

INDUSTRIAL AUTOMATION

# Variable speed drives

## Altivar Process for Cabinet Integration

# Quick access to product information

## Get technical information about your product

**References**

**Modicon TM3**  
I/O expansion modules for Modicon controllers  
Analog I/O modules

References	Modicon analog input modules	Number of channels	Input range	Resolution	Input terminal	Reference	Weight (g)
TM3A1CH	2 analog inputs	-10...10VDC	-10.000 to +10.000	12 bit or sign	11.000 to 12.000	TM3A1CH	0.190
TM3A1AM	2 analog inputs	-20...20mA	-20.000 to +20.000	12 bit or sign	11.000 to 12.000	TM3A1AM	0.200
TM3A1CH	4 analog inputs	-10...10VDC	-10.000 to +10.000	12 bit or sign	11.000 to 15	TM3A1CH	0.200
TM3A1AM	4 analog inputs	-20...20mA	-20.000 to +20.000	12 bit or sign	11.000 to 15	TM3A1AM	0.200
TM3A1CH	4 temperature inputs	-40...+120°C	-40.000 to +120.000	12 bit or sign	11.000 to 15	TM3A1CH	0.200
TM3A1AM	4 temperature inputs	-40...+120°C	-40.000 to +120.000	12 bit or sign	11.000 to 15	TM3A1AM	0.200
TM3D1W	8 unisensored	-10...+10VDC	-10.000 to +10.000	16 bit or sign	16.000 to 17.000	TM3D1W	0.190
TM3D1R	8 unisensored	-10...+10VDC	-10.000 to +10.000	12 bit or sign	12.000 to 17.000	TM3D1R	0.190

Each commercial reference presented in a catalog contains a hyperlink.  
Click on it to obtain the technical information of the product:

- Characteristics, Dimensions and drawings, Mounting and clearance, Connections and schemas, Performance curves
- Product image, Instruction sheet, User guide, Product certifications, End of life manual

The screenshot shows the Schneider Electric website for the TM3AI2H module. It includes the product image, a brief description ("Module TM3 - 2 analog inputs high resolution"), and links to "View all Modicon TM3", "Add to My Products", and "Compare". Below the main product info, there's a "Main" section with "range of product" set to "Modicon TM3", "product or component type" set to "Analog input module", and "range compatibility" set to "Modicon M251".

## Find your catalog **INDUSTRIAL AUTO**

The screenshot shows the Schneider Electric digital catalog interface. It features a video player overlay with the text "Digital Catalog Industrial Automation V 14.0" and a play button. The background shows a thumbnail of a catalog page with a worker in an industrial setting.

- With just 3 clicks, you can access the Industrial Automation and Control catalogs, in both English and French
- Consult digital automation catalogs at [Digi-Cat Online](#)

The screenshot shows the Schneider Electric general catalog interface. It features a search bar and a sidebar with navigation links for "Industrial Automation", "Process Automation", "Building Automation", "Smart Cities", and "Digital Services". The main area displays a list of product categories under "General Catalog", including "Power Distribution, Switches, LED Lights & Relays", "Sensors, Cabling & Interfaces", "Signaling Devices", "HMI Terminals and Industrial PC", "Motors & Drives", "Sensors & RFID System", "Motor Starters and Load Management", "Components for Motor Starters", "Variable Speed Drives & Soft Starters", "Motor Control & Robotics", "Interfaces, Measurement & Control Relays", and "PLC, IEC & other Controllers".

- Up-to-date catalogs
- Embedded product selectors, 360° pictures
- Optimized search by commercial references

## Select your training



- Find the right [Training](#) for your needs on our Global website
- Locate the training center with the selector tool, using this [link](#)

The screenshot shows the Schneider Electric training and courses page. It features a banner with a man in glasses and the text "Training and courses". Below the banner, there are sections for "Training by domain of expertise" with categories like "Electrical Installation and Safety", "Data Center", and "Industrial Automation". A "SELECTOR TOOL" is shown on the right side of the page.

# Altivar

Discover Altivar

Variable speed drives and soft starters

Altivar variable speed drives and soft starters deliver top performance in motor control applications across machines, processes, and buildings. With built-in intelligence, these smart connected devices gather and share data to improve operational efficiency, safety, and reliability.

## Explore our offer

- Altivar Process
- Altivar Machine
- Altivar Building
- Altivar Soft Starters

# Green Premium™

Enhance sustainability with Altivar™ Process drives

Superior environmental performance thanks to upgradability and modernization solutions

Altivar Process is RoHS and REACH compliant

- Transparent environment information
- Life Cycle Analysis, compliant with ISO 14025
- Circularity Profile

Altivar Process drives offer key benefits to help you achieve superior sustainable performance by enhancing functionality, performance, and capacity of both hardware and software.

The additional hardware options and firmware upgradability capabilities of Altivar Process can help you to maximize process continuity and operation, as well as reduce your operational expenses, by avoiding the need to replace your drive or modify your existing installation as a retrofit.

## Benefits

- Maximize process continuity and operation
- Reduce your OPEX
- Easy scalability of your automation system
- Future-ready solution for Industry 4.0
- Improve the power quality of your system with a low investment
- Improve the Safety Integrity Level (SIL), and/or Performance Level (PEL), integration, and performance of your application
- Optimize your maintenance costs and the drive's service life



Sustainable  
performance,  
by design

## Communication & Wi-Fi modules

The additional fieldbus modules allow you to easily integrate Altivar Process drives in your scalable automation system. Together with the Wi-Fi access point, they bring easy access to the real data provided by the drive, helping the digitalization and easy integration of the drive in Industry 4.0 technologies.

## Passive filters\*

The optional passive filter available with Altivar Process drives offers you the possibility to improve your installation's power quality by reducing the harmonics levels, even keeping your existing drives installed.

## Additional I/O & safety modules\*

The I/O module helps you to extend your application's performance and integration.

The Safety module optimizes the overall cost of the installation by avoiding the need for additional external devices, while conforming to international safety standards.

## Firmware updates & Service expertise

Our global network of service experts offers you the possibility of upgrading your drive's firmware and modernizing its hardware to extend your drive's service life.



Experience the difference today at  
[se.com/green-premium](http://se.com/green-premium)

\* For more information regarding the compatibility of these options, please visit us at [se.com/drives](http://se.com/drives)

# CÔNG TY CỔ PHẦN CÔNG NGHỆ HỢP LONG

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## Altivar Process

Provides the efficiency you deserve

Altivar Process is the new comprehensive range of variable speed drives from Schneider Electric, covering the majority of industrial applications with two series:

- > ATV600: drives focused on fluid management and processing and energy saving
- > ATV900: drives focused on maximum productivity with exceptional motor control and connectivity

Depending on customer requirements, Altivar Process drives are available as wall-mounting, floor-standing, and optimized solutions for integration in cabinets.



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

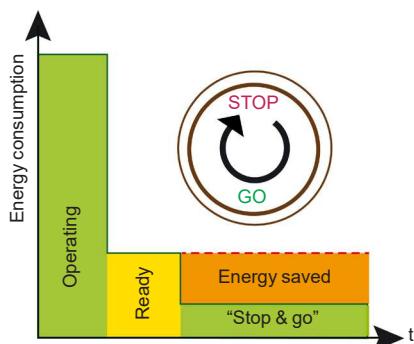
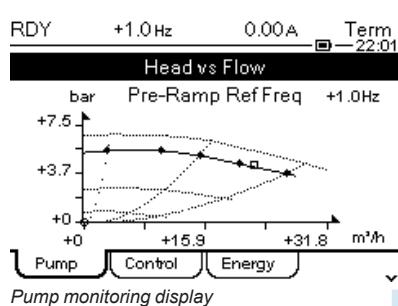


Enclosed drive solutions  
from 0.75 kW up to 2600 kW  
(1...2600 HP)



Drives for cabinet integration  
from 0.75 kW up to 2600 kW  
(1...2600 HP)

Altivar Process range



"Stop & go" function



Calculate your level of energy efficiency  
with the Altivar Efficiency Calculator

## Business optimization

### Optimum monitoring of your process

- > Instant response if pump efficiency drops thanks to 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 lifecycle
- > Data logging and graphic display of the power consumption

## Process efficiency

### Motor performance and connectivity

- > Excellent motor performance on any type of motor
- > Ethernet dual port offers maximum services such as connection to the control room and process transparency
- > Network service helps ensure operation continuity even in case of connection breakdown
- > Web server and data logging help to reduce downtime through fast troubleshooting and preventive maintenance

## Altivar Efficiency Calculator

This tool calculates the level of energy efficiency of your variable speed drive according to the Ecodesign standard EN/IEC 61800-9-2.

### Drive efficiency (CDM Complete Drive Module)

Drive performance is determined according to 8 operating points considering torque and speed

### System efficiency (PDS Power Drive System)

System performance is determined according to 8 operating points considering torque and speed. This includes the efficiency of the variable speed drive and its motor.



Saving energy with variable speed drives



Achilles™ Level2 certified



ODVA organization:  
Supports network  
technologies based on  
EtherNet/IP



FDT Technology:  
A widely-accepted  
international standard in  
the automation industry

### 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.

### User-friendliness

#### Simple integration in controller environments

- Easy integration thanks to standardized FDT/DTM and ODVA technology
- Supported by predefined EcoStruxure Control Expert libraries
- Easy access via PC, tablet, or smartphone
- Robust connection via “cybersecure Ethernet”

### EcoStruxure™ for Industry



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 according to European Directive 2011/65 and the delegated Directive (EU) 2015/863
  - REACH according to EU regulation 1907/2006
  - IEC 62635: The end-of-life instructions comply with the latest recycling rules; up to 85% of the product components can be recycled

(1) The Schneider Electric industrial software business and AVEVA have merged to trade as AVEVA Group plc, a UK listed company. The Schneider Electric and Life is On trademarks are owned by Schneider Electric and are being licensed to AVEVA by Schneider Electric.



Best-in-class service concept

Hotline: 1900.6536 Website: HOPLONGTECH.COM





### Consolidating a powerful range

The Altivar Process Modular offer is designed for easy and cost-effective integration of power-intensive drives into cabinets. From just a few standard components it is possible to build a wide range of air- and liquid-cooled drives from 75 to 2600 kW (125 to 2600 HP) in different integration types.

Customers using our Altivar Process Modular offer benefit from all the advanced features of service-oriented Altivar Process ATV600 and ATV900 drives developed for industrial applications such as water & wastewater, mining, minerals & metals, oil & gas, and consumer packaged goods (CPG).

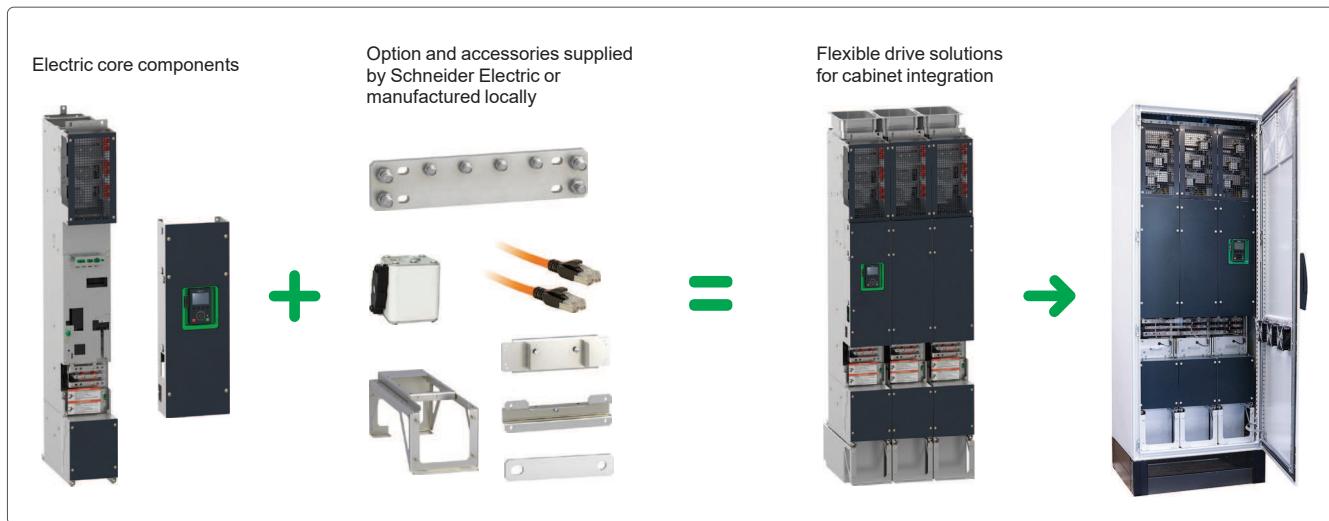
- > ATV600 drives focused on fluid management and processing and energy saving
- > ATV900 drives focused on maximum productivity with exceptional motor control and connectivity

### Modularity

Get more than just a drive with the Altivar Process Modular offer:

- > Standardized and cost-efficient integration
- > Flexibility in cabinet design such as protection rating and incoming supply equipment
- > Prewired, tested electric core components
- > Integrated category C3 EMC filter
- > Reduced harmonics with integrated line choke for Standard drives and less than 3% THDi for Low Harmonic/Regen drives
- > Integrated high-efficiency motor filter reducing the risk of motor winding insulation aging and motor damage even for longer motor cables
- > Ready-to-connect line supply 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 (for Standard/Reduced Height drives) and power fan (for Low Harmonic/Regen, Standard, and Reduced Height drives) inside a drawer accessible from the front face

## INDUSTRIAL AUTOMATION



**Easy and standardized cabinet integration**



Cost-saving solution due to standardization and local production

### Cabinet integration

#### Standardization of integration design for ATV600 and ATV900 solutions

- ATV600 and ATV900 drive solutions by simply changing the control unit
- Larger application scope with power rating through module paralleling up to 1800 kW/2500 HP at 400 V supply voltage and up to 2600 kW/2600 HP at 690 V supply voltage
- Reduced engineering workload thanks to standardization
- Optimized supply chain with standard sub-assembly and kits available ex stock



### Local production

- Assembly of Modular drive architectures on sites of qualified partners belonging to Schneider Electric network
- Altivar Process Modular partners have access to dedicated selection tools, drawings, EPLAN macros, integration manuals, videos, and training material
- Options and accessories may be supplied by Schneider Electric or manufactured locally

Fast construction of power connections and control cabling

### Main benefits

- Cost-saving solution with reduced integration workload (lighter and less space-consuming) and simplified purchasing (optimized number of parts covering all architectures)
- Reduce lead time to end users thanks to standardized integration design and simple adaptation as per application requirement
- Enlarge your business scope thanks to simple maintenance of the Altivar Process Modular offer



Compact compared with a standard product

Hotline: 1900.6536   Website: HOPLONGTECH.COM

Market segments		Water & wastewater		Oil & gas		Mining, minerals & metals			
		Mining, minerals & metals		Consumer packaged goods (CPG)					
<b>Mounting type</b>									
<b>Drive type</b>									
<b>Degree of protection</b>		Cabinet integration		Modular Standard drives		Modular Low Harmonic/Regen drives			
<b>Power range for 50...60 Hz line supply</b>	Three phase: 380...480 V (kW/HP)	IP20		IP00					
	Three-phase: 400 V (kW)	0.75...90/1...120		–		–			
	Three-phase: 440 V (kW)	–		110...800		110...1800			
	Three-phase: 480 V (HP)	–		110...800		110...1800			
	Three-phase: 500 (kW)	–		150...1100		150...2500			
	Three-phase: 600 (HP)	–		75...800		110...1900			
	Three-phase: 690 (kW)	–		125...1200		150...2600			
<b>Drive</b>		110...1200		–		160...2600			
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					
<b>Functions</b>		Advanced functions							
		Including all the advanced features of ATV600 drives:							
		<ul style="list-style-type: none"> <li>■ Accurate measurement for monitoring system energy consumption (deviation &lt; 5%)</li> <li>■ Installation energy drift detection</li> <li>■ Embedded Ethernet with direct access to system configuration and monitoring</li> <li>■ Integration of actual pump curves to optimize the system operating point</li> <li>■ Optimized pump monitoring based on actual operating point</li> <li>■ Sensorless estimated flow rate</li> <li>■ Measurements expressed in working units (e.g. m³/h, kWh/m³)</li> <li>■ Limitation of overvoltage at the motor terminals</li> <li>■ Contextual access to technical documentation through dynamic QR code</li> <li>■ Continuous and historical real-time measurements with customizable dashboards</li> <li>■ Predictive and preventive maintenance tracking functions (e.g. temperatures with PT100/1000 probe, fan monitoring)</li> <li>■ Easy setting of drive identification for Altivar Process Modular drives</li> </ul>							
		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 voltage (0...±10 V) or current (0-20 mA/4-20 mA), or for PTC, PT100, or PT1000 2- or 3-wire probes							
		6: Voltage 24 V ... (positive or negative logic)							
		2: Assignable							
		3: NO contacts							
		Modbus/TCP, Modbus serial link							
		Ethernet/IP, Modbus TCP and MD-Link dual port, CANopen daisy chain, SUB-D, and screw terminal block, PROFINET, PROFIBUS DP V1, DeviceNet, BACnet MS/TP, POWERLINK							
<b>Configuration and runtime tools</b>		Graphic display terminal, embedded Web server, DTM (Device Type Manager), SoMove software							
<b>Standards and certifications</b>		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 13849-1, TÜV certification, CE marking, cULus, IEC 61508, IEC 61000-3-12, IEC 60721-3, IEC 61508, IEC 13849-1, TÜV certification, CE marking, ATEX 2/22, ATEX 1/21		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 13849-1, TÜV certification, CE marking, cULus, IEC 61508, IEC 61000-3-12, IEC 60721-3, IEC 13849-1, TÜV certification, CE marking, cULus, IEC 61508, ATEX 2/22, ATEX 1/21		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 13849-1, TÜV certification, CE marking, cULus, IEC 61508, ATEX 2/22, ATEX 1/21			

(1) For marine product certificate, please contact your Schneider Electric representative.



