digital outputs
- 2 removable spring terminal blocks

Module with relay outputs

- 3 relay outputs with NO contacts
- 1 fixed screw terminal block

Note: *Digital and analog I/O modules and relay output modules can go in either slot A or slot B on Altivar Process drives.*
However, the drives cannot take 2 modules of the same type (e.g., 2 digital and analog I/O modules or 2 relay output modules).

Variable speed drives
Altivar Process
Option: I/O expansion modules

PF130896

VW3A3203

PF130897

VW3A3204

I/O expansion modules

Description	I/O type				Reference	Weight kg/ *lb*
	Digital inputs	Digital outputs	Analog inputs	Relay outputs		
Module with digital and analog I/O	6	2	2 *(1)*	–	**VW3A3203**	–
Module with relay outputs	–	–	–	3 *(2)*	**VW3A3204**	–

(1) Differential analog inputs configurable via software as current 0-20 mA/4-20 mA), or for PTC, PT100 or PT1000, 2 or 3-wire. When configured as PTC probe inputs, they must never be used to monitor the temperature of an ATEX motor for applications in explosive atmospheres. Please refer to the ATEX guide on our website www.schneider-electric.com.
(2) NO contacts.

2

Variable speed drives
Altivar Process
Communication buses and networks

Presentation

Altivar Process drives have 3 built-in RJ45 communication ports as standard:
- 1 Ethernet port
- 2 serial ports

Integrated communication protocols

Altivar Process drives integrate the Modbus TCP and Modbus serial link communication protocols as standard.

- Ethernet port

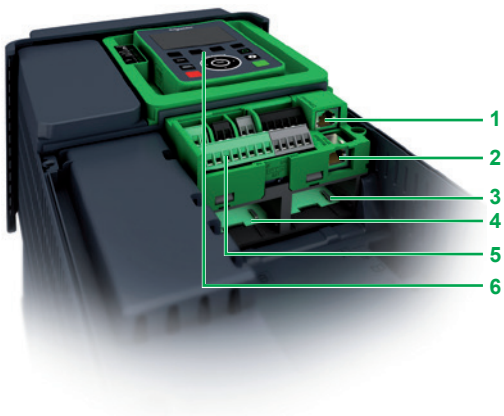
This offers standard services regularly used in industrial networks:
- Modbus TCP message handling is based on the Modbus protocol and is used to exchange process data with other network devices (e.g., a PLC). It provides Altivar Process drives with access to the Modbus protocol and to the high performance of the Ethernet network, which is the communication standard for numerous devices.
- SNMP (Simple Network Management Protocol) offers standard diagnostics services for network management tools.
- The FDR (Fast Device Replacement) service allows automatic reconfiguration of a new device installed to replace an existing device.
- Device integrity is reinforced by disabling some unused services as well as managing a list of authorized devices.
- Setup and adjustment tools (SoMove, Unity with DTM) can be connected locally or remotely.
- The embedded Web server is used to display operating data and dashboards as well as to configure and perform system elements diagnostics from any web browser.

These numerous services offered by the Ethernet port mean that Altivar Process drives can be integrated into Schneider Electric solutions.

- Serial ports
- One port dedicated to field network operation for exchanging data with other devices via the Modbus protocol
- A second dedicated port for the multidrop connection of the following HMIs and configuration tools:
  - The remote graphic display terminal supplied with the drive
  - A Magelis industrial HMI terminal
  - A PC with SoMove or Unity setup software

The detailed specifications for the Ethernet or serial communication ports, and the Modbus and Modbus TCP protocols are available on our website www.schneider-electric.com.

PF140354



Description

1 RJ45 Ethernet port
2 RJ45 serial port
3 Slot A for I/O expansion or communication modules
4 Slot B for I/O expansion modules
5 Removable screw terminal blocks for 24 V ⎓ power supply and integrated I/O
6 RJ45 serial link for HMI (remote graphic display terminal, Magelis terminal, etc.)

Altivar Process drives can only take one communication module, in slot A **3** only. They cannot take 2 modules of the same type (e.g., 2 digital and analog I/O modules or 2 relay output modules).
The drives can take 1 digital and analog I/O module and 1 relay output module in either slot A **3** or slot B **4**.

Note: *The user manuals and description files (gsd, eds, xif) for the devices on the communication buses and networks are available on our website www.schneider-electric.com.*

Optional communication modules

The Altivar Process drive can also be connected to other industrial communication buses and networks by using one of the communication modules available as an option. Communication cards are supplied in “cassette” format for ease of mounting/removal.

Dedicated communication modules:
- EtherNet/IP and Modbus TCP Dual port
- CANopen:
  - RJ45 Daisy Chain
  - Sub-D
  - Screw terminal block
- PROFINET
- PROFIBUS DP V1
- POWERLINK network
- DeviceNet
- BACnet

PROFINET and PROFIBUS DP V1 modules also support the Profidrive and CiA402 profiles.

It is possible to maintain communication using a separate power supply for the control and power sections. Monitoring and diagnostics are possible via the network even if there is no power supply to the power section.

Functions

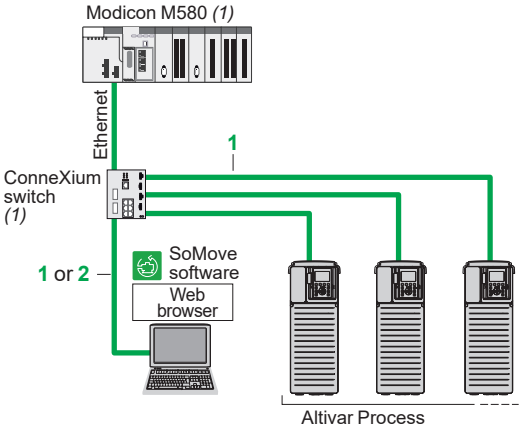
The drive functions can be accessed via the various communication networks:
- Configuration
- Adjustment
- Control
- Monitoring

Altivar Process drives offer a high degree of interfacing flexibility with the possibility to assign, by configuration, the different control sources (I/O, communication networks, and HMI terminal) to control functions in order to meet the requirements of complex applications.

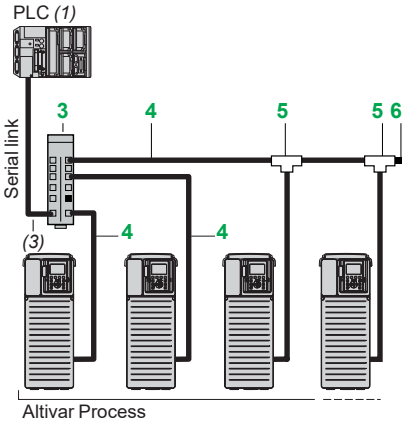
Network services and parameters are configured using the SoMove drive setup software, or using Unity software if the drive is being integrated into a PlantStruXure architecture.

Communication is monitored according to the specific criteria for each protocol. However, regardless of the protocol, it is possible to configure how the drive responds to a detected communication interruption, as follows:
- Define the type of stop when a communication interruption is detected
- Maintain last command received
- Fallback position at preset speed
- Ignore the detected communication interruption

Variable speed drives
Altivar Process
Communication buses and networks
Integrated ports



Example of Ethernet architecture



Example of serial link architecture

Integrated Ethernet port

Description	Item	Length m/ *ft*	Unit reference	Weight kg/ *lb*
ConneXium cordsets *(2)*				
Straight shielded twisted pair cables equipped with 2 RJ45 connectors conforming to EIA/TIA-568 category 5 and IEC 11801/EN 50173-1, class D	1	2/ *6.56*	**490NTW00002**	–
		5/ *16.40*	**490NTW00005**	–
		12/ *39.37*	**490NTW00012**	–
Crossover shielded twisted pair cables equipped with 2 RJ45 connectors conforming to EIA/TIA-568 category 5 and IEC 11801/EN 50173-1, class D	2	5/ *16.40*	**490NTC00005**	–
		15/ *49.21*	**490NTC00015**	–
Straight shielded twisted pair cables equipped with 2 RJ45 connectors conforming to UL and CSA 22.1	1	2/ *6.56*	**490NTW00002U**	–
		5/ *16.40*	**490NTW00005U**	–
		12/ *39.37*	**490NTW00012U**	–
Crossover shielded twisted pair cables equipped with 2 RJ45 connectors conforming to UL and CSA 22.1	2	5/ *16.40*	**490NTC00005U**	–
		15/ *49.21*	**490NTC00015U**	–

Integrated serial port

Description			Item	Length m/ *ft*	Unit reference	Weight kg/ *lb*
Connection accessories						
Splitter box 10 RJ45 connectors and 1 screw terminal block			3	–	**LU9GC3**	0.500/ *1.102*
Modbus T-junction boxes	With 0.3 m/*0.98 ft integrated cable*		5	0.3/ *0.98*	**VW3A8306TF03**	0.190/ *0.419*
	With 1 m/*3.28 ft integrated cable*		5	1/ *3.28*	**VW3A8306TF10**	0.210/ *0.463*
Modbus line terminator *(4)*	For RJ45 connector	R = 120 Ω C = 1 nf	6	–	**VW3A8306RC**	0.010/ *0.022*
Cordsets equipped with 2 RJ45 connectors			4	0.3/ *0.98*	**VW3A8306R03**	0.025/ *0.055*
				1/ *3.28*	**VW3A8306R10**	0.060/ *0.132*
				3/ *9.84*	**VW3A8306R30**	0.130/ *0.287*

(1) Please refer to the "Modicon automation platform" catalogs on our website www.schneider-electric.com.
(2) Also exist in 40 and 80 m/131 and 262 ft lengths. For other ConneXium connection accessories, please consult our website www.schneider-electric.com.
(3) Cable depends on the PLC.
(4) Sold in lots of 2.

Variable speed drives
Altivar Process
Communication buses and networks
Option: Communication modules

PF130914A

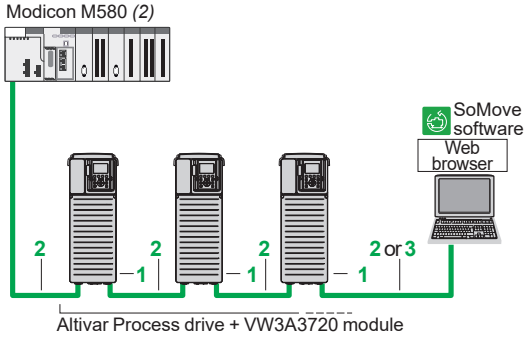
VW3A3720

EtherNet/IP and Modbus TCP networks *(1)*

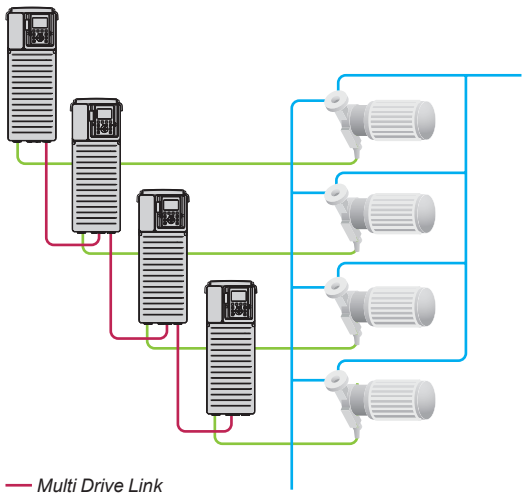
Description	Item	Length m/ *ft*	Unit reference	Weight kg/ *lb*
Communication module				
EtherNet/IP and Modbus TCP dual port module For connection to the Modbus TCP or EtherNet/IP network Ports: 2 RJ45 connectors ■ 10/100 Mbps, half duplex and full duplex ■ embedded Web server Requires cordset 490NTW000●●/●●U or 490NTC000●●/●●U	1	–	**VW3A3720**	0.020/ *0.044*
EtherNet/IP, Modbus TCP, and MD-Link dual port module For connection to the Modbus TCP or EtherNet/IP network and MultiDrive-Link Ports: 2 RJ45 connectors ■ 10/100 Mbps, half duplex and full duplex ■ embedded Web server Requires cordset 490NTW000●●/●●U or 490NTC000●●/●●U	4	–	**VW3A3721**	0.020/ *0.044*
ConneXium cordsets *(3)*				
Straight shielded twisted pair cables equipped with 2 RJ45 connectors conforming to EIA/TIA-568 category 5 and IEC 11801/EN 50173-1, class D	2	2/ *6.56*	**490NTW00002**	–
		5/ *16.40*	**490NTW00005**	–
		12/ *39.37*	**490NTW00012**	–
Crossover shielded twisted pair cables equipped with 2 RJ45 connectors conforming to EIA/TIA-568 category 5 and IEC 11801/EN 50173-1, class D	3	5/ *16.40*	**490NTC00005**	–
		15/ *49.21*	**490NTC00015**	–
Straight shielded twisted pair cables equipped with 2 RJ45 connectors conforming to UL and CSA 22.1	2	2/ *6.56*	**490NTW00002U**	–
		5/ *16.40*	**490NTW00005U**	–
		12/ *39.37*	**490NTW00012U**	–
Crossover shielded twisted pair cables equipped with 2 RJ45 connectors conforming to UL and CSA 22.1	3	5/ *16.40*	**490NTC00005U**	–
		15/ *49.21*	**490NTC00015U**	–

(1) Altivar Process drives can only take one communication module.
(2) Please refer to the "M580 automation platform" catalog on our website www.schneider-electric.com.
(3) Also exist in 40 and 80 m/131 and 262 ft lengths. For other ConneXium connection accessories, please consult our website www.schneider-electric.com.

Modicon M580 *(2)*



Example of connection on an EtherNet/IP network



Multi Drive Link
VSD

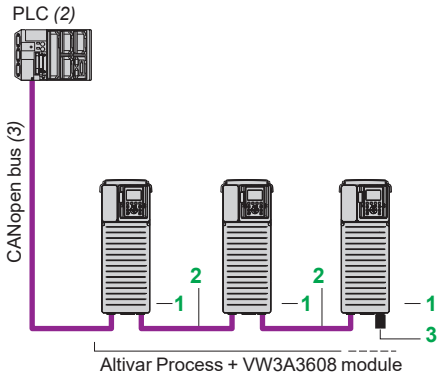
Variable speed drives
Altivar Process
Communication buses and networks
Option: Communication modules

PF514340

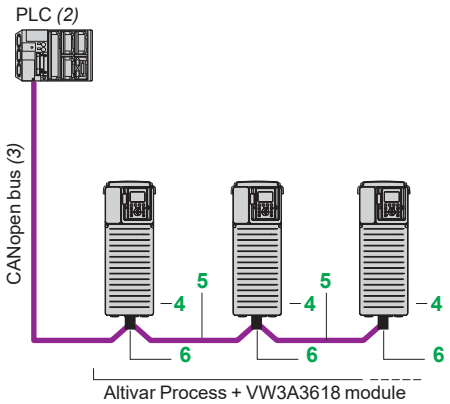
VW3A3608

PF514341

VW3A3618



Optimized solution for daisy chain connection to the CANopen bus



Example of connection to the CANopen bus via SUB-D connector

CANopen bus *(1)*

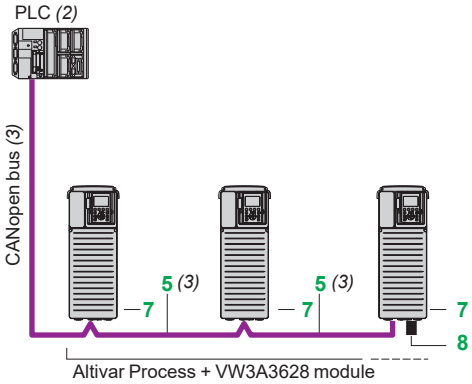
Description	Item	Length m/ *ft*	Unit reference	Weight kg/ *lb*
Communication module				
CANopen Daisy chain module Ports: 2 RJ45 connectors	1	–	**VW3A3608**	–
Connection to RJ45 connector (optimized solution for daisy chain connection on CANopen bus)				
CANopen cordsets equipped with 2 RJ45 connectors	2	0.3/ *0.98*	**VW3CANCARR03**	0.050/ *0.110*
		1/ *3.28*	**VW3CANCARR1**	0.500/ *1.102*
CANopen line terminator for RJ45 connector	3	–	**TCSCAR013M120**	–
Communication module				
CANopen SUB-D module Ports: 1 x 9-way male SUB-D connector	4	–	**VW3A3618**	–
Connection to SUB-D connector				
CANopen cables *(3) (4)* Standard cable, CE mark Low smoke zero halogen. Flame-retardant (IEC 60332-1)	5	50/ *164.04*	**TSXCANCA50**	4.930/ *10.869*
		100/ *328.08*	**TSXCANCA100**	8.800/ *19.401*
		300/ *984.25*	**TSXCANCA300**	24.560/ *54.145*
CANopen cables *(3) (4)* UL certification, CE mark Flame-retardant (IEC 60332-2)	5	50/ *164.04*	**TSXCANCB50**	3.580/ *7.893*
		100/ *328.08*	**TSXCANCB100**	7.840/ *17.284*
		300/ *984.25*	**TSXCANCB300**	21.870/ *48.215*
CANopen cables *(3) (4)* Cable for harsh environments or mobile installations, CE mark Low smoke zero halogen Flame-retardant (IEC 60332-1)	5	50/ *164.04*	**TSXCANCD50**	3.510/ *7.738*
		100/ *328.08*	**TSXCANCD100**	7.770/ *17.130*
		300/ *984.25*	**TSXCANCD300**	7.770/ *17.130*
IP 20 straight CANopen connector *(5)* 9-way female SUB-D connector with line terminator that can be deactivated For connecting CAN-H, CAN-L, CAN-GND	6	–	**TSXCANKCDF180T**	0.049/ *0.108*

(1) Altivar Process drives can only take one communication module.
(2) Please refer to the "Modicon automation platform" catalogs on our website www.schneider-electric.com.
(3) Cable depends on the PLC.
(4) Standard environment:
- No particular environmental constraints
- Operating temperature between 5 °C and 60 °C/41 °F and 140 °F
- Fixed installation
Harsh environment:
- Resistance to hydrocarbons, industrial oils, detergents, solder splashes
- Relative humidity up to 100%
- Saline atmosphere
- Operating temperature between -10 °C and +70 °C/+14 °F and 158 °F
- Significant temperature variations
(5) Only straight connectors are compatible with Altivar Process drives.

Variable speed drives
Altivar Process
Communication buses and networks
Option: Communication modules

PF095129

VW3A3628



Example of connection to the CANopen bus with a screw terminal block

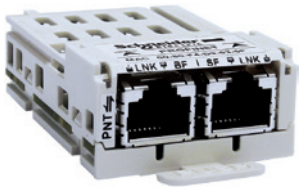
CANopen bus (continued) (1)

Description	Item	Length m/ ft	Unit reference	Weight kg/ lb
Communication module				
CANopen module Port: 1 x 5-way screw terminal block	7	–	**VW3A3628**	–
Connection to screw terminal block				
CANopen IP 20 cordsets *(3)* equipped with 2 x 9-way female SUB-D connectors Standard cable, CE mark. Low smoke zero halogen Flame-retardant (IEC 60332-1)	5	0.3/ *0.98*	**TSXCANCADD03**	0.091/ *0.201*
		1/ *3.28*	**TSXCANCADD1**	0.143/ *0.315*
		3/ *9.84*	**TSXCANCBDD3**	0.268/ *0.591*
		5/ *16.40*	**TSXCANCBDD5**	0.400/ *0.882*
IP 20 CANopen tap junction boxes equipped with: ■ 4 x 9-way male SUB-D connectors + screw terminal block for trunk cable tap link ■ Line terminator	–	–	**TSXCANTDM4**	0.196/ *0.432*
IP 20 CANopen tap junction boxes equipped with: ■ 2 screw terminal blocks for trunk cable tap link ■ 2 RJ45 connectors for connecting drives ■ 1 RJ45 connector for connecting a PC	–	–	**VW3CANTAP2**	–
CANopen line terminator for screw terminal connector *(4)*	8	–	**TCSCAR01NM120**	–

(1) Altivar Process drives can only take one communication module.
(2) Please refer to the "Modicon automation platform" catalogs on our website www.schneider-electric.com.
(3) Cable depends on the PLC.
(4) Sold in lots of 2.

Variable speed drives
Altivar Process
Communication buses and networks
Option: Communication modules

PF 514350



VW3A3627

PROFINET bus *(1) (2)*

Description	Reference	Weight kg/ *lb*
Communication module		
PROFINET module equipped with 2 RJ45 connectors	**VW3A3627**	0.290/ *0.639*

PF095130

VW3A3607

PROFIBUS DP V1 bus *(1) (3)*

Description	Reference	Weight kg/ *lb*
Communication module		
PROFIBUS DP V1 module Port: 1 x 9-way female SUB-D connector Conforming to PROFIBUS DP V1 Profiles supported: ■ CiA 402 drive ■ Profidrive Offers several message handling modes based on DP V1	**VW3A3607**	0.140/ *0.309*
SUB-D connection		
IP 20 straight connectors *(4)* for Profibus module	**LU9AD7**	–

PF095144

VW3A3619

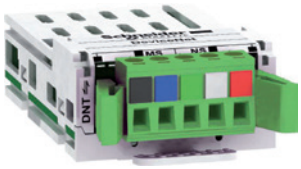
POWERLINK network *(5)*

Description	Reference	Weight kg/*lb*
Ethernet POWERLINK communication module Port: 2 RJ45 connectors	**VW3A3619**	0.300/ *0.660*

(1) Altivar Process drives can only take one communication module.
(2) Minimum version compatible with Altivar Process: v1.2.06.
(3) Minimum version compatible with Altivar Process: v1.9.01.
(4) Only straight connectors are compatible with Altivar Process drives.
(5) Minimum Altivar Process firmware version compatible with Powerlink module: v2.2.

Variable speed drives
Altivar Process
Communication buses and networks
Option: Communication modules

PF514345



VW3A3609

ATVPro_62317_CPMFS17001B

VW3A3725

DeviceNet bus *(1) (2)*

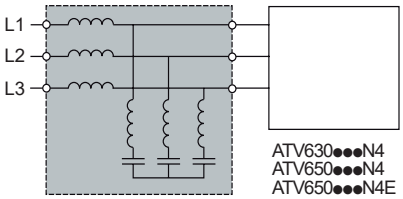
Description	Reference	Weight kg/ *lb*
Communication module		
DeviceNet module Port: 1 removable 5-way screw connector Profiles supported: ■ CIP AC DRIVE ■ CiA 402 drive	**VW3A3609**	0.300/ *0.661*

BACnet MSTP *(1) (2)*

Description	Reference	Weight kg/ *lb*
Communication module		
BACnet module Port: RS485 5-pin removable terminal block - 2 twistedpairs	**VW3A3725**	0.035/ *0.08*

(1) Altivar Process drives can only take one communication module.
(2) Minimum version compatible with Altivar Process: v1.7.

Variable speed drives
Altivar Process
Option: Passive filters



Passive filter

Presentation

Passive filters are used to obtain total harmonic distortion of less than 10% or 5%. Reactive power increases at no load or low load. To help reduce this reactive power, the filter capacitors can be disconnected (see the diagrams on our website www.schneider-electric.com).
Passive filters provide IP 20 protection.

Applications

Reduction of current harmonics in order to use drives in the first environment (restricted distribution, domestic applications).