More technical information on [www.se.com](http://www.se.com)



More technical information on [www.se.com](http://www.se.com)

Market segments	<ul style="list-style-type: none"> <li>■ Oil &amp; gas</li> <li>■ Mining, minerals &amp; metals</li> <li>■ Consumer packaged goods (CPG)</li> <li>■ Water &amp; wastewater</li> </ul>			
				
Mounting type	Cabinet integration	Modular Standard drives	Modular Low Harmonic/Regen drives	Modular Liquid-cooled drives
Drive type	Drive products for cabinet integration	Modular Standard drives	Modular Low Harmonic/Regen drives	Modular Liquid-cooled drives
Degree of protection	IP20	IP00	–	–
Power range for 50...60 Hz line supply	Three-phase: 380...480 V (kW/HP) Three-phase: 400 V (kW) Three-phase: 440 V (kW) Three-phase: 480 V (HP) Three-phase: 500 (kW) Three-phase: 600 (HP) Three-phase: 690 (kW)	0.75...90/1...120 – – – – – – 0.1...599 Hz	110...800 110...800 150...1100 75...800 125...1200 110...1200	110...1800 110...1800 150...2500 110...1900 150...2600 160...2600
Drive	Output frequency Control type	Asynchronous motor Synchronous motor	Standard constant torque, variable standard torque, optimized torque mode PM (permanent magnet) motor, synchronous reluctance motor	
Functions	Advanced functions	Including all the advanced features of ATV900 drives: <ul style="list-style-type: none"> <li>■ High-performance motor control with an overload torque up to 180% Tn in an open or closed loop</li> <li>■ Asynchronous, synchronous, special motors: all efficiency classes, brand independent, permanent magnet motors, torque motors, conical sliding rotor, reluctance motor</li> <li>■ Integrated EtherNet/IP and Modbus TCP dual port, cybersecurity (Achilles Level 2)</li> <li>■ Smart integration in PlantStruxure and Foxboro Evo process automation systems</li> <li>■ Optimized energy efficiency, detection of energy consumption drift of the installation</li> <li>■ Adaptation to the process by dedicated functions with modular design</li> <li>■ Embedded safety functions STO SIL3</li> <li>■ Master/slave and load sharing with drive-to-drive capability:             <ul style="list-style-type: none"> <li>□ torque sharing on rigid coupling</li> <li>□ torque sharing on elastic coupling</li> <li>■ Contextual access to technical documentation through dynamic QR code</li> <li>■ Continuous and historical real-time measurements with customizable dashboards</li> <li>■ Predictive maintenance (e.g. temperatures with PT100/1000 probe, fan monitoring, etc.)</li> <li>■ Easy setting of drive identification</li> </ul> </li> </ul> <p>1: STO (Safe Torque Off) SIL3 16</p>		
Integrated safety function				
Number of integrated I/O	Number of preset speeds			
Analog inputs	3: 2 configurable as voltage (0...10 V) or current (0-20 mA/4-20 mA), including probes (PTC, PT100, PT1000, or KTY84), and 1 configurable as voltage (0...±10 V)			
Digital inputs	8: Voltage 24 V ... (positive or negative logic)			
Digital output	1: Assignable, can be used as PTO (pulse train 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			
Extended I/O module (optional)	2 differential analog inputs configurable via software current (0-20 mA/4-20 mA), or for PTC, PT100, or PT1000 2- or 3-wire probes			
Digital inputs	6: Voltage 24 V ... (positive or negative logic)			
Digital outputs	2: Assignable			
Extended relay module (optional)	3: NO contacts			
Communication	Integrated Option modules	EtherNet/IP, Modbus/TCP Dual port, Modbus serial link CANopen daisy chain, SUB-D, and screw terminal block, PROFINET, PROFIBUS DP V1, DeviceNet, EtherCAT, POWERLINK		
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 61000-4-2, 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, Marine certification (DNV-GL, ABS, RINA, BV, LR) (1), IEC 13849-1, TÜV certification, CE marking, cULus, ATEX 2/22, ATEX 1/21		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 13849-1, TÜV certification, CE marking, cULus, IEC 61508, ATEX 2/22, ATEX 1/21
References	ATV930●●●N4Z	ATV9A0●●●●●	ATV9B0●●●●●	ATV9L0●●●●●
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(1) For marine product certificate, please contact your Schneider Electric representative.

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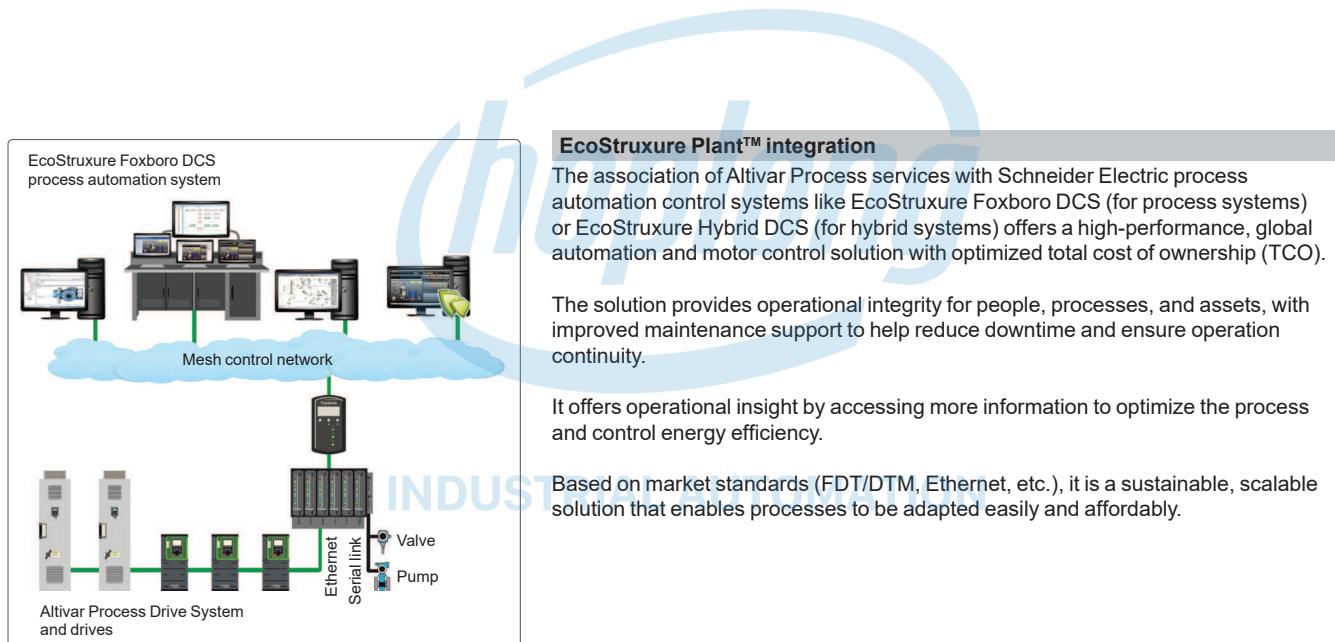


Altivar Process Modular range

### Process

Altivar Process drives are specifically designed to meet the requirements of the following market segments:

- Water & wastewater
- Oil & gas
- Mining, minerals & metals
- Consumer packaged goods (CPG)



Altivar Process in EcoStruxure Foxboro DCS architecture



### Water & wastewater applications

- Pumping
- Drilling
- Suction
- Dosing
- Odor control
- Ventilation
- Gas compression
- Treatment plant
- Wastewater treatment
- 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
- Decanter



### 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
- PCP (progressive cavity pump)
- ESP (electrical submersible pump)
- Rod pump
- Mud pump
- Rotary table, top drive
- Draw works
- 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
- Open-pit or underground mining
- Stockpiling/homogenization
- Concentration/mineral separation
- Solid-liquid separation
- Final handling/transport
- Clinker production
- Cement production

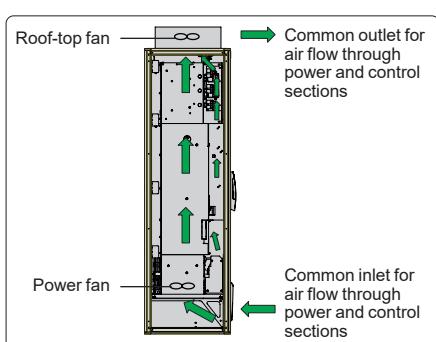
#### Use

- Conveyors
- Grinders
- Mixers
- Pumps
- Tunnel boring machines
- Long-distance heavy conveying
- Bucket wheel excavator
- Special cranes:
- Gantry cranes
- Grab cranes
- Grinding mills (ball mills, SAG and AG mills)
- Spiral and magnetic separators
- Reclaimers and stackers
- Ship loaders
- Mobile mining machines
- Vibro feeders
- Crushers
- Long belt conveyors
- Kiln main drives
- Separators for VRM (vertical roller mills)



Modular drive architecture with 2 power modules from 200 kW to 315 kW on 400 V supply

## INDUSTRIAL AUTOMATION



IP21/UL Type1 integration with a common cooling air flow

### Process (continued)

#### Consumer packaged goods (CPG) applications

- Pumping
- Drying fans
- Dairy beverage
- Agribusiness

#### Use

- Conveyors
- Mixers
- Centrifuges
- Pumps
- Extruders
- Shredders
- Centrifuges
- Hot rotary dryers

### 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 and SoMove commissioning software
- 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 Modular drives are designed for IT systems.

#### Modular drive

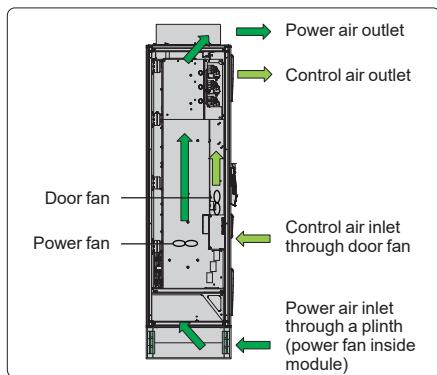
Altivar Process Modular is ready to build into cabinets to create high-power drive solutions with minimum dimensions that withstand harsh environments.

Altivar Process Modular brings a new approach with sub-assemblies to build drives locally:

- A power module section to be combined in different drive architectures. Each architecture covers several drive power ranges, set at the discretion of the integrator by using SoMove commissioning software
- Control units that make the drive family differentiation of the power architecture between ATV600 and ATV900 families
- Optional kits and accessories that can be supplied by Schneider Electric or manufactured locally
- Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets
- Liquid-cooled modules to create high-power drive solutions that withstand harsh environments

Altivar Process Modular drives are designed to operate on IT and corner-grounded (1) systems.

Altivar Process Modular drives can also be supplied as Engineered Drive System variants from 75 to 2600 kW (125...2600 HP), developed by Schneider Electric based on customer specifications. For more information, please contact your Schneider Electric supplier.



IP54/UL Type 12 integration with a separate cooling air flow

### General presentation of the offer (continued)

#### Cabinet integration (air-cooled)

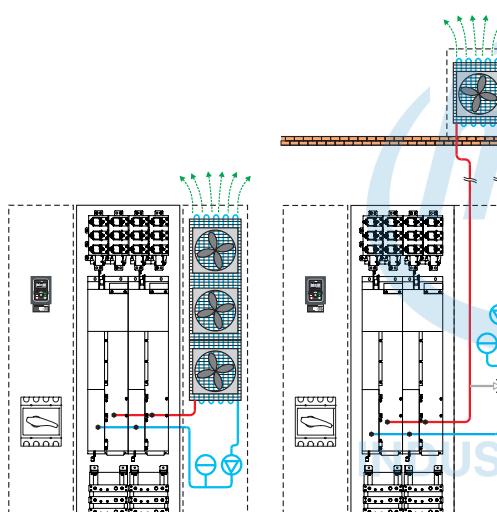
Altivar Process Modular brings flexible solutions for special integration constraints as well as standard integration in 2 m/6.56 ft height and 600 mm/23.62 in. depth cabinets with IP21 (UL Type 1)/IP54 (UL Type 12) protection rating.

The Altivar Process Modular drives offer consists of:

- Drive power and control modules
- Semiconductor protection fuses
- Line chokes to limit THDi levels for the Standard version and less than 3% THDi for the Low Harmonic/Regen version
- A filter to help protect the motor against the effects of dv/dt
- Accessible terminals to simplify the motor wiring and power wiring

IP21 (UL Type 1) integration type creates a common cooling air flow for the power and control sections.

The IP54 (UL Type 12) integration mechanical kit introduces a system for separating the cooling air flow between the power and control sections, allowing operation in a highly polluted environment as well as optimum management of thermal stress in the plant room.



IP23 air-cooled design with internal liquid/air heat exchanger

IP23 with external air heat exchanger

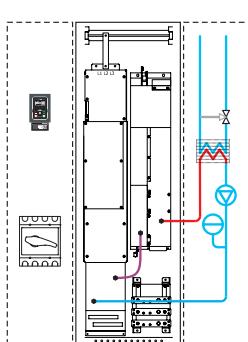
#### Cabinet integration (liquid-cooled)

Altivar Process liquid-cooled drives for cabinet integration offer a modular high-power solution for installation in cabinets and separate enclosures. Thanks to the optimized liquid cooling concept, these drives are suitable for operation in a very harsh environment.

The integrated liquid cooling allows optimal dissipation of the heat losses and therefore optimizes the encapsulation of the whole drive unit. Its robust design meets the requirements for applications in harsh environments and provides protection up to IP66.

Ideally suited to customer needs with flexible cooling concepts:

- Air-cooled drive with internal liquid/air heat exchanger
- Air-cooled drive with external liquid/air heat exchanger to dissipate the heat losses out of the operating room
- Liquid-cooled drive with liquid/liquid heat exchanger, encapsulated solution for harsh environment and "low noise" requirements



Up to IP66 with liquid/liquid heat exchanger

#### Optimized cabinet design

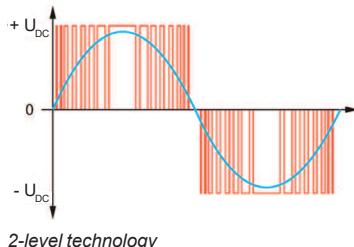
Altivar Process Modular liquid-cooled drives bring flexible solutions for special integration constraints with a 6- or 12-pulse supply and robust design with two offers:

- **Universal:** Suitable for all kinds of grid with integrated mains choke (THDi ≤ 48% at 6-pulse or THDi ≤ 9% at 12-pulse supply at 80 to 100% load)
- **Compact:** Optimized with dedicated transformer for most compact dimensions

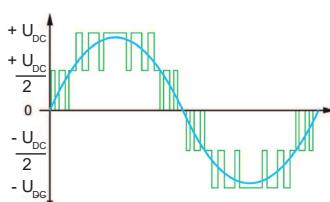
(1) Only Modular Standard drives for 380...480 V supply are compatible with corner-grounded systems.



Low Harmonic/Regen drive architecture with 2 power modules



2-level technology



3-level technology



Braking unit module

### General presentation of the offer (continued)

#### Low Harmonic/Regen drives

The Low Harmonic/Regenerative drives are used when drives need to generate particularly low harmonics on the mains.

In addition, Low Harmonic/Regen drives are capable of feeding energy back to the mains, enabling a 4Q operation and improving overall application efficiency.

In comparison with commonly-used 2-level AFE (active front end) architectures, the 3-level technology of Altivar Process Modular Low Harmonic/Regen drives allows this new technology to reach a total distortion factor (THDi) of around 2% and thus fulfills the requirements of standard IEEE 519 for a THDi < 5% in case of distorted mains. Additionally, the cos Phi ≈ 1 in each load situation (from 30 % Pn) helps to reduce the line supply load.

The Low Harmonic/Regen drives range is an optimum solution for energy efficiency and process optimization.

#### Device features

##### Enhanced motor service life due to the 3-level concept

The 3-level AIC (active infeed converter) technology reduces the voltage load at the motor significantly, compared with other low harmonic frequency inverters. The fluctuating adaptation of the DC link voltage helps to extend the motor service life.

##### 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 size of the integrated filter. Due to the increased switching frequency and its location inside the forced cooling air channel, the dimensions of the filter can be almost halved.

## INDUSTRIAL AUTOMATION

#### Braking units

##### Same integration process as standard power module

Braking units and standard power modules have the same frame and size. They use the same integration kits and DC bus bar kits.

#### Compliant with Standard and Low Harmonic/Regen drives

Braking units can be built for APM Standard drives, APM Reduced Height drives and APM Low Harmonic/Regen drives with an ATV900 control unit.

#### Compliant with any APM integration type

- Standard integration in 2 m/6.56 ft high cabinets
- Reduced Height integration in 1.6 m/5.25 ft high cabinets
- IP21/UL Type 1 with a common cooling air flow
- IP54/UL Type 12 with a separate cooling air flow

#### Advanced functions with ATV900

- With Standard drives:
- Full braking torque also in overload range
- Shortening and monitoring of deceleration time, such as for long travel application
- Temporary regenerative load, such as for hoist applications
- With Low Harmonic/Regen drives:
- Braking operation when Energy regeneration is not possible

# Presentation CÔNG TY CỔ PHẦN CÔNG NGHỆ HƠI LONG

## Variable speed drives Altivar Process Modular

Selection tool for Altivar Process Modular

## Altivar Process Modular

Drive Integration Partner Program



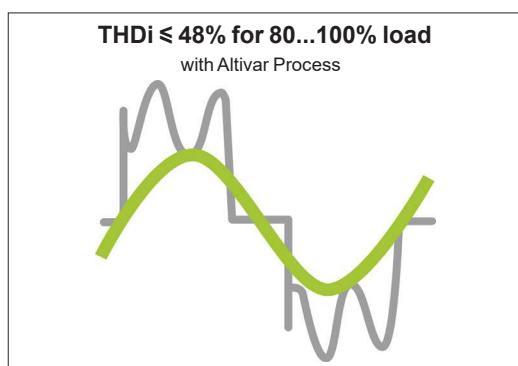
### Altivar Process Modular Partner Program

The Altivar Process Modular offer is dedicated to partners building ATV600 and ATV900 high-power drive solutions.

This offer enhances our partners' offerings as they are able to:

- Build customized panels and high-power drive solutions by paralleling drive modules up to 1800 kW (2500 HP) in 380...480 V supply voltage and 2600 kW (2600 HP) in 500...690 V supply voltage
- Assemble the final drive and perform panel integration
- Benefit from the standardized way of drive integration using the modular concept
- Perform the final power setting and drive registration
- Order/produce mechanical options for integration locally
- Access the download area of the partner portal and find all the relevant technical documents, including mechanical specifications
- Access service training material for commissioning, assembly, and after-sales services
- Become a Schneider Electric recognized trained and registered drive integration partner

## INDUSTRIAL AUTOMATION

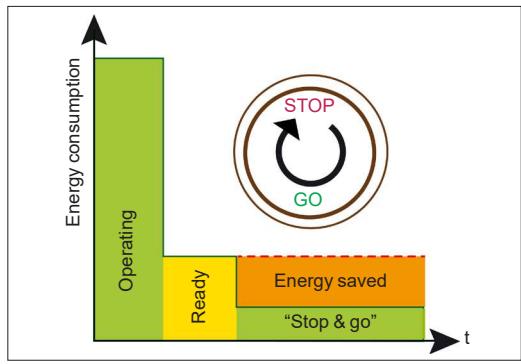


Altivar Process drive THDI

### Rugged

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

- Ambient operating temperature
- Temperature without derating:
  - 10...40 °C/14...104 °F for Altivar Process Modular Standard (air- and liquid-cooled)
  - 5...40 °C/23...104 °F for Altivar Process Modular Low Harmonic/Regen
- Temperature with derating of output power: < 50 °C/< 122 °F
- Relative humidity without condensing: 5...95%
- Storage and transport temperature: -40...+70 °C/-40...+158 °F
- Operating altitude:
  - 0...1,000 m/0...3,300 ft without derating
  - 1,000...4,800 m/3,300...15,740 ft with derating of 1% per 100 m/330 ft
- Withstand to harsh environments:
  - Chemical class 3C3 conforming to IEC/EN 60721-3-3
  - Mechanical class 3S3 conforming to IEC/EN 60721-3-3
  - Printed circuit boards with protective coating
  - IP00 to integrate in an enclosure



"Stop & 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 on the most common operating range maintaining an optimum power factor
- Embedded line choke technology complying with standard IEC 61000-3-12
- Low Harmonic offer compatible with standard IEEE 519

In addition, thanks to the "Stop & 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 & go" function can be enabled and disabled in the drive parameters.

#### Environment

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

- REACH (1) + 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) (2)

#### Electromagnetic compatibility (EMC)

Compliance with electromagnetic compatibility requirements has been incorporated into the design of Altivar Process Modular drives, which simplifies installation and provides an economical means of helping to ensure equipment meets CE marking requirements.

Altivar Process Modular drives have category C3 EMC filters that allow 300 m/980 ft of shielded motor cables.

(1) European regulation 1907/2006.

(2) According to IEC 62635 Enhanced Guidelines.

### General presentation of the offer (continued)

#### Installation/Maintenance

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

- IP00 modules that can be integrated in cabinets with an IP21 (UL Type 1) or IP54 (UL Type 12) protection rating as a standard integration and up to IP66 with liquid-cooled modules
- Easy installation of products and systems:
  - Color code for connections to the removable terminal blocks on the HMI block
  - Long cable: Highly efficient integrated motor filters for dv/dt and common mode reduction and voltage peak limitation allow motor cable lengths up to 300 m/980 ft with shielded cable (category C3 environment) and 500 m/1,640 ft with unshielded cable (category C4 environment)
- Asynchronous or synchronous drive in open loop for 0.1...599 Hz output frequency
- Special motors: Submersible, synchronous reluctance, and tapered rotor motors
- Lower maintenance costs due to drive's ergonomic design:
  - Fans can be replaced in less than 5 minutes thanks to access from front face and drawer design
  - Wheel on standard drive power module for easy removal
  - Limited number of parts and integrated power auxiliaries
- 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

### Integrated functions

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

For more information, please refer to the Altivar Process ATV600 and Altivar Process ATV900 catalogs.



Altivar Process catalogs  
Click to open the documents

INDUSTRIAL AUTOMATION



Altivar Process Modular Standard architecture from 1 to 6 modules



Altivar Process Modular Low Harmonic/Regen architecture from 1 to 6 modules



Altivar Process Modular Standard Reduced Height architecture from 1 to 6 modules



Altivar Process Modular - Liquid-cooled architecture from 1 to 6 modules

### Altivar Process Modular offer structure

#### Presentation

The Altivar Process Modular drives offer is composed of sub-assemblies and accessories that are integrated into cabinets to create modular drive solutions.

These separate elements can be ordered from our Schneider Electric Partner Network. For more information on the references, see [page 20](#).

Numerous drive solutions can be built using these modular parts. For more information on the characteristics of these configurations, see [page 35](#).



INDUSTRIAL AUTOMATION

### Altivar Process Modular offer structure (continued)

#### Description

The Altivar Process Modular drives offer consists of sub-assemblies and accessories:

- 1 Power module, braking unit, or mains module
- 2 Front face cover
- 3 Control units for ATV600 and ATV900 or braking unit

Accessories

Optional extensions: Communication, I/O expansion, and encoder modules



Altivar Process Modular standard drives



Altivar Process Modular Low Harmonic/Regen drives



Braking units



Altivar Process Modular standard Reduced Height drives



Altivar Process Modular - Liquid-cooled drives



Altivar Process Modular power connection kit

Accessories comprise:

- Power connection kits
- Digi-Link cables
- Mechanical mounting kits

Altivar Process Modular Digi-Link cables

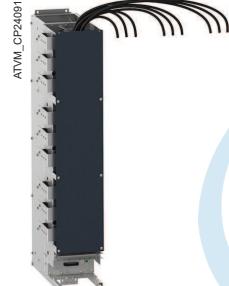
For more information, please contact your Schneider Electric supplier.



APM1A0C16N401



APM1A0C16N401

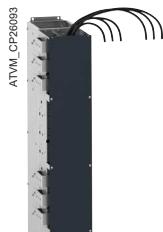


APMCA03LCN4RH

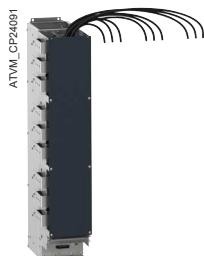


APM1L0C28Y6

Power modules		
Description	Reference	Weight kg/lb
<b>Standard architectures</b>		
<b>Standard power module</b>		
<b>Power module 160 kW - 380...480 V IP00:</b>	APM1A0C16N401	155/ 342
<ul style="list-style-type: none"> <li>■ 1 x standard power unit</li> <li>■ 1 x standard mains unit</li> <li>■ 3 x fuse holder with screws and washers for the fuse</li> <li>■ 2 x brackets with nuts for front mechanical connection</li> </ul>		
<b>Power module 200 kW - 500...690 V IP00:</b>	APM1A0C20Y6	168/ 370
<ul style="list-style-type: none"> <li>■ 1 x standard power unit</li> <li>■ 1 x standard mains unit</li> <li>■ 3 x fuse holder with screws and washers for the fuse</li> <li>■ 2 x brackets with nuts for front mechanical connection</li> </ul>		
<b>Low Harmonic/Regen power module</b>		
<b>Power module 160 kW - 380...480 V IP00:</b>	APM1B0C16N4	260/ 574
<ul style="list-style-type: none"> <li>■ 1 x power module for Low Harmonic/Regen APM drives</li> <li>■ 3 x fuse holder with screws and washers for the fuse</li> </ul>		
<b>Power module 200 kW - 500...690 V IP00:</b>	APM1B0C20Y6	290/ 639
<ul style="list-style-type: none"> <li>■ 1 x power module for Low Harmonic/Regen APM drives</li> <li>■ 3 x fuse holder with screws and washers for the fuse</li> </ul>		
<b>Reduced Height architectures</b>		
<b>Standard power module (Reduced Height integration)</b>		
<b>Power module for Reduced Height 160 kW - 380...480 V IP00:</b>	APM1A0C16N4RH	100/ 220
<ul style="list-style-type: none"> <li>■ 1 x power module</li> </ul>		
<b>Power module for Reduced Height 200 kW - 500...690 V IP00:</b>	APM1A0C20Y6RH	100/ 220
<ul style="list-style-type: none"> <li>■ 1 x power module</li> </ul>		
<b>Liquid-cooled architectures</b>		
<b>Standard power module liquid-cooled</b>		
<b>Standard power module 200 kW - 380...480V IP00:</b>	APM1L0C20N4	82.5/ 182
<ul style="list-style-type: none"> <li>■ 1 x standard power unit with embedded 6-/12-pulse rectifier</li> <li>■ 1 x integrated water/water heat exchanger</li> </ul>		
<b>Standard power module 315 kW - 380...480V IP00:</b>	APM1L0C31N4	82.5/ 182
<ul style="list-style-type: none"> <li>■ 1 x standard power unit with embedded 6-/12-pulse rectifier</li> <li>■ 1 x integrated water/water heat exchanger</li> </ul>		
<b>Standard power module 280 kW - 500...690V IP00:</b>	APM1L0C28Y6	82.5/ 182
<ul style="list-style-type: none"> <li>■ 1 x standard power unit with embedded 6-/12-pulse rectifier</li> <li>■ 1 x integrated water/water heat exchanger</li> </ul>		
<b>Standard power module 450 kW - 500...690V IP00</b>	APM1L0C45Y6	82.5/ 182
<ul style="list-style-type: none"> <li>■ 1 x standard power unit with embedded 6-/12-pulse rectifier</li> <li>■ 1 x integrated water/water heat exchanger</li> </ul>		
<b>Overall dimensions</b>		
Reference	W x H x D	
	mm	in.
APM1A0C16N401	230 x 1705 x 510	9.10 x 67.12 x 20.08
APM1A0C20Y6		
APM1B0C16N4	450 x 1692 x 508	17.72 x 66.61 x 20
APM1B0C20Y6		
APM1A0C16N4RH	230 x 1230 x 509	9.10 x 48.43 x 20
APM1A0C20Y6RH		
APM1L0C20N4	232 x 1080 x 526	9.13 x 40.08 x 20.71
APM1L0C31N4		
APM1L0C28Y6		
APM1L0C45Y6		



APMCA02LCN4RH



APMCA03LCY6RH

Power modules		Reference	Weight kg/lb
<b>Description</b>			
<b>Reduced Height architectures (continued)</b>			
<b>Mains module (Reduced Height integration)</b>			
<b>Mains module 1 line choke - 380...480V - IP00:</b> For combination with 1 standard power module. ■ 1 x mains module for APM Standard Reduced Height 380...480V		APMCA01LCN4RH	103/ 227
■ Components for power fan management: Controller, 48 VDC power supply, 2 x relays and 2 x relay holders, 3 x fuses and 3 x fuse holders			
<b>Mains module 2 line chokes - 380...480V - IP00:</b> For combination with 2 x standard power modules. ■ 1 x mains module for APM Standard Reduced Height 380...480V		APMCA02LCN4RH	160/ 353
■ Components for power fan management: Controller, 48 VDC power supply, 2 x relays and 2 x relay holders, 3 x fuses and 3 x fuse holders			
<b>Mains module 3 line chokes - 380...480V - IP00:</b> For combination with 3 x standard power modules. ■ 1 x mains module for APM Standard Reduced Height 380...480V		APMCA03LCN4RH	217/ 478
■ Components for power fan management: Controller, 48 VDC power supply, 2 x relays and 2 x relay holders, 3 x fuses and 3 x fuse holders			
<b>Mains module 1 line choke - 500...690V - IP00:</b> For combination with 1 standard power module. ■ 1 x mains module for APM Standard Reduced Height 500...690V		APMCA01LCY6RH	116/ 256
■ Components for power fan management: Controller, 48 VDC power supply, 2 x relays and 2 x relay holders, 3 x fuses and 3 x fuse holders			
<b>Mains module 2 line chokes - 500...690V - IP00:</b> For combination with 2 x standard power modules. ■ 1 x mains module for APM Standard Reduced Height 500...690V		APMCA02LCY6RH	186/ 410
■ Components for power fan management: Controller, 48 VDC power supply, 2 x relays and 2 x relay holders, 3 x fuses and 3 x fuse holders			
<b>Mains module 3 line chokes - 500...690V - IP00:</b> For combination with 3 x standard power modules. ■ 1 x mains module for APM Standard Reduced Height 500...690V		APMCA03LCY6RH	256/ 564
■ Components for power fan management: Controller, 48 VDC power supply, 2 x relays and 2 x relay holders, 3 x fuses and 3 x fuse holders			

Overall dimensions		
Reference	W x H x D mm	in.
APMCA01LCN4RH	269 x 1248 x 506	10.60 x 49.10 x 19.92
APMCA02LCN4RH		
APMCA03LCN4RH		
APMCA01LCY6RH		
APMCA02LCY6RH		
APMCA03LCY6RH		

ATV6L\_CPN041  
APM6A0CTLN401ATV6L\_CPN025  
APM6B0CTLY6ATV6L\_CPN026  
APM9L0CTLY6

## Control units for power module

Description	Reference	Weight kg/lb
<b>ATV600 (1)</b>		
Standard module 380...480 V	APM6A0CTLN401	6.8/ 14.9
Standard module 500...690 V	APM6A0CTLY6	6.8/ 14.9
Low Harmonic 380...480 V	APM6B0CTLN4	8.0/ 17.6
Low Harmonic 500...690 V	APM6B0CTLY6	4.8/ 10.6
Liquid-cooled 380...480 V	APM6L0CTLN4	6.5/ 14.3
Liquid-cooled 500...690 V	APM6L0CTLY6	6.5/ 14.3
<b>ATV900 (1)</b>		
Standard module 380...480 V	APM9A0CTLN401	6.8/ 14.9
Standard module 500...690 V	APM9A0CTLY6	6.8/ 14.9
Low Harmonic/Regen 380...480 V	APM9B0CTLN4	8.0/ 17.6
Low Harmonic/Regen 500...690 V	APM9B0CTLY6	4.8/ 10.6
Liquid-cooled 380...480 V	APM9L0CTLN4	6.5/ 14.3
Liquid-cooled 500...690 V	APM9L0CTLY6	6.5/ 14.3

## Overall dimensions

Reference	W x H x D	
	mm	in.
APM6A0CTLN401	230 x 678 x 108	9.10 x 16.80 x 4.30
APM9A0CTLN401		
APM6A0CTLY6		
APM9A0CTLY6		
APM6L0CTLN4	230 x 510 x 131	9.10 x 20.08 x 5.16
APM6L0CTLY6		
APM6B0CTLN4	450 x 520 x 105	17.72 x 20.47 x 4.13
APM9B0CTLN4		
APM6B0CTLY6		
APM9B0CTLY6		
APM9L0CTLN4	230 x 510 x 131	9.10 x 20.08 x 5.16
APM9L0CTLY6		

(1) All control units include 1 control unit (metal housing + control block + power board), 1 graphic display terminal, 1 Digi-Link cable, 1 cable for 24 V supply, and cables for voltage measurement (mains, DC, motor).



<b>Housings</b>			
Description	Reference	Weight kg/lb	
Standard front face cover	VW3A97A01	5.0/ 11.0	
Low Harmonic/Regen front face cover	VW3A97B01	5.9/ 13.0	
<b>Overall dimensions</b>			
Reference	W x H x D		
	mm	in.	
VW3A97A01	230 x 678 x 108	9.06 x 26.70 x 4.25	
VW3A97B01	450 x 520 x 105	17.72 x 20.47 x 4.13	
<b>Control cables</b>			
Description	Reference	Weight kg/lb	
RJ45 module-link cable 1.5 m/4.92 ft	VW3A83BMR015	0.120/ 0.264	
RJ45 module-link cable 5 m/16.4 ft	VW3A83BMR050	0.230/ 0.507	
Digi-Link cable 2 m/6.56 ft	VW3A83CDG020	0.100/ 0.220	
Digi-Link cable 3 m/9.84 ft	VW3A83CDG030	0.140/ 0.309	
Digi-Link cable 5 m/16.4 ft	VW3A83CDG050	0.230/ 0.507	
Digi-Link cable 10 m/33 ft	VW3A83CDG100	0.430/ 0.948	

INDUSTRIAL AUTOMATION



VW3A98ABMAAA



VW3A98ABMCAC



VW3A98CTM01



VW3A98CTM02



VW3A98CF4040

**Power busbar kits**

Description	Reference	Weight kg/lb
Power busbar kit to connect 1 standalone power module in a 400 mm/15.75 in. width cabinet.	VW3A98ABMAAA	4.5/ 9.9
Power busbar kit to connect 2 side-by-side power modules in a 600 mm/23.62 in. width cabinet	VW3A98ABMCAB	8.0/ 17.6
Power busbar kit to connect 3 side-by-side power modules in a 800 mm/31.50 in. width cabinet	VW3A98ABMCAC	12.0/ 26.5
Power busbar kit to connect 2 remote power modules integrated in side-by-side cabinet columns of: <ul style="list-style-type: none"> <li>■ 600 mm + 600 mm (23.62 in. + 23.62 in.) width or</li> <li>■ 800 mm + 600 mm (31.50 in. + 23.62 in.) width</li> </ul>	VW3A98ABMDCE	2.5/ 5.5
Power busbar kit to connect 2 remote power modules integrated in side-by-side cabinet columns of 800 mm + 800 mm (31.50 in. + 31.50 in.) width	VW3A98ABMDCF	2.0/ 4.4
Power busbar kit to connect: <ul style="list-style-type: none"> <li>■ 2 side-by-side standard power modules or</li> <li>■ 1 side-by-side standard power module + 1 braking unit</li> </ul>	VW3A98ABPC1	1.0/ 2.2
Power busbar kit to connect: <ul style="list-style-type: none"> <li>■ 2 remote standard power modules or</li> <li>■ 1 remote standard power module and 1 braking unit</li> </ul> In side-by-side cabinet columns of: <ul style="list-style-type: none"> <li>■ 600 mm + 600 mm (23.62 in. + 23.62 in.) width or</li> <li>■ 800 mm + 600 mm (31.50 in. + 23.62 in.) width</li> </ul>	VW3A98ABPDCE1	2.6/ 5.7
Power busbar kit to connect 2 power modules integrated in side-by-side cabinet columns of 800 mm+ 800 mm (31.50 in. + 31.50 in.) width	VW3A98ABPDCF	2.0/ 4.4
Power busbar kit to connect 1 standalone Low Harmonic power module integrated in a 600 mm/23.62 in. width cabinet	VW3A98BBMAAB	8.4/ 18.5
Power busbar kit to connect 2 side-by-side Low Harmonic power modules integrated in a 1,000 mm/39.37 in. width cabinet	VW3A98BBMCAD	16.5/ 36.4
Power busbar kit to connect 2 remote Low Harmonic power modules integrated in side-by-side cabinet columns of: <ul style="list-style-type: none"> <li>■ 600 mm + 1,000 mm (23.62 in. + 39.37 in.) width or</li> <li>■ 1,000 mm + 1,000 mm (39.37 in. + 39.37 in.) width</li> </ul>	VW3A98BBMDCG	1.8/ 4.0
Power busbar kit to connect 2 side-by-side Low Harmonic power modules	VW3A98BBPC	2.0/ 4.4
Power busbar kit to connect 2 remote Low Harmonic power modules integrated in side-by-side cabinet columns of: <ul style="list-style-type: none"> <li>■ 600 mm + 1,000 mm (23.62 in. + 39.37 in.) width or</li> <li>■ 1,000 mm + 1,000 mm (39.37 in. + 39.37 in.) width</li> </ul>	VW3A98BBPDG	2.5/ 5.5
Power busbar kit to connect 1 Low Harmonic/Regen power module with 1 braking unit integrated in side-by-side cabinet columns of: <ul style="list-style-type: none"> <li>■ 400 mm + 600 mm (15.75 in. + 23.62 in.) width or</li> <li>■ 400 mm + 1,000 mm (15.75 in. + 39.37 in.) width</li> </ul>	VW3A98BBDCK	1.0/ 2.2
Power busbar mounting kit	VW3A98CTM01	0.5/ 1.1
Power terminal kit	VW3A98CTM02	7.5/ 16.5