Variable speed drives
Altivar Process
Option: Passive filters

PF140347

VW3A46106

Passive filters: 400 V 50 Hz three-phase supply

Motor rating		For Altivar Process drives	Filter		Quantity required per drive	Reference (1)	Weight
			Nominal current				
			input	output			
kW	*HP*		A	A			kg/ *lb*
THDi < 10%							
0.75	*1*	**ATV630U07N4 ATV650U07N4 ATV650U07N4E**	6	6.2	1	**VW3A46101**	12.000/ *26.455*
1.5	*2*	**ATV630U15N4 ATV650U15N4 ATV650U15N4E**					
2.2	*3*	**ATV630U22N4 ATV650U22N4 ATV650U22N4E**					
3	–	**ATV630U30N4 ATV650U30N4 ATV650U30N4E**					
4	*5*	**ATV630U40N4 ATV650U40N4 ATV650U40N4E**	10	10.4	1	**VW3A46102**	13.500/ *29.762*
5.5	*7.5*	**ATV630U55N4 ATV650U55N4 ATV650U55N4E**					
7.5	*10*	**ATV630U75N4 ATV650U75N4 ATV650U75N4E**	14	14.5	1	**VW3A46103**	16.300/ *35.935*
11	*15*	**ATV630D11N4 ATV650D11N4 ATV650D11N4E**	22	23	1	**VW3A46104**	22.000/ *48.502*
15	*20*	**ATV630D15N4 ATV650D15N4 ATV650D15N4E**	29	30	1	**VW3A46105**	25.000/ *55.116*
18.5	*25*	**ATV630D18N4 ATV650D18N4 ATV650D18N4E**	35	37	1	**VW3A46106**	37.000/ *81.571*
22	*30*	**ATV630D22N4 ATV650D22N4 ATV650D22N4E**	43	45	1	**VW3A46107**	39.000/ *85.980*
30	*40*	**ATV630D30N4 ATV650D30N4 ATV650D30N4E**	58	60	1	**VW3A46108**	44.000/ *97.003*
37	*50*	**ATV630D37N4 ATV650D37N4 ATV650D37N4E**	72	75	1	**VW3A46109**	56.000/ *123.459*
45	*60*	**ATV630D45N4 ATV650D45N4 ATV650D45N4E**	86	90	1	**VW3A46110**	62.000/ *136.686*
55	*75*	**ATV630D55N4 ATV650D55N4 ATV650D55N4E**	101	105	1	**VW3A46111**	74.000/ *163.142*
75	*100*	**ATV630D75N4 ATV650D75N4 ATV650D75N4E**	144	150	1	**VW3A46112**	85.000/ *187.393*
90	*125*	**ATV630D90N4 ATV650D90N4 ATV650D90N4E**	180	187	1	**VW3A46113**	102.000/ *224.871*
110	*150*	**ATV630C11N4**	217	225	1	**VW3A46114**	119.000/ *262.350*
132	*200*	**ATV630C13N4**	252	262	1	**VW3A46115**	136.000/ *299.828*
160	*250*	**ATV630C16N4**	304	316	1	**VW3A46116**	142.000/ *313.056*
220	*350*	**ATV630C22N4**	380	395	1	**VW3A46118**	172.000/ *379.195*
250	*400*	**ATV630C25N4**	433	450	1	**VW3A46119**	205.000/ *451.947*
315	*500*	**ATV630C31N4**	304	316	2	**VW3A46116**	142.000/ *313.056*

*(1) When used with **ATV650U07N4/N4E...D90N4/N4E** drives, the filter must be mounted in a separate enclosure to maintain IP 55 protection for the installation.*

Variable speed drives
Altivar Process
Option: Passive filters

Passive filters: 400 V 50 Hz three-phase supply

Motor rating		For Altivar Process drives	Filter		Quantity required per drive	Reference (1)	Weight
			Nominal current				
			input	output			
kW	*HP*		A	A			kg/ *lb*
THDi < 5%							
0.75	*1*	**ATV630U07N4 ATV650U07N4 ATV650U07N4E**	6	6.2	1	**VW3A46120**	16.000/ *35.274*
1.5	*2*	**ATV630U15N4 ATV650U15N4 ATV650U15N4E**					
2.2	*3*	**ATV630U22N4 ATV650U22N4 ATV650U22N4E**					
3	–	**ATV630U30N4 ATV650U30N4 ATV650U30N4E**					
4	*5*	**ATV630U40N4 ATV650U40N4 ATV650U40N4E**	10	10.4	1	**VW3A46121**	18.000/ *39.683*
5.5	*7.5*	**ATV630U55N4 ATV650U55N4 ATV650U55N4E**					
7.5	*10*	**ATV630U75N4 ATV650U75N4 ATV650U75N4E**	14	14.5	1	**VW3A46122**	20.000/ *44.092*
11	*15*	**ATV630D11N4 ATV650D11N4 ATV650D11N4E**	22	23	1	**VW3A46123**	30.000/ *66.139*
15	*20*	**ATV630D15N4 ATV650D15N4 ATV650D15N4E**	29	30	1	**VW3A46124**	34.000/ *74.957*
18.5	*25*	**ATV630D18N4 ATV650D18N4 ATV650D18N4E**	35	37	1	**VW3A46125**	53.000/ *116.845*
22	*30*	**ATV630D22N4 ATV650D22N4 ATV650D22N4E**	43	45	1	**VW3A46126**	58.000/ *127.868*
30	*40*	**ATV630D30N4 ATV650D30N4 ATV650D30N4E**	58	60	1	**VW3A46127**	76.000/ *167.551*
37	*50*	**ATV630D37N4 ATV650D37N4 ATV650D37N4E**	72	75	1	**VW3A46128**	98.000/ *216.053*
45	*60*	**ATV630D45N4 ATV650D45N4 ATV650D45N4E**	86	90	1	**VW3A46129**	104.000/ *229.281*
55	*75*	**ATV630D55N4 ATV650D55N4 ATV650D55N4E**	101	105	1	**VW3A46130**	106.000/ *233,690*
75	*100*	**ATV630D75N4 ATV650D75N4 ATV650D75N4E**	144	150	1	**VW3A46131**	126.000/ *277.782*
90	*125*	**ATV630D90N4 ATV650D90N4 ATV650D90N4E**	180	187	1	**VW3A46132**	135.000/ *297.623*
110	*150*	**ATV630C11N4**	217	225	1	**VW3A46133**	172.000/ *379.195*
132	*200*	**ATV630C13N4**	252	262	1	**VW3A46134**	206.000/ *454.152*
160	*250*	**ATV630C16N4**	304	316	1	**VW3A46135**	221.000/ *487.221*
220	350	**ATV630C22N4**	380	395	1	**VW3A46137**	265.000/ *584.225*
250	400	**ATV630C25N4**	433	450	1	**VW3A46138**	272.000/ *599.657*
315	500	**ATV630C31N4**	304	316	2	**VW3A46135**	221.000/ *487.221*

*(1) When used with **ATV650U07N4/N4E...D90N4/N4E** drives, the filter must be mounted in a separate enclosure to maintain IP 55 protection for the installation.*

Variable speed drives
Altivar Process
Option: Passive filters

Passive filters: 460 V 60 Hz three-phase supply

Motor rating		For Altivar Process drives	Filter		Quantity required per drive	Reference (1)	Weight
			Nominal current				
			input	output			
kW	*HP*		A	A			kg/ *lb*
THDi < 10%							
0.75	*1*	**ATV630U07N4 ATV650U07N4 ATV650U07N4E**	6	6.2	1	**VW3A46139**	12.000/ *26.455*
1.5	*2*	**ATV630U15N4 ATV650U15N4 ATV650U15N4E**					
2.2	*3*	**ATV630U22N4 ATV650U22N4 ATV650U22N4E**					
3	–	**ATV630U30N4 ATV650U30N4 ATV650U30N4E**					
4	*5*	**ATV630U40N4 ATV650U40N4 ATV650U40N4E**	10	10.4	1	**VW3A46140**	13.500/ *29.762*
5.5	*7.5*	**ATV630U55N4 ATV650U55N4 ATV650U55N4E**					
7.5	*10*	**ATV630U75N4 ATV650U75N4 ATV650U75N4E**	14	14.5	1	**VW3A46141**	16.300/ *35.935*
11	*15*	**ATV630D11N4 ATV650D11N4 ATV650D11N4E**	19	19.5	1	**VW3A46142**	22.000/ *48.502*
15	*20*	**ATV630D15N4 ATV650D15N4 ATV650D15N4E**	25	26	1	**VW3A46143**	23.000/ *50.706*
18.5	*25*	**ATV630D18N4 ATV650D18N4 ATV650D18N4E**	31	32	1	**VW3A46144**	33.000/ *72.752*
22	*30*	**ATV630D22N4 ATV650D22N4 ATV650D22N4E**	36	37	1	**VW3A46145**	37.000/ *81.571*
30	*40*	**ATV630D30N4 ATV650D30N4 ATV650D30N4E**	48	50	1	**VW3A46146**	39.000/ *85.980*
37	*50*	**ATV630D37N4 ATV650D37N4 ATV650D37N4E**	60	62	1	**VW3A46147**	43.000/ *94.799*
45	*60*	**ATV630D45N4 ATV650D45N4 ATV650D45N4E**	73	76	1	**VW3A46148**	55.000/ *121.254*
55	*75*	**ATV630D55N4 ATV650D55N4 ATV650D55N4E**	95	99	1	**VW3A46149**	62.000/ *136.686*
75	*100*	**ATV630D75N4 ATV650D75N4 ATV650D75N4E**	118	122	1	**VW3A46150**	74.000/ *163.142*
90	*125*	**ATV630D90N4 ATV650D90N4 ATV650D90N4E**	154	160	1	**VW3A46151**	85.000/ *187.393*
110	*150*	**ATV630C11N4**	183	190	1	**VW3A46152**	102.000/ *224.871*
132	*200*	**ATV630C13N4**	231	240	1	**VW3A46153**	119.000/ *262.350*
160	*250*	**ATV630C16N4**	291	302.5	1	**VW3A46154**	142.000/ *313.056*
220	350	**ATV630C22N4**	355	369	1	**VW3A46155**	162.000/ *357.149*
250	400	**ATV630C25N4**	436	450	1	**VW3A46157**	205.000/ *451.948*
315	500	**ATV630C31N4**	231	240	2	**VW3A46153**	119.000/ *262.35*

*(1) When used with **ATV650U07N4/N4E...D90N4/N4E** drives, the filter must be mounted in a separate enclosure to maintain IP 55 protection for the installation.*

Variable speed drives
Altivar Process
Option: Passive filters

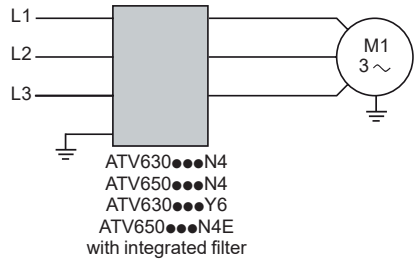
Passive filters: 460 V 60 Hz three-phase supply

Motor rating		For Altivar Process drives	Filter		Quantity required per drive	Reference (1)	Weight
			Nominal current				
			input	output			
kW	HP		A	A			kg/lb
THDi < 5%							
0.75	1	**ATV630U07N4 ATV650U07N4 ATV650U07N4E**	6	6.2	1	**VW3A46158**	16.000/ 35.274
1.5	2	**ATV630U15N4 ATV650U15N4 ATV650U15N4E**					
2.2	3	**ATV630U22N4 ATV650U22N4 ATV650U22N4E**					
3	–	**ATV630U30N4 ATV650U30N4 ATV650U30N4E**					
4	5	**ATV630U40N4 ATV650U40N4 ATV650U40N4E**	10	10.4	1	**VW3A46159**	18.000/ 39.683
5.5	7.5	**ATV630U55N4 ATV650U55N4 ATV650U55N4E**					
7.5	10	**ATV630U75N4 ATV650U75N4 ATV650U75N4E**	14	14.5	1	**VW3A46160**	20.000/ 44.092
11	15	**ATV630D11N4 ATV650D11N4 ATV650D11N4E**	19	19.5	1	**VW3A46161**	30.000/ 66.139
15	20	**ATV630D15N4 ATV650D15N4 ATV650D15N4E**	25	26	1	**VW3A46162**	34.000/ 74.957
18.5	25	**ATV630D18N4 ATV650D18N4 ATV650D18N4E**	31	32	1	**VW3A46163**	52.000/ 114.640
22	30	**ATV630D22N4 ATV650D22N4 ATV650D22N4E**	36	37	1	**VW3A46164**	53.000/ 116.845
30	40	**ATV630D30N4 ATV650D30N4 ATV650D30N4E**	48	50	1	**VW3A46165**	57.000/ 125.663
37	50	**ATV630D37N4 ATV650D37N4 ATV650D37N4E**	60	62	1	**VW3A46166**	75.000/ 165.347
45	60	**ATV630D45N4 ATV650D45N4 ATV650D45N4E**	73	76	1	**VW3A46167**	97.000/ 213.848
55	75	**ATV630D55N4 ATV650D55N4 ATV650D55N4E**	95	99	1	**VW3A46168**	104.000/ 229.281
75	100	**ATV630D75N4 ATV650D75N4 ATV650D75N4E**	118	122	1	**VW3A46169**	106.000/ 233.690
90	125	**ATV630D90N4 ATV650D90N4 ATV650D90N4E**	154	160	1	**VW3A46170**	126.000/ 277.782
110	150	**ATV630C11N4**	183	190	1	**VW3A46171**	135.000/ 297.624
132	200	**ATV630C13N4**	231	240	1	**VW3A46172**	172.000/ 379.195
160	250	**ATV630C16N4**	291	316	1	**VW3A46173**	221.000/ 487.221
220	350	**ATV630C22N4**	355	369	1	**VW3A46174**	229.000/ 504.858
250	400	**ATV630C25N4**	436	450	1	**VW3A46176**	272.000/ 599.657
315	500	**ATV630C31N4**	231	240	2	**VW3A46172**	172.000/ 379.195

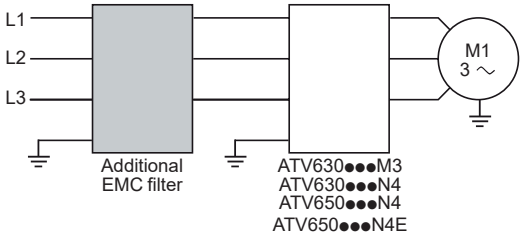
*(1) When used with **ATV650U07N4/N4E...D90N4/N4E** drives, the filter must be mounted in a separate enclosure to maintain IP 55 protection for the installation.*

Presentation: page 1/8 | Variable speed drives: page 2/2 | Configuration and runtime tools: page 2/14 | Combinations: page 2/18 | Dimensions: page 2/56

Variable speed drives
Altivar Process
EMC filters



Altivar Process drive with integrated EMC filter



Altivar Process drive with additional EMC filter

Integrated EMC filters

Altivar Process drives (except ATV630U07M3...D75M3) have integrated radio interference input filters in accordance with 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 EMC (electromagnetic compatibility) directive.

The integrated EMC filter runs the leakage current to ground. The leakage current can be reduced by disconnecting the filter capacitors (please refer to the installation guide on our website www.schneider-electric.com). In this configuration, the product does not comply with the European EMC directive.

For drives	Maximum length of shielded cable *(1)* acc. to	
	IEC/EN 61800-3 category C2	IEC/EN 61800-3 category C3
	m	m
Three-phase supply voltage: 380…480 V IP 21		
ATV630U07N4… D45N4	50	150
ATV630D55N4… C16N4	–	150
ATV630U07N4Z…D45N4Z	10	50
ATV630D55N4Z...D90N4Z	–	50
ATV630C22N4… C31N4	–	50
ATV630C11N4F…C31N4F ATV650C11N4F…C31N4F	–	300
Three-phase supply voltage: 380…480 V IP 55		
ATV650U07N4/N4E…D45N4/N4E	50	150
ATV650D55N4/N4E…D90N4/N4E	–	150
Three-phase supply voltage: 500...690 V IP 00		
ATV630U22Y6...D90Y6	–	25

Additional EMC input filters

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 standard IEC/EN 61800-3 category C1, C2 or C3.

Use according to the type of line supply

Use of these additional filters is only possible on TN (neutral connection) and TT (grounded neutral) type systems.

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

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

(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, it is the total length of all cables that should be taken into account.

Variable speed drives
Altivar Process: EMC filters
Option: Additional EMC input filters

PF130915

VW3A4701

PF130922

VW3A4411

Additional EMC input filters (continued)

References

For drives	Maximum length of shielded cable (1)			In (2)	If	Degree of Protection	Reference	Weight
	IEC/EN 61800-3 category C1 (3)	IEC/EN 61800-3 category C2 (3)	IEC/EN 61800-3 category C3 (3)					
	m	m	m	A	mA	IP		kg/ *lb*
Three-phase supply voltage: 200...240 V 50 Hz								
ATV630U07M3...U15M3	50	150	300	8	7.6	20	**VW3A4701**	2.000/ *4.409*
ATV630U22M3...U30M3	50	150	300	15	7.6	20	**VW3A4702**	2.400/ *5.291*
ATV630U40M3...U75M3	50	150	300	35	7.6	20	**VW3A4703**	4.100/ *9.039*
ATV630D11M3	50	150	300	50	7.6	20	**VW3A4704**	5.200/ *11.464*
ATV630D15M3	50	150	300	70	13.9	20	**VW3A4705**	6.100/ *13.448*
ATV630D18M3...D22M3	50	150	300	100	13.9	20	**VW3A4706**	6.500/ *14.330*
ATV630D30M3...D37M3	50	150	300	160	13.9	20	**VW3A4707**	8.500/ *18.739*
ATV630D45M3	50	150	300	200	13.9	20	**VW3A4708**	9.500/ *20.944*
ATV630D55M3	50	150	300	240	27.8	00	**VW3A4709**	15.000/ *33.069*
ATV630D75M3	50	150	300	305	27.8	00	**VW3A4710**	17.000/ *37.479*
Three-phase supply voltage: 380...480 V 50 Hz								
ATV630U07N4...U22N4 ATV650U07N4...U22N4 ATV650U07N4E...U22N4E	50	150	300	8	7.6	20	**VW3A4701**	2.000/ *4.409*
ATV630U30N4...U55N4 ATV650U30N4...U55N4 ATV650U30N4E...U55N4E	50	150	300	15	7.6	20	**VW3A4702**	2.400/ *5.291*
ATV630U75N4...D15N4 ATV650U75N4...D15N4 ATV650U75N4E...D15N4E	50	150	300	35	7.6	20	**VW3A4703**	4.100/ *9.039*
ATV630D18N4...D22N4 ATV650D18N4...D22N4 ATV650D18N4E...D22N4E	50	150	300	50	7.6	20	**VW3A4704**	5.200/ *11.464*
ATV630D30N4 ATV650D30N4 ATV650D30N4E	50	150	300	70	13.9	20	**VW3A4705**	6.100/ *13.448*
ATV630D37N4...D45N4 ATV650D37N4...D45N4 ATV650D37N4E...D45N4E	50	150	300	100	13.9	20	**VW3A4706**	6.500/ *14.330*
ATV630D55N4 ATV650D55N4 ATV650D55N4E	50	150	300	160	13.9	20	**VW3A4707**	8.500/ *18.739*
ATV630D75N4...D90N4 ATV650D75N4...D90N4 ATV650D75N4E...D90N4E	50	150	300	200	13.9	20	**VW3A4708**	9.500/ *20.944*
ATV630C11N4...C13N4	–	150	300	240	27.8	00	**VW3A4709**	15.000/ *33.069*
ATV630C16N4	–	150	300	305	27.8	00	**VW3A4710**	17.000/ *37.479*
ATV630C22N4...C31N4	50	300	-	546	500	00	**VW3A4411**	25.000/ *57.320*

(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, it is the total length of all cables that should be taken into account.
(2) Nominal filter current.
(3) Values given depend on the nominal switching frequency of the drive. This frequency depends on the drive rating.

Variable speed drives
Altivar Process: EMC filters
Option: Additional EMC input filters,
Substitution kits for ATV61/71

IP 21 protection kit for IP 20 filters

Additional input filters provide IP 20 protection as standard. This kit can be used to provide IP 21 or UL type 1 protection.

Description	For filters	Reference	Weight kg/ *lb*
Mechanical kit including cover and cable clamps	**VW3A4701**	**VW3A47901**	0.200/ *0.441*
	VW3A4702	**VW3A47902**	0.300/ *0.661*
	VW3A4703	**VW3A47903**	0.400/ *0.882*
	VW3A4704	**VW3A47904**	0.500/ *1.102*
	VW3A4705	**VW3A47905**	0.900/ *1.984*
	VW3A4706	**VW3A47906**	1.000/ *2.205*
	VW3A4707	**VW3A47907**	1.500/ *3.307*
	VW3A4708	**VW3A47908**	2.000/ *4.409*

Substitution kits for ATV61/71

This kit is used to install an Altivar Process drive in the place of an Altivar 61 or Altivar 71 drive using the same fixing holes. It includes the mechanical adaptors required for mounting.

For drive	From ATV61/71	Kit reference	Weight kg/ *lb*
ATV630U07N4Z…U22N4Z	S2	**VW3A93111**	–
	S3	**VW3A93112**	–
	S4	**VW3A93113**	–
ATV630U75N4Z, D11N4Z	S4	**VW3A93114**	–
	S5A	**VW3A93115**	–
ATV630D15N4Z…D22N4Z	S5B	**VW3A93116**	–
	S6	**VW3A93116**	–
ATV630D30N4Z…D45N4Z	S6	**VW3A93117**	–
	S7A	**VW3A93117**	–
	S8	**VW3A93118**	–
ATV630D55N4Z…D90N4Z	S8	**VW3A93119**	–
	S9	**VW3A93120**	–

Variable speed drives
Altivar Process: reduction of current harmonics
Option: AC line chokes

PF142110

VW3A4556

Line chokes

A line choke can be used to reduce harmonic distortion of the current produced by the drive.

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

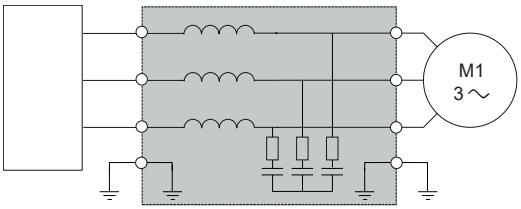
Line chokes allow ATV630U22Y6…D90Y6 drives to be used in applications requiring a harmonic level of THDi 48%.

Chokes must be installed upstream of the drive.

References

For drives	Line Supply Isc	Line chokes			Reference	Weight
		Inductance value	Nominal Current	Losses		
	kA	mH	A	W		kg/ *lb*
Three-phase supply voltage: 500…690 V 50/60 Hz						
ATV630U22Y6…40Y6	22	10	4	45	**VW3A4551**	1.500/ *2.204*
ATV630U55Y6…75Y6	22	4	10	65	**VW3A4552**	3.000/ *6.613*
ATV630D11Y6...15Y6	22	2	16	75	**VW3A4553**	3.500/ *7.716*
ATV630D18Y6…22Y6	22	1	30	90	**VW3A4554**	6.000/ *13.227*
ATV630D30Y6...45Y6	22	0.5	60	94	**VW3A4555**	11.000/ *24.250*
ATV630D55Y6...90Y6	22	0.3	100	260	**VW3A4556**	16.000/ *35.274*

Variable speed drives
Altivar Process: Output filters
Option: dv/dt filters



ATV630●●●M3
ATV630●●●N4
ATV650●●●N4
ATV650●●●N4E

dv/dt filter

Altivar Process drive with dv/dt filter

Presentation

Altivar Process drives with supply voltage of 200...240 V and 380...480 V operate with the following maximum motor cable lengths : 150 m/*492 ft* for shielded cables and 300 m/*984 ft* for unshielded cables.
For supply voltage of 500...690 V maximum motor cable lengths are : 10 m/*32 ft* for shielded cables and 20 m/*65 ft* for unshielded cables.

To limit the impact of dv/dt and overvoltages in the motor, it is advisable for cables longer than 50 m/*164 ft*, that an output filter is added if the motor insulation type does not conform to IEC60034-25.

For further information, please consult the "An Improved Approach for Connecting VSD and Electric Motors" White Paper available on our website www.schneider-electric.com.

Output filters are used to limit dv/dt at the motor terminals to 500 V/µs maximum for supply voltages up to 480 V, to 750 V/µs maximum for supply voltage of 500 V and to 1000 V/µs maximum for supply voltage of 690 V.