**Fuses**

Description	Reference	Weight kg/lb
Set of 3 fuses 315 A	VW3A98CF3169	0.750/ 1.653
Set of 3 fuses 400 A, UL certified	VW3A98CF4040	0.750/ 1.653

ATM\_68654\_CPSCT18014



VW3A99ACFAA

ATM\_68654\_CPSCT18018



VW3A99AR01

ATM\_CPA20100



VW3A99ACFCBM02

ATM\_CPA20109



VW3A99ACA11

**Mechanical mounting kits**

Description	Cabinet	Reference	Weight kg/lb
<b>Mounting kits</b>			
Mains terminal extension plates for drive architectures with UL certification	SF/TS8/VX25	<a href="#">VW3A98CTM03</a>	6.5/ 14.2
Mains bar support for a required SCR rating > 50 kA	SF/TS8/VX25	<a href="#">VW3A98CTM04</a>	0.2/ 0.4
Mechanical mounting kit for integration of: ■ 1 standard power module in a 400 mm/15.75 in. width cabinet	SF/TS8 VX25	<a href="#">VW3A99ACFAA</a> <a href="#">VW3A99ACFAA01</a>	6.6/ 14.6
Mechanical mounting kit for integration of: ■ 2 standard power modules in a 600 mm/23.62 in. width cabinet	SF/TS8 VX25	<a href="#">VW3A99ACFCB</a> <a href="#">VW3A99ACFCB01</a>	9.5/ 20.9
Mechanical mounting kit for integration of: ■ 3 standard power modules in a 800 mm/31.50 in. width cabinet.	SF/TS8 VX25	<a href="#">VW3A99ACFEC</a> <a href="#">VW3A99ACFEC01</a>	14.0/ 30.9
Removable support	SF/TS8/VX25	<a href="#">VW3A99AR01</a>	2.2/ 4.9
Mechanical mounting kit for integration of: ■ 1 Low Harmonic/Regen power module in a 600 mm/23.62 in. width cabinet	SF/TS8 VX25	<a href="#">VW3A99BCFAB</a> <a href="#">VW3A99BCFAB01</a>	17.0/ 37.5
Mechanical mounting kit for integration of: ■ 2 Low Harmonic/Regen power modules in a 1,000 mm/39.37 in. width cabinet.	SF/TS8 VX25	<a href="#">VW3A99BCFCD</a> <a href="#">VW3A99BCFCD01</a>	26.0/ 57.3
Removable support for Low Harmonic power module integration	SF/TS8/VX25	<a href="#">VW3A99BR01</a>	16.5/ 36.4
Mechanical mounting kit for integration of: ■ 1 standard power module + 1 mains module	SF/TS8/VX25	<a href="#">VW3A99ACFCBN01</a>	10.0/ 22.0
Mechanical mounting kit for integration of: ■ 2 standard power modules or ■ 1 standard power module + 1 braking module or ■ 2 braking modules	SF/TS8 VX25	<a href="#">VW3A99ACFCBM01</a>	9.0/ 19.8
Mechanical mounting kit for integration of: ■ 2 standard power modules or ■ 1 standard power module + 1 braking module or ■ 2 braking modules	VX25	<a href="#">VW3A99ACFCBM02</a>	9.0/ 19.8
Mechanical mounting kit for integration of: ■ 3 standard power modules or ■ 2 standard power modules + 1 braking module	SF/TS8 VX25	<a href="#">VW3A99ACFEBN01</a> <a href="#">VW3A99ACFEBN02</a>	12.0/ 26.5
Mechanical mounting kit for integration of: ■ 1 mains module	SF/TS8/VX25	<a href="#">VW3A99ACFABM</a>	5.5/ 12.1
<b>Top air ducts</b>			
Top outlet cooling air duct for IP54/UL Type 12 integration of: ■ 1 standard power module or ■ 1 braking unit		<a href="#">VW3A99ACA03</a>	1.8/ 4.0
Top outlet cooling air duct for IP54/UL Type 12 integration of: ■ 1 Low Harmonic/Regen power module		<a href="#">VW3A99BCA03</a>	1.7/ 3.7
Top outlet cooling air duct for IP54/UL Type 12 integration of: ■ 1 standard power module or ■ 1 braking module		<a href="#">VW3A99ACA04</a>	3.0/ 6.6
Top outlet cooling air duct for IP54/UL Type 12 integration of: ■ 1 mains module		<a href="#">VW3A99ACA11</a>	2.5/ 5.5
Top outlet cooling air duct for IP54/UL Type 12 integration of: ■ 1 standard power module or ■ 1 braking module in cabinet with an air cooling outlet at the top rear side		<a href="#">VW3A99ACA12</a>	4.0/ 8.8
Top outlet cooling air duct for IP54/UL Type 12 integration of: ■ 1 mains module in cabinet with an air cooling outlet at the top rear side		<a href="#">VW3A99ACA13</a>	3.0/ 6.6



VW3A99ACA01



VW3A99ACA10



APM1L0LFMY6

**Mechanical mounting kits (continued)**

Description	Cabinet	Reference	Weight kg/lb
<b>Bottom supports and ducts</b>			
Bottom support for IP21/UL Type 1 integration of: ■ 1 standard power module		VW3A99ACA01	8.0/ 17.6
Bottom support for IP54/UL Type 12 integration of: ■ 1 standard power module		VW3A99ACA02	7.6/ 17.8
Bottom inlet air duct for IP54/UL Type 12 integration of: ■ 1 Low Harmonic/Regen power module		VW3A99BCA02	6.9/ 15.2
Bottom support for IP21/UL Type 1 integration of: ■ 1 standard power module or ■ 1 mains module or ■ 1 braking module	SF/TS8	VW3A99ACA05	3.0/ 6.6
Bottom support for IP54/UL Type 12 integration of: ■ 1 standard power module or ■ 1 mains module or ■ 1 braking module	SF/TS8	VW3A99ACA06	6.0/ 13.2
Bottom support for IP21/UL Type 1 integration of: ■ 1 standard power module or ■ 1 mains module or ■ 1 braking module	VX25	VW3A99ACA09	3.0/ 6.6
Bottom support for IP54/UL Type 12 integration of: ■ 1 standard power module or ■ 1 mains module or ■ 1 braking module	VX25	VW3A99ACA10	6.0/ 13.2
<b>Mechanical mounting kits for liquid-cooled drives</b>			
Connection kit for drive power module and motor protection module in 600mm/23.62 in. width cabinets for 2 to 6 modules		VW3A98LBPC1	15.0/ 33.1
Mains bar support		VW3A98LTMC1	1.5/ 3.3
Set of tubes for liquid cooling		VW3A98LGHC1	5.0/ 11.0
Over-pressure valve		VW3A98LGHC2	2.5/ 5.5
Motor terminal extension for box lugs		VW3A98LBPC3	2.5/ 5.5
Braking module interconnection kit including cabinet cooling module adapter		VW3A98LBPC2	27.0/ 59.5
Module-link cable 10 m/32.8 ft for braking unit		VW3A83BMR100	0.430/ 0.948
Steel support for liquid-cooled module		VW3A99LR01	6.0/ 13.2

**Additional modules for liquid-cooled drives**

Description	Reference	Weight kg/lb
<b>Line paralleling</b>		
Line paralleling module IP00, 380 ... 480 V ■ 6- or 12-pulse supply ■ 1 x paralleling choke ■ 3 x semiconductor fuses	APM1L0LPN4	40.0/ 88.2
Line paralleling module IP00, 500 ... 690 V ■ 6- or 12-pulse supply ■ 1 x paralleling choke ■ 3 x semiconductor fuses	APM1L0LPY6	40.0/ 88.2
<b>Line filter</b>		
Line filter module IP00, 380 ... 480 V ■ EMC filter	APM1L0LFMN4	6.5/ 14.3
Line filter module IP00, 500 ... 690 V ■ EMC filter	APM1L0LFMY6	6.5/ 14.3

ATV-M.CP190398  
APMBC0C63Y6ATV-M.CP19041  
APMBC0CTLY6**Additional modules for liquid-cooled drives (continued)**

Description	Reference	Weight kg/lb
<b>Line choke</b>		
Line choke module IP00, 380 ... 480 V ■ 6- or 12-pulse supply ■ 2 x three-phase line reactors ■ 6 x semiconductor fuses ■ EMC filter	APM1L0LCMN4	183/ 404
Line choke module IP00, 500 ... 690 V ■ 6- or 12-pulse supply ■ 2 x three-phase line reactors ■ 6 x semiconductor fuses ■ EMC filter	APM1L0LCMY6	183/ 404
<b>Motor protection</b>		
Motor protection module IP00, 380 ... 480 V ■ 1 x dv/dt filter and common mode filter ■ Integrated motor terminals	APM1L0MPMN4	32.5/ 71.7
Motor protection module IP00, 500 ... 690 V ■ 1 x dv/dt filter and common mode filter ■ Integrated motor terminals	APM1L0MPMY6	32.5/ 71.7
<b>Cabinet cooling</b>		
Cabinet cooling module IP00, 115 VAC ■ Air/water heat exchanger with fan	APM1L0CCM115	13.5/ 29.8
Cabinet cooling module IP00, 230 VAC ■ Air/water heat exchanger with fan	APM1L0CCM230	13.5/ 29.8

**Braking modules**

Description	Reference	Weight kg/lb
<b>Braking module for APM 380...480 V:</b>		
■ 1 x power unit ■ 1 x air outlet unit ■ 2 x brackets with nuts for front mechanical connection	APMBC0C50N4	95/ 209
<b>Braking module for APM 500...690 V:</b>		
■ 1 x power unit ■ 1 x air outlet unit ■ 2 x brackets with nuts for front mechanical connection	APMBC0C63Y6	95/ 209
<b>Overall dimensions</b>		
Reference	W x H x D	
	mm	in.
APMBC0C50N4	750 x 1,360 x 700	29.53 x 53.54 x 27.56
APMBC0C63Y6		

**Control units for braking unit**

Description	Reference	Weight kg/lb
<b>Control unit for braking unit 380...480 V</b>		
	APMBC0CTLN4	6.7/ 14.8
<b>Control unit for braking unit 500...690 V</b>		
	APMBC0CTLY6	6.7/ 14.8
<b>Overall dimensions</b>		
Reference	W x H x D	
	mm	in.
APMBC0CTLN4	287 x 735 x 178	11.30 x 28.94 x 7.01
APMBC0CTLY6		



VX5VAM001

ATVW-L6554-CPSCT18006



SoMove software

**Wear parts**

Description	Reference	Weight kg/lb
Power fan kit	VX5VAM001	1.420/ 3.130
Drive power fan kit	VX5VAML001	0.7/ 1.543
Cabinet cooling fan kit, 115 V ~	VX5VAML003	1.4/ 3.086
Cabinet cooling fan kit, 230 V ~	VX5VAML002	1.4/ 3.086

**SoMove software for Altivar Process Modular****Presentation**

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

In addition to the standard features offered by SoMove software, such as the oscilloscope function for accurate display of data samples or access to multi-drive applications, the following features are accessible to partners of Altivar Process Modular drives:

- First-time drive setting including architecture identification and validation, main voltage and nominal power range setting, and operational reference creation, which is the identity card of the configuration
- Serial number generation for the built modular drive
- Activation of warranty by registering the built modular drive in the Schneider Electric Partner Database
- Start-up and maintenance of the built modular drive

For more information on SoMove setup software, please consult the [SoMove Setup software for motor control devices catalog](#).

# References CÔNG TY CỔ PHẦN CÔNG NGHỆ HƠI LONG

Variable speed drives

Altivar Process Modular

Options: Graphic display terminal, communication accessory



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



Instant access to online help



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



Remote mounting kit for graphic display terminal (rear panel)

## Graphic display terminal (supplied with the drive)

### References

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

## Communication accessory

### References

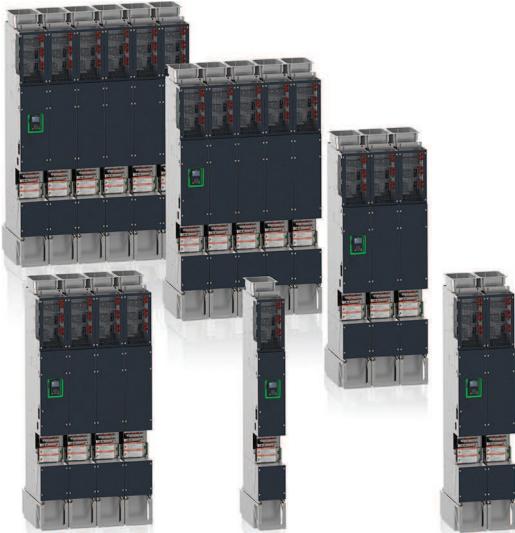
Description	Reference	Weight kg/lb
Wi-Fi dongle Portable battery-powered Wi-Fi access point for Wi-Fi equipment (PC, tablet, smartphone, etc.)	TCSEGWBT31W	0.134/0.295

## INDUSTRIAL AUTOMATION

### References

Description	Length m/ft	IP rating	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
	5/16.4	–	VW3A1104R50	0.250/0.551
	10/33	–	VW3A1104R100	0.500/1.102
IP65 remote mounting kit for Ethernet port (1) Ø 22 RJ45 female/female adapter with seal	–	65	VW3A1115	0.018/0.040

(1) Used to connect a remote PC to the RJ45 port on an IP21 drive mounted in an enclosure.  
Drill hole with a standard Ø 22 tool, as used for a pushbutton (requires a remote-mounting cordset VW3A1104R\*\*\* equipped with 2 RJ45 connectors).



Altivar Process Modular Standard architecture from 1 to 6 modules



Altivar Process Modular Low Harmonic/Regen architecture from 1 to 6 modules

### Modular drives

Modular drive solutions can be built using power modules, control units, and accessories. They cover motor power ratings from 75...2600 kW/125...2600 HP for 380...690 V three-phase voltages.

#### Three-phase power supply - 380...480 V (-15...10%) Standard

Motor power	Degree of protection	Reference
110...800 kW	IP00	ATV6A0C11•4...C80•4
150...1100 HP		ATV9A0C11•4...C80•4

#### Three-phase power supply 500 V (-10...15%), 600...690 V (-15...10%) Standard

Motor power	Degree of protection	Reference
75...1200 kW	IP00	ATV6A0C11•6...M12•6
125...1200 HP		ATV9A0C11•6...M12•6

#### Three-phase power supply - 380...440 V (-15...10%), 480 V (-10...10%) Low Harmonic

Motor power	Degree of protection	Reference
110...800 kW	IP00	ATV6B0C11•4...C80•4
150...1100 HP		ATV9B0C11•4...C80•4

#### Three-phase power supply 500 V (-15...10%), 600...690 V (-10...10%) Low Harmonic

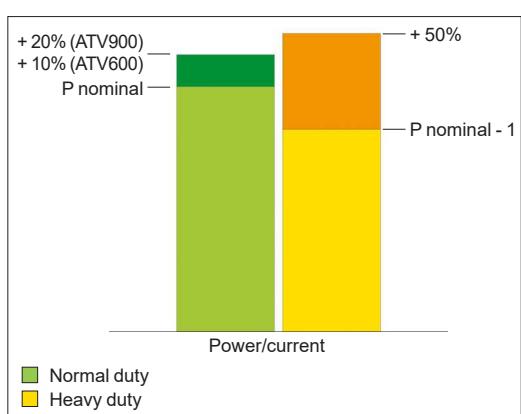
Motor power	Degree of protection	Reference
75...1200 kW	IP00	ATV6B0C11•6...M12•6
125...1200 HP		ATV9B0C11•6...M12•6

#### Liquid-cooled three-phase power supply - 400 V...480 V (-15...10%) Standard

Motor power	Degree of protection	Reference
132...1800 kW	IP00	ATV6L0C13•4...M18•4
200...2500 HP		ATV9L0C13•4...M18•4

#### Liquid-cooled three-phase power supply - 500 V...690 V (-15...10%) Standard

Motor power	Degree of protection	Reference
132...2600 kW	IP00	ATV6L0C20•6...M26•6
200...2600 HP		ATV9L0C20•6...M26•6



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% for ATV600 and 120% for ATV900) 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% for both ATV600 and ATV900) with a motor power no higher than the drive nominal power derated by one rating

## Architectures

Altivar Process Modular drives can be integrated into cabinets with the following dimensions:

- 2,000 mm/78.7 in. height for standard cabinets or 1,600 mm/63 in., height for Reduced Height cabinets
- 600 mm/23.6 in. depth
- Four different widths: 400 mm/15.7 in., 600 mm/23.6 in., 800 mm/31.5 in., and 1,000 mm/39.4 in.

For a 380..480 V line supply, there are five different kinds of Standard and Reduced Height architectures for Standard or Low Harmonic/Regen drives with a power range from 110 to 800 kW (150 to 1100 HP).

For a 500...690 V line supply, there are six different kinds of Standard and Reduced Height architectures for Standard, Low Harmonic/Regen, or Liquid-cooled drives from 75 to 2600 kW (125 to 2600 HP).

Architectures with braking exist on all the Standard drive ranges. For the Low Harmonic/Regen drive architectures, there are three different kinds of architecture with a power range from 110 to 500 kW (150 to 700 HP) for a 380..480 V line supply and 75 to 630 kW (125 to 650 HP) for a 500...690 V line supply.

Please refer to the combinations table (see page 80) to learn more about the possible architectures.

### Standard drive solutions without braking - Standard architectures

1 x APM 400 mm width	2 x APM 600 mm width	3 x APM 800 mm width	4 x APM 1,200 mm width	5 x APM 1,400 mm width	6 x APM 1,600 mm width
380...480 V 110 to 160 kW	200 to 315 kW	355 to 500 kW	560 to 630 kW	710 to 800 kW	—
500...690 V 75 to 200 kW	160 to 400 kW	355 to 630 kW	560 to 800 kW	710 to 1000 kW	800 to 1200 kW

400 mm width
 600 mm width
 800 mm width

Power module
 Control unit

Set of 3 fuses
 Top air duct

Line supply bars kits
 Digi-Link cables

DC connection bar kits
 Motor busbar kits

### Standard drive solutions with braking - Standard architectures

1 x APM 1 x BM 600 mm width	2 x APM 1 x BM 800 mm width	3 x APM 1 x BM 1,200 mm width	4 x APM 2 x BM 1,600 mm width	5 x APM 2 x BM 2,000 mm width	6 x APM 2 x BM 2,200 mm width
400 V 110 to 160 kW	200 to 315 kW	355 to 500 kW	560 to 630 kW	710 to 800 kW	—
690 V 75 to 200 kW	160 to 400 kW	355 to 630 kW	560 to 800 kW	710 to 1000 kW	800 to 1200 kW

400 mm width
 600 mm width
 800 mm width

Power module
 Control unit

Braking module
 Control unit

Set of 3 fuses
 Top air duct

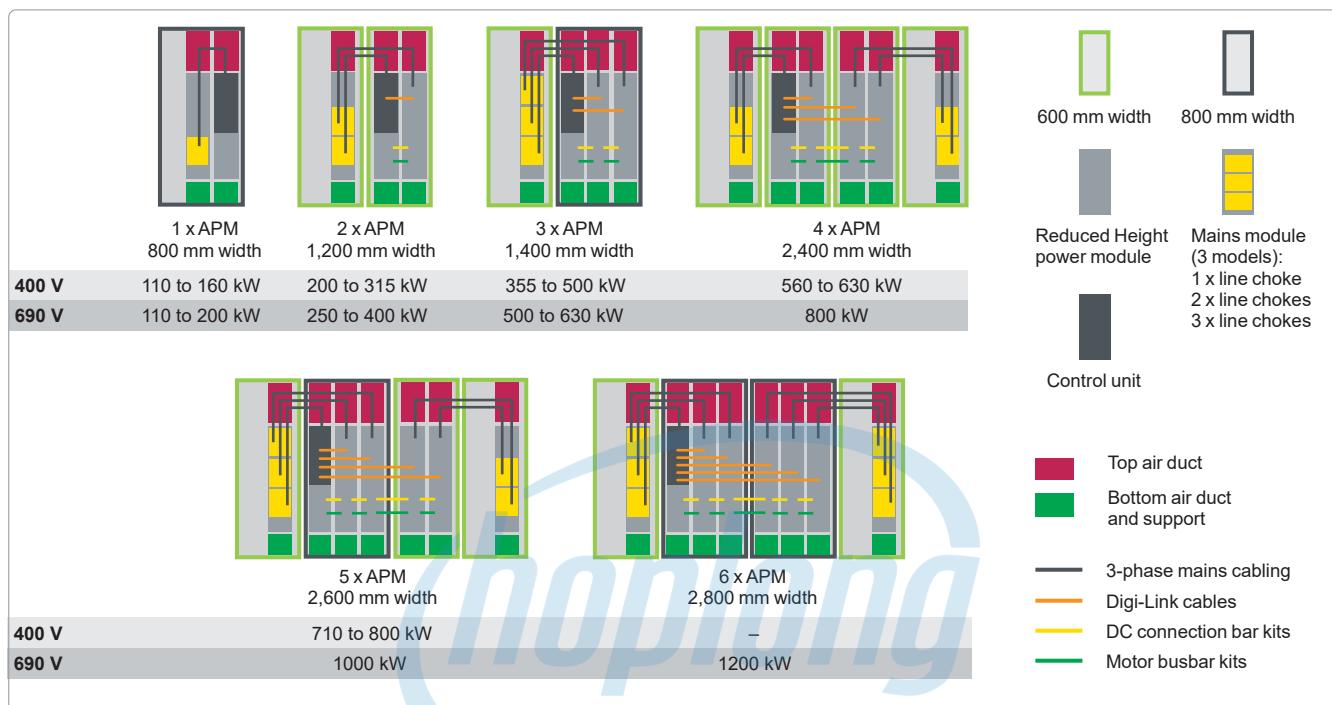
Line supply bars kits
 Bottom air duct and support

DC connection bar kits
 Module link cables

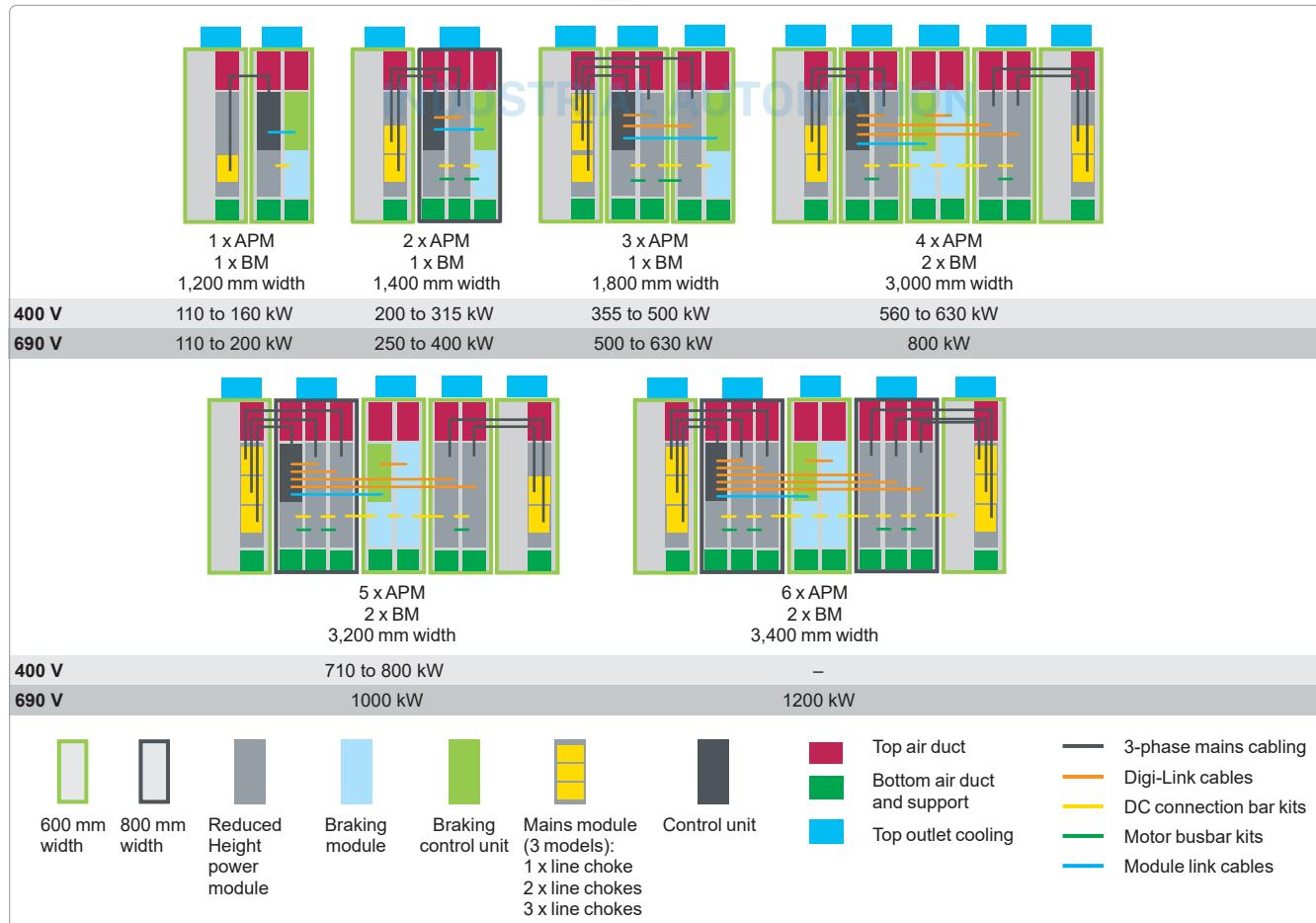
Motor busbar kits
 Digi-Link cables

### Architectures (continued)

#### Standard drive solution without braking - Reduced Height architectures

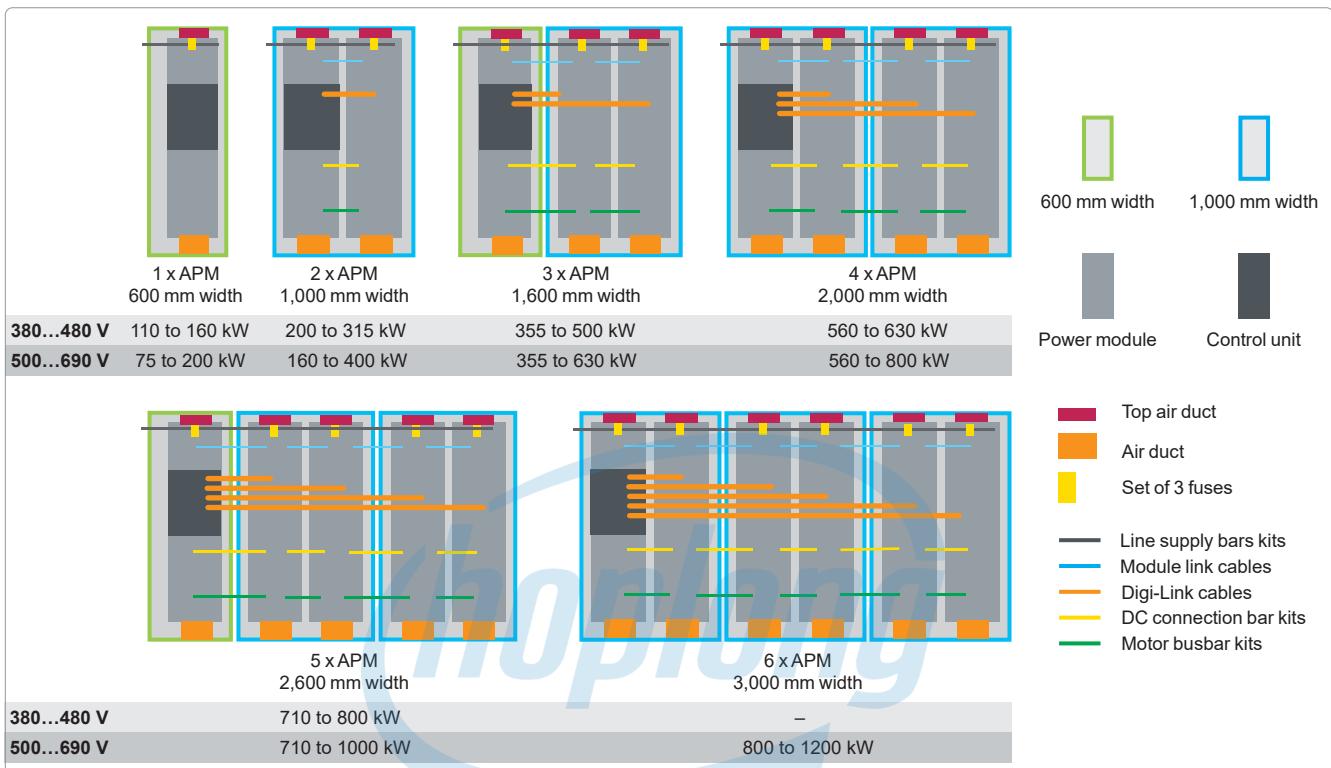


#### Standard drive solution with braking - Reduced Height architectures

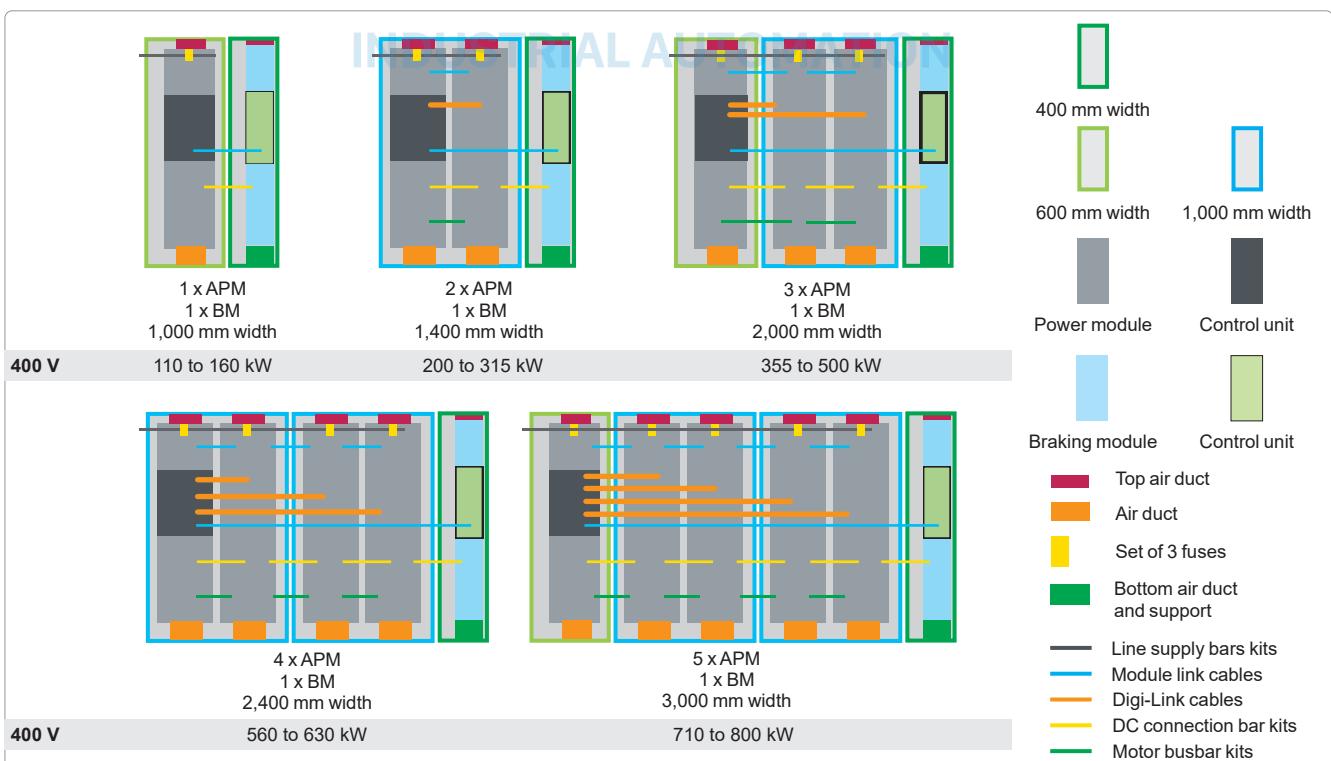


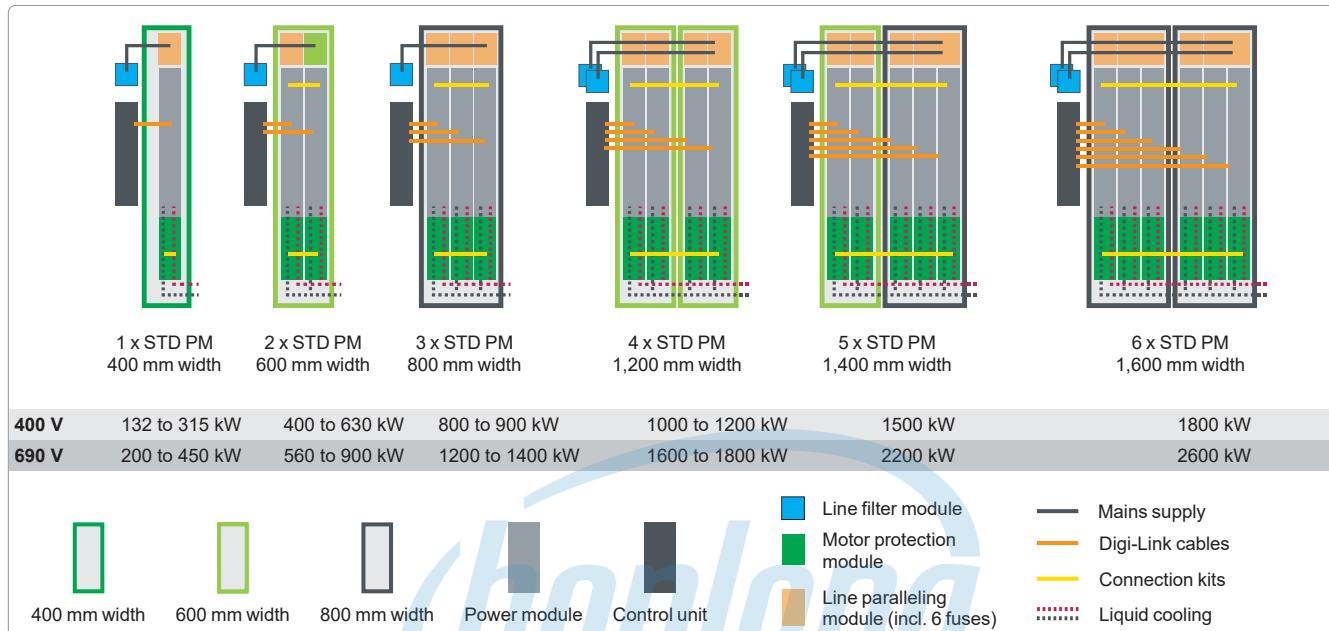
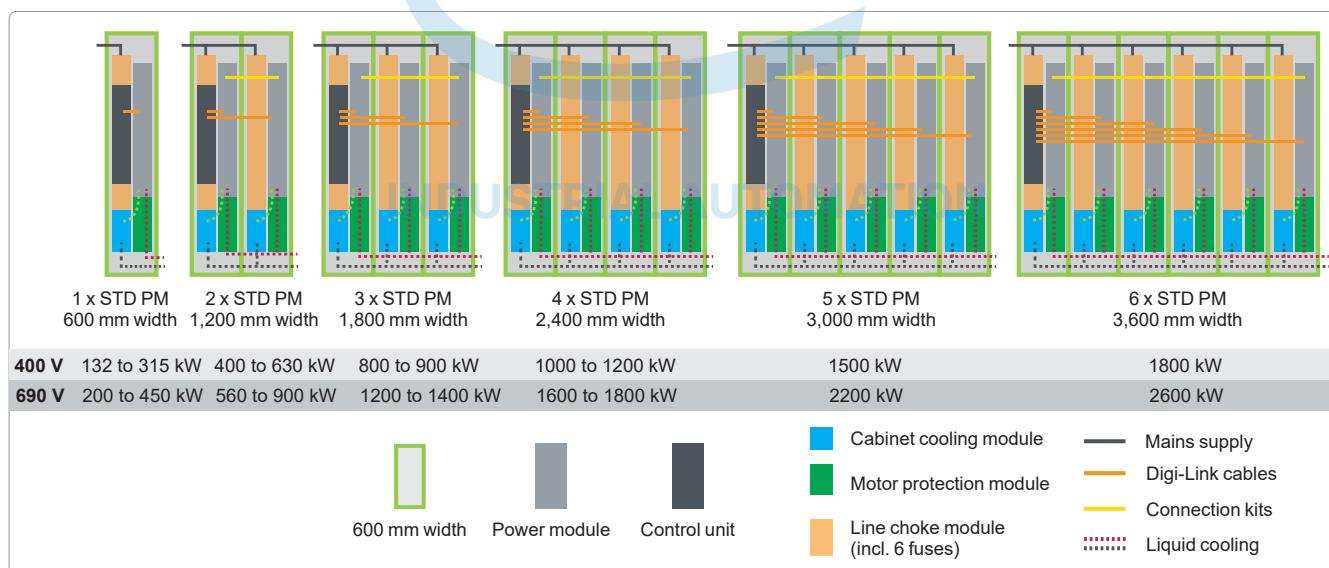
**Architectures (continued)**

**Low Harmonic/Regen drive solutions without braking - Standard architectures**



**Low Harmonic/Regen drive solutions with braking - Standard architectures**



**Architectures (continued)****Liquid-cooled drive solutions – Standard architectures - Compact****Liquid-cooled drive solutions – Standard architectures - Universal****Motor starters**

Schneider Electric offers combinations of circuit breakers and contactors to be able to use Altivar Process Modular drives in optimum conditions (see page 94).