Output filters are designed to limit overvoltages at the motor terminals to less than:
- 800 V with a shielded cable 0 to 50 m (*0 to 164 ft*) long, with a 400 V supply voltage
- 1,000 V with a shielded cable 50 to 150 m (*164 to 492 ft*) long, with a 400 V supply voltage
- 1,500 V with a shielded cable 150 to 300 m (*492 to 984 ft*) long, with a 400 V supply voltage (up to 500 m (*1,640 ft*) with an unshielded cable)
- 1,300 V with 500 V supply voltage, cable length depending on the dv/dt filter combination
- 1,600 V with 690 V supply voltage, cable length depending on the dv/dt filter combination

The performance of dv/dt filters will be affected if the maximum cable lengths are exceeded. For an application with several motors connected in parallel, the cable length must include all cabling. If a cable longer than that specified is used, the dv/dt filters may overheat.

The switching frequency must be less than 8 kHz.

dv/dt output filters

For drives	Maximum length of motor cable		Degree of protection	In *(3)*	Reference	Weight
	Maximum switching frequency *(1)*	Shielded cable *(2)*				
	kHz	m/*ft*	IP	A		kg/*lb*
Three-phase supply voltage: 200...240 V						
ATV630U07M3	4	300/*984*	20	6	**VW3A5301**	11.000/*24.251*
ATV630U15M3...U30M3	4	300/*984*	20	15	**VW3A5302**	12.000/*26.455*
ATV630U40M3	4	300/*984*	20	25	**VW3A5303**	12.000/*26.455*
ATV630U55M3...D11M3	4	300/*984*	20	50	**VW3A5304**	18.000/*39.683*
ATV630D15M3...D22M3	4	300/*984*	20	95	**VW3A5305**	19.000/*41.888*
ATV630D30M3...D45M3	2.5	300/*984*	00	180	**VW3A5306**	22.000/*48.502*
ATV630D55M3...D75M3	2.5	300/*984*	00	305	**VW3A5307**	40.000/*88.185*

(1) The filters are designed to operate in a switching frequency range of between 2 and 8 kHz.
(2) Values given depend on the nominal switching frequency of the drive. This frequency depends on the drive rating. These cable lengths are given as examples only as they can vary depending on the application. They correspond to motors conforming to IEC 6034-25 and NEMA MG1/31.2006.
(3) Nominal filter current.

Variable speed drives
Altivar Process: Output filters
Option: dv/dt filters

IOP121624

VW3A5104

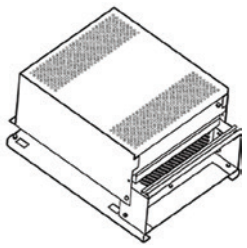
dv/dt output filters (continued)

For drives	Maximum length of motor cable		Degree of protection	In *(3)*	Reference *(4)*	Weight
	Maximum switching frequency *(1)*	Shielded cable *(2)*				
	kHz	m/*ft*	IP	A		kg/*lb*
Three-phase supply voltage: 380...480 V						
ATV630U07N4...U22N4 ATV650U07N4...U22N4 ATV650U07N4E...U22N4E	4	300/ *984*	20	6	**VW3A5301**	11.000/ *24.251*
ATV630U30N4...U55N4 ATV650U30N4...U55N4 ATV650U30N4E...U55N4E	4	300/ *984*	20	15	**VW3A5302**	12.000/ *26.455*
ATV630U75N4...D11N4 ATV650U75N4...D11N4 ATV650U75N4E...D11N4E	4	300/ *984*	20	25	**VW3A5303**	12.000/ *26.455*
ATV630D15N4...D22N4 ATV650D15N4...D22N4 ATV650D15N4E...D22N4E	4	300/ *984*	20	50	**VW3A5304**	18.000/ *39.683*
ATV630D30N4...D45N4 ATV650D30N4...D45N4 ATV650D30N4E...D45N4E	4	300/ *984*	20	95	**VW3A5305**	19.000/ *41.888*
ATV630D55N4...D90N4 ATV650D55N4...D90N4 ATV650D55N4E...D90N4E	2.5	300/ *984*	00	180	**VW3A5306**	22.000/ *48.502*
ATV630C11N4...C16N4	2.5	300/ *984*	00	305	**VW3A5307**	40.000/ *88.185*
ATV630C22N4	2.5	250/ *820*	00	481	**VW3A5106**	58.000/ *127.868*
ATV630C25N4...C31N4	2.5	200/ *656*	00	759	**VW3A5107**	93.000/ *205.230*
Three-phase supply voltage: 500…690 V						
ATV630U22Y6..U55Y6	6	50/ *164*	00	90	**VW3A5103**	10.000/ *22.046*
ATV630U75Y6, ATV630D11Y6	6	50/ *164*	00	90	**VW3A5103**	10.000/ *22.046*
	6	100/ *328*	00	215	**VW3A5104**	15.500/ *34.171*
ATV630D15Y6…30Y6	2.5	50/ *164*	00	90	**VW3A5103**	10.000/ *22.046*
	2.5	70/ *230*	00	90	**2 x VW3A5103**	20.000/ *44.001*
	4	35/ *115*	00	90		
	4	150/ *492*	00	215	**VW3A5104**	15.500/ *34.171*
	6	100/ *328*	00	215		
	6	150/ *492*	00	215	**2 x VW3A5104**	31.000/ *68.342*
ATV630D37Y6...D90Y6	4	100/ *328*	00	215	**VW3A5104**	15.500/ *34.171*
	4	150/ *492*	00	215	**2 x VW3A5104**	31.000/ *68.342*

(1) The filters are designed to operate in a switching frequency range of between 2 and 8 kHz.
(2) Values given depend on the nominal switching frequency of the drive. This frequency depends on the drive rating. These cable lengths are given as examples only as they can vary depending on the application. They correspond to motors conforming to IEC 6034-25 and NEMA MG1/31.2006.
(3) Nominal filter current.
*(4) When used with **ATV650U07N4/N4E...D90N4/N4E** drives, the filter must be mounted in a separate enclosure to maintain IP 55 protection for the installation.*

Variable speed drives
Altivar Process: Output filters
Option: dv/dt filters

PF152807



VW3A9612

IP 20 protection kit for IP 00 filters

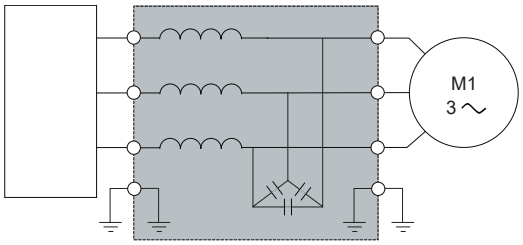
Description	For dv/dt filters	Reference	Weight kg/ *lb*
Mechanical kit including cover and cable clamps	VW3A5104	VW3A9612	–
	VW3A5106 VW3A5107	VW3A9613	–

IP 21 protection kit for IP 20 filters

Description	For dv/dt filters	Reference	Weight kg/ *lb*
Mechanical kit including cover and cable clamps	VW3A5301 VW3A5302 VW3A5303	VW3A53902	1.300/ *2.866*
	VW3A5304	VW3A53903	1.700/ *3.748*
	VW3A5305	VW3A53905	3.200/ *7.055*

2

Variable speed drives
Altivar Process: Output filters
Option: Sinus filters



ATV630●●●M3
ATV630●●●N4
ATV630●●●Y6
ATV650●●●N4
ATV650●●●N4E

Sinus filter

Altivar Process drive with sinus filter

Presentation

Sinus filters allow Altivar Process drives to operate with long motor cables:
- 500 m (1,640 ft) with a shielded cable
- 1,000 m (3,280 ft) with an unshielded cable

The minimum switching frequency at which sinus filters can operate is 2 kHz. This is the default value when the sinus filter function is activated on the variable speed drive (please refer to the programming guide on our website www.schneider-electric.com).

The output frequency must be less than 100 Hz.

At 100% load, the voltage drop is less than 8% with output frequency 50 Hz and switching frequency 4 kHz.

Applications

For applications requiring:
- Long cable runs
- Motors connected in parallel
- Submersible pumps sensitive to dv/dt
- An intermediate transformer between the drive and the motor

Sinus filters

For drives	Maximum length of unshielded motor cable	Nominal current	Degree of protection	Reference *(1)*	Weight
	m/ *ft*	A	IP		kg/ *lb*
Three-phase supply voltage: 200...240 V					
ATV630U07M3	1000/ *3.280*	6	20	**VW3A5401**	10.000/ *22.046*
ATV630U15M3...U30M3	1000/ *3.280*	15	20	**VW3A5402**	13.500/ *29.762*
ATV630U40M3	1000/ *3.280*	25	20	**VW3A5403**	20.000/ *44.092*
ATV630U55M3...D11M3	1000/ *3.280*	50	20	**VW3A5404**	35.000/ *77.162*
ATV630D15M3...D22M3	1000/ *3.280*	95	20	**VW3A5405**	60.000/ *132.277*
ATV630D30M3...D45M3	1000/ *3.280*	180	00	**VW3A5406**	90.000/ *198.416*
ATV630D75M3 *(2)*	1000/ *3.280*	305	00	**VW3A5407**	134.000/ *295.419*

(1) The filters are designed to operate in a switching frequency range of between 4 and 8 kHz.
(2) In "Normal Duty", apply a derating of 1 to the drive nominal power with a minimum switching frequency of 4 kHz.
For example: An ATV630D75M3 drive with sinus filter can be used on a 55 kW motor.

Variable speed drives
Altivar Process: Output filters
Option: Sinus filters

F19_FILT_CPSCT17002

VW3A5216

F19_FILT_CPSCT17005

VW3A5219

Sinus filters (continued)

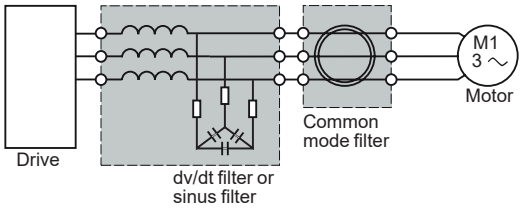
For drives	Maximum length of unshielded motor cable	Nominal current	Degree of protection	Reference (1) (2)	Weight
	m/ *ft*	A	IP		kg/ *lb*
Three-phase supply voltage: 380...480 V					
ATV630U07N4...U22N4 ATV650U07N4...U22N4 ATV650U07N4E...U22N4E	1000/ *3.280*	6	20	**VW3A5401**	10.000/ *22.046*
ATV630U30N4...U55N4 ATV650U30N4...U55N4 ATV650U30N4E...U55N4E	1000/ *3.280*	15	20	**VW3A5402**	13.500/ *29.762*
ATV630U75N4...D11N4 ATV650U75N4...D11N4 ATV650U75N4E...D11N4E	1000/ *3.280*	25	20	**VW3A5403**	20.000/ *44.092*
ATV630D15N4...D22N4 ATV650D15N4...D22N4 ATV650D15N4E...D22N4E	1000/ *3.280*	50	20	**VW3A5404**	35.000/ *77.162*
ATV630D30N4...D45N4 ATV650D30N4...D45N4 ATV650D30N4E...D45N4E	1000/ *3.280*	95	20	**VW3A5405**	60.000/ *132.277*
ATV630D55N4...D90N4 ATV650D55N4...D90N4 ATV650D55N4E...D90N4E	1000/ *3.280*	180	00	**VW3A5406**	90.000/ *198.416*
ATV630C13N4...C16N4 *(3)*	1000/ *3.280*	305	00	**VW3A5407**	134.000/ *295.419*
ATV630C22N4	1000/ *3.280*	400	00	**VW3A5209**	190.000/ *418.878*
ATV630C25N4..C31N4	1000/ *3.280*	600	00	**VW3A5210**	260.000/ *573.202*
Three-phase supply voltage: 500...690 V					
ATV630U22Y6...U75Y6	500/ *1.640*	13	20	**VW3A5215**	13.500/ *29.762*
ATV630D11Y6...D22Y6	500/ *1.640*	28	20	**VW3A5216**	25.400/ *55.997*
ATV630D30Y6...D37Y6	500/ *1.640*	45	20	**VW3A5217**	38.000/ *83.776*
ATV630D45Y6...D55Y6	750/ *2.460*	75	20	**VW3A5218**	75.000/ *165.347*
ATV630D75Y6...D90Y6	750/ *2.460*	115	20	**VW3A5219**	106.000/ *233.690*

IP 21 protection kit for IP 20 filters

Description	For sinus filter	Reference	Weight kg/ *lb*
Mechanical kit including cover and cable clamps	**VW3A5401** **VW3A5402**	**VW3A53901**	1.000/ *2.205*
	VW3A5403	**VW3A53902**	1.300/ *2.866*
	VW3A5404	**VW3A53903**	2.700/ *5.952*
	VW3A5405	**VW3A53904**	3.200/ *7.055*

(1) The filters are designed to operate in a switching frequency range of between 4 and 8 kHz.
*(2) When used with **ATV650U07N4/N4E...D90N4/N4E** drives, the filter must be mounted in a separate enclosure to maintain IP 55 protection for the installation.*
(3) In "Normal Duty", apply a derating of 1 to the drive nominal power with a minimum switching frequency of 4 kHz. For example:
An ATV630C13N4 drive with sinus filter can be used on a 110 kW motor.
An ATV630C16N4 drive with sinus filter can be used on a 132 kW motor.

Variable speed drives
Altivar Process: Output filters
Option: Common mode filters



Altivar Process ATV600 drive with common mode filter

Presentation

Sinus filters or dv/dt filters reduce the overvoltage across windings and high frequency currents in differential mode. But they have no effect on the common mode current between phases and the cable shielding, and between the windings and the stator/rotor of the motor.

Common mode filters bring several benefits:
- Reduction of RFI (radio frequency interference) of the motor cable and improvement of the effectiveness of the EMC filter for conducted emissions
- Reduction of the high frequency currents circulating in the bearings of the motor and protection of the bearings (to help prevent damage).

It is possible to use the common mode filter at the output terminals of the drive, the dv/dt filter, or the sinus filter.

***Note**: The selection of a common mode configuration depends on the type and length of motor cable. An abnormal increase of the temperature indicates a possible saturation. Additional filters shall be used to avoid it.*

Common mode filters

For drives	Maximum length of unshielded cable			
	150 m/ *492.12 ft*	**300 m/ *984.25 ft***	**500 m/ *1,640.42 ft***	**1,000 m/ *3,280.83 ft***
ATV630U07M3…U40M3	VW3A5501	VW3A5502	2 x VW3A5501	VW3A5501 + VW3A5502
ATV630U55M3	VW3A5501	VW3A5502	VW3A5501 + VW3A5502	2 x VW3A5502
ATV630U75M3…D11M3	VW3A5503	VW3A5504	2 x VW3A5503	VW3A5503 + VW3A5504
ATV630D15M3…D45M3	VW3A5503	VW3A5504	VW3A5503 + VW3A5504	2 x VW3A5504
ATV630D55M3…D75M3	VW3A5505	VW3A5506	2 x VW3A5505	2 x VW3A5506

Variable speed drives
Altivar Process: Output filters
Option: Common mode filters

Common mode filters (continued)

For drives	Maximum length of unshielded cable			
	150 m/ *492.12 ft*	300 m/ *984.25 ft*	500 m/ *1,640.42 ft*	1,000 m/ *3,280.83 ft*
ATV630U07N4…U40N4 ATV650U07N4…U40N4 ATV650U07N4E…U40N4E	VW3A5501	VW3A5502	2 x VW3A5501	VW3A5501 + VW3A5502
ATV630U55N4 ATV650U55N4 ATV650U55N4E	VW3A5501	VW3A5502	VW3A5501 + VW3A5502	VW3A5501 + VW3A5502
ATV630U75N4…D11N4 ATV650U75N4…D11N4 ATV650U75N4E…D11N4E	VW3A5501	VW3A5502	VW3A5501 + VW3A5502	2 x VW3A5502
ATV630D15N4…D22N4 ATV650D15N4…D22N4 ATV650D15N4E…D22N4E	VW3A5503	VW3A5504	2 x VW3A5503	VW3A5503 + VW3A5504
ATV630D30N4…D90N4 ATV650D30N4…D90N4 ATV650D30N4E…D90N4E	VW3A5503	VW3A5504	VW3A5503 + VW3A5504	2 x VW3A5504
ATV630C11N4…C16N4	VW3A5505	VW3A5506	2 x VW3A5505	2 x VW3A5506

For drives	Maximum length of shielded cable		
	150 m/ *492.12 ft*	300 m/ *984.25 ft*	500 m/ *1,640.42 ft*
ATV630U07N4…U40N4 ATV650U07N4…U40N4 ATV650U07N4E…U40N4E	VW3A5501	VW3A5502	2 x VW3A5501
ATV630U55N4 ATV650U55N4 ATV650U55N4E	VW3A5502	2 x VW3A5501	2 x VW3A5502
ATV630U75N4…D11N4 ATV650U75N4…D11N4 ATV650U75N4E…D11N4E	VW3A5502	2 x VW3A5501	2 x VW3A5502
ATV630D15N4…D22N4 ATV650D15N4…D22N4 ATV650D15N4E…D22N4E	VW3A5503	2 x VW3A5503	VW3A5503 + VW3A5504
ATV630D30N4…D90N4 ATV650D30N4…D90N4 ATV650D30N4E…D90N4E	VW3A5504	VW3A5503 + VW3A5504	2 x VW3A5504
ATV630C11N4	VW3A5505	VW3A5506	VW3A5505 + VW3A5506
ATV630C13N4…C16N4	VW3A5506	2 x VW3A5505	2 x VW3A5506

Variable speed drives
Altivar Process
Motor starters
Supply voltage 200...240 V

GV3L40

+

LC1D40A●●

+

ATV630D11M3

Applications

Circuit breaker/contactor/drive combinations help to ensure continuity of service in the installation.
The type of circuit breaker/contactor coordination selected can reduce maintenance costs in the event of a motor short-circuit on the drive input by minimizing the time required to make the necessary repairs and the cost of replacement equipment. The suggested combinations provide coordination according to the drive rating.

The drive controls the motor, provides a monitoring function against short-circuits between the drive and the motor, and helps protect the motor cable against overloads. Overload monitoring is provided by the drive's motor thermal monitoring function if this has been enabled. Otherwise, an external monitoring device such as a probe or thermal overload relay should be provided.
The circuit breaker helps protect the drive's power cables against short-circuits.

IEC standard motor starters

Motor		Drive	Circuit breaker			Line contactor
Power *(1)*		Reference	Reference *(2)*	Rating	Irm	Reference *(3) (4)*
kW	*HP*			A	A	
Three-phase supply voltage: 200…240 V 50/60 Hz						
0.75	*1*	**ATV630U07M3**	**GV2L08**	4	51	**LC1D09●●**
1.5	*2*	**ATV630U15M3**	**GV2L10**	6.3	78	**LC1D09●●**
2.2	*3*	**ATV630U22M3**	**GV2L14**	10	138	**LC1D09●●**
3	–	**ATV630U30M3**	**GV2L16**	14	170	**LC1D18●●**
4	*5*	**ATV630U40M3**	**GV2L20**	18	223	**LC1D18●●**
5.5	*7.5*	**ATV630U55M3**	**GV2L22**	25	327	**LC1D25●●**
7.5	*10*	**ATV630U75M3**	**GV2L32**	32	448	**LC1D40A●●**
11	*15*	**ATV630D11M3**	**GV3L40**	40	560	**LC1D40A●●**
15	*20*	**ATV630D15M3**	**GV3L65**	65	910	**LC1D65A●●**
18.5	*25*	**ATV630D18M3**	**GV4L/LE80●**	80	480	**LC1D65A●●**
22	*30*	**ATV630D22M3**	**GV4L/LE80●**	80	480	**LC1D80●●**
30	*40*	**ATV630D30M3**	**GV4L/LE115●**	100	600	**LC1D95●●**
37	*50*	**ATV630D37M3**	**NSX160●MA150**	150	1,350	**LC1D115●●**
45	*60*	**ATV630D45M3**	**NSX160●MA150**	150	1,350	**LC1D150●●**
55	*75*	**ATV630D55M3**	**NSX250●MA220**	220	1,980	**LC1F185●●**
75	*100*	**ATV630D75M3**	**NSX400● Micrologic 1.3-M**	320	1,600	**LC1F265●●**

(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 breaking performance of the circuit breaker (F, N, H, S, or L).
Breaking capacity of circuit breakers according to standard IEC 60947-2:

Circuit breaker	Icu (kA) for 200…240 V						
		B	F	N	H	S	L
GV2L08…L20	>100	–	–	–	–	–	–
GV2L22…L32	50	–	–	–	–	–	–
GV3L40…L65	50	–	–	–	–	–	–
GV4L80/115●	–	50	–	100	–	–	–
GV4LE80/115●	–	50	–	100	–	120	–
NSX160●MA150	–	–	85	90	100	120	150
NSX250●MA220	–	–	85	90	100	120	150
NSX400● Micrologic 1.3-M	–	–	40	85	100	120	150

(3) Composition of contactors:
LC1D09...D150: 3 poles + 1 NO auxiliary contact + 1 NC auxiliary contact
LC1F185...F265: 3 poles
To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalog.
(4) Replace ●● with the control circuit voltage code indicated in the table below:

	Volts ∿	24	48	110	220	230	240
LC1D09…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**
LC1F185	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**
LC1F265	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 Center.

NSX100FMA100

+

LC1D80●●

+

ATV630D45N4

IEC standard motor starters

Motor Power (1) kW	HP	Drive Reference	Circuit breaker Reference (2)	Rating A	Irm A	Line contactor Reference (3) (4)
Three-phase supply voltage: 380…415 V 50/60 Hz						
0.75	1	**ATV630U07N4**	**GV2L07**	2.5	33.5	**LC1D09●●**
1.5	2	**ATV630U15N4**	**GV2L08**	4	51	**LC1D09●●**
2.2	3	**ATV630U22N4**	**GV2L10**	6.3	78	**LC1D09●●**
3	–	**ATV630U30N4**	**GV2L14**	10	138	**LC1D09●●**
4	5	**ATV630U40N4**	**GV2L14**	10	138	**LC1D09●●**
5.5	7.5	**ATV630U55N4**	**GV2L16**	14	170	**LC1D18●●**
7.5	10	**ATV630U75N4**	**GV2L20**	18	223	**LC1D18●●**
11	15	**ATV630D11N4**	**GV2L22**	25	327	**LC1D25●●**
15	20	**ATV630D15N4**	**GV3L32**	32	448	**LC1D25●●**
18.5	25	**ATV630D18N4**	**GV3L40**	40	560	**LC1D40A●●**
22	30	**ATV630D22N4**	**GV3L50**	50	700	**LC1D50A●●**
30	40	**ATV630D30N4**	**GV3L65**	65	910	**LC1D50A●●**
37	50	**ATV630D37N4**	**GV4L/LE80●**	80	480	**LC1D65A●●**
45	60	**ATV630D45N4**	**GV4L/LE115●**	115	690	**LC1D80●●**
55	75	**ATV630D55N4**	**GV4L/LE115●**	115	690	**LC1D80●●**
75	100	**ATV630D75N4**	**NSX160●MA150**	150	1,350	**LC1D115●●**
90	125	**ATV630D90N4**	**NSX250●MA220**	220	1,980	**LC1F185●●**
110	150	**ATV630C11N4**	**NSX250●MA220**	220	1,980	**LC1F185●●**
132	200	**ATV630C13N4**	**NSX400● Micrologic 1.3-M**	320	1,600	**LC1F265●●**
160	250	**ATV630C16N4**	**NSX400● Micrologic 1.3-M**	320	1,600	**LC1F265●●**
220	350	**ATV630C22N4**	**NSX630● Micrologic 1.3-M**	500	3,000	**LC1F400●●**
250	400	**ATV630C25N4**	**NSX630● Micrologic 1.3-M**	500	3,000	**LC1F500●●**
310	500	**ATV630C31N4**	**NS800L Micrologic 2 or 5**	800	1,600	**LC1F630●●**

(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 breaking performance of the circuit breaker (F, N, H, S, or L).
Breaking capacity of circuit breakers according to standard IEC 60947-2:

Circuit breaker	Icu (kA) for 380…415 V						
		B	F	N	H	S	L
GV2L07...L14	>100	–	–	–	–	–	–
GV2L16 ...L22	50	–	–	–	–	–	–
GV3L32…L65	50	–	–	–	–	–	–
GV4L80/115●	–	25	–	50	–	–	–
GV4LE80/115●	–	25	–	50	–	100	–
NSX160●MA150	–	–	36	50	70	100	150
NSX250●MA220	–	–	36	50	70	100	150
NSX400●, NSX630●	–	–	36	50	70	100	150
NS800L Micrologic 2 or 5	–	–	–	–	–	–	150

(3) Composition of contactors:
LC1D09...D115: 3 poles + 1 NO auxiliary contact + 1 NC auxiliary contact
LC1F185...F265: 3 poles
To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalog.
(4) Replace ●● with the control circuit voltage code indicated in the table below:

	Volts ∿	24	48	110	220	230	240
LC1D09...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**
LC1F185	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**
LC1F265	40...400 Hz (LX1 coil)	**B7**	**E7**	**F7**	**M7**	**P7**	**U7**
LC1F400...F800	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 Center.

NSX100FMA100

+

LC1D80●●

+

ATV650D45N4

IEC standard motor starters

Motor Power (1)		Drive Reference	Circuit breaker Reference (2)	Rating	Irm	Line contactor Reference (3) (4) (5)
kW	HP			A	A	
Three-phase supply voltage: 380…415 V 50/60 Hz						
0.75	1	ATV650U07N4/N4E	GV2L07	2.5	33.5	LC1D09●●
1.5	2	ATV650U15N4/N4E	GV2L08	4	51	LC1D09●●
2.2	3	ATV650U22N4/N4E	GV2L10	6.3	78	LC1D09●●
3	–	ATV650U30N4/N4E	GV2L14	10	138	LC1D09●●
4	5	ATV650U40N4/N4E	GV2L14	10	138	LC1D09●●
5.5	7.5	ATV650U55N4/N4E	GV2L16	14	170	LC1D18●●
7.5	10	ATV650U75N4/N4E	GV2L20	18	223	LC1D18●●
11	15	ATV650D11N4/N4E	GV2L22	25	327	LC1D25●●
15	20	ATV650D15N4/N4E	GV3L32	32	448	LC1D25●●
18.5	25	ATV650D18N4/N4E	GV3L40	40	560	LC1D40A●●
22	30	ATV650D22N4/N4E	GV3L50	50	700	LC1D50A●●
30	40	ATV650D30N4/N4E	GV3L65	65	910	LC1D50A●●
37	50	ATV650D37N4/N4E	GV4L/LE80●	80	480	LC1D65A●●
45	60	ATV650D45N4/N4E	GV4L/LE115●	115	690	LC1D80●●
55	75	ATV650D55N4/N4E	GV4L/LE115●	115	690	LC1D80●●
75	100	ATV650D75N4/N4E	NSX160●MA150	150	1,350	LC1D115●●
90	125	ATV650D90N4/N4E	NSX250●MA220	220	1,980	LC1F185●●

(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 breaking performance of the circuit breaker (F, N, H, S, or L).
Breaking capacity of circuit breakers according to standard IEC 60947-2:

Circuit breaker	Icu (kA) for 380…415 V						
		B	F	N	H	S	L
GV2L07...L14	>100	–	–	–	–	–	–
GV2L16...L22	50	–	–	–	–	–	–
GV3L32…L65	50	–	–	–	–	–	–
GV4L80/115●	–	25	–	50	–	–	–
GV4LE80/115●	–	25	–	50	–	100	–
NSX160●MA150	–	–	36	50	70	100	150
NSX250●MA220	–	–	36	50	70	100	150

(3) Composition of contactors:
LC1D09...D115: 3 poles + 1 NO auxiliary contact + 1 NC auxiliary contact
LC1F185: 3 poles
To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalog.
(4) Replace ●● with the control circuit voltage code indicated in the table below:

	Volts ∿	24	48	110	220	230	240
LC1D09...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**
LC1F185	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 Center.
(5) When they are used with ATV650U07N4/N4E...D90N4/N4E drives, the motor starters must be installed in a separate enclosure to maintain the IP 55 protection rating of the installation.

Variable speed drives
Altivar Process
Motor starters
Supply voltage 440 V

GV2L08

+

LC1D09●●

+

ATV630U15N4

IEC standard motor starters

Motor Power (1) kW	HP	Drive Reference	Circuit breaker Reference (2)	Rating A	Irm A	Line contactor Reference (3) (4)
Three-phase supply voltage: 440 V 50/60 Hz						
0.75	1	**ATV630U07N4**	**GV2L07**	2.5	33.5	**LC1D09●●**
1.5	2	**ATV630U15N4**	**GV2L08**	4	51	**LC1D09●●**
2.2	3	**ATV630U22N4**	**GV2L10**	6.3	78	**LC1D09●●**
3	–	**ATV630U30N4**	**GV2L10**	6.3	78	**LC1D09●●**
4	5	**ATV630U40N4**	**GV2L14**	10	138	**LC1D09●●**
5.5	7.5	**ATV630U55N4**	**GV2L16**	14	170	**LC1D18●●**
7.5	10	**ATV630U75N4**	**GV2L16**	14	170	**LC1D18●●**
11	15	**ATV630D11N4**	**GV2L22**	25	327	**LC1D25●●**
15	20	**ATV630D15N4**	**GV3L32**	32	448	**LC1D25●●**
18.5	25	**ATV630D18N4**	**GV3L40**	40	560	**LC1D40A●●**
22	30	**ATV630D22N4**	**GV3L50**	50	700	**LC1D50A●●**
30	40	**ATV630D30N4**	**GV3L65**	65	910	**LC1D50A●●**
37	50	**ATV630D37N4**	**GV3L65**	65	910	**LC1D65A●●**
45	60	**ATV630D45N4**	**GV4L/LE80●**	80	480	**LC1D65A●●**
55	75	**ATV630D55N4**	**GV4L/LE115●**	115	690	**LC1D80●●**
75	100	**ATV630D75N4**	**NSX160●MA150**	150	1,350	**LC1D115●●**
90	125	**ATV630D90N4**	**NSX250●MA220**	220	1,980	**LC1D115●●**
110	150	**ATV630C11N4**	**NSX250●MA220**	220	1,980	**LC1F185●●**
132	200	**ATV630C13N4**	**NSX250●MA220**	220	1,980	**LC1F185●●**
160	250	**ATV630C16N4**	**NSX400● Micrologic 1.3-M**	320	1,600	**LC1F265●●**
220	350	**ATV630C22N4**	**NSX630● Micrologic 1.3-M**	500	3,000	**LC1F400●●**
250	400	**ATV630C25N4**	**NSX630● Micrologic 1.3-M**	500	3,000	**LC1F500●●**
310	500	**ATV630C31N4**	**NS800L Micrologic 2 or 5**	800	1,600	**LC1F630●●**

(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 breaking performance of the circuit breaker (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
GV2L07...L10	>100	–	–	–	–	–	–
GV2L14...L22	50	–	–	–	–	–	–
GV3L32...L66	50	–	–	–	–	–	–
GV4L80/115●	–	25	–	50	–	–	–
GV4LE80/115●	–	25	–	50	–	70	–
NSX160●MA150	–	–	35	50	65	90	130
NSX250●MA220	–	–	35	50	65	90	130
NSX400●, NSX630●	–	–	30	42	65	90	130
NS800L Micrologic 2 or 5	–	–	–	–	–	–	130

(3) Composition of contactors:
LC1D09...D115: 3 poles + 1 NO auxiliary contact + 1 NC auxiliary contact
To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalog.
(4) Replace ●● with the control circuit voltage code indicated in the table below:

	Volts ∿	24	48	110	220	230	240
LC1D09...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**
LC1F185	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**
LC1F265	40...400 Hz (LX1 coil)	**B7**	**E7**	**F7**	**M7**	**P7**	**U7**
LC1F400...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 Center.

Variable speed drives
Altivar Process
Motor starters
Supply voltage 440 V

NSX250●MA220

+

LC1D115●●

+

ATV650D90N4

IEC standard motor starters

Motor Power (1)		Drive Reference	Circuit breaker Reference (2)	Rating	Irm	Line contactor Reference (3) (4)
kW	HP			A	A	
Three-phase supply voltage: 440 V 50/60 Hz						
0.75	1	**ATV650U07N4/N4E**	**GV2L07**	2.5	33.5	**LC1D09●●**
1.5	2	**ATV650U15N4/N4E**	**GV2L08**	4	51	**LC1D09●●**
2.2	3	**ATV650U22N4/N4E**	**GV2L10**	6.3	78	**LC1D09●●**
3	–	**ATV650U30N4/N4E**	**GV2L10**	6.3	78	**LC1D09●●**
4	5	**ATV650U40N4/N4E**	**GV2L14**	10	138	**LC1D09●●**
5.5	7.5	**ATV650U55N4/N4E**	**GV2L16**	14	170	**LC1D18●●**
7.5	10	**ATV650U75N4/N4E**	**GV2L16**	14	170	**LC1D18●●**
11	15	**ATV650D11N4/N4E**	**GV2L22**	25	327	**LC1D25●●**
15	20	**ATV650D15N4/N4E**	**GV3L32**	32	448	**LC1D25●●**
18.5	25	**ATV650D18N4/N4E**	**GV3L40**	40	560	**LC1D40A●●**
22	30	**ATV650D22N4/N4E**	**GV3L50**	50	700	**LC1D50A●●**
30	40	**ATV650D30N4/N4E**	**GV3L65**	65	910	**LC1D50A●●**
37	50	**ATV650D37N4/N4E**	**GV3L65**	65	910	**LC1D65A●●**
45	60	**ATV650D45N4/N4E**	**GV4L/LE80●**	80	480	**LC1D65A●●**
55	75	**ATV650D55N4/N4E**	**GV4L/LE115●**	115	690	**LC1D80●●**
75	100	**ATV650D75N4/N4E**	**NSX160●MA150**	150	1,350	**LC1D115●●**
90	125	**ATV650D90N4/N4E**	**NSX250●MA220**	220	1,980	**LC1D115●●**

(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 breaking performance of the circuit breaker (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
GV2L07...L10	>100	–	–	–	–	–	–
GV2L14...L22	50	–	–	–	–	–	–
GV3L32...L66	50	–	–	–	–	–	–
GV4L80/115●	–	25	–	50	–	–	–
GV4LE80/115●	–	25	–	50	–	70	–
NSX160●MA150	–	–	35	50	65	90	130
NSX250●MA220	–	–	35	50	65	90	130

(3) Composition of contactors:
LC1D09...D115: 3 poles + 1 NO auxiliary contact + 1 NC auxiliary contact
To add auxiliary contacts or other accessories, please refer to the "Motor-starter solutions - Control and protection components" catalog.
(4) Replace ●● with the control circuit voltage code indicated in the table below:

	Volts ∿	24	48	110	220	230	240
LC1D09...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**

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

GV2L10

+

LC1D09●●

+

ATV630U22Y6

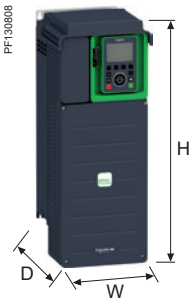
IEC standard motor starters

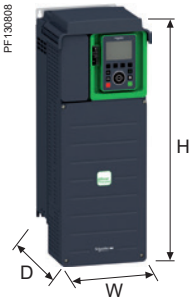
Motor Power		Drive	Circuit breaker			Line contactor
		Reference	Reference *(1)*	Rating	Irm	Reference
kW	*HP*			A	A	
Three-phase supply voltage: 500 V 50/60 Hz						
1.5	*2*	**ATV630U22Y6**	**GV2L10**	6.3	78	**LC1D09●●**
2.2	*3*	**ATV630U30Y6**	**GV2L10**	6.3	78	**LC1D09●●**
3	–	**ATV630U40Y6**	**GV2L14**	10	138	**LC1D18●●**
4	*5*	**ATV630U55Y6**	**GV2L14**	10	138	**LC1D18●●**
5.5	*7.5*	**ATV630U75Y6**	**GV2L16**	14	170	**LC1D25●●**
7.5	*10*	**ATV630D11Y6**	**GV2L20**	18	223	**LC1D25●●**
11	*15*	**ATV630D15Y6**	**GV2L22**	25	327	**LC1D40A●●**
15	*20*	**ATV630D18Y6**	**GV3L25**	25	350	**LC1D40A●●**
18.5	*25*	**ATV630D22Y6**	**GV3L32**	32	448	**LC1D40A●●**
22	*30*	**ATV630D30Y6**	**GV3L40**	40	560	**LC1D40A●●**
30	*40*	**ATV630D37Y6**	**GV3L50**	50	700	**LC1D50A●●**
37	*50*	**ATV630D45Y6**	**GV3L65**	65	910	**LC1D65A●●**
45	*60*	**ATV630D55Y6**	**NSX100●MA100**	100	600	**LC1D80●●**
55	*75*	**ATV630D75Y6**	**NSX100●MA100**	100	600	**LC1D80●●**
75	*100*	**ATV630D90Y6**	**NSX160●MA150**	150	1,350	**LC1D150●●**
Three-phase supply voltage: 690 V 50/60 Hz						
2.2	*3*	**ATV630U22Y6**	**GV2L08**	6.3	78	**LC1D09●●**
3	–	**ATV630U30Y6**	**GV2L10**	10	138	**LC1D09●●**
4	*5*	**ATV630U40Y6**	**GV2L14**	10	138	**LC1D18●●**
5.5	*7.5*	**ATV630U55Y6**	**GV2L14**	14	170	**LC1D18●●**
7.5	*10*	**ATV630U75Y6**	**GV2L16**	18	223	**LC1D18●●**
11	*15*	**ATV630D11Y6**	**GV2L20**	25	327	**LC1D18●●**
15	*20*	**ATV630D15Y6**	**GV2L22**	25	327	**LC1D25●●**
18.5	*25*	**ATV630D18Y6**	**GV3L25**	32	416	**LC1D40A●●**
22	*30*	**ATV630D22Y6**	**GV3L32**	40	560	**LC1D40A●●**
30	*40*	**ATV630D30Y6**	**GV3L40**	50	700	**LC1D40A●●**
37	*50*	**ATV630D37Y6**	**GV3L50**	65	910	**LC1D50A●●**
45	*60*	**ATV630D45Y6**	**GV3L65**	100	1,100	**LC1D65A●●**
55	*75*	**ATV630D55Y6**	**NSX100●MA100**	100	600	**LC1D80●●**
75	*100*	**ATV630D75Y6**	**NSX100●MA100**	150	600	**LC1D80●●**
90	*125*	**ATV630D90Y6**	**NSX250●MA150**	150	1,980	**LC1D150●●**

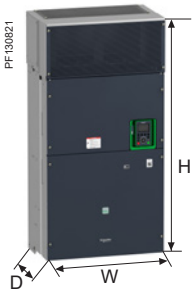
(1) For references to be completed, replace ● with the letter corresponding to the breaking performance of the circuit breaker (H, HB1 or HB2). Breaking capacity of circuit breakers according to standard IEC 609472:

Circuit breaker	Supply voltage (V)	Icu (kA)			
			H	HB1	HB2
GV2L07...L10	500	>100	–	–	–
	690	4	–	–	–
GV2L14…L22	500	10	–	–	–
	690	4	–	–	–
GV2L25…L32	500	12	–	–	–
	690	4	–	–	–
GV3L40…L66	500	12	–	–	–
	690	5	–	–	–
NSX100●MA100	500	–	50	85	100
	690	–	–	75	100
NSX160●MA150	500	–	50	–	–
NSX250●MA220	690	–	–	75	100

Variable speed drives
Altivar Process
IP 21 drives: 200...240 V, 380...480 V







200...240 V IP 21/UL Type 1

Overall dimensions

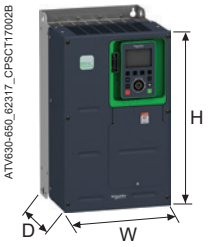
Drives	W x H x D	
	mm	*in.*
ATV630U07M3	144 x 350 x 203	*5.67 x 13.78 x 7.99*
ATV630U15M3	144 x 350 x 203	*5.67 x 13.78 x 7.99*
ATV630U22M3	144 x 350 x 203	*5.67 x 13.78 x 7.99*
ATV630U30M3	144 x 350 x 203	*5.67 x 13.78 x 7.99*
ATV630U40M3	144 x 350 x 203	*5.67 x 13.78 x 7.99*
ATV630U55M3	171 x 409 x 233	*6.73 x 16.10 x 9.17*
ATV630U75M3	211 x 546 x 232	*8.31 x 21.50 x 9.13*
ATV630D11M3	211 x 546 x 232	*8.31 x 21.50 x 9.13*
ATV630D15M3	226 x 673 x 271	*8.90 x 26.50 x 10.67*
ATV630D18M3	226 x 673 x 271	*8.90 x 26.50 x 10.67*
ATV630D22M3	226 x 673 x 271	*8.90 x 26.50 x 10.67*
ATV630D30M3	290 x 922 x 323	*11.42 x 36.30 x 12.72*
ATV630D37M3	290 x 922 x 323	*11.42 x 36.30 x 12.72*
ATV630D45M3	290 x 922 x 323	*11.42 x 36.30 x 12.72*
ATV630D55M3	320 x 852 x 390	*12.60 x 33.54 x 15.35*
With IP 21/UL Type 1 conformity kit	320 x 1160 x 390	*12.60 x 45.67 x 15.35*
ATV630D75M3	320 x 852 x 390	*12.60 x 33.54 x 15.35*
With IP 21/UL Type 1 conformity kit	320 x 1160 x 390	*12.60 x 45.67 x 15.35*

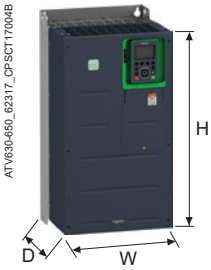
380...480 V IP 21/UL Type 1 and cabinet integration drives

Overall dimensions

Drives	W x H x D	
	mm	*in.*
ATV630U07N4	144 x 350 x 203	*5.67 x 13.78 x 7.99*
ATV630U07N4Z	130 x 285 x 196	*5.11 x 11.22 x 7.71*
ATV630U15N4	144 x 350 x 203	*5.67 x 13.78 x 7.99*
ATV630U15N4Z	130 x 285 x 196	*5.11 x 11.22 x 7.71*
ATV630U22N4	144 x 350 x 203	*5.67 x 13.78 x 7.99*
ATV630U22N4Z	130 x 285 x 196	*5.11 x 11.22 x 7.71*
ATV630U30N4	144 x 350 x 203	*5.67 x 13.78 x 7.99*
ATV630U30N4Z	130 x 285 x 196	*5.11 x 11.22 x 7.71*
ATV630U40N4	144 x 350 x 203	*5.67 x 13.78 x 7.99*
ATV630U40N4Z	130 x 285 x 196	*5.11 x 11.22 x 7.71*
ATV630U55N4	144 x 350 x 203	*5.67 x 13.78 x 7.99*
ATV630U55N4Z	130 x 285 x 196	*5.11 x 11.22 x 7.71*
ATV630U75N4	171 x 409 x 233	*6.73 x 16.10 x 9.17*
ATV630U75N4Z	155 x 345 x 225	*6.10 x 13.58 x 8.85*
ATV630D11N4	171 x 409 x 233	*6.73 x 16.10 x 9.17*
ATV630D11N4Z	155 x 345 x 225	*6.10 x 13.58 x 8.85*
ATV630D15N4	211 x 546 x 232	*8.31 x 21.50 x 9.13*
ATV630D15N4Z	195 x 480 x 225,5	*7.67 x 18.89 x 8.87*
ATV630D18N4	211 x 546 x 232	*8.31 x 21.50 x 9.13*
ATV630D18N4Z	195 x 480 x 225,5	*7.67 x 18.89 x 8.87*
ATV630D22N4	211 x 546 x 232	*8.31 x 21.50 x 9.13*
ATV630D22N4Z	195 x 480 x 225,5	*7.67 x 18.89 x 8.87*
ATV630D30N4	226 x 673 x 271	*8.90 x 26.50 x 10.67*
ATV630D30N4Z	210 x 597 x 262	*8.26 x 23.50 x 10.31*
ATV630D37N4	226 x 673 x 271	*8.90 x 26.50 x 10.67*
ATV630D37N4Z	210 x 597 x 262	*8.26 x 23.50 x 10.31*
ATV630D45N4	226 x 673 x 271	*8.90 x 26.50 x 10.67*
ATV630D45N4Z	210 x 597 x 262	*8.26 x 23.50 x 10.31*
ATV630D55N4	290 x 922 x 323	*11.42 x 36.30 x 12.72*
ATV630D55N4Z	265 x 748 x 307	*10.43 x 29.44 x 12.08*
ATV630D75N4	290 x 922 x 323	*11.42 x 36.30 x 12.72*
ATV630D75N4Z	265 x 748 x 307	*10.43 x 29.44 x 12.08*
ATV630D90N4	290 x 922 x 323	*11.42 x 36.30 x 12.72*
ATV630D90N4Z	265 x 748 x 307	*10.43 x 29.44 x 12.08*

Variable speed drives
Altivar Process
IP 21 drives: 380...480 V
IP 00 drives: 500...690 V





380...480 V IP 21/UL Type 1 and cabinet integration drives (continued)

Overall dimensions

Drives	W x H x D	
	mm	*in.*
ATV630C11N4	320 x 852 x 390	*12.60 x 33.54 x 15.35*
With IP 21/UL Type 1 conformity kit	320 x 1157 x 390	*12.60 x 45.55 x 15.35*
ATV630C13N4	320 x 852 x 390	*12.60 x 33.54 x 15.35*
With IP 21/UL Type 1 conformity kit	320 x 1160 x 390	*12.60 x 45.67 x 15.35*
ATV630C16N4	320 x 852 x 390	*12.60 x 33.54 x 15.35*
With IP 21/UL Type 1 conformity kit	320 x 1160 x 390	*12.60 x 45.67 x 15.35*
ATV630C22N4	440 x 1190 x 377	*17.32 x 46.85 x 14.84*
With IP 21/UL Type 1 conformity kit	440 x 1498 x 377	*17.32 x 58.98 x 14.84*
ATV630C25N4	598 x 1190 x 377	*23.43 x 46.85 x 14.84*
With IP 21/UL Type 1 conformity kit	598 x 1498 x 377	*23.43 x 58.98 x 14.84*
ATV630C31N4	598 x 1190 x 377	*23.43 x 46.85 x 14.84*
With IP 21/UL Type 1 conformity kit	598 x 1498 x 377	*23.43 x 58.98 x 14.84*

500...690 V IP 00 drives *(1)*

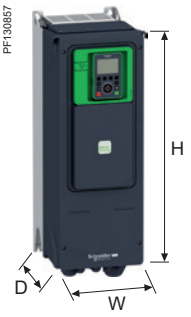
Overall dimensions

Drives	W x H x D	
	mm	*in.*
ATV630U22Y6	246 x 420 x 242	*9.68 x 16.5 x 9.52*
With kit for IP 20/UL Type 1 conformity	246 x 567 x 242	*9.68 x 22.32 x 9.52*
ATV630U30Y6	246 x 420 x 242	*9.68 x 16.5 x 9.52*
With kit for IP 20/UL Type 1 conformity	246 x 567 x 242	*9.68 x 22.32 x 9.52*
ATV630U40Y6	246 x 420 x 242	*9.68 x 16.5 x 9.52*
With kit for IP 20/UL Type 1 conformity	246 x 567 x 242	*9.68 x 22.32 x 9.52*
ATV630U55Y6	246 x 420 x 242	*9.68 x 16.5 x 9.52*
With kit for IP 20/UL Type 1 conformity	246 x 567 x 242	*9.68 x 22.32 x 9.52*
ATV630U75Y6	246 x 420 x 242	*9.68 x 16.5 x 9.52*
With kit for IP 20/UL Type 1 conformity	246 x 567 x 242	*9.68 x 22.32 x 9.52*
ATV630D11Y6	246 x 420 x 242	*9.68 x 16.5 x 9.52*
With kit for IP 20/UL Type 1 conformity	246 x 567 x 242	*9.68 x 22.32 x 9.52*
ATV630D15Y6	246 x 420 x 242	*9.68 x 16.5 x 9.52*
With kit for IP 20/UL Type 1 conformity	246 x 567 x 242	*9.68 x 22.32 x 9.52*
ATV630D18Y6	246 x 420 x 242	*9.68 x 16.5 x 9.52*
With kit for IP 20/UL Type 1 conformity	246 x 567 x 242	*9.68 x 22.32 x 9.52*
ATV630D22Y6	246 x 420 x 242	*9.68 x 16.5 x 9.52*
With kit for IP 21/UL Type 1 conformity	246 x 567 x 242	*9.68 x 22.32 x 9.52*
ATV630D30Y6	246 x 420 x 242	*9.68 x 16.5 x 9.52*
With kit for IP 20/UL Type 1 conformity	246 x 567 x 242	*9.68 x 22.32 x 9.52*
ATV630D37Y6	331 x 630 x 297	*13.03 x 24.80 x 11.69*
With kit for IP 20/UL Type 1 conformity	331 x 822 x 297	*13.03 x 32.36 x 11.69*
ATV630D45Y6	331 x 630 x 297	*13.03 x 24.80 x 11.69*
With kit for IP 20/UL Type 1 conformity	331 x 822 x 297	*13.03 x 32.36 x 11.69*
ATV630D55Y6	331 x 630 x 297	*13.03 x 24.80 x 11.69*
With kit for IP 20/UL Type 1 conformity	331 x 822 x 297	*13.03 x 32.36 x 11.69*
ATV630D75Y6	331 x 630 x 297	*13.03 x 24.80 x 11.69*
With kit for IP 20/UL Type 1 conformity	331 x 822 x 297	*13.03 x 32.36 x 11.69*
ATV630D90Y6	331 x 630 x 297	*13.03 x 24.80 x 11.69*
With kit for IP 20/UL Type 1 conformity	331 x 822 x 297	*13.03 x 32.36 x 11.69*

1) Product supplied as IP 00 for mounting in an enclosure. For IP 20/UL Type1 wall mounting, an adaptation kit should be ordered separately (see page 2/11).