ATV6A0C11Q4



ATV6A0C25Q4

400 V (-15...10%) IP00 Modular Standard 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	
		400 V	400 V					
ND: Normal duty								
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	—	198	137	50	211	232	ATV6A0C11Q4
HD	90	—	167	116	50	173	260	
ND	132	—	233	161	50	250	275	ATV6A0C13Q4
HD	110	—	198	137	50	211	317	
ND	160	—	278	193	50	302	332	ATV6A0C16Q4
HD	132	—	233	161	50	250	375	
ND	200	—	352	244	50	370	407	ATV6A0C20Q4
HD	160	—	290	201	50	302	453	
ND	250	—	432	299	50	477	525	ATV6A0C25Q4
HD	200	—	353	245	50	370	555	
ND	315	—	538	373	50	590	649	ATV6A0C31Q4
HD	250	—	432	299	50	477	716	
ND	355	—	611	423	50	660	726	ATV6A0C35Q4
HD	280	—	489	339	50	520	780	
ND	400	—	681	472	50	730	803	ATV6A0C40Q4
HD	315	—	545	378	50	590	885	
ND	450	—	764	529	50	830	913	ATV6A0C45Q4
HD	355	—	611	423	50	660	990	
ND	500	—	846	586	50	900	990	ATV6A0C50Q4
HD	400	—	681	472	50	730	1095	
ND	560	—	948	657	50	1020	1122	ATV6A0C56Q4
HD	450	—	767	531	50	830	1245	
ND	630	—	1058	733	50	1140	1254	ATV6A0C63Q4
HD	500	—	849	588	50	900	1350	
ND	710	—	1192	826	50	1260	1386	ATV6A0C71Q4
HD	560	—	951	659	50	1020	1530	
ND	800	—	1335	925	50	1420	1562	ATV6A0C80Q4
HD	630	—	1061	735	50	1140	1710	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2451702).

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

**Note:** Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets.



400 V (-15...10%) IP00 Modular Standard drives (continued) (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	
		400 V	400 V					
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
<b>Altivar Process Modular for demanding applications</b>								
THDi ≤ 48% at 100% load in Normal duty								
ND	110	—	198	135	50	211	253	ATV9A0C11Q4
HD	90	—	167	114	50	173	260	
ND	132	—	233	161	50	250	300	ATV9A0C13Q4
HD	110	—	198	136	50	211	317	
ND	160	—	278	192	50	302	362	ATV9A0C16Q4
HD	132	—	233	161	50	250	375	
ND	200	—	352	242	50	370	444	ATV9A0C20Q4
HD	160	—	290	198	50	302	453	
ND	250	—	432	299	50	477	572	ATV9A0C25Q4
HD	200	—	353	245	50	370	555	
ND	315	—	538	373	50	590	708	ATV9A0C31Q4
HD	250	—	432	299	50	477	716	
ND	355	—	611	423	50	660	792	ATV9A0C35Q4
HD	280	—	489	339	50	520	780	
ND	400	—	681	472	50	730	876	ATV9A0C40Q4
HD	315	—	545	378	50	590	885	
ND	450	—	764	529	50	830	996	ATV9A0C45Q4
HD	355	—	611	423	50	660	990	
ND	500	—	846	586	50	900	1080	ATV9A0C50Q4
HD	400	—	681	472	50	730	1095	
ND	560	—	948	657	50	1020	1224	ATV9A0C56Q4
HD	450	—	767	531	50	830	1245	
ND	630	—	1058	733	50	1140	1368	ATV9A0C63Q4
HD	500	—	849	588	50	900	1350	
ND	710	—	1192	826	50	1260	1512	ATV9A0C71Q4
HD	560	—	951	659	50	1020	1530	
ND	800	—	1335	925	50	1420	1704	ATV9A0C80Q4
HD	630	—	1061	735	50	1140	1710	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2451702).

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

**Note:** Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets.



ATV6A0C20R4



ATV6A0C35R4

440 V (-15...10%) IP00 Modular Standard 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	
		440 V	440 V					
ND: Normal duty								
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	—	183	139	50	211	232	ATV6A0C11R4
HD	90	—	155	118	50	173	260	
ND	132	—	214	163	50	250	275	ATV6A0C13R4
HD	110	—	183	139	50	211	317	
ND	160	—	255	194	50	302	332	ATV6A0C16R4
HD	132	—	214	163	50	250	375	
ND	160	—	325	248	50	370	407	ATV6A0C20R4
HD	160	—	269	205	50	302	453	
ND	250	—	396	302	50	477	525	ATV6A0C25R4
HD	200	—	325	248	50	370	555	
ND	315	—	493	376	50	590	649	ATV6A0C31R4
HD	250	—	396	302	50	477	716	
ND	355	—	559	426	50	660	726	ATV6A0C35R4
HD	280	—	450	343	50	520	780	
ND	400	—	623	475	50	730	803	ATV6A0C40R4
HD	315	—	501	382	50	590	885	
ND	450	—	697	531	50	830	913	ATV6A0C45R4
HD	355	—	559	426	50	660	990	
ND	500	—	771	588	50	900	990	ATV6A0C50R4
HD	400	—	623	475	50	730	1095	
ND	560	—	865	659	50	1020	1122	ATV6A0C56R4
HD	450	—	703	536	50	830	1245	
ND	630	—	965	735	50	1140	1254	ATV6A0C63R4
HD	500	—	776	591	50	900	1350	
ND	710	—	1087	828	50	1260	1386	ATV6A0C71R4
HD	580	—	869	662	50	1020	1530	
ND	800	—	1216	927	50	1420	1562	ATV6A0C80R4
HD	630	—	968	738	50	1140	1710	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2451702).

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

**Note:** Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets.

ATV9L-CP19049



ATV9A0C31R4

ATV9L-CP19050



ATV9A0C40R4

440 V (-15...10%) IP00 Modular Standard drives (continued) (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	
		440 V	440 V					
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
Altivar Process Modular for demanding applications								
THDi ≤ 48% at 100% load in Normal duty								
ND	110	—	183	136	50	211	253	ATV9A0C11R4
HD	90	—	155	115	50	173	260	
ND	132	—	214	162	50	250	300	ATV9A0C13R4
HD	110	—	183	138	50	211	317	
ND	160	—	255	194	50	302	362	ATV9A0C16R4
HD	132	—	214	162	50	250	375	
ND	160	—	325	245	50	370	444	ATV9A0C20R4
HD	160	—	269	201	50	302	453	
ND	250	—	396	302	50	477	572	ATV9A0C25R4
HD	200	—	325	248	50	370	555	
ND	315	—	493	376	50	590	708	ATV9A0C31R4
HD	250	—	396	302	50	477	716	
ND	355	—	559	426	50	660	792	ATV9A0C35R4
HD	280	—	450	343	50	520	780	
ND	400	—	623	475	50	730	876	ATV9A0C40R4
HD	315	—	501	382	50	590	885	
ND	450	—	697	531	50	830	996	ATV9A0C45R4
HD	355	—	559	426	50	660	990	
ND	500	—	771	588	50	900	1080	ATV9A0C50R4
HD	400	—	623	475	50	730	1095	
ND	560	—	865	659	50	1020	1224	ATV9A0C56R4
HD	450	—	703	536	50	830	1245	
ND	630	—	965	735	50	1140	1368	ATV9A0C63R4
HD	500	—	776	591	50	900	1350	
ND	710	—	1087	828	50	1260	1512	ATV9A0C71R4
HD	580	—	869	662	50	1020	1530	
ND	800	—	1216	927	50	1420	1704	ATV9A0C80R4
HD	630	—	968	738	50	1140	1710	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2451702).

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

**Note:** Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets.

## Variable speed drives

Altivar Process Modular

Drives for cabinet integration

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

ATV6\_OP19051



ATV6A0C56T4

ATV6\_OP19052



ATV6A0C80T4

480 V (-15...10%) IP00 Modular Standard 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	
		480 V	480 V					
ND: Normal duty								
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) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 kHz for all ratings.

Above 2.5 kHz, the drive will automatically reduce the switching frequency in the event of an excessive temperature rise.

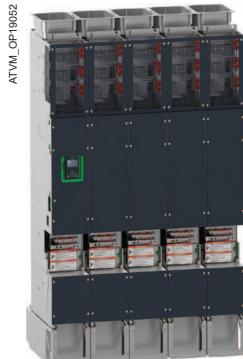
For continuous operation above the nominal switching frequency, derate the nominal drive current (see the derating curves in the Integration Manual PHA2451702).

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

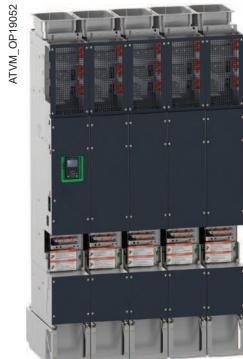
**Note:** Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets.



ATV9A0C63T4



ATV9A0C80T4



480 V (-15...10%) IP00 Modular Standard drives (continued) (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	
		480 V	480 V					
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
Altivar Process Modular for demanding applications								
THDi ≤ 48% at 100% load in Normal duty								
ND	—	150	168	138	50	211	253	<a href="#">ATV9A0C11T4</a>
HD	—	125	145	118	50	173	260	
ND	—	200	218	180	50	250	300	<a href="#">ATV9A0C13T4</a>
HD	—	150	168	140	50	211	317	
ND	—	250	268	223	50	302	362	<a href="#">ATV9A0C16T4</a>
HD	—	200	218	180	50	250	375	
ND	—	300	328	271	50	370	444	<a href="#">ATV9A0C20T4</a>
HD	—	250	280	230	50	302	453	
ND	—	400	427	355	50	477	572	<a href="#">ATV9A0C25T4</a>
HD	—	300	328	273	50	370	555	
ND	—	500	528	439	50	590	708	<a href="#">ATV9A0C31T4</a>
HD	—	400	427	355	50	477	716	
ND	—	550	586	487	50	660	792	<a href="#">ATV9A0C35T4</a>
HD	—	450	486	404	50	520	780	
ND	—	600	634	527	50	730	876	<a href="#">ATV9A0C40T4</a>
HD	—	500	536	446	50	590	885	
ND	—	650	685	569	50	830	996	<a href="#">ATV9A0C45T4</a>
HD	—	550	586	487	50	660	990	
ND	—	700	736	612	50	900	1080	<a href="#">ATV9A0C50T4</a>
HD	—	600	634	527	50	730	1095	
ND	—	800	842	700	50	1020	1224	<a href="#">ATV9A0C56T4</a>
HD	—	650	690	574	50	830	1245	
ND	—	900	939	781	50	1140	1368	<a href="#">ATV9A0C63T4</a>
HD	—	700	740	615	50	900	1350	
ND	—	1000	1044	868	50	1260	1512	<a href="#">ATV9A0C71T4</a>
HD	—	800	846	703	50	1020	1530	
ND	—	1100	1146	953	50	1420	1704	<a href="#">ATV9A0C80T4</a>
HD	—	900	942	783	50	1140	1710	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2451702).

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

**Note:** Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets.

## Variable speed drives

Altivar Process Modular

Drives for cabinet integration

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



ATV6A0C11N6



ATV6A0C25N6

500 V (-10...15%) IP00 Modular Standard 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	
		500 V	500 V					
ND: Normal duty								
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	75	—	110	95	50	125	138	ATV6A0C11N6
HD	55	—	83	72	50	105	158	
ND	90	—	129	112	50	145	160	ATV6A0C13N6
HD	75	—	110	95	50	125	188	
ND	110	—	154	133	50	175	193	ATV6A0C16N6
HD	90	—	129	112	50	145	218	
ND	132	—	183	158	50	215	237	ATV6A0C20N6
HD	110	—	154	133	50	175	263	
ND	160	—	225	195	50	275	303	ATV6A0C25N6
HD	132	—	190	165	50	215	323	
ND	220	—	303	262	50	340	374	ATV6A0C31N6
HD	160	—	225	195	50	275	413	
ND	280	—	380	329	50	425	468	ATV6A0C40N6
HD	220	—	303	262	50	340	510	
ND	355	—	484	419	50	520	572	ATV6A0C50N6
HD	280	—	385	333	50	425	638	
ND	450	—	607	526	50	650	715	ATV6A0C63N6
HD	355	—	484	419	50	520	780	
ND	560	—	756	655	50	830	913	ATV6A0C80N6
HD	450	—	610	528	50	650	975	
ND	710	—	954	826	50	1030	1133	ATV6A0M10N6
HD	560	—	758	656	50	830	1245	
ND	800	—	1070	927	50	1230	1353	ATV6A0M12N6
HD	710	—	954	826	50	1030	1545	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2451702).

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

**Note:** Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets.

ATV9L-CP-9044



ATV9A0C11N6

ATV9L-CP-9049



ATV9A0C25N6

500 V (-10...15%) IP00 Modular Standard drives (continued) (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
			500 V	500 V				
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A	A	
<b>Altivar Process Modular for demanding applications</b>								
THDi ≤ 48% at 100% load in Normal duty								
ND	75	—	110	95	50	125	150	ATV9A0C11N6
HD	55	—	83	72	50	105	158	
ND	90	—	129	112	50	145	174	ATV9A0C13N6
HD	75	—	110	95	50	125	188	
ND	110	—	154	133	50	175	210	ATV9A0C16N6
HD	90	—	129	112	50	145	218	
ND	132	—	183	158	50	215	258	ATV9A0C20N6
HD	110	—	154	133	50	175	263	
ND	160	—	225	195	50	275	330	ATV9A0C25N6
HD	132	—	190	165	50	215	323	
ND	220	—	303	262	50	340	408	ATV9A0C31N6
HD	160	—	225	195	50	275	413	
ND	280	—	380	329	50	425	510	ATV9A0C40N6
HD	220	—	303	262	50	340	510	
ND	355	—	484	419	50	520	624	ATV9A0C50N6
HD	280	—	385	333	50	425	638	
ND	450	—	607	526	50	650	780	ATV9A0C63N6
HD	355	—	484	419	50	520	780	
ND	560	—	756	655	50	830	996	ATV9A0C80N6
HD	450	—	610	528	50	650	975	
ND	710	—	954	826	50	1030	1236	ATV9A0M10N6
HD	560	—	758	656	50	830	1245	
ND	800	—	1070	927	50	1230	1476	ATV9A0M12N6
HD	710	—	954	826	50	1030	1545	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2451702).

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

**Note:** Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets.

## Variable speed drives

Altivar Process Modular

Drives for cabinet integration

Three-phase supply voltage: 600 V 50/60 Hz



ATV6A0C50T6

ATV6A0C80T6

600 V (-15...10%) IP00 Modular Standard 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	
		600 V	600 V	(4)				
ND: Normal duty								
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	–	125	112	116	50	125	138	ATV6A0C11T6
HD	–	100	92	96	50	105	158	
ND	–	150	131	136	50	145	160	ATV6A0C13T6
HD	–	125	112	116	50	125	188	
ND	–	175	152	158	50	175	193	ATV6A0C16T6
HD	–	150	131	136	50	145	218	
ND	–	200	172	179	50	215	237	ATV6A0C20T6
HD	–	175	152	158	50	175	263	
ND	–	250	218	227	50	275	303	ATV6A0C25T6
HD	–	200	179	186	50	215	323	
ND	–	350	298	310	50	340	374	ATV6A0C31T6
HD	–	250	218	227	50	275	413	
ND	–	450	379	394	50	425	468	ATV6A0C40T6
HD	–	350	298	310	50	340	510	
ND	–	550	464	482	50	520	572	ATV6A0C50T6
HD	–	450	383	398	50	425	638	
ND	–	650	544	565	50	650	715	ATV6A0C63T6
HD	–	550	464	482	50	520	780	
ND	–	800	670	696	50	830	913	ATV6A0C80T6
HD	–	650	547	568	50	650	975	
ND	–	1000	833	866	50	1030	1133	ATV6A0M10T6
HD	–	800	673	699	50	830	1245	
ND	–	1200	994	1033	50	1230	1353	ATV6A0M12T6
HD	–	1000	835	835	50	1030	1545	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2451702).

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

(4) For 600V UL certified drives, a higher SCCR is possible under some conditions. Please refer to the Integration Manual PHA2451702 for more details.

**Note:** Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets.



ATV9A0C50T6



ATV9A0C80T6



600 V (-15...10%) IP00 Modular Standard drives (continued) (1)								
Motor		Line supply			Altivar Process			
Power indicated on rating plate (2)		Line current (3)	Apparent power	Maximum prospective line Isc (4)	Maximum continuous current (2)	Max. transient current for 60 s	Reference	
ND: Normal duty		600 V	600 V	(4)				
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
Altivar Process Modular for demanding applications								
THDi ≤ 48% at 100% load in Normal duty								
ND	—	125	112	116	50	125	150	ATV9A0C11T6
HD	—	100	92	96	50	105	158	
ND	—	150	131	136	50	145	174	ATV9A0C13T6
HD	—	125	112	116	50	125	188	
ND	—	175	152	158	50	175	210	ATV9A0C16T6
HD	—	150	131	136	50	145	218	
ND	—	200	172	179	50	215	258	ATV9A0C20T6
HD	—	175	152	158	50	175	263	
ND	—	250	218	227	50	275	330	ATV9A0C25T6
HD	—	200	179	186	50	215	323	
ND	—	350	298	310	50	340	408	ATV9A0C31T6
HD	—	250	218	227	50	275	413	
ND	—	450	379	394	50	425	510	ATV9A0C40T6
HD	—	350	298	310	50	340	510	
ND	—	550	464	482	50	520	624	ATV9A0C50T6
HD	—	450	383	398	50	425	638	
ND	—	650	544	565	50	650	780	ATV9A0C63T6
HD	—	550	464	482	50	520	780	
ND	—	800	670	696	50	830	996	ATV9A0C80T6
HD	—	650	547	568	50	650	975	
ND	—	1000	833	866	50	1030	1236	ATV9A0M10T6
HD	—	800	673	699	50	830	1245	
ND	—	1200	994	1033	50	1230	1476	ATV9A0M12T6
HD	—	1000	835	835	50	1030	1545	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2451702).

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

(4) For 600V UL certified drives, a higher SCCR is possible under some conditions. Please refer to the Integration Manual PHA2451702 for more details.

**Note:** Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets.

## Variable speed drives

Altivar Process Modular

Drives for cabinet integration

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

ATV6AOP19052



ATV6A0M10Q6

ATV6AOP19053



ATV6A0M12Q6

690 V (-15...10%) IP00 Modular Standard 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	
		690 V	690 V					
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
<b>Altivar Process Modular for fluid management</b>								
THDi ≤ 48% at 100% load in Normal duty								
ND	110	—	118	141	50	125	138	ATV6A0C11Q6
HD	90	—	100	120	50	105	158	
ND	132	—	138	165	50	145	160	ATV6A0C13Q6
HD	110	—	118	141	50	125	188	
ND	160	—	163	195	50	175	193	ATV6A0C16Q6
HD	132	—	138	165	50	145	218	
ND	200	—	200	239	50	215	237	ATV6A0C20Q6
HD	160	—	163	195	50	175	263	
ND	250	—	255	305	50	275	303	ATV6A0C25Q6
HD	200	—	211	252	50	215	323	
ND	315	—	316	378	50	340	374	ATV6A0C31Q6
HD	250	—	255	305	50	275	413	
ND	400	—	394	471	50	425	468	ATV6A0C40Q6
HD	315	—	316	378	50	340	510	
ND	500	—	495	592	50	520	572	ATV6A0C50Q6
HD	400	—	401	479	50	425	638	
ND	630	—	615	735	50	650	715	ATV6A0C63Q6
HD	500	—	495	592	50	520	780	
ND	800	—	776	927	50	830	913	ATV6A0C80Q6
HD	630	—	619	740	50	650	975	
ND	1000	—	969	1158	50	1030	1133	ATV6A0M10Q6
HD	800	—	779	931	50	830	1245	
ND	1200	—	1161	1388	50	1230	1353	ATV6A0M12Q6
HD	1000	—	971	1160	50	1030	1545	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2451702).

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

**Note:** Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets.

ATV9\_OP9062



ATV9A0M10Q6

ATV9\_OP19053



ATV9A0M12Q6

690 V (-15...10%) IP00 Modular Standard drives (continued) (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	
		690 V	690 V					
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
Altivar Process Modular for demanding applications								
THDI ≤ 48% at 100% load in Normal duty								
ND	110	—	118	141	50	125	150	ATV9A0C11Q6
HD	90	—	100	120	50	105	158	
ND	132	—	138	165	50	145	174	ATV9A0C13Q6
HD	110	—	118	141	50	125	188	
ND	160	—	163	195	50	175	210	ATV9A0C16Q6
HD	132	—	138	165	50	145	218	
ND	200	—	200	239	50	215	258	ATV9A0C20Q6
HD	160	—	163	195	50	175	263	
ND	250	—	255	305	50	275	330	ATV9A0C25Q6
HD	200	—	211	252	50	215	323	
ND	315	—	316	378	50	340	408	ATV9A0C31Q6
HD	250	—	255	305	50	275	413	
ND	400	—	394	471	50	425	510	ATV9A0C40Q6
HD	315	—	316	378	50	340	510	
ND	500	—	495	592	50	520	624	ATV9A0C50Q6
HD	400	—	401	479	50	425	638	
ND	630	—	615	735	50	650	780	ATV9A0C63Q6
HD	500	—	495	592	50	520	780	
ND	800	—	776	927	50	830	996	ATV9A0C80Q6
HD	630	—	619	740	50	650	975	
ND	1000	—	969	1158	50	1030	1236	ATV9A0M10Q6
HD	800	—	779	931	50	830	1245	
ND	1200	—	1161	1388	50	1230	1476	ATV9A0M12Q6
HD	1000	—	971	1160	50	1030	1545	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2451702).

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

**Note:** Altivar Process Modular Standard drives can be designed as Reduced Height versions for integration in 1.6 m/5.25 ft cabinets.

ATVPro\_62317\_CPNIGU80016



ATV6B0C11Q4

ATVPro\_OPI9025



ATV6B0C20Q4

400 V (-15...10%) IP00 Modular Low Harmonic drives (1)								
Motor		Line supply			Altivar Process			
Power indicated on rating plate (2)		Line current (3)	Apparent power	Maximum prospective line lsc	Maximum continuous current (2)	Max. transient current for 60 s	Reference	
		400 V	400 V					
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
<b>Altivar Process Modular for fluid management</b>								
THDi ≤ 5% at 100% load in Normal duty								
ND	110	—	175	121	50	211	232	<a href="#">ATV6B0C11Q4</a>
HD	90	—	144	100	50	173	260	
ND	132	—	208	144	50	250	275	<a href="#">ATV6B0C13Q4</a>
HD	110	—	174	121	50	211	317	
ND	160	—	252	174	50	302	332	<a href="#">ATV6B0C16Q4</a>
HD	132	—	208	144	50	250	375	
ND	200	—	313	217	50	370	407	<a href="#">ATV6B0C20Q4</a>
HD	160	—	252	174	50	302	453	
ND	250	—	389	270	50	477	525	<a href="#">ATV6B0C25Q4</a>
HD	200	—	313	217	50	370	555	
ND	315	—	491	340	50	590	649	<a href="#">ATV6B0C31Q4</a>
HD	250	—	389	270	50	477	716	
ND	355	—	553	383	50	660	726	<a href="#">ATV6B0C35Q4</a>
HD	280	—	436	302	50	520	780	
ND	400	—	620	429	50	730	803	<a href="#">ATV6B0C40Q4</a>
HD	315	—	491	340	50	590	885	
ND	450	—	697	483	50	830	913	<a href="#">ATV6B0C45Q4</a>
HD	355	—	553	383	50	660	990	
ND	500	—	775	537	50	900	990	<a href="#">ATV6B0C50Q4</a>
HD	400	—	620	429	50	730	1095	
ND	560	—	868	601	50	1020	1122	<a href="#">ATV6B0C56Q4</a>
HD	450	—	697	483	50	830	1245	
ND	630	—	971	673	50	1140	1254	<a href="#">ATV6B0C63Q4</a>
HD	500	—	775	537	50	900	1350	
ND	710	—	1094	758	50	1260	1386	<a href="#">ATV6B0C71Q4</a>
HD	560	—	868	601	50	1020	1530	
ND	800	—	1227	850	50	1420	1562	<a href="#">ATV6B0C80Q4</a>
HD	630	—	971	673	50	1140	1710	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2452602).

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



ATV9B0C13Q4



ATV9B0C25Q4



ATV9B0C13Q4

400 V (-15...10%) IP00 Modular Low Harmonic/Regen 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	
		400 V	400 V					
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
<b>Altivar Process Modular for demanding applications</b>								
THDi ≤ 5% at 100% load in Normal duty								
ND	110	—	175	121	50	211	253	ATV9B0C11Q4
HD	90	—	144	100	50	173	260	
ND	132	—	208	144	50	250	300	ATV9B0C13Q4
HD	110	—	174	121	50	211	317	
ND	160	—	252	174	50	302	362	ATV9B0C16Q4
HD	132	—	208	144	50	250	375	
ND	200	—	313	217	50	370	444	ATV9B0C20Q4
HD	160	—	252	174	50	302	453	
ND	250	—	389	270	50	477	572	ATV9B0C25Q4
HD	200	—	313	217	50	370	555	
ND	315	—	491	340	50	590	708	ATV9B0C31Q4
HD	250	—	389	270	50	477	716	
ND	355	—	553	383	50	660	792	ATV9B0C35Q4
HD	280	—	436	302	50	520	780	
ND	400	—	620	429	50	730	876	ATV9B0C40Q4
HD	315	—	491	340	50	590	885	
ND	450	—	697	483	50	830	996	ATV9B0C45Q4
HD	355	—	553	383	50	660	990	
ND	500	—	775	537	50	900	1080	ATV9B0C50Q4
HD	400	—	620	429	50	730	1095	
ND	560	—	868	601	50	1020	1224	ATV9B0C56Q4
HD	450	—	697	483	50	830	1245	
ND	630	—	971	673	50	1140	1368	ATV9B0C63Q4
HD	500	—	775	537	50	900	1350	
ND	710	—	1094	758	50	1260	1512	ATV9B0C71Q4
HD	560	—	868	601	50	1020	1530	
ND	800	—	1227	850	50	1420	1704	ATV9B0C80Q4
HD	630	—	971	673	50	1140	1710	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

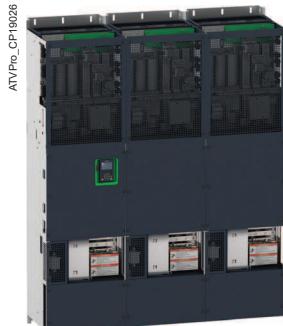
(2) These values are given for a nominal switching frequency of 2.5 kHz for use in continuous operation.

The switching frequency is adjustable from 2 to 4.9 kHz for all ratings.

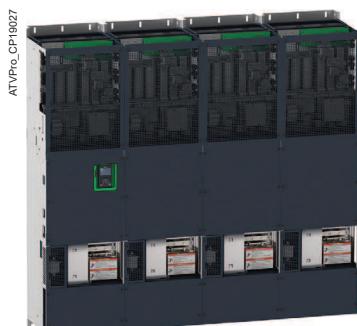
Above 2.5 kHz, the drive will automatically reduce the switching frequency in the event of an excessive temperature rise.

For continuous operation above the nominal switching frequency, derate the nominal drive current (see the derating curves in the Integration Manual PHA2452602).

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



ATV6B0C31R4



ATV6B0C56R4

440 V (-15...10%) IP00 Modular Low Harmonic 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	
ND: Normal duty		440 V	440 V					
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
<b>Altivar Process Modular for fluid management</b>								
THDi ≤ 5% at 100% load in Normal duty								
ND	110	—	159	121	50	211	232	ATV6B0C11R4
HD	90	—	132	100	50	173	260	
ND	132	—	190	145	50	250	275	ATV6B0C13R4
HD	110	—	159	121	50	211	317	
ND	160	—	229	174	50	302	332	ATV6B0C16R4
HD	132	—	190	145	50	250	375	
ND	200	—	285	217	50	370	407	ATV6B0C20R4
HD	160	—	229	174	50	302	453	
ND	250	—	354	270	50	477	525	ATV6B0C25R4
HD	200	—	285	217	50	370	555	
ND	315	—	446	340	50	590	649	ATV6B0C31R4
HD	250	—	354	270	50	477	716	
ND	355	—	503	383	50	660	726	ATV6B0C35R4
HD	280	—	396	302	50	520	780	
ND	400	—	563	429	50	730	803	ATV6B0C40R4
HD	315	—	446	340	50	590	885	
ND	450	—	634	483	50	830	913	ATV6B0C45R4
HD	355	—	503	383	50	660	990	
ND	500	—	704	537	50	900	990	ATV6B0C50R4
HD	400	—	563	429	50	730	1095	
ND	560	—	789	601	50	1020	1122	ATV6B0C56R4
HD	450	—	634	483	50	830	1245	
ND	630	—	883	673	50	1140	1254	ATV6B0C63R4
HD	500	—	704	537	50	900	1350	
ND	710	—	995	758	50	1260	1386	ATV6B0C71R4
HD	560	—	789	601	50	1020	1530	
ND	800	—	1115	850	50	1420	1562	ATV6B0C80R4
HD	630	—	883	673	50	1140	1710	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2452602).

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

ATVPro\_CP19026



ATV9B0C40R4

ATVPro\_CP19027



ATV9B0C63R4

440 V IP00 (-15...10%) Modular Low Harmonic/Regen 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	
ND: Normal duty		440 V	440 V					
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
Altivar Process Modular for demanding applications								
THDi ≤ 5% at 100% load in Normal duty								
ND	110	—	159	121	50	211	253	ATV9B0C11R4
HD	90	—	132	100	50	173	260	
ND	132	—	190	145	50	250	300	ATV9B0C13R4
HD	110	—	159	121	50	211	317	
ND	160	—	229	174	50	302	362	ATV9B0C16R4
HD	132	—	190	145	50	250	375	
ND	200	—	285	217	50	370	444	ATV9B0C20R4
HD	160	—	229	174	50	302	453	
ND	250	—	354	270	50	477	572	ATV9B0C25R4
HD	200	—	285	217	50	370	555	
ND	315	—	446	340	50	590	708	ATV9B0C31R4
HD	250	—	354	270	50	477	716	
ND	355	—	503	383	50	660	792	ATV9B0C35R4
HD	280	—	396	302	50	520	780	
ND	400	—	563	429	50	730	876	ATV9B0C40R4
HD	315	—	446	340	50	590	885	
ND	450	—	634	483	50	830	996	ATV9B0C45R4
HD	355	—	503	383	50	660	990	
ND	500	—	704	537	50	900	1080	ATV9B0C50R4
HD	400	—	563	429	50	730	1095	
ND	560	—	789	601	50	1020	1224	ATV9B0C56R4
HD	450	—	634	483	50	830	1245	
ND	630	—	883	673	50	1140	1368	ATV9B0C63R4
HD	500	—	704	537	50	900	1350	
ND	710	—	995	758	50	1260	1512	ATV9B0C71R4
HD	560	—	789	601	50	1020	1530	
ND	800	—	1115	850	50	1420	1704	ATV9B0C80R4
HD	630	—	883	673	50	1140	1710	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2452602).

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

## Variable speed drives

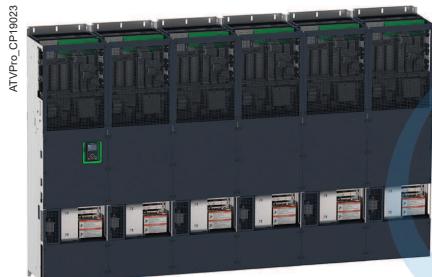
Altivar Process Modular

Drives for cabinet integration

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



ATV6B0C45T4



ATV6B0C71T4

**480 V (-10...10%) IP00 Modular Low Harmonic drives (1)**

Motor Power indicated on rating plate (2)	Line supply			Altivar Process		
	Line current (3)	Apparent power	Maximum prospective line Isc	Maximum continuous current (2)	Max. transient current for 60 s	Reference
	480 V	480 V		A	A	
<b>ND: Normal duty</b>						
<b>HD: Heavy duty</b>						
kW	HP	A	kVA	ka	A	A
<b>Altivar Process Modular for fluid management</b>						
THDi ≤ 5% at 100% load in Normal duty						
ND	—	150	148	50	211	232
<b>HD</b>	—	125	125	50	173	260
ND	—	200	197	50	250	275
<b>HD</b>	—	150	148	50	211	317
ND	—	250	245	50	302	332
<b>HD</b>	—	200	197	50	250	375
ND	—	300	292	50	370	407
<b>HD</b>	—	250	245	50	302	453
ND	—	400	387	50	477	525
<b>HD</b>	—	300	292	50	370	555
ND	—	500	484	50	590	649
<b>HD</b>	—	400	387	50	477	716
ND	—	550	533	50	660	726
<b>HD</b>	—	450	436	50	520	780
ND	—	600	578	50	730	803
<b>HD</b>	—	500	484	50	590	885
ND	—	650	626	50	830	913
<b>HD</b>	—	550	533	50	660	990
ND	—	700	674	50	900	990
<b>HD</b>	—	600	578	50	730	1095
ND	—	800	771	50	1020	1122
<b>HD</b>	—	650	626	50	830	1245
ND	—	900	862	50	1140	1254
<b>HD</b>	—	700	674	50	900	1350
ND	—	1000	958	50	1260	1386
<b>HD</b>	—	800	771	50	1020	1530
ND	—	1100	1049	50	1420	1562
<b>HD</b>	—	900	862	50	1140	1710

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2452602).

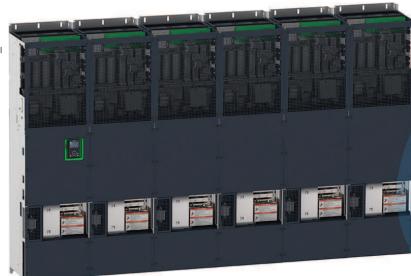
(3) Typical value for the indicated motor power and for the maximum prospective line Isc.