Variable speed drives
Altivar Process
Drive products for cabinet integration: 380...480 V
IP 55 drives: 380...480 V

PF130857



PF130884

380…480 V IP55 drives		
Overall dimensions		
Drives	**W x H x D**	
	mm	***in.***
ATV650U07N4	264 x 678 x 272	*10.39 x 26.69 x 10.71*
ATV650U15N4	264 x 678 x 272	*10.39 x 26.69 x 10.71*
ATV650U22N4	264 x 678 x 272	*10.39 x 26.69 x 10.71*
ATV650U30N4	264 x 678 x 272	*10.39 x 26.69 x 10.71*
ATV650U40N4	264 x 678 x 272	*10.39 x 26.69 x 10.71*
ATV650U55N4	264 x 678 x 272	*10.39 x 26.69 x 10.71*
ATV650U75N4	264 x 678 x 299	*10.39 x 26.69 x 11.77*
ATV650D11N4	264 x 678 x 299	*10.39 x 26.69 x 11.77*
ATV650D15N4	264 x 678 x 299	*10.39 x 26.69 x 11.77*
ATV650D18N4	264 x 678 x 299	*10.39 x 26.69 x 11.77*
ATV650D22N4	264 x 678 x 299	*10.39 x 26.69 x 11.77*
ATV650D30N4	290 x 910 x 340	*11.42 x 35.83 x 13.39*
ATV650D37N4	290 x 910 x 340	*11.42 x 35.83 x 13.39*
ATV650D45N4	290 x 910 x 340	*11.42 x 35.83 x 13.39*
ATV650D55N4	345 x 1250 x 375	*13.58 x 49.21 x 14.76*
ATV650D75N4	345 x 1250 x 375	*13.58 x 49.21 x 14.76*
ATV650D90N4	345 x 1250 x 375	*13.58 x 49.21 x 14.76*

380...480 V IP 55 drives with Vario disconnect switch		
Drives	**W x H x D** *(1)*	
	mm	***in.***
Overall dimensions		
ATV650U07N4E	264 x 678 x 300	*10.39 x 26.69 x 11.81*
ATV650U15N4E	264 x 678 x 300	*10.39 x 26.69 x 11.81*
ATV650U22N4E	264 x 678 x 300	*10.39 x 26.69 x 11.81*
ATV650U30N4E	264 x 678 x 300	*10.39 x 26.69 x 11.81*
ATV650U40N4E	264 x 678 x 300	*10.39 x 26.69 x 11.81*
ATV650U55N4E	264 x 678 x 300	*10.39 x 26.69 x 11.81*
ATV650U75N4E	264 x 678 x 330	*10.39 x 26.69 x 12.99*
ATV650D11N4E	264 x 678 x 330	*10.39 x 26.69 x 12.99*
ATV650D15N4E	264 x 678 x 330	*10.39 x 26.69 x 12.99*
ATV650D18N4E	264 x 678 x 330	*10.39 x 26.69 x 12.99*
ATV650D22N4E	264 x 678 x 330	*10.39 x 26.69 x 12.99*
ATV650D30N4E	290 x 910 x 401	*11.42 x 35.83 x 15.79*
ATV650D37N4E	290 x 910 x 401	*11.42 x 35.83 x 15.79*
ATV650D45N4E	290 x 910 x 401	*11.42 x 35.83 x 15.79*
ATV650D55N4E	345 x 1250 x 436	*13.58 x 49.21 x 17.17*
ATV650D75N4E	345 x 1250 x 436	*13.58 x 49.21 x 17.17*
ATV650D90N4E	345 x 1250 x 436	*13.58 x 49.21 x 17.17*

(1) Add 60 mm/2.36 in. to the total depth to include the door handle.

Floor-standing 380...440 V IP 21 drives

Overall dimensions

Drives	W x H x D *(1)*	
	mm	*in.*
ATV630C11N4F	400 x 2150 x 605	*15.75 x 84.65 x 23.82*
ATV630C13N4F	400 x 2150 x 605	*15.75 x 84.65 x 23.82*
ATV630C16N4F	400 x 2150 x 605	*15.75 x 84.65 x 23.82*
ATV630C20N4F	600 x 2150 x 605	*23.62 x 84.65 x 23.82*
ATV630C25N4F	600 x 2150 x 605	*23.62 x 84.65 x 23.82*
ATV630C31N4F	600 x 2150 x 605	*23.62 x 84.65 x 23.82*

Floor-standing 380...440 V IP 54 drives

Overall dimensions

Drives	W x H x D *(2)*	
	mm	*in.*
ATV650C11N4F	400 x 2350 x 605	*15.75 x 92.52 x 23.82*
ATV650C13N4F	400 x 2350 x 605	*15.75 x 92.52 x 23.82*
ATV650C16N4F	400 x 2350 x 605	*15.75 x 92.52 x 23.82*
ATV650C20N4F	600 x 2350 x 605	*23.62 x 92.52 x 23.82*
ATV650C25N4F	600 x 2350 x 605	*23.62 x 92.52 x 23.82*
ATV650C31N4F	600 x 2350 x 605	*23.62 x 92.52 x 23.82*

(1) Add 42 mm/1.65 in. to the total depth in order to include the door handle.
(2) Add 60 mm/2.36 in. to the total depth in order to include the door handle. The total height includes a plinth of 200 mm/7.87 in.

2

Passive filters: 400 V 50 Hz three-phase supply		
Overall dimensions		
Passive filters	**W x H x D**	
	mm	***in.***
VW3A46101	190 x 332.11 x 205.5	*7.48 x 13.08 x 8.09*
VW3A46102	190 x 332.11 x 205.5	*7.48 x 13.08 x 8.09*
VW3A46103	190 x 332.11 x 205.5	*7.48 x 13.08 x 8.09*
VW3A46104	232 x 436.11 x 247.5	*9.13 x 17.17 x 9.74*
VW3A46105	232 x 436.11 x 247.5	*9.13 x 17.17 x 9.74*
VW3A46106	378 x 594.08 x 242	*14.88 x 23.39 x 9.53*
VW3A46107	378 x 594.08 x 242	*14.88 x 23.39 x 9.53*
VW3A46108	378 x 623.6 x 333	*14.88 x 24.55 x 13.11*
VW3A46109	378 x 623.6 x 333	*14.88 x 24.55 x 13.11*
VW3A46110	418 x 736.8 x 333	*16.46 x 29.01 x 13.11*
VW3A46111	418 x 736.8 x 333	*16.46 x 29.01 x 13.11*
VW3A46112	418 x 767.6 x 400	*16.46 x 30.22 x 15.75*
VW3A46113	418 x 767.6 x 400	*16.46 x 30.22 x 15.75*
VW3A46114	468 x 900.06 x 448.5	*18.42 x 35.43 x 17.66*
VW3A46115	468 x 900.06 x 448.5	*18.42 x 35.43 x 17.66*
VW3A46116	468 x 900.06 x 448.5	*18.42 x 35.43 x 17.66*
VW3A46118	468 x 900.06 x 448.5	*18.42 x 35.43 x 17.66*
VW3A46119	468 x 900.06 x 510	*18.42 x 35.43 x 20.00*
VW3A46120	190 x 332.11 x 205.5	*7.48 x 13.08 x 8.09*
VW3A46121	190 x 332.11 x 205.5	*7.48 x 13.08 x 8.09*
VW3A46122	190 x 332.11 x 205.5	*7.48 x 13.08 x 8.09*
VW3A46123	232 x 436.11 x 247.5	*9.13 x 17.17 x 9.74*
VW3A46124	232 x 436.11 x 247.5	*9.13 x 17.17 x 9.74*
VW3A46125	378 x 594.08 x 242	*14.88 x 23.39 x 9.53*
VW3A46126	378 x 594.08 x 242	*14.88 x 23.39 x 9.53*
VW3A46127	378 x 623.6 x 333	*14.88 x 24.55 x 13.11*
VW3A46128	378 x 623.6 x 333	*14.88 x 24.55 x 13.11*
VW3A46129	418 x 736.8 x 333	*16.46 x 29.01 x 13.11*
VW3A46130	418 x 736.8 x 333	*16.46 x 29.01 x 13.11*
VW3A46131	418 x 767.6 x 400	*16.46 x 30.22 x 15.75*
VW3A46132	418 x 767.6 x 400	*16.46 x 30.22 x 15.75*
VW3A46133	468 x 900.06 x 448.5	*18.42 x 35.43 x 17.66*
VW3A46134	468 x 900.06 x 448.5	*18.42 x 35.43 x 17.66*
VW3A46135	468 x 900.06 x 510	*18.42 x 35.43 x 20.00*
VW3A46137	468 x 900.06 x 510	*18.42 x 35.43 x 20.00*
VW3A46138	468 x 900.06 x 510	*18.42 x 35.43 x 20.00*

Passive filters: 460 V 60 Hz three-phase supply

Overall dimensions

Passive filters	W x H x D	
	mm	*in.*
VW3A46139	190 x 332.11 x 205.5	*7.48 x 13.08 x 8.09*
VW3A46140	190 x 332.11 x 205.5	*7.48 x 13.08 x 8.09*
VW3A46141	190 x 332.11 x 205.5	*7.48 x 13.08 x 8.09*
VW3A46142	232 x 436.11 x 247.5	*9.13 x 17.17 x 9.74*
VW3A46143	232 x 436.11 x 247.5	*9.13 x 17.17 x 9.74*
VW3A46144	378 x 594.08 x 242	*14.88 x 23.39 x 9.53*
VW3A46145	378 x 594.08 x 242	*14.88 x 23.39 x 9.53*
VW3A46146	378 x 594.08 x 242	*14.88 x 23.39 x 9.53*
VW3A46147	378 x 623.6 x 333	*14.88 x 24.55 x 13.11*
VW3A46148	378 x 623.6 x 333	*14.88 x 24.55 x 13.11*
VW3A46149	418 x 736.8 x 333	*16.46 x 29.01 x 13.11*
VW3A46150	418 x 736.8 x 333	*16.46 x 29.01 x 13.11*
VW3A46151	418 x 767.6 x 400	*16.46 x 30.22 x 15.75*
VW3A46152	418 x 767.6 x 400	*16.46 x 30.22 x 15.75*
VW3A46153	468 x 900.06 x 448.5	*18.42 x 35.43 x 17.66*
VW3A46154	468 x 900.06 x 448.5	*18.42 x 35.43 x 17.66*
VW3A46155	468 x 900.06 x 448.5	*18.42 x 35.43 x 17.66*
VW3A46157	468 x 900.06 x 510	*18.42 x 35.43 x 20.00*
VW3A46158	190 x 332.11 x 205.5	*7.48 x 13.08 x 8.09*
VW3A46159	190 x 332.11 x 205.5	*7.48 x 13.08 x 8.09*
VW3A46160	190 x 332.11 x 205.5	*7.48 x 13.08 x 8.09*
VW3A46161	232 x 436.11 x 247.5	*9.13 x 17.17 x 9.74*
VW3A46162	232 x 436.11 x 247.5	*9.13 x 17.17 x 9.74*
VW3A46163	378 x 594.08 x 242	*14.88 x 23.39 x 9.53*
VW3A46164	378 x 594.08 x 242	*14.88 x 23.39 x 9.53*
VW3A46165	378 x 594.08 x 242	*14.88 x 23.39 x 9.53*
VW3A46166	378 x 623.6 x 333	*14.88 x 24.55 x 13.11*
VW3A46167	378 x 623.6 x 333	*14.88 x 24.55 x 13.11*
VW3A46168	418 x 736.8 x 333	*16.46 x 29.01 x 13.11*
VW3A46169	418 x 736.8 x 333	*16.46 x 29.01 x 13.11*
VW3A46170	418 x 767.6 x 400	*16.46 x 30.22 x 15.75*
VW3A46171	418 x 767.6 x 400	*16.46 x 30.22 x 17.75*
VW3A46172	468 x 900.06 x 448.5	*18.42 x 35.43 x 17.66*
VW3A46173	468 x 900.06 x 510	*18.42 x 35.43 x 20.00*
VW3A46174	468 x 900.06 x 510	*18.42 x 35.43 x 20.00*
VW3A46176	468 x 900.06 x 510	*18.42 x 35.43 x 20.00*

2

Additional EMC input filters

Overall dimensions

EMC filters	W x H x D	
	mm	*in.*
VW3A4701	75 x 220 x 130	*2.95 x 8.66 x 5.12*
With IP 21/UL Type 1 conformity kit	77 x 220 x 130	*3.03 x 8.66 x 5.12*
VW3A4702	75 x 240 x 140	*2.95 x 9.45 x 5.51*
With IP 21/UL Type 1 conformity kit	77 x 240 x 140	*3.03 x 9.45 x 5.12*
VW3A4703	80 x 302 x 155	*3.15 x 11.89 x 6.10*
With IP 21/UL Type 1 conformity kit	83 x 302 x 155	*3.27 x 11.89 x 6.10*
VW3A4704	90 x 283 x 165	*3.54 x 11.14 x 6.50*
With IP 21/UL Type 1 conformity kit	93 x 283 x 165	*3.66 x 11.14 x 6.50*
VW3A4705	100 x 328 x 175	*3.94 x 12.91 x 6.89*
With IP 21/UL Type 1 conformity kit	103 x 328 x 175	*4.05 x 12.91 x 6.89*
VW3A4706	120 x 340 x 180	*4.72 x 13.39 x 7.09*
With IP 21/UL Type 1 conformity kit	123 x 340 x 180	*4.84 x 13.39 x 7.09*
VW3A4707	130 x 395 x 240	*5.12 x 15.55 x 9.45*
With IP 21/UL Type 1 conformity kit	134 x 395 x 240	*5.28 x 15.55 x 9.45*
VW3A4708	200 x 445 x 320	*7.87 x 17.52 x 12.60*
With IP 21/UL Type 1 conformity kit	204 x 445 x 320	*8.03 x 17.52 x 12.60*
VW3A4709	260 x 520 x 117	*10.24 x 20.47 x 4.61*
VW3A4710	260 x 520 x 117	*10.24 x 20.47 x 4.61*
VW3A4411	800 x 261 x 139	*31.49 x 10.27 x 5.47*

dv/dt filters

Overall dimensions

dv/dt filters	W x H x D	
	mm	*in.*
VW3A5103	234 x 226 x 126	*9.21 x 9.21 x 4.96*
VW3A5104	170 x 250 x 100	*6.69 x 9.84 x 3.94*
VW3A5106	245 x 250 x 200	*9.65 x 9.84 x 7.87*
VW3A5107	320 x 250 x 220	*12.60 x 9.84 x 8.66*
VW3A5301	285 x 520 x 215	*11.22 x 20.47 x 8.46*
With IP 21/UL Type 1 conformity kit	285 x 530 x 215	*11.22 x 20.87 x 8.46*
VW3A5302	285 x 520 x 215	*11.22 x 20.47 x 8.46*
With IP 21/UL Type 1 conformity kit	285 x 530 x 215	*11.22 x 20.87 x 8.46*
VW3A5303	285 x 520 x 215	*11.22 x 20.47 x 8.46*
With IP 21/UL Type 1 conformity kit	285 x 530 x 215	*11.22 x 20.87 x 8.46*
VW3A5304	300 x 545 x 245	*11.81 x 21.46 x 9.65*
With IP 21/UL Type 1 conformity kit	300 x 560 x 245	*11.81 x 22.05 x 9.65*
VW3A5305	300 x 590 x 245	*11.81 x 23.23 x 9.65*
With IP 21/UL Type 1 conformity kit	300 x 610 x 245	*11.81 x 24.02 x 9.65*
VW3A5306	380 x 235 x 325	*14.96 x 9.25 x 12.80*
VW3A5307	420 x 270 x 350	*16.54 x 10.63 x 13.78*

Variable speed drives
Altivar Process
AC chokes, Sinus filters and common mode filter

AC Chokes

Overall dimensions

AC Chokes	W x H x D	
	mm	*in.*
VW3A4551	100 x 35 x 60	*3.93 x 1.37 x 2.36*
VW3A4552	130 x 55 x 90	*5.11 x 2.16 x 3.54*
VW3A4553	130 x 55 x 90	*5.11 x 2.16 x 3.54*
VW3A4554	155 x 170 x 135	*6.10 x 6.69 x 5.31*
VW3A4555	180 x 210 x 165	*7.08 x 8.26 x 6.49*
VW3A4556	270 x 210 x 180	*10.62 x 8.26 x 7.08*

Sinus filters

Overall dimensions

Sinus filters	W x H x D	
	mm	*in.*
VW3A5401	210 x 455 x 210	*8.27 x 17.91 x 8.27*
VW3A5402	210 x 455 x 210	*8.27 x 17.91 x 8.27*
VW3A5403	280 x 520 x 215	*11.02 x 20.47 x 8.46*
VW3A5404	300 x 545 x 245	*11.81 x 21.46 x 9.64*
VW3A5405	375 x 740 x 280	*14.76 x 29.13 x 11.02*
VW3A5406	430 x 350 x 495	*16.93 x 13.78 x 19.49*
VW3A5407	460 x 370 x 565	*18.11 x 14.57 x 22.24*
VW3A5209	480 x 340 x 600	*18.90 x 13.38 x 23.62*
VW3A5210	480 x 370 x 710	*18.90 x 14.57 x 27.95*
VW3A5215	246 x 420 x 242	*9.68 x 16.53 x 9.52*
VW3A5216	171 x 409 x 233	*6.73 x 16.10 x 9.17*
VW3A5217	331 x 822 x 297	*13.03 x 32.36 x 11.69*
VW3A5218	331 x 822 x 297	*13.03 x 32.36 x 11.69*
VW3A5219	331 x 822 x 297	*13.03 x 32.36 x 11.69*

Common mode filter

Overall dimensions

Common mode filter	W x H x D	
	mm	*in.*
VW3A5501	66 x 119.2 x 66	*2.60 x 4.69 x 2.60*
VW3A5502	66 x 163.8 x 66	*2.60 x 4.69 x 2.60*
VW3A5503	127.5 x 161 x 127.5	*5.02 x 6.34 x 5.02*
VW3A5504	127.5 x 210 x 127.5	*5.02 x 8.27 x 5.02*
VW3A5505	191 x 197 x 196	*7.52 x 7.76 x 7.72*
VW3A5506	191 x 256 x 196	*7.52 x 10.08 x 7.72*

Contents

3 - Drives for integration

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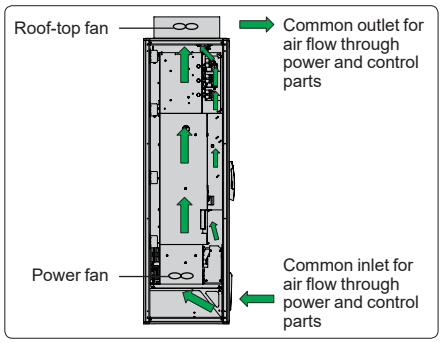
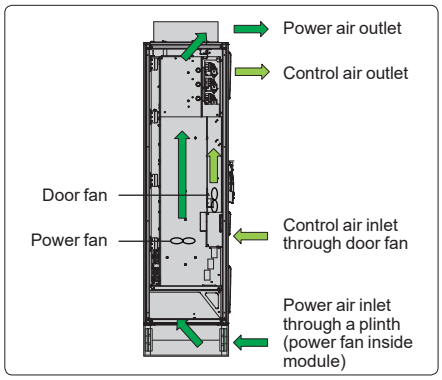
- **Drive products for integration 380...480 V** ..... *page 3/5*
- **400 V 50/60 Hz supply** ..... *page 3/6*
- **440 V 50/60 Hz supply** ..... *page 3/6*
- **480 V 50/60 Hz supply** ..... *page 3/7*

Variable speed drives
Altivar Process
Drives for integration

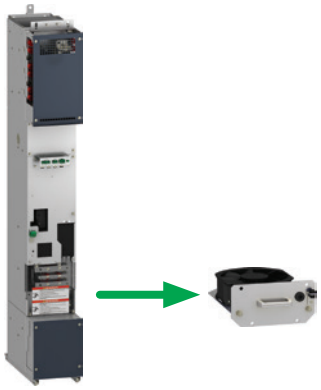
Drives for cabinet integration



IP 20, 21, 23, 40, 41, 43/Type 1 integration common cooling air flow



IP54/Type 12 integration separated cooling air flow



Power module and power fan inside drawer

General presentation of the offer

Altivar Process for cabinet integration is a cost effective drives solution for installation into cabinets and separate enclosures with its compact and robust design. These drives variants simplify cabinet design and allows quick installation and commissioning.

Altivar Process Modular concept

Altivar Process Modular is ready to build into cabinets to create high power drive solutions with minimum dimensions that withstand harsh environments.

A powerful drives range from 110 kW up to 800 kW *(150...1100 HP)* can be created by combining sub-assemblies and accessories such as power modules, control units, options, and mechanical accessories.

Altivar Process Modular brings a new approach using sub-assemblies to build locally single drives:
- A power module part to be combined in different single drive architectures
- Control units that make the drive family differentiation of the power architecture between the ATV600 and ATV900 families
- Optional kits and accessories for easy enclosure integration

Optimized cabinet design

Altivar Process Modular drives offer has been developed to reduce the engineering time required to design cabinet mounted drives solutions, consequently decreasing the time to market and the cost of the solution.

Altivar Process Modular brings flexible solutions for special integration constraints as well as standard integration in 2 m/*6.56 ft* height and 600 mm/*23.62 in.* depth cabinets with IP 21/IP 54 protection and robust design.

These power intensive single drives offers integrate:
- Drive power and control modules
- Line chokes to limit THDi levels
- A filter to help protect the motor against the effects of dv/dt
- Accessible busbars to simplify the motor wiring and power wiring

IP21 integration type creates a common cooling air flow for the power and control parts.

The IP 54 mechanical option introduces a system for separating the cooling air flow between the power and control parts, allowing operation in a highly polluted environment as well as optimum management of thermal stress in the plant room. Both designs allow incoming air temperature up to + 50 °C/*122 °F* with derating (class 3K3 according to IEC/EN 60721-3-3).

Product features

The Altivar Process Modular drives offer has been developed to meet the most demanding applications and enclosure requirements and the most recent standards and regulations.

Compliance with electromagnetic compatibility requirements has been incorporated into the design of the modular process drives, which simplifies installation and provides an economical means of helping to ensure equipment meets marking requirements.
- Altivar Process Modular drives have category C3 EMC filters and highly efficient integrated motor filters for dv/dt and common mode reduction and voltage peak limitation that allow 300 m/*984.25 ft* of shielded motor cabels (category C3 environment) and 500 m/*1640 ft* of unshielded motor cables (category C4 enviroment).
- THDi ≤ 48% for 80 to 100% load, which is used to maintain an optimum power factor on the most common operating range
- Embedded Line choke technology complying with standard IEC 61000-3-12
- Prewired, tested electric core components by Schneider Electric laboratories and test centers

Simple maintenance

Altivar Process Modular drives can significantly cut downtime of your assets by means of easily replaceable core components:
- Same power module with optimized weight and wheels for all power ranges
- Same power fan inside a drawer accessible from front face for all power modules
- Spare parts designed for easy and fast intervention in the field

Altivar Process Modular

Drive Integration Partner Program

Life Is On Schneider Electric

Altivar Process Modular program

The Altivar Process modular program is dedicated to trained and qualified partners within Schneider Electric Partner Network, bringing Schneider Electric high quality power intensive drive solutions to End Users.

This program recognizes our partners as they are able to:

- Build customized panels and high power drives solutions by paralleling drive modules up to 800 kw *(1100 HP)* in 380...480 V supply voltage
- Access the download area of partner portal and find all datasheets, dimensions and drawing in different file formats, EPLAN marcos, selection tool for electric and mechanical parts, external components for line side of the drive: http://www.schneider-electric.com/en/partners/

Drive products for integration

Drive products for integration can be used for optimizing space when integrated inside cabinets. They cover motor power ratings from 1…90 kW/*22…120.7 HP* for 380…480 V three-phase voltages.

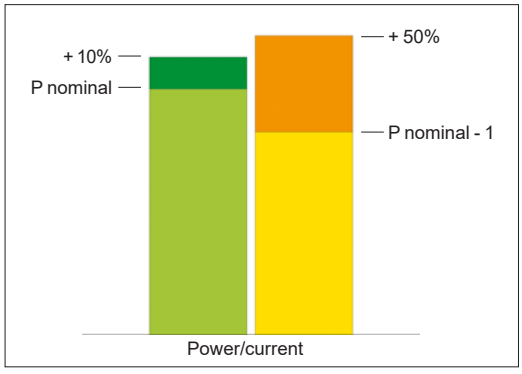
Three-phase power supply - 380...480 V		
Motor power	**Degree of protection**	**Reference**
0.75...22 kW ***1...30 HP***	IP 20	**ATV630U07N4Z…D22N4Z**
30…90 kW ***40...120 HP***	IP 20	**ATV630D30N4Z…D90N4Z**

Altivar Process Modular architecture from 1 to 5 modules

Modular single drives

Modular single drives solutions can be built using power modules, control units and accessories. They cover motor power ratings from 110...800 kW/*150...1100 HP* for 380...480 V three-phase voltages.

Three-phase power supply - 380...480 V		
Motor power	**Degree of protection**	**Reference**
110...800 kW ***150...1100 HP***	IP 00	**ATV6A0C11Q4...ATV6A0C80Q4** **ATV6A0C11R4…ATV6A0C80R4** **ATV6A0C11T4…ATV6A0C80T4**



Normal duty and Heavy duty modes

Altivar Process Modular variable speed drives are designed for use in two operating modes that can optimize the drive nominal rating according to the system constraints.

These two modes are:
- Normal duty (ND): Dedicated mode for applications requiring a slight overload up to 110% with a motor power no higher than the drive nominal power
- Heavy duty (HD): Dedicated mode for applications requiring a significant overload up to 150% with a motor power no higher than the drive nominal power derated by one rating

Variable speed drives

Altivar Process

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

Drive products for integration

ATV630U30N4Z

380…480 V 50/60 Hz drive products for cabinet integration

Motor			Line supply				Altivar Process			
Power indicated on rating plate *(1)*			Line current *(2)*		Apparent power	Maximum prospective line Isc	Max. continuous current *(1)*	Max. transient current for 60 s	Reference	Weight
			380 V	480 V	380 V					
ND:	Normal duty *(3)*									
HD:	*Heavy duty (4)*									
	kW	*HP*	A	A	kVA	kA	A	A		kg/ *lb*
With category C2 or C3 integrated EMC filter										
IP 20 drives										
ND	0.75	*1*	1.5	1.3	1.1	50	2.2	2.4	**ATV630U07N4Z**	3.700/ *8.157*
HD	*0.37*	*0.5*	*0.9*	*0.8*	*0.7*	*50*	*1.5*	*2.3*		
ND	1.5	*2*	3	2.6	2.2	50	4	4.4	**ATV630U15N4Z**	3.700/ *8.157*
HD	*0.75*	*1*	*1.7*	*1.5*	*1.2*	*50*	*2.2*	*3.3*		
ND	2.2	*3*	4.3	3.8	3.2	50	5.6	6.2	**ATV630U22N4Z**	3.700/ *8.157*
HD	*1.5*	*2*	*3.1*	*2.9*	*2.4*	*50*	*4*	*6*		
ND	3	–	5.8	5.1	4.2	50	7.2	7.9	**ATV630U30N4Z**	3.800/ *8.377*
HD	*2.2*	*3*	*4.5*	*4*	*3.3*	*50*	*5.6*	*8.4*		
ND	4	*5*	7.6	6.7	5.6	50	9.3	10.2	**ATV630U40N4Z**	3.800/ *8.377*
HD	*3*	–	*6*	*5.4*	*4.5*	*50*	*7.2*	*10.8*		
ND	5.5	*7.5*	10.4	9.1	7.6	50	12.7	14	**ATV630U55N4Z**	3.900/ *8.598*
HD	*4*	*5*	*8*	*7.2*	*6.0*	*50*	*9.3*	*14*		
ND	7.5	*10*	13.8	11.9	9.9	50	16.5	18.2	**ATV630U75N4Z**	6.900/ *15.211*
HD	*5.5*	*7.5*	*10.5*	*9.2*	*7.6*	*50*	*12.7*	*19.1*		
ND	11	*15*	19.8	17	14.1	50	23.5	25.9	**ATV630D11N4Z**	6.900/ *15.211*
HD	*7.5*	*10*	*14.1*	*12.5*	*10.4*	*50*	*16.5*	*24.8*		
ND	15	*20*	27	23.3	19.4	50	31.7	34.9	**ATV630D15N4Z**	13.000/ *28.660*
HD	*11*	*15*	*20.6*	*18.1*	*15.0*	*50*	*23.5*	*35.3*		
ND	18.5	*25*	33.4	28.9	24	50	39.2	43.1	**ATV630D18N4Z**	*13.600/* 29.982
HD	*15*	*20*	*27.7*	*24.4*	*20.3*	*50*	*31.7*	*47.6*		
ND	22	*30*	39.6	34.4	28.6	50	46.3	50.9	**ATV630D22N4Z**	13.700/ *30.203*
HD	*18.5*	*25*	*34.1*	*29.9*	*24.9*	*50*	*39.2*	*58.8*		

(1) These values are given for use in continuous operation with a nominal switching frequency of 4 kHz (ATV630U07N4Z...D45N4Z). The switching frequency is adjustable from 2…12 kHz (ATV630U07N4Z...D45N4Z). Above the nominal switching frequency, the drive will automatically reduce it in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, nominal drive current should be derated according to the derating curves available on www.schneider-electric.com.

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

(3) Values given for applications requiring a slight overload (up to 110%).

(4) Values given for applications requiring a significant overload (up to 150%).

Note: *Consult the summary tables of possible drive, option, and accessory combinations (see page 2/18).*

Variable speed drives
Altivar Process
Three-phase supply voltage: 380...480 V 50/60 Hz
Drive products for integration

ATVPro_62317_CPMGU18009

ATV630D30N4Z

380…480 V 50/60 Hz drive products for cabinet integration

Motor			Line supply				Altivar Process			
Power indicated on rating plate *(1)*			Line current *(2)*		Apparent power	Maximum prospective line Isc	Max. continuous current *(1)*	Max. transient current for 60 s	Reference	Weight
			380 V	480 V	380 V					
ND:	Normal duty *(3)*									
HD:	*Heavy duty (4)*									
	kW	*HP*	A	A	kVA	kA	A	A		kg/ *lb*
With category C2 or C3 integrated EMC filter										
IP 20 drives *(5)*										
ND	30	*40*	53.3	45.9	38.2	50	61.5	67.7	**ATV630D30N4Z**	25.800/ *56.879*
HD	*22*	*30*	*40.5*	*35.8*	*29.8*	*50*	*46.3*	*69.5*		
ND	37	*50*	66.2	57.3	47.6	50	74.5	82	**ATV630D37N4Z**	26.000/ *57.320*
HD	*30*	*40*	*54.8*	*48.3*	*40.2*	*50*	*61.5*	*92.3*		
ND	45	*60*	79.8	69.1	57.4	50	88	96.8	**ATV630D45N4Z**	26.500/ *58.422*
HD	*37*	*50*	*67.1*	*59.0*	*49.1*	*50*	*74.5*	*111.8*		
ND	55	*75*	97.2	84.2	70	50	106	116.6	**ATV630D55N4Z**	52.600/ *115.963*
HD	*45*	*60*	*81.4*	*71.8*	*59.7*	*50*	*88*	*132*		
ND	75	*100*	131.3	112.7	93.7	50	145	159.5	**ATV630D75N4Z**	54.100/ *119.269*
HD	*55*	*75*	*98.9*	*86.9*	*72.2*	*50*	*106*	*159*		
ND	90	*125*	156.2	135.8	112.9	50	173	190.3	**ATV630D90N4Z**	54.600/ *120.372*
HD	*75*	*100*	*134.3*	*118.1*	*98.2*	*50*	*145*	*217.5*		

EMC plates for ATV630●●●N4Z

For drive	Plate reference	Weight kg/ *lb*
ATV630U07N4Z…U55N4Z	**VW3A47801**	–
ATV630U75N4Z, D11N4Z	**VW3A47802**	–
ATV630D15N4Z…D22N4Z	**VW3A47803**	–
ATV630D30N4Z..D37N4Z	**VW3A47804**	–
ATV630D55N4Z…D90N4Z	**VW3A47805**	–

(1) These values are given for use in continuous operation with a nominal switching frequency of 4 kHz (ATV630U07N4Z...D45N4Z). The switching frequency is adjustable from 2…12 kHz (ATV630U07N4Z...D45N4Z). Above the nominal switching frequency, the drive will automatically reduce it in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, nominal drive current should be derated according to the derating curves available on www.schneider-electric.com.

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

(3) Values given for applications requiring a slight overload (up to 110%).

(4) Values given for applications requiring a significant overload (up to 150%).

(5) These drives are IP 00 at bottom terminals for power connection.

***Note:** Consult the summary tables of possible drive, option, and accessory combinations (see page 2/18).*

Variable speed drives

Altivar Process

Three-phase supply voltage: 400 V and 440 V 50/60 Hz

Modular single drives

ATVPro_62317_CPSCT17006

ATV6A0C11Q4

400 V IP 00 Modular single drives

Motor			Line supply			Altivar Process		
Power indicated on rating plate			Line current	Apparent power	Maximum prospective line Isc	Maximum continuous current	Max. transient current for 60 s	Reference *(1)*
ND:	Normal duty		400 V	400 V				
HD:	*Heavy duty*							
	kW	*HP*	A	kVA	kA	A	A	
Altivar Process Modular for fluid management								
THDi ≤ 48% at 100% load in Normal duty								
ND	110	*150*	198	137	50	211	232	**ATV6A0C11Q4**
HD	*90*	*125*	*167*	*116*	*50*	*173*	*260*	
ND	132	*200*	233	161	50	250	275	**ATV6A0C13Q4**
HD	*110*	*150*	*198*	*137*	*50*	*211*	*317*	
ND	160	*250*	278	193	50	302	332	**ATV6A0C16Q4**
HD	*132*	*200*	*233*	*161*	*50*	*250*	*375*	
ND	200	*300*	352	244	50	370	407	**ATV6A0C20Q4**
HD	*160*	*250*	*290*	*201*	*50*	*302*	*453*	
ND	250	*400*	432	299	50	477	525	**ATV6A0C25Q4**
HD	*200*	*300*	*353*	*245*	*50*	*370*	*555*	
ND	315	*500*	538	373	50	590	649	**ATV6A0C31Q4**
HD	*250*	*400*	*432*	*299*	*50*	*477*	*716*	
ND	355	*550*	611	423	50	660	726	**ATV6A0C35Q4**
HD	*280*	*450*	*489*	*339*	*50*	*520*	*780*	
ND	400	*600*	681	472	50	730	803	**ATV6A0C40Q4**
HD	*315*	*500*	*545*	*378*	*50*	*590*	*885*	
ND	450	*650*	764	529	50	830	913	**ATV6A0C45Q4**
HD	*355*	*550*	*611*	*423*	*50*	*660*	*990*	
ND	500	*700*	846	586	50	900	990	**ATV6A0C50Q4**
HD	*400*	*600*	*681*	*472*	*50*	*730*	*1095*	
ND	560	*800*	948	657	50	1020	1122	**ATV6A0C56Q4**
HD	*450*	*650*	*767*	*531*	*50*	*830*	*1245*	
ND	630	*900*	1058	733	50	1140	1254	**ATV6A0C63Q4**
HD	*500*	*700*	*849*	*588*	*50*	*900*	*1350*	
ND	710	*1000*	1192	826	50	1260	1386	**ATV6A0C71Q4**
HD	*560*	*800*	*951*	*659*	*50*	*1020*	*1530*	
ND	800	*1100*	1335	925	50	1420	1562	**ATV6A0C80Q4**
HD	*630*	*900*	*1061*	*735*	*50*	*1140*	*1710*	

ATVPro_62317_CPSCT17008

ATV6A0C20R4

440 V IP 00 Modular single drives

Motor			Line supply			Altivar Process		
Power indicated on rating plate			Line current	Apparent power	Maximum prospective line Isc	Maximum continuous current	Max. transient current for 60 s	Reference *(1)*
ND:	Normal duty		440 V	440 V				
HD:	*Heavy duty*							
	kW	*HP*	A	kVA	kA	A	A	
Altivar Process Modular for fluid management								
THDi ≤ 48% at 100% load in Normal duty								
ND	110	*150*	183	139	50	211	232	**ATV6A0C11R4**
HD	*90*	*125*	*155*	*118*	*50*	*173*	*260*	
ND	132	*200*	214	163	50	250	275	**ATV6A0C13R4**
HD	*110*	*150*	*183*	*139*	*50*	*211*	*317*	
ND	160	*250*	255	194	50	302	332	**ATV6A0C16R4**
HD	*132*	*200*	*214*	*163*	*50*	*250*	*375*	
ND	160	*300*	325	248	50	370	407	**ATV6A0C20R4**
HD	*160*	*250*	*269*	*205*	*50*	*302*	*453*	
ND	250	*400*	396	302	50	477	525	**ATV6A0C25R4**
HD	*200*	*300*	*325*	*248*	*50*	*370*	*555*	
ND	315	*500*	493	376	50	590	649	**ATV6A0C31R4**
HD	*250*	*400*	*396*	*302*	*50*	*477*	*716*	
ND	355	*550*	559	426	50	660	726	**ATV6A0C35R4**
HD	*280*	*450*	*450*	*343*	*50*	*520*	*780*	
ND	400	*600*	623	475	50	730	803	**ATV6A0C40R4**
HD	*315*	*500*	*501*	*382*	*50*	*590*	*885*	
ND	450	*650*	697	531	50	830	913	**ATV6A0C45R4**
HD	*355*	*550*	*559*	*426*	*50*	*660*	*990*	
ND	500	*700*	771	588	50	900	990	**ATV6A0C50R4**
HD	*400*	*600*	*623*	*475*	*50*	*730*	*1095*	
ND	560	*800*	865	659	50	1020	1122	**ATV6A0C56R4**
HD	*450*	*650*	*703*	*536*	*50*	*830*	*1245*	
ND	630	*900*	965	735	50	1140	1254	**ATV6A0C63R4**
HD	*500*	*700*	*776*	*591*	*50*	*900*	*1350*	
ND	710	*1000*	1087	828	50	1260	1386	**ATV6A0C71R4**
HD	*580*	*800*	*869*	*662*	*50*	*1020*	*1530*	
ND	800	*1100*	1216	927	50	1420	1562	**ATV6A0C80R4**
HD	*630*	*900*	*968*	*738*	*50*	*1140*	*1710*	

ATVPro_62317_CPSCT17009

ATV6A0C35R4

(1) These references are built by combining sub-assemblies and accessories that are integrated by Altivar Process Modular Program members.

Variable speed drives
Altivar Process
Three-phase supply voltage: 480 V 50/60 Hz
Modular single drives

ATVPro_62317_CPSCT17010

ATV6A0C56T4

ATVPro_62317_CPSCT17011

ATV6A0C80T4

480 V IP 00 Modular single drives

Motor			Line supply			Altivar Process		
Power indicated on rating plate			Line current	Apparent power	Maximum prospective line Isc	Maximum continuous current	Max. transient current for 60 s	Reference (1)
ND:	Normal duty		480 V	480 V				
HD:	*Heavy duty*							
	kW	*HP*	A	kVA	kA	A	A	
Altivar Process Modular for fluid management								
THDi ≤ 48% at 100% load in Normal duty								
ND	–	*150*	168	140	50	211	232	**ATV6A0C11T4**
HD	–	*125*	*145*	*121*	*50*	*173*	*260*	
ND	–	*200*	218	181	50	250	275	**ATV6A0C13T4**
HD	–	*150*	*168*	*140*	*50*	*211*	*317*	
ND	–	*250*	268	223	50	302	332	**ATV6A0C16T4**
HD	–	*200*	*218*	*181*	*50*	*250*	*375*	
ND	–	*300*	328	273	50	370	407	**ATV6A0C20T4**
HD	–	*250*	*280*	*233*	*50*	*302*	*453*	
ND	–	*400*	427	355	50	477	525	**ATV6A0C25T4**
HD	–	*300*	*328*	*273*	*50*	*370*	*555*	
ND	–	*500*	528	439	50	590	649	**ATV6A0C31T4**
HD	–	*400*	*427*	*355*	*50*	*477*	*716*	
ND	–	*550*	586	487	50	660	726	**ATV6A0C35T4**
HD	–	*450*	*486*	*404*	*50*	*520*	*780*	
ND	–	*600*	634	527	50	730	803	**ATV6A0C40T4**
HD	–	*500*	*536*	*446*	*50*	*590*	*885*	
ND	–	*650*	685	569	50	830	913	**ATV6A0C45T4**
HD	–	*550*	*586*	*487*	*50*	*660*	*990*	
ND	–	*700*	736	612	50	900	990	**ATV6A0C50T4**
HD	–	*600*	*634*	*527*	*50*	*730*	*1095*	
ND	–	*800*	842	700	50	1020	1122	**ATV6A0C56T4**
HD	–	*650*	*690*	*574*	*50*	*830*	*1245*	
ND	–	*900*	939	781	50	1140	1254	**ATV6A0C63T4**
HD	–	*700*	*740*	*615*	*50*	*900*	*1350*	
ND	–	*1000*	1044	868	50	1260	1386	**ATV6A0C71T4**
HD	–	*800*	*846*	*703*	*50*	*1020*	*1530*	
ND	–	*1100*	1146	953	50	1420	1562	**ATV6A0C80T4**
HD	–	*900*	*942*	*783*	*50*	*1140*	*1710*	

(1) These references are built by combining sub-assemblies and accessories that are integrated by Altivar Process Modular Program members.

Contents

4 - Drive systems

Altivar Process Drive Systems

- **Altivar Process Drive Systems presentation** ..... *page 4/2*
- **Compact Drive Systems** ..... *page 4/4*
- **Low Harmonic Drive Systems** ..... *page 4/10*
- **Options** ..... *page 4/16*

Variable speed drives
Altivar Process
Drive Systems

ATV660C31Q4X1

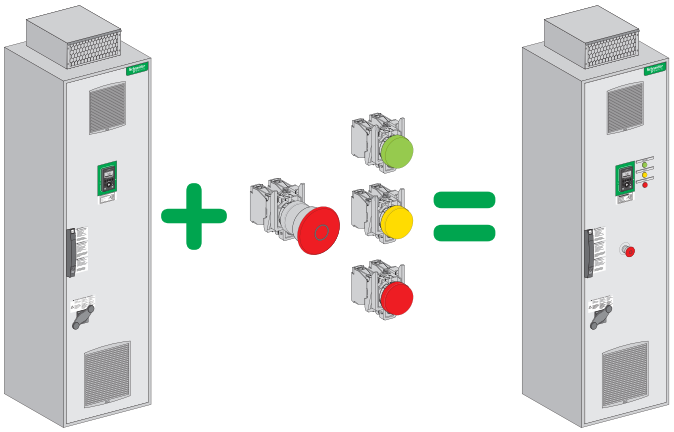
Engineered Drive Systems

Altivar Process Drive Systems offer extensive flexibility for customers from different segments and for various applications.

Several solutions are available depending on customer requirements.

Configured to order (CTO)

In the CTO variant, Altivar Process Drive Systems can be quickly equipped via predefined CTO options to fit customer requirements.



Thanks to its predefined CTO options, the CTO variant allows the minimum delivery time for individually adapted enclosures, ready to connect.

The available CTO options are:

- Increased IP 54 protection degree
- Enclosure plinth for basic device
- Additional enclosure allowing cabling from the top or from the bottom
- Enclosure lighting, heating
- “Local/remote” key switch
- Ethernet port on front door
- Digital and analog I/O modules and relay output modules
- Communication modules for various fieldbus systems
- STO - SIL 3 Stop category 0 or 1 emergency stop
- Front display module (FDM)
- Indicator lights on front door
- Motor/bearing temperature monitoring
- dv/dt filters for long motor cables
- Motor heating
- Circuit breaker
- Undervoltage coil for circuit breaker
- Motor for circuit breaker
- Automated mains disconnection
- Setting for 415 V + 10%
- Safety labels in the local language
- Design for IT mains
- Seaworthy packaging

Engineered Drive System based on the ATV660C50Q4X1 drive

Engineered Drive Systems (continued)

Engineered to order (ETO)

The ETO variant offers, in addition to the predefined CTO options, the possibility of implementing customer-specific adaptations in Drive Systems.

The following adaptations are available:
- Modified wiring colors
- Remote monitoring
- Different ranges of supply voltages
- Multipulse supply (12-pulse)
- Design without a main switch
- Increased short-circuit strength up to 100 kA
- Air intake from the back
- Other enclosure colors
- Customized documentation and labeling
- Motor contactor
- Etc.

Full ETO Drive System

Full engineered to order (Full ETO)

With the Full ETO variant it is possible to design bespoke system solutions for the customer.

Typical design variations are:
- Multi-drive systems (several frequency inverters in the same enclosure)
- Other cooling systems
- Other enclosure types
- Other dimensions
- Etc.

For further information, please consult our Customer Care Center.

Variable speed drives
Altivar Process
Compact Drive Systems

ATV660C31Q4X1

Presentation

Concept

The ATV660 Compact Drive Systems range offers standard enclosures ready to connect. The modular construction makes it possible to adapt the enclosure unit to individual requirements. The low-cost enclosure variant simplifies design and allows quick installation and commissioning of the drive.

Power versus overload

For optimum adaptation to the application you can choose between two overload modes:

- Normal duty: High continuous power with an overload capability of 10% (for pumps, fans, etc.)
- Heavy duty: Reduced continuous power with an increased overload capability of 50% for drives with enhanced requirements regarding overload capability, starting torque, load impacts and control performance (such as compressors, mixers, rotary blowers, etc.)

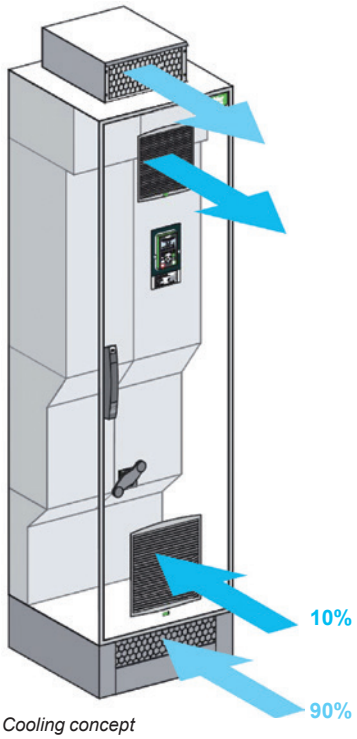
Standard equipment

The standard compact offer contains frequency inverter modules, semiconductor fuses, a main switch, a line reactor to reduce the harmonics, a motor choke to protect the motor and spacious mains and motor bars for connecting the power cables.

The design is based on the ready-assembled Sarel "Spacial SF" enclosures with a graphic operating panel integrated in the enclosure door.

Compact dimensions

Inside the enclosure there is an easily accessible and spaciously designed control panel with the control components. It has compact dimensions, nevertheless there is enough space for additional extensions and accessibility for maintenance.



Cooling concept

Device features

Enclosure system

The ready-assembled Sarel "Spacial SF" enclosure with additional internal reinforcing elements and separate cooling air channels provides optimum cooling of the built-in frequency inverter modules and maximum compactness at the same time.

Cooling concept

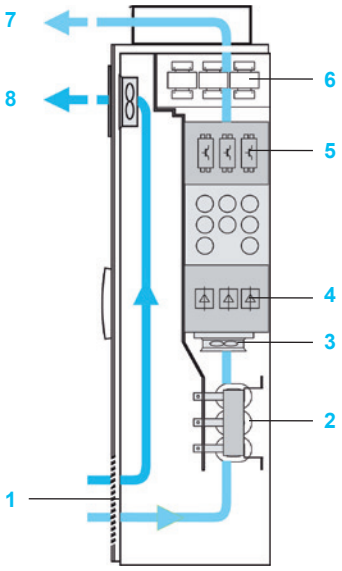
The power section components are cooled in a separate cooling air channel. About 90% of the heat losses are evacuated via this channel. The inside of the enclosure is cooled via fans in the enclosure door.

When using the "IP 54 increased protection degree" option, the separate air supply for the power section comes through the enclosure plinth.

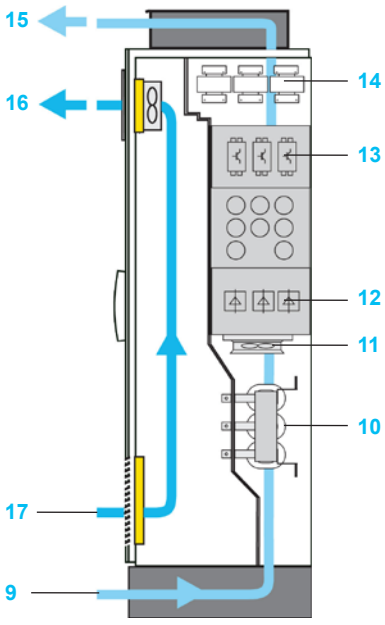
Connection

The power cables are connected on the mains side and motor side to spaciously designed bars. The cable strain relief is realized via another bar with solid metal clamps. Each device is equipped with an EMC screen bar for correct shielding connection. In the standard design, the cables are connected at the bottom.

Variable speed drives
Altivar Process
Compact Drive Systems



IP 23 enclosure



IP 54 enclosure

Protection degrees

The standard design of Altivar Process Compact Drive Systems complies with the IP 23 protection degree. This solution provides optimum cooling of the built-in frequency inverter modules and power components as well as maximum compactness.

For operation in harsh ambient conditions, the increased IP 54 protection degree is available as an option. This solution consists of a clearly specified and tested cooling system with a separate cooling air channel which provides excellent reliability.

About 90% of the heat losses are evacuated via the separate cooling air channel. The inside of the enclosure is cooled via fans located in the enclosure door.

Standard IP 23 enclosure design

In order to avoid internal air short-circuits, the power sections of the components are located in the main cooling air channel.

The cooling air intake comes from a grid located in the bottom of the enclosure door. The internal fan, which is in a separate air channel, provides cooling of the power section. The air then comes out through the top of the enclosure.

The heat losses from the control section are evacuated by a fan in the enclosure door.

The incoming air temperature must be between 0°C and 40°C (- 10°C with enclosure heating) and can reach + 50°C with derating (class 3K3 according to IEC/EN 60721-3-3).

IP 23 enclosures comprise:
1 An air intake (without filter mat) via a grid on the bottom of the enclosure door
2 A line reactor
3 Fans for the power section
4 A rectifier module
5 An inverter module
6 A dv/dt filter choke
7 An air outlet via a metal cover with protection against water splashes on the enclosure roof
8 An air outlet (without filter mat) with fans for the control section

Increased IP 54 protection degree

With the increased IP 54 protection degree with separate channels, the cooling air intake comes from the floor and goes out through the enclosure roof.

The control section is cooled by filter fans located in the enclosure door.

The incoming air temperature must be between 0°C and 40°C (- 10°C with enclosure heating) and can reach + 50°C with derating (class 3K3 according to IEC/EN 60721-3-3).

IP 54 enclosures are composed of:
9 An air intake for the power section via the enclosure plinth
10 A line reactor
11 Fans for the power section
12 A rectifier module
13 An inverter module
14 A dv/dt filter choke
15 An air outlet via a metal cover with protection against water splashes on the enclosure roof
16 An air outlet (with filter mat) with fans for the control section
17 An air intake grid (with filter mat) for the control section

Variable speed drives
Altivar Process
Compact Drive Systems

Additional enclosure allowing cabling from the bottom

Modular offer

This consists of:
- The standard compact offer
- One or more options (see pages 4/16 to 4/19)

Options (CTO)

Some of these options depend on the drive rating. They can be integrated without any need for modifications to the enclosure:
- Increased IP 54 protection degree
- Enclosure plinth for basic device
- Additional enclosure allowing cabling from the top or from the bottom
- Enclosure lighting, heating
- "Local/remote" key switch
- Ethernet port on front door
- Digital and analog I/O modules and relay output modules
- Communication modules for various fieldbus systems
- STO - SIL 3 Stop category 0 or 1 emergency stop
- Front display module (FDM)
- Indicator lights on front door
- Motor/bearing temperature monitoring
- dv/dt filters for long motor cables
- Motor heating
- Circuit breaker
- Undervoltage coil for circuit breaker
- Motor for circuit breaker
- Automated mains disconnection
- Setting for 415 V + 10%
- Safety labels in the local language
- Design for IT mains
- Seaworthy packaging

Further design variations (ETO)

These adaptations depend on the drive rating. Some may lead to modification of the size of the enclosure:
- Modified wiring colors
- Remote monitoring
- Different ranges of supply voltages
- Multipulse supply (12-pulse)
- Design without a main switch
- Increased short-circuit strength up to 100 kA
- Air intake from the back
- Other enclosure colors
- Customized documentation and labeling
- Motor contactor
- Etc.

Variable speed drives
Altivar Process
Compact Drive Systems

ATV660C16Q4X1

IP 23 three-phase 380...415 V Compact Drive Systems

Motor		Line supply			Altivar Process			
Power indicated on rating plate *(1)*		Line current *(2)*	Apparent power	Max. prospective line Isc	Max. continuous current *(1)*	Max. transient current for 60 s	Reference *(1)*	Weight
		400 V	400 V					
ND:	Normal duty *(3)*							
HD:	*Heavy duty (4)*							
	kW	A	kVA	kA	A	A		kg/ *lb*
THDi ≤ 44% at 100% load								
ND	110	195	135	50	211	232	**ATV660C11Q4X1**	300.000/ *661.386*
HD	*90*	*164*	*113*	*50*	*173*	*260*		
ND	132	232	161	50	250	275	**ATV660C13Q4X1**	300.000/ *661.386*
HD	*110*	*197*	*136*	*50*	*211*	*317*		
ND	160	277	192	50	302	332	**ATV660C16Q4X1**	300.000/ *661.386*
HD	*132*	*232*	*161*	*50*	*250*	*375*		
ND	200	349	242	50	370	407	**ATV660C20Q4X1**	400.000/ *881.848*
HD	*160*	*286*	*198*	*50*	*302*	*453*		
ND	250	432	299	50	477	525	**ATV660C25Q4X1**	400.000/ *881.848*
HD	*200*	*353*	*244*	*50*	*370*	*555*		
ND	315	538	373	50	590	649	**ATV660C31Q4X1**	400.000/ *881.848*
HD	*250*	*432*	*299*	*50*	*477*	*716*		
ND	355	611	423	50	660	726	**ATV660C35Q4X1**	650.000/ *1433.004*
HD	*280*	*489*	*339*	*50*	*520*	*780*		
ND	400	681	472	50	730	803	**ATV660C40Q4X1**	650.000/ *1433.004*
HD	*315*	*545*	*378*	*50*	*590*	*885*		
ND	450	764	529	50	830	913	**ATV660C45Q4X1**	650.000/ *1433.004*
HD	*355*	*611*	*423*	*50*	*660*	*990*		
ND	500	846	586	50	900	990	**ATV660C50Q4X1**	650.000/ *1433.004*
HD	*400*	*681*	*472*	*50*	*730*	*1095*		
ND	560	948	656	50	1020	1122	**ATV660C56Q4X1**	850.000/ *1873.928*
HD	*450*	*767*	*531*	*50*	*830*	*1245*		
ND	630	1058	733	50	1140	1254	**ATV660C63Q4X1**	850.000/ *1873.928*
HD	*500*	*849*	*588*	*50*	*900*	*1350*		
ND	710	1192	826	50	1260	1386	**ATV660C71Q4X1**	1100.00/ *2425.083*
HD	*560*	*951*	*659*	*50*	*1020*	*1530*		
ND	800	1335	925	50	1420	1562	**ATV660C80Q4X1**	1100.00/ *2425.083*
HD	*630*	*1061*	*735*	*50*	*1140*	*1710*		

(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…8 kHz for all ratings.
Above 2.5 kHz, the drive will automatically reduce the switching frequency in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current (see the 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) Values given for applications requiring a slight overload (up to 110%).
(4) Values given for applications requiring a significant overload (up to 150%).

***Note**: Consult the summary tables of possible drive, option, and accessory combinations (see page 4/16).*

Variable speed drives
Altivar Process
Compact Drive Systems

ATV660C25T4X1

IP 23 three-phase 480 V Compact Drive Systems

Motor		Line supply			Altivar Process			
Power indicated on rating plate (1)		Line current (2)	Apparent power	Max. prospective line Isc	Max. continuous current (1)	Max. transient current for 60 s	Reference (1)	Weight
		480 V	480 V					
ND:	Normal duty (3)							
HD:	Heavy duty (4)							
	kW	A	kVA	kA	A	A		kg/lb
THDi ≤ 44% at 100% load								
ND	132	196	163	50	211	232	**ATV660C11T4X1**	300.000/661.386
HD	*110*	*168*	*139*	*50*	*173*	*260*		
ND	160	233	194	50	250	275	**ATV660C13T4X1**	300.000/661.386
HD	*132*	*198*	*164*	*50*	*211*	*317*		
ND	180	258	194	50	302	332	**ATV660C16T4X1**	300.000/661.386
HD	*160*	*233*	*215*	*50*	*250*	*375*		
ND	220	320	266	50	370	407	**ATV660C20T4X1**	400.000/881.848
HD	*180*	*267*	*222*	*50*	*302*	*453*		
ND	280	400	333	50	477	525	**ATV660C25T4X1**	400.000/881.848
HD	*220*	*323*	*268*	*50*	*370*	*555*		
ND	355	503	418	50	590	649	**ATV660C31T4X1**	400.000/881.848
HD	*280*	*400*	*333*	*50*	*477*	*716*		
ND	400	572	475	50	660	726	**ATV660C35T4X1**	650.000/1433.004
HD	*315*	*456*	*379*	*50*	*520*	*780*		
ND	450	637	530	50	730	803	**ATV660C40T4X1**	650.000/1433.004
HD	*355*	*510*	*424*	*50*	*590*	*885*		
ND	500	706	587	50	830	913	**ATV660C45T4X1**	650.000/1433.004
HD	*400*	*572*	*475*	*50*	*660*	*990*		
ND	560	789	656	50	900	990	**ATV660C50T4X1**	650.000/1433.004
HD	*450*	*637*	*530*	*50*	*730*	*1095*		
ND	630	888	739	50	1020	1122	**ATV660C56T4X1**	850.000/1873.928
HD	*500*	*711*	*591*	*50*	*830*	*1245*		
ND	710	993	826	50	1140	1254	**ATV660C63T4X1**	850.000/1873.928
HD	*560*	*794*	*660*	*50*	*900*	*1350*		
ND	800	1119	931	50	1260	1386	**ATV660C71T4X1**	1100.00/2425.083
HD	*630*	*893*	*742*	*50*	*1020*	*1530*		
ND	900	1257	1045	50	1420	1562	**ATV660C80T4X1**	1100.00/2425.083
HD	*710*	*997*	*828*	*50*	*1140*	*1710*		

(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…8 kHz for all ratings.
Above 2.5 kHz, the drive will automatically reduce the switching frequency in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current (see the 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) Values given for applications requiring a slight overload (up to 110%).
(4) Values given for applications requiring a significant overload (up to 150%).

***Note**: Consult the summary tables of possible drive, option, and accessory combinations (see page 4/16).*

Variable speed drives
Altivar Process
Low Harmonic Drive Systems

ATV680C16Q4X1

Presentation

Concept

The ATV680 Low Harmonic Drive Systems are used when drives need to have particularly low mains harmonics.

In comparison with the classic circuit structure of active mains rectifiers, the 3-level technology allows an increase of the switching frequency and the current load is reduced at the same time. This new technology reaches a total distortion factor THDi of around 2% and thus fulfills the requirements according to IEEE 519 of THDi < 5% also in case of distorted mains. Additionally, the cos Phi ≈ 1 in each load situation helps to reduce the load of the mains.

The ATV680 range is an optimum solution for energy efficiency and process optimization.

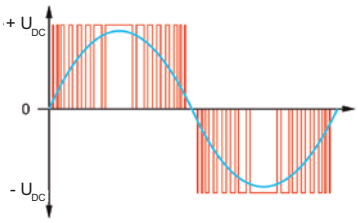
The modular design makes it possible to adapt the enclosure unit to individual requirements. It simplifies planning and allows quick installation and commissioning of the drive.

Standard equipment

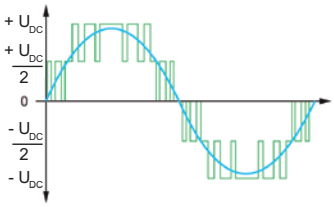
The Low Harmonic offer contains active infeed modules as well as frequency inverter modules, filter components, semiconductor fuses, a main switch, a dv/dt filter choke for motor protection and spacious mains and motor bars for connecting the power cables.

The design is based on the ready-assembled Sarel "Spacial SF" enclosures with a graphic operating panel integrated in the enclosure door.

Inside the enclosure there is an easily accessible and spaciously designed control panel with the control components. It has compact dimensions, nevertheless there is enough space for additional extensions and accessibility for maintenance.



2-level technology



ATV680 with 3-level technology

Device features

Enhanced motor lifetime due to the 3-level concept

The 3-level technology of the active mains rectifier reduces the voltage load at the motor significantly, compared to other Low Harmonic frequency inverters. The fluctuating adaptation of the DC link voltage helps extend the motor lifetime.

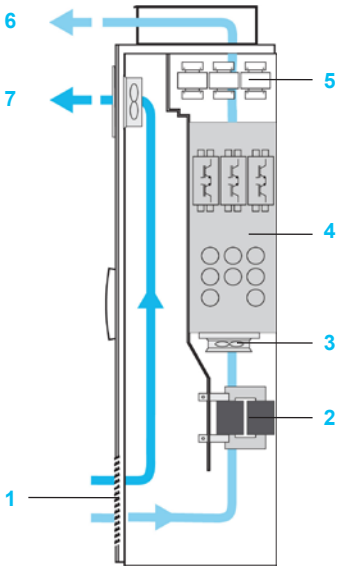
Reduced losses due to the 3-level concept

In comparison with the traditional circuit structure of active mains rectifiers, the switching frequency is increased and the current load is reduced at the same time when using 3-level technology.

Compact dimensions due to the 3-level concept

A significant advantage of the 3-level technology is the reduced dimensions of the integrated filter components. Due to the increased switching frequency and to its location inside the forced cooling air channel, the dimensions of the filter can be almost halved.

Variable speed drives
Altivar Process
Low Harmonic Drive Systems



IP 23 enclosure

Protection degrees

The standard design of the Altivar Process Low Harmonic Drive Systems complies with the IP 23 protection degree. This solution provides optimum cooling of the built-in frequency inverter modules and power components as well as maximum compactness.

For operation in harsh ambient conditions, the increased IP 54 protection degree is available as an option. This solution consists of a clearly specified and tested cooling system with a separate cooling air channel which provides excellent reliability.

About 90% of the heat losses are evacuated via the separate cooling air channel. The inside of the enclosure is cooled via fans located in the enclosure door.

Standard IP 23 enclosure design

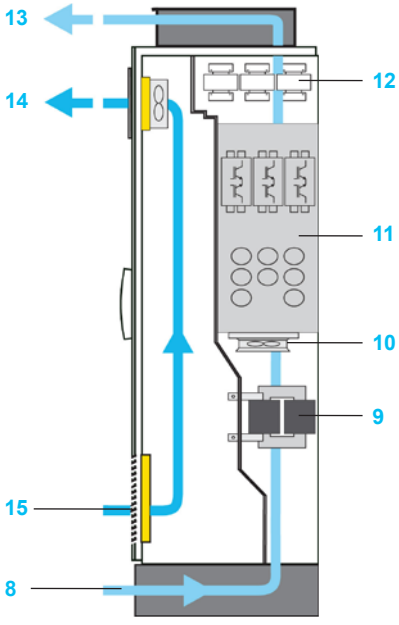
In order to avoid internal air short-circuits, the power sections of the components are located in the main cooling air channel.

The cooling air intake comes from a grid located in the bottom of the enclosure door. The internal fan, which is in a separate air channel, provides cooling of the power section. The air then comes out through the top of the enclosure.

The heat losses from the control section are evacuated by a fan in the enclosure door.

The incoming air temperature must be between 0°C and 40°C (- 10°C with enclosure heating) and can reach + 50°C with derating (class 3K3 according to IEC/EN 60721-3-3).

IP 23 enclosures comprise:
1 An air intake (without filter mat) via a grid on the bottom of the enclosure door
2 Filter components
3 Fans for the power section
4 An Active Front End module
5 A dv/dt filter choke
6 An air outlet via a metal cover with protection against water splashes on the enclosure roof
7 An air outlet (without filter mat) with fans for the control section



IP 54 enclosure

Increased IP 54 protection degree

With the increase IP 54 protection degree with separate channels the cooling air intake comes from the floor and goes out through the enclosure roof.

The control section is cooled by filter fans located in the enclosure door.

The incoming air temperature must be between 0°C and 40°C (- 10°C with enclosure heating) and can reach + 50°C with derating (class 3K3 according to IEC/EN 60721-3-3).

IP 54 enclosures comprise:
8 An air intake for the power section via the enclosure plinth
9 Filter components
10 Fans for the power section
11 An Active Front End module
12 A dv/dt filter choke
13 An air outlet via a metal cover with protection against water splashes on the enclosure roof
14 An air outlet (with filter mat) with fans for the control section
15 An air intake grid (with filter mat) for the control section

Variable speed drives
Altivar Process
Low Harmonic Drive Systems

Enclosure heating

Modular offer

This consists of:
- The standard Low Harmonic offer
- One or more options (see pages 4/16 to 4/19)

Options (CTO)

Some of these options depend on the drive rating. They can be integrated without any need for modifications to the enclosure:
- Increased IP 54 protection degree
- Enclosure plinth for basic device
- Additional enclosure allowing cabling from the top or from the bottom
- Enclosure lighting, heating
- "Local/remote" key switch
- Ethernet port on front door
- Digital and analog I/O modules and relay output modules
- Communication modules for various fieldbus systems
- STO - SIL 3 Stop category 0 or 1 emergency stop
- Front display module (FDM)
- Indicator lights on front door
- Motor/bearing temperature monitoring
- dv/dt filters for long motor cables
- Motor heating
- Circuit breaker
- Undervoltage coil for circuit breaker
- Motor for circuit breaker
- Automated mains disconnection
- Setting for 415 V + 10%
- Design for IT mains
- Seaworthy packaging

Further design variations (ETO)

These adaptations depend on the drive rating. Some will lead to modification of the size of the enclosure:
- Modified wiring colors
- Remote monitoring
- Different ranges of supply voltages
- Design without a main switch
- Increased short-circuit strength up to 100 kA
- Air intake from the back
- Other enclosure colors
- Customized documentation and labeling
- Motor contactor
- Etc.

Variable speed drives
Altivar Process
Low Harmonic Drive Systems

ATV680C16Q4X1

IP 23 three-phase 380...415 V Low Harmonic Drive Systems

Motor		Line supply			Altivar Process			
Power indicated on rating plate *(1)*		Line current *(2)*	Apparent power	Max. prospective line Isc	Max. continuous current *(1)*	Max. transient current for 60 s	Reference *(1)*	Weight
		400 V	400 V					
ND:	Normal duty *(3)*							
HD:	*Heavy duty (4)*							
	kW	A	kVA	kA	A	A		kg/ *lb*
THDi ≤ 5% at 100% load								
ND	110	175	121	50	211	232	**ATV680C11Q4X1**	400.000/ *881.848*
HD	*90*	*144*	*100*	*50*	*173*	*260*		
ND	132	208	144	50	250	275	**ATV680C13Q4X1**	400.000/ *881.848*
HD	*110*	*174*	*121*	*50*	*211*	*317*		
ND	160	252	174	50	302	332	**ATV680C16Q4X1**	400.000/ *881.848*
HD	*132*	*208*	*144*	*50*	*250*	*375*		
ND	200	313	217	50	370	407	**ATV680C20Q4X1**	700.000/ *1543.235*
HD	*160*	*252*	*174*	*50*	*302*	*453*		
ND	250	389	270	50	477	525	**ATV680C25Q4X1**	700.000/ *1543.235*
HD	*200*	*313*	*217*	*50*	*370*	*555*		
ND	315	491	340	50	590	649	**ATV680C31Q4X1**	700.000/ *1543.235*
HD	*250*	*389*	*270*	*50*	*477*	*716*		
ND	355	553	383	50	660	726	**ATV680C35Q4X1**	1150.000/ *2535.314*
HD	*280*	*436*	*302*	*50*	*520*	*780*		
ND	400	620	429	50	730	803	**ATV680C40Q4X1**	1150.000/ *2535.314*
HD	*315*	*491*	*340*	*50*	*590*	*885*		
ND	450	697	483	50	830	913	**ATV680C45Q4X1**	1150.000/ *2535.314*
HD	*355*	*553*	*383*	*50*	*660*	*990*		
ND	500	775	537	50	900	990	**ATV680C50Q4X1**	1150.000/ *2535.314*
HD	*400*	*620*	*429*	*50*	*730*	*1095*		
ND	560	868	601	50	1020	1122	**ATV680C56Q4X1**	1450.000/ *3196.700*
HD	*450*	*697*	*483*	*50*	*830*	*1245*		
ND	630	971	673	50	1140	1254	**ATV680C63Q4X1**	1450.000/ *3196.700*
HD	*500*	*775*	*537*	*50*	*900*	*1350*		
ND	710	1094	758	50	1260	1386	**ATV680C71Q4X1**	1950.000/ *4299.011*
HD	*560*	*868*	*601*	*50*	*1020*	*1530*		
ND	800	1227	850	50	1420	1562	**ATV680C80Q4X1**	1950.000/ *4299.011*
HD	*630*	*971*	*673*	*50*	*1140*	*1710*		

(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…8 kHz for all ratings.
Above 2.5 kHz, the drive will automatically reduce the switching frequency in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current (see the 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) Values given for applications requiring a slight overload (up to 110%).
(4) Values given for applications requiring a significant overload (up to 150%).

***Note**: Consult the summary tables of possible drive, option, and accessory combinations (see page 4/16).*

Variable speed drives
Altivar Process
Low Harmonic Drive Systems

ATV680C31T4X1

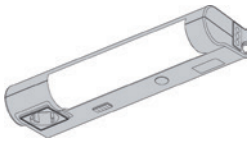
IP 23 three-phase 480 V Low Harmonic Drive Systems

Motor		Line supply			Altivar Process			
Power indicated on rating plate (1)		Line current (2)	Apparent power	Max. prospective line Isc	Max. continuous current (1)	Max. transient current for 60 s	Reference (1)	Weight
		480 V	480 V					
ND:	Normal duty (3)							
HD:	Heavy duty (4)							
	kW	A	kVA	kA	A	A		kg/lb
THDi ≤ 5% at 100% load								
ND	132	175	145	50	211	232	ATV680C11T4X1	400.000/881.848
HD	110	147	123	50	173	260		
ND	160	211	175	50	250	275	ATV680C13T4X1	400.000/881.848
HD	132	175	145	50	211	317		
ND	180	236	196	50	302	332	ATV680C16T4X1	400.000/881.848
HD	160	211	175	50	250	375		
ND	220	287	239	50	370	407	ATV680C20T4X1	700.000/1543.235
HD	180	236	196	50	302	453		
ND	280	363	302	50	477	525	ATV680C25T4X1	700.000/1543.235
HD	220	287	239	50	370	555		
ND	355	461	383	50	590	649	ATV680C31T4X1	700.000/1543.235
HD	280	363	302	50	477	716		
ND	400	519	432	50	660	726	ATV680C35T4X1	1150.000/2535.314
HD	315	409	340	50	520	780		
ND	450	581	483	50	730	803	ATV680C40T4X1	1150.000/2535.314
HD	355	461	383	50	590	885		
ND	500	646	537	50	830	913	ATV680C45T4X1	1150.000/2535.314
HD	400	519	432	50	660	990		
ND	560	723	601	50	900	990	ATV680C50T4X1	1150.000/2535.314
HD	450	581	483	50	730	1095		
ND	630	813	676	50	1020	1122	ATV680C56T4X1	1450.000/3196.700
HD	500	646	537	50	830	1245		
ND	710	912	758	50	1140	1254	ATV680C63T4X1	1450.000/3196.700
HD	560	723	601	50	900	1350		
ND	800	1028	854	50	1260	1386	ATV680C71T4X1	1950.000/4299.011
HD	630	813	676	50	1020	1530		
ND	900	1150	956	50	1420	1562	ATV680C80T4X1	1950.000/4299.011
HD	710	912	758	50	1140	1710		

(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…8 kHz for all ratings.
Above 2.5 kHz, the drive will automatically reduce the switching frequency in the event of an excessive temperature rise. For continuous operation above the nominal switching frequency, derate the nominal drive current (see the 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) Values given for applications requiring a slight overload (up to 110%).
(4) Values given for applications requiring a significant overload (up to 150%).

***Note**: Consult the summary tables of possible drive, option, and accessory combinations (see page 4/16).*

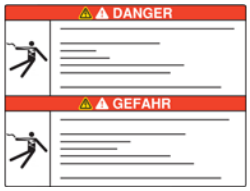
Variable speed drives
Altivar Process
Drive Systems
Common CTO options


VW3AP1601

Common options *(1)*

Description	Reference	Weight kg/*lb*
Enclosure options		
Enclosure lighting *(2)*	VW3AP1601	0.500/ *1.102*
Control options		
"Local/remote" key switch	VW3AP1801	0.200/ *0.441*
Ethernet port on front door	VW3AP1807	0.200/ *0.441*
I/O expansion modules		
Expansion module with additional I/O	VW3AP3203	0.200/ *0.441*
Expansion module with relay outputs	VW3AP3204	0.200/ *0.441*
Communication modules		
Profibus DP communication module	VW3AP3607	0.200/ *0.441*
CANopen Daisy Chain communication module	VW3AP3608	0.200/ *0.441*
DeviceNet communication module	VW3AP3609	0.200/ *0.441*
CANopen SUB-D9 communication module	VW3AP3618	0.200/ *0.441*
CANopen communication module with screw terminals	VW3AP3628	0.200/ *0.441*
PROFINET communication module	VW3AP3627	0.200/ *0.441*
Modbus TCP and EtherNet/IP communication module	VW3AP3720	0.200/ *0.441*
Communication Card Ethernet/IP, Modbus TCP, MultiDrive-Link	VW3AP3721	0.200/ *0.441*
Safety functions		
Safe Torque Off STO - SIL 3 Stop category 0	VW3AP1502	0.200/ *0.441*
Safe Torque Off STO - SIL 3 Stop category 1	VW3AP1503	0.500/ *1.102*
Display options		
Indicator lights on front door	VW3AP0421	0.200/ *0.441*
Motor options		
PTC relay for motor monitoring	VW3AP2001	0.200/ *0.441*
PTC relay with ATEX certification for motor monitoring *(3)*	VW3AP2002	0.200/ *0.441*
PT100/1000/KTY relay for motor monitoring	VW3AP2003	0.200/ *0.441*
PT100/1000/KTY relay for bearing monitoring	VW3AP2004	0.200/ *0.441*
Motor heating	VW3AP2101	0.300/ *0.661*
Mains supply		
Setting for 415 V + 10%	VW3AP0415	–
Ready for IT mains	VW3AP2701	–
Safety labels *(4)*		
English and German safety labels	VW3AP0561	–
English and Italian safety labels	VW3AP0562	–
English and Spanish safety labels	VW3AP0563	–
English and Dutch safety labels	VW3AP0564	–
English and Chinese safety labels	VW3AP0565	–
English and Russian safety labels	VW3AP0566	–
English and Turkish safety labels	VW3AP0567	–
English and Polish safety labels	VW3AP0568	–
English and Portuguese safety labels	VW3AP0569	–

VW3AP1502



(1) These options cannot be ordered alone. For any other configuration, please contact our Customer Care Center.
(2) Not available for ATV660C11●4X1...C16●4X1.
(3) ATEX: please refer to the ATEX guide available on our website www.schneider-electric.com.
(4) English and French as standards

Variable speed drives
Altivar Process
Drive Systems
CTO options dependent on the drive rating

VW3AP0801

Options dependent on the drive rating (1)

Description	For enclosure (2)	Reference	Weight kg/lb
Enclosure options			
Enclosure heating	ATV660C11●4X1...C16●4X1	**VW3AP0501**	1.500/ *3.307*
	ATV660C20●4X1...C50●4X1	**VW3AP0502**	3.000/ *6.614*
	ATV660C56●4X1...C80●4X1	**VW3AP0503**	4.500/ *9.921*
	ATV680C11●4X1...C31●4X1	**VW3AP0551**	2.000/ *4.409*
	ATV680C35●4X1...C80●4X1	**VW3AP0552**	3.000/ *6.614*
Increased IP 54 protection degree	ATV660C11●4X1...C16●4X1	**VW3AP0301**	13.000/ *28.660*
	ATV660C20●4X1...C31●4X1	**VW3AP0302**	16.000/ *35.274*
	ATV660C35●4X1...C50●4X1	**VW3AP0303**	19.000/ *41.888*
	ATV660C56●4X1...C63●4X1	**VW3AP0304**	32.000/ *70.548*
	ATV660C71●4X1...C80●4X1	**VW3AP0305**	35.000/ *77.162*
	ATV680C11●4X1...C16●4X1	**VW3AP0351**	16.000/ *35.274*
	ATV680C20●4X1...C31●4X1	**VW3AP0352**	29.000/ *63.934*
	ATV680C35●4X1...C50●4X1	**VW3AP0353**	45.000/ *99.208*
	ATV680C56●4X1...C63●4X1	**VW3AP0354**	58.000/ *127.668*
	ATV680C71●4X1...C80●4X1	**VW3AP0355**	74.000/ *163.142*
Enclosure plinth for basic device	ATV660C11●4X1...C16●4X1	**VW3AP0801**	9.000/ *19.842*
	ATV660C20●4X1...C31●4X1	**VW3AP0802**	11.000/ *24.251*
	ATV660C35●4X1...C50●4X1	**VW3AP0803**	13.000/ *28.660*
	ATV660C56●4X1...C63●4X1	**VW3AP0804**	22.000/ *48.502*
	ATV660C71●4X1...C80●4X1	**VW3AP0805**	24.000/ *52.911*
	ATV680C11●4X1...C16●4X1	**VW3AP0851**	11.000/ *24.251*
	ATV680C20●4X1...C31●4X1	**VW3AP0852**	20.000/ *44.093*
	ATV680C35●4X1...C50●4X1	**VW3AP0853**	31.000/ *68.343*
	ATV680C56●4X1...C63●4X1	**VW3AP0854**	40.000/ *88.185*
	ATV680C71●4X1...C80●4X1	**VW3AP0855**	54.000/ *119.050*

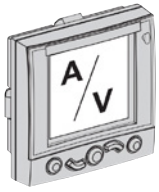
(1) These options cannot be ordered alone. For any other configuration, please contact our Customer Care Center.
(2) Replace ● with Q for 380...415 V mains voltage or with T for 480 V mains voltage.

Variable speed drives
Altivar Process
Drive Systems
CTO options dependent on the drive rating

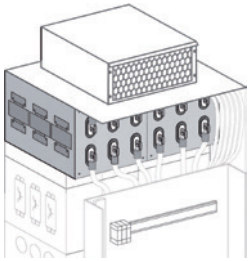
VW3AP0707

Options dependent on the drive rating (continued) *(1)*

Description	For enclosure *(2)*	Reference	Weight kg/*lb*
Enclosure options			
Additional enclosure allowing cabling from the top	ATV660C11●4X1...C31●4X1 ATV680C11●4X1...C31●4X1	**VW3AP0701**	85.000/ *187.393*
	ATV660C35●4X1...C80●4X1 ATV680C35●4X1...C80●4X1	**VW3AP0702**	100.000/ *220.462*
Additional enclosure allowing cabling from the top with plinth	ATV660C11●4X1...C31●4X1 ATV680C11●4X1...C31●4X1	**VW3AP0704**	94.000/ *207.234*
	ATV660C35●4X1...C80●4X1 ATV680C35●4X1...C80●4X1	**VW3AP0705**	111.000/ *244.713*
Additional enclosure allowing cabling from the bottom	ATV660C11●4X1...C31●4X1 ATV680C11●4X1...C31●4X1	**VW3AP0707**	85.000/ *187.393*
	ATV660C35●4X1...C80●4X1 ATV680C35●4X1...C80●4X1	**VW3AP0708**	100.000/ *220.462*
Additional enclosure allowing cabling from the bottom with plinth	ATV660C11●4X1...C31●4X1 ATV680C11●4X1...C31●4X1	**VW3AP0710**	94.000/ *207.234*
	ATV660C35●4X1...C80●4X1 ATV680C35●4X1...C80●4X1	**VW3AP0711**	111.000/ *244.713*
Display options			
Front display module (FDM)	ATV660C11●4X1...C13●4X1 ATV680C11●4X1...C13●4X1	**VW3AP0401**	0.500/ *1.102*
	ATV660C16●4X1...C20●4X1 ATV680C16●4X1...C20●4X1	**VW3AP0402**	0.500/ *1.102*
	ATV660C25●4X1...C31●4X1 ATV680C25●4X1...C31●4X1	**VW3AP0403**	0.500/ *1.102*
	ATV660C35●4X1...C50●4X1 ATV680C35●4X1...C50●4X1	**VW3AP0404**	0.500/ *1.102*
	ATV660C56●4X1...C80●4X1 ATV680C56●4X1...C80●4X1	**VW3AP0405**	0.500/ *1.102*
Motor options			
150 m dv/dt filter choke	ATV660C11●4X1...C16●4X1 ATV680C11●4X1...C16●4X1	**VW3AP0601**	25.000/ *55.116*
	ATV660C20●4X1...C31●4X1	**VW3AP0602**	50.000/ *110.231*
300 m dv/dt filter choke	ATV660C11●4X1...C16●4X1 ATV680C11●4X1...C16●4X1	**VW3AP0611**	28.000/ *61.729*
	ATV660C20●4X1...C31●4X1 ATV680C20●4X1...C31●4X1	**VW3AP0612**	56.000/ *123.459*
	ATV660C35●4X1...C50●4X1 ATV680C35●4X1...C50●4X1	**VW3AP0613**	84.000/ *185.188*
	ATV660C56●4X1...C63●4X1 ATV680C56●4X1...C63●4X1	**VW3AP0614**	112.000/ *246.918*
	ATV660C71●4X1...C80●4X1 ATV680C71●4X1...C80●4X1	**VW3AP0615**	140.000/ *308.647*



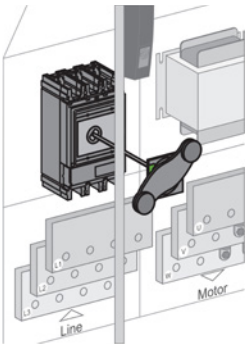
VW3AP0403



VW3AP0612

(1) These options cannot be ordered alone. For any other configuration, please contact our Customer Care Center.
(2) Replace ● with Q for 380...415 V mains voltage or with T for 480 V mains voltage.

Variable speed drives
Altivar Process
Drive Systems
CTO options dependent on the drive rating



VW3AP0104

Options dependent on the drive rating (continued) (1)

Description	For enclosure (2)	Reference	Weight kg/lb
Mains supply			
Circuit breaker	ATV660C11●4X1...C16●4X1 ATV680C11●4X1...C16●4X1	**VW3AP0101**	2.000/ 4.409
	ATV660C20●4X1...C31●4X1 ATV680C20●4X1...C31●4X1	**VW3AP0102**	2.000/ 4.409
	ATV660C35●4X1...C40●4X1 ATV680C35●4X1...C40●4X1	**VW3AP0103**	1.000/ 2.204
	ATV660C45●4X1...C50●4X1 ATV680C45●4X1...C50●4X1	**VW3AP0104**	1.000/ 2.204
	ATV660C56●4X1...C63●4X1 ATV680C56●4X1...C63●4X1	**VW3AP0105**	1.000/ 2.204
	ATV660C71●4X1...C80●4X1 ATV680C71●4X1...C80●4X1	**VW3AP0106**	1.000/ 2.204
Circuit breaker with MicroLogic	ATV660C11●4X1...C16●4X1 ATV680C11●4X1...C16●4X1	**VW3AP0111**	2.000/ 4.409
	ATV660C20●4X1...C31●4X1 ATV680C20●4X1...C31●4X1	**VW3AP0112**	2.000/ 4.409
	ATV660C35●4X1...C40●4X1 ATV680C35●4X1...C40●4X1	**VW3AP0113**	1.000/ 2.204
	ATV660C45●4X1...C50●4X1 ATV680C45●4X1...C50●4X1	**VW3AP0114**	1.000/ 2.204
	ATV660C56●4X1...C63●4X1 ATV680C56●4X1...C63●4X1	**VW3AP0115**	1.000/ 2.204
	ATV660C71●4X1...C80●4X1 ATV680C71●4X1...C80●4X1	**VW3AP0116**	1.000/ 2.204
Undervoltage coil for circuit breaker 230 V	ATV660C11●4X1...C31●4X1 ATV680C11●4X1...C31●4X1	**VW3AP0201**	0.100/ 0.220
	ATV660C35●4X1...C80●4X1 ATV680C35●4X1...C80●4X1	**VW3AP0202**	0.100/ 0.220
Motor for circuit breaker 230 V	ATV660C11●4X1...C31●4X1 ATV680C11●4X1...C31●4X1	**VW3AP0251**	4.000/ 8.818
	ATV660C35●4X1...C40●4X1 ATV680C35●4X1...C40●4X1	**VW3AP0252**	4.000/ 8.818
	ATV660C45●4X1...C50●4X1 ATV680C45●4X1...C50●4X1	**VW3AP0253**	7.000/ 15.432
	ATV660C56●4X1...C63●4X1 ATV680C56●4X1...C63●4X1	**VW3AP0254**	7.000/ 15.432
	ATV660C71●4X1...C80●4X1 ATV680C71●4X1...C80●4X1	**VW3AP0255**	7.000/ 15.432
Automated mains disconnection	ATV660C11●4X1...C16●4X1	**VW3AP0271**	0.500/ 1.102
	ATV660C20●4X1...C31●4X1	**VW3AP0272**	0.500/ 1.102
	ATV660C35●4X1...C40●4X1	**VW3AP0273**	0.500/ 1.102
	ATV660C45●4X1...C50●4X1	**VW3AP0274**	0.500/ 1.102
	ATV660C56●4X1...C63●4X1	**VW3AP0275**	0.500/ 1.102
	ATV660C71●4X1...C80●4X1	**VW3AP0276**	0.500/ 1.102
Packaging			
Seaworthy packaging	ATV660C11●4X1...C16●4X1	**VW3AP0811**	105.000/ 231.485
	ATV660C20●4X1...C31●4X1	**VW3AP0812**	124.000/ 273.373
	ATV660C35●4X1...C50●4X1	**VW3AP0813**	138.000/ 3024.237
	ATV660C56●4X1...C63●4X1	**VW3AP0815**	192.000/ 423.287
	ATV660C71●4X1...C80●4X1	**VW3AP0816**	205.000/ 451.947
	ATV680C11●4X1...C16●4X1	**VW3AP0812**	124.000/ 273.373
	ATV680C20●4X1...C31●4X1	**VW3AP0814**	155.000/ 341.716
	ATV680C35●4X1...C50●4X1	**VW3AP0817**	225.000/ 496.040
	ATV680C56●4X1...C63●4X1	**VW3AP0819**	255.000/ 562.178
	ATV680C71●4X1...C80●4X1	**VW3AP0821**	352.000/ 776.027

(1) These options cannot be ordered alone. For any other configuration, please contact our Customer Care Center.
(2) Replace ● with Q for 380...415 V mains voltage or with T for 480 V mains voltage.

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5

Variable speed drives
Altivar Process
A whole world of services for your drives by Schneider Electric

Presentation

Schneider Electric offers an extensive range of support services to help ensure the reliability of your installation in the long term, control your maintenance costs, and keep your process running at peak performance for maximum efficiency.
Altivar Process has been designed in harmony with a whole range of services offered by Schneider Electric.

A worldwide network, 24/7:
- 400 highly qualified and certified experts
- Field service engineers, online experts

A digital world of services:
- Schneider Electric Customer Care app
- Remote technical support

People

Digitized support material

Spare parts

Service provisions

A dedicated supply chain:
- All the spare parts you need
- Designed and manufactured by Schneider Electric

An optimal life cycle model:
- Spare parts management, exchange and repairs
- Extended warranties, maintenance plans

Schneider Electric drive maintenance expert certification

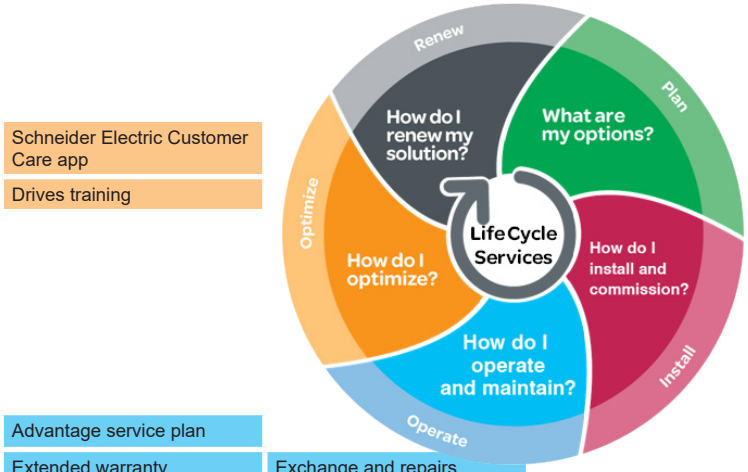
A worldwide network, 24/7:
- 400 highly qualified and certified experts
- Our field service engineers follow a proven drives certification program designed to support you with maximum expertise and efficiency.
- They use a range of professional tools and software to provide fast, in-depth diagnostics and repairs.

	Repair centers	Low voltage (LV) drives field service engineers	Medium voltage (MV) drives field service engineers
Module A	LV drive safety training		MV drive safety training
Module B	Technical training for LV drives		Technical training for MV drives
Module C	Repair center audit	Skills assessment	On-site start-up
Module D	Internal certification procedure		
Module E	Registration in Schneider Electric's international directory of Drives skills		
Module F	Re-certification every 3 years		

Variable speed drives
Altivar Process
A whole world of services for your drives by Schneider Electric

Drives support and services offer by Schneider Electric

Schneider Electric has developed a generic services offer to assist you throughout the life cycle of your product. From the planning stage right through to renewal, whether for standard or critical operations, you will find the solution you need in our set of standardized offers.



Schneider Electric Customer Care app
Drives training

Schneider Electric drive solutions

Initial warranty
Start-up - Commissioning
Spare parts
Spare parts management

Advantage service plan
Extended warranty
On-site expert assistance
Exchange and repairs
Remote technical support

Plan - Install - Operate - Optimize - Renew

The offer	Contact, How to order	Description
Schneider Electric drive solutions	Contact your local Customer Care Center	Our Schneider Electric experts can help you design your installation, offering whatever type of assistance you need from technical support to turnkey solutions.
Start-up - Commissioning	Contact your local Customer Care Center	Our team of experts are specialists in installation commissioning and start-up whatever the conditions and for any application.
Spare parts - Spare parts management	Contact your local Customer Care Center	Our spare parts are available for the lifetime of your equipment. They are designed and manufactured to the same high quality standards as our products. They are available via a dedicated supply chain for emergency shipments. Our team can help you identify critical parts and define the right level of stock required. Whether stored in your premises (on-site) or in a central store (off-site), it is reassuring to know that critical spare parts are available 24/7.
Exchange and repairs	Contact your local Customer Care Center	Schneider Electric offers high-quality repair services via a global network of certified repair centers and certified field service engineers to cover any need: repairs in Schneider Electric repair centers, exchanges with refurbished products, or on-site repairs (Schneider Electric intervention on your premises).
Remote technical support	Contact your local Customer Care Center	Direct priority access to our experts to help you solve any technical difficulties. Our experts have extensive field experience and have fully mastered the technologies implemented. A simple phone conversation or on-line chat is usually sufficient to help you find the optimal solution and can help keep your costs down by avoiding on-site intervention.
On-site technical support	Contact your local Customer Care Center	Our field service engineers can support your maintenance staff in their everyday operations, or engage when requested in the event of an emergency.
Extended warranty	Contact your local Customer Care Center	Spare parts and repairs performed by Schneider Electric experts on duty.
Advantage service plan	Contact your local Customer Care Center	The Advantage Service plan combines the Preventive Maintenance program (annual visit for inspection, checks, and replacement of worn parts) with the extended warranty (covering spare parts and repairs), plus remote technical support.
Drives training	Contact your local Customer Care Center	A comprehensive suite of training courses to master your Altivar Process drive at any stage in the life cycle of your installation.
mySchneider Customer Care app	Download from the Apple Store® or Google Play Store™	Free download from the Apple Store® or Google Play Store™. Immediate access to Schneider Electric Customer Care Centers, product documentation, FAQs, Cloud services, etc. and plenty of other services yet to come.

Variable speed drives
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