ATVPro\_CPI9028



ATV9B0C50T4

ATVPro\_CPI9023



ATV9B0C80T4

480 V (-10...10%) IP00 Modular Low Harmonic/Regen drives (1)							
Motor		Line supply			Altivar Process		
Power indicated on rating plate (2)		Line current (3)	Apparent power 480 V	Maximum prospective line Isc	Maximum continuous current (2)	Max. transient current for 60 s	Reference
ND: Normal duty							
HD: Heavy duty							
kW	HP	A	kVA	kA	A	A	
Altivar Process Modular for demanding applications							
THDi ≤ 5% at 100% load in Normal duty							
ND	—	150	148	123	50	211	253 <a href="#">ATV9B0C11T4</a>
HD	—	125	125	104	50	173	260 <a href="#">ATV9B0C13T4</a>
ND	—	200	197	164	50	250	300 <a href="#">ATV9B0C16T4</a>
HD	—	150	148	123	50	211	317 <a href="#">ATV9B0C20T4</a>
ND	—	250	245	203	50	302	362 <a href="#">ATV9B0C25T4</a>
HD	—	200	197	164	50	250	375 <a href="#">ATV9B0C31T4</a>
ND	—	300	292	243	50	370	444 <a href="#">ATV9B0C35T4</a>
HD	—	250	245	203	50	302	453 <a href="#">ATV9B0C40T4</a>
ND	—	400	387	322	50	477	572 <a href="#">ATV9B0C45T4</a>
HD	—	300	292	243	50	370	555 <a href="#">ATV9B0C50T4</a>
ND	—	500	484	402	50	590	708 <a href="#">ATV9B0C56T4</a>
HD	—	400	387	322	50	477	716 <a href="#">ATV9B0C63T4</a>
ND	—	550	533	443	50	660	792 <a href="#">ATV9B0C71T4</a>
HD	—	450	436	362	50	520	780 <a href="#">ATV9B0C80T4</a>
ND	—	600	578	480	50	730	876 <a href="#">ATV9B0C45T4</a>
HD	—	500	484	402	50	590	885 <a href="#">ATV9B0C50T4</a>
ND	—	650	626	520	50	830	996 <a href="#">ATV9B0C56T4</a>
HD	—	550	533	443	50	660	990 <a href="#">ATV9B0C63T4</a>
ND	—	700	674	561	50	900	1080 <a href="#">ATV9B0C71T4</a>
HD	—	600	578	480	50	730	1095 <a href="#">ATV9B0C80T4</a>
ND	—	800	771	641	50	1020	1224 <a href="#">ATV9B0C56T4</a>
HD	—	650	626	520	50	830	1245 <a href="#">ATV9B0C63T4</a>
ND	—	900	862	717	50	1140	1368 <a href="#">ATV9B0C71T4</a>
HD	—	700	674	561	50	900	1350 <a href="#">ATV9B0C80T4</a>
ND	—	1000	958	797	50	1260	1512 <a href="#">ATV9B0C71T4</a>
HD	—	800	771	641	50	1020	1530 <a href="#">ATV9B0C80T4</a>
ND	—	1100	1049	872	50	1420	1704 <a href="#">ATV9B0C80T4</a>
HD	—	900	862	717	50	1140	1710 <a href="#">ATV9B0C80T4</a>

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2452602).

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

## Variable speed drives

Altivar Process Modular

Drives for cabinet integration

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

ATVPro\_62317\_CPNIGU190016



ATV6B0C11N6

ATVPro\_CP19025



ATV6B0C25N6

500 V (-10...15%) IP00 Modular Low Harmonic 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	
		500 V	500 V					
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
Altivar Process Modular for fluid management								
THDi ≤ 5% at 100% load in Normal duty								
ND	75	—	98	85	50	125	138	ATV6B0C11N6
HD	55	—	72	62	50	105	158	
ND	90	—	117	101	50	145	160	ATV6B0C13N6
HD	75	—	98	85	50	125	188	
ND	110	—	141	122	50	175	193	ATV6B0C16N6
HD	90	—	117	101	50	145	218	
ND	132	—	169	146	50	215	237	ATV6B0C20N6
HD	110	—	141	122	50	175	263	
ND	160	—	204	176	50	275	303	ATV6B0C25N6
HD	132	—	169	146	50	215	323	
ND	220	—	278	241	50	340	374	ATV6B0C31N6
HD	160	—	204	176	50	275	413	
ND	280	—	352	305	50	425	468	ATV6B0C40N6
HD	220	—	278	241	50	340	510	
ND	355	—	446	386	50	520	572	ATV6B0C50N6
HD	280	—	352	305	50	425	638	
ND	450	—	562	487	50	650	715	ATV6B0C63N6
HD	355	—	446	386	50	520	780	
ND	560	—	701	607	50	830	913	ATV6B0C80N6
HD	450	—	564	488	50	650	975	
ND	710	—	884	766	50	1030	1133	ATV6B0M10N6
HD	560	—	701	607	50	830	1245	
ND	800	—	991	859	50	1230	1353	ATV6B0M12N6
HD	710	—	884	766	50	1030	1545	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2452602).

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

ATVPro\_62317\_CPNGLU190016



ATV9B0C11N6

ATVPro\_CP19025



ATV9B0C25N6

500 V (-10...15%) IP00 Modular Low Harmonic/Regen 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	
		500 V	500 V					
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
Altivar Process Modular for demanding applications								
THDi ≤ 5% at 100% load in Normal duty								
ND	75	—	98	85	50	125	150	ATV9B0C11N6
HD	55	—	72	62	50	105	158	
ND	90	—	117	101	50	145	174	ATV9B0C13N6
HD	75	—	98	85	50	125	188	
ND	110	—	141	122	50	175	210	ATV9B0C16N6
HD	90	—	117	101	50	145	218	
ND	132	—	169	146	50	215	258	ATV9B0C20N6
HD	110	—	141	122	50	175	263	
ND	160	—	204	176	50	275	330	ATV9B0C25N6
HD	132	—	169	146	50	215	323	
ND	220	—	278	241	50	340	408	ATV9B0C31N6
HD	160	—	204	176	50	275	413	
ND	280	—	352	305	50	425	510	ATV9B0C40N6
HD	220	—	278	241	50	340	510	
ND	355	—	446	386	50	520	624	ATV9B0C50N6
HD	280	—	352	305	50	425	638	
ND	450	—	562	487	50	650	780	ATV9B0C63N6
HD	355	—	446	386	50	520	780	
ND	560	—	701	607	50	830	996	ATV9B0C80N6
HD	450	—	564	488	50	650	975	
ND	710	—	884	766	50	1030	1236	ATV9B0M10N6
HD	560	—	701	607	50	830	1245	
ND	800	—	991	859	50	1230	1476	ATV9B0M12N6
HD	710	—	884	766	50	1030	1545	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2452602).

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



ATV6B0C50T6



ATV6B0C80T6

600 V (-10...10%) IP00 Modular Low Harmonic drives (1)								
Motor		Line supply			Altivar Process			
Power indicated on rating plate (2)		Line current (3)	Apparent power 600 V	Maximum prospective line Isc (4)	Maximum continuous current (2)	Max. transient current for 60 s	Reference	
ND: Normal duty		600 V	600 V	(4)				
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
<b>Altivar Process Modular for fluid management</b>								
THDi ≤ 5% at 100% load in Normal duty								
ND	—	125	102	50	125	138	ATV6B0C11T6	
HD	—	100	82	50	105	158		
ND	—	150	121	50	145	160	ATV6B0C13T6	
HD	—	125	102	50	125	188		
ND	—	175	142	50	175	193	ATV6B0C16T6	
HD	—	150	121	50	145	218		
ND	—	200	161	50	215	237	ATV6B0C20T6	
HD	—	175	142	50	175	263		
ND	—	250	199	50	275	303	ATV6B0C25T6	
HD	—	200	160	50	215	323		
ND	—	350	277	50	340	374	ATV6B0C31T6	
HD	—	250	199	50	275	413		
ND	—	450	355	50	425	468	ATV6B0C40T6	
HD	—	350	277	50	340	510		
ND	—	550	434	50	520	572	ATV6B0C50T6	
HD	—	450	355	50	425	638		
ND	—	650	511	50	650	715	ATV6B0C63T6	
HD	—	550	434	50	520	780		
ND	—	800	628	50	830	913	ATV6B0C80T6	
HD	—	650	513	50	650	975		
ND	—	1000	785	50	1030	1133	ATV6B0M10T6	
HD	—	800	628	50	830	1245		
ND	—	1200	937	50	1230	1353	ATV6B0M12T6	
HD	—	1000	785	50	1030	1545		

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2452602).

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

(4) For 600V UL certified drives, a higher SCCR is possible under some conditions. Please refer to the Integration Manual PHA2452602 for more details.

ATVPro\_CP19026



ATV9B0C50T6

ATVPro\_CP19027



ATV9B0C80T6

600 V (-10...10%) IP00 Modular Low Harmonic/Regen drives (1)								
Motor		Line supply			Altivar Process			
Power indicated on rating plate (2)		Line current (3) 600 V	Apparent power 600 V	Maximum prospective line Isc (4)	Maximum continuous current (2)	Max. transient current for 60 s	Reference	
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
Altivar Process Modular for demanding applications								
THDi ≤ 5% at 100% load in Normal duty								
ND	—	125	102	106	50	125	150	ATV9B0C11T6
HD	—	100	82	86	50	105	158	
ND	—	150	121	126	50	145	174	ATV9B0C13T6
HD	—	125	102	106	50	125	188	
ND	—	175	142	147	50	175	210	ATV9B0C16T6
HD	—	150	121	126	50	145	218	
ND	—	200	161	167	50	215	258	ATV9B0C20T6
HD	—	175	142	147	50	175	263	
ND	—	250	199	207	50	275	330	ATV9B0C25T6
HD	—	200	160	166	50	215	323	
ND	—	350	277	288	50	340	408	ATV9B0C31T6
HD	—	250	199	207	50	275	413	
ND	—	450	355	369	50	425	510	ATV9B0C40T6
HD	—	350	277	288	50	340	510	
ND	—	550	434	451	50	520	624	ATV9B0C50T6
HD	—	450	355	369	50	425	638	
ND	—	650	511	531	50	650	780	ATV9B0C63T6
HD	—	550	434	451	50	520	780	
ND	—	800	628	652	50	830	996	ATV9B0C80T6
HD	—	650	513	533	50	650	975	
ND	—	1000	785	815	50	1030	1236	ATV9B0M10T6
HD	—	800	628	652	50	830	1245	
ND	—	1200	937	973	50	1230	1476	ATV9B0M12T6
HD	—	1000	785	815	50	1030	1545	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2452602).

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

(4) For 600V UL certified drives, a higher SCCR is possible under some conditions. Please refer to the Integration Manual PHA2452602 for more details.

ATVPro CP19028



ATV6B0M10Q6

ATVPro CP19023



ATV6B0M12Q6

### 690 V (-10...10%) IP00 Modular Low Harmonic drives (1)

Motor	Line supply			Altivar Process				
	Power indicated on rating plate (2)	Line current (3)	Apparent power (3)	Maximum prospective line Isc	Maximum continuous current (2)	Max. transient current for 60 s		
		690 V	690 V			Reference		
<b>ND: Normal duty</b>								
<b>HD: Heavy duty</b>								
kW	HP	A	kVA	kA	A	A		
<b>Altivar Process Modular for fluid management</b>								
THDi ≤ 5% at 100% load in Normal duty								
ND	110	—	102	122	50	125	138	<a href="#">ATV6B0C11Q6</a>
HD	90	—	85	101	50	105	158	
ND	132	—	122	146	50	145	160	<a href="#">ATV6B0C13Q6</a>
HD	110	—	102	122	50	125	188	
ND	160	—	148	177	50	175	193	<a href="#">ATV6B0C16Q6</a>
HD	132	—	122	146	50	145	218	
ND	200	—	183	219	50	215	237	<a href="#">ATV6B0C20Q6</a>
HD	160	—	148	177	50	175	263	
ND	250	—	228	273	50	275	303	<a href="#">ATV6B0C25Q6</a>
HD	200	—	183	219	50	215	323	
ND	315	—	287	343	50	340	374	<a href="#">ATV6B0C31Q6</a>
HD	250	—	228	273	50	275	413	
ND	400	—	363	434	50	425	468	<a href="#">ATV6B0C40Q6</a>
HD	315	—	287	343	50	340	510	
ND	500	—	453	541	50	520	572	<a href="#">ATV6B0C50Q6</a>
HD	400	—	362	433	50	425	638	
ND	630	—	568	678	50	650	715	<a href="#">ATV6B0C63Q6</a>
HD	500	—	453	541	50	520	780	
ND	800	—	718	859	50	830	913	<a href="#">ATV6B0C80Q6</a>
HD	630	—	569	680	50	650	975	
ND	1000	—	898	1073	50	1030	1133	<a href="#">ATV6B0M10Q6</a>
HD	800	—	718	859	50	830	1245	
ND	1200	—	1078	1288	50	1230	1353	<a href="#">ATV6B0M12Q6</a>
HD	1000	—	898	1073	50	1030	1545	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

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

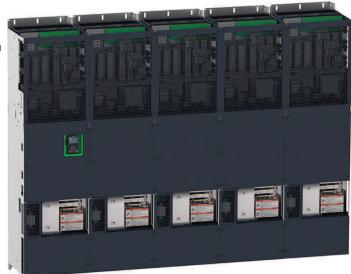
The switching frequency is adjustable from 2 to 4.9 kHz for all ratings.

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 in the Integration Manual PHA2452602).

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

ATVPro\_CPI9028



ATV9B0M10Q6

ATVPro\_CPI9023



ATV9B0M12Q6

## 690 V (-10...+10%) IP00 Modular Low Harmonic/Regen drives (1)

Motor Power indicated on rating plate (2)	Line supply			Altivar Process		
	Line current (3)	Apparent power 690 V	Maximum prospective line Isc 690 V	Maximum continuous current (2)	Max. transient current for 60 s	Reference
	kW	HP	A	kVA	kA	A
<b>Altivar Process Modular for demanding applications</b>						
THDi ≤ 5% at 100% load in Normal duty						
ND 110	—	102	122	50	125	150 <a href="#">ATV9B0C11Q6</a>
HD 90	—	85	101	50	105	158 <a href="#">ATV9B0C13Q6</a>
ND 132	—	122	146	50	145	174 <a href="#">ATV9B0C16Q6</a>
HD 110	—	102	122	50	125	188 <a href="#">ATV9B0C20Q6</a>
ND 160	—	148	177	50	175	210 <a href="#">ATV9B0C25Q6</a>
HD 132	—	122	146	50	145	218 <a href="#">ATV9B0C31Q6</a>
ND 200	—	183	219	50	215	258 <a href="#">ATV9B0C40Q6</a>
HD 160	—	148	177	50	175	263 <a href="#">ATV9B0C50Q6</a>
ND 250	—	228	273	50	275	330 <a href="#">ATV9B0C63Q6</a>
HD 200	—	183	219	50	215	323 <a href="#">ATV9B0C80Q6</a>
ND 315	—	287	343	50	340	408 <a href="#">ATV9B0M10Q6</a>
HD 250	—	228	273	50	275	413 <a href="#">ATV9B0M12Q6</a>
ND 400	—	363	434	50	425	510 <a href="#">ATV9B0M10Q6</a>
HD 315	—	287	343	50	340	510 <a href="#">ATV9B0M12Q6</a>
ND 500	—	453	541	50	520	624 <a href="#">ATV9B0M10Q6</a>
HD 400	—	362	433	50	425	638 <a href="#">ATV9B0M12Q6</a>
ND 630	—	568	678	50	650	780 <a href="#">ATV9B0M10Q6</a>
HD 500	—	453	541	50	520	780 <a href="#">ATV9B0M12Q6</a>
ND 800	—	718	859	50	830	996 <a href="#">ATV9B0M10Q6</a>
HD 630	—	569	680	50	650	975 <a href="#">ATV9B0M12Q6</a>
ND 1000	—	898	1073	50	1030	1236 <a href="#">ATV9B0M10Q6</a>
HD 800	—	718	859	50	830	1245 <a href="#">ATV9B0M12Q6</a>
ND 1200	—	1078	1288	50	1230	1476 <a href="#">ATV9B0M10Q6</a>
HD 1000	—	898	1073	50	1030	1545 <a href="#">ATV9B0M12Q6</a>

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual PHA2452602).

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



ATV6L0C13Q4



ATV6L0C50Q4

400 V (-15...10%) IP00 Modular Liquid-cooled drives (1)								
Motor			Line supply			Altivar Process		
Power indicated on rating plate (2)			Line current (3)	Apparent power 400 V	Maximum prospective line Isc 400 V	Maximum continuous current (2)	Max. transient current for 60 s	Reference
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A	A	
<b>Altivar Process Modular Liquid-cooled</b>								
THDi ≤ 48% at 100% load in Normal duty with 6-pulse supply (4)								
ND	132	-	244	169	50	250	275	ATV6L0C13Q4
HD	110	-	210	145	50	211	317	
ND	160	-	287	199	50	302	332	ATV6L0C16Q4
HD	132	-	244	169	50	250	375	
ND	200	-	350	242	50	370	407	ATV6L0C20Q4
HD	160	-	287	199	50	302	453	
ND	250	-	429	297	50	477	525	ATV6L0C25Q4
HD	200	-	350	242	50	370	555	
ND	315	-	536	371	50	590	649	ATV6L0C31Q4
HD	250	-	429	297	50	477	716	
ND	400	-	684	474	50	730	803	ATV6L0C40Q4
HD	315	-	549	380	50	590	885	
ND	500	-	847	587	50	900	990	ATV6L0C50Q4
HD	400	-	684	474	50	730	1095	
ND	630	-	1056	732	50	1140	1254	ATV6L0C63Q4
HD	500	-	847	587	50	900	1350	
ND	800	-	1335	925	50	1420	1562	ATV6L0C80Q4
HD	630	-	1062	736	50	1140	1710	
ND	900	-	1502	1041	50	1600	1760	ATV6L0C90Q4
HD	710	-	1188	823	50	1260	1890	
ND	1000	-	1669	1156	50	1770	1947	ATV6L0M10Q4
HD	800	-	1339	928	50	1420	2130	
ND	1200	-	2005	1389	50	2140	2354	ATV6L0M12Q4
HD	1000	-	1669	1156	50	1770	2655	
ND	1500	-	2513	1741	50	2680	2948	ATV6L0M15Q4
HD	1200	-	2005	1389	50	2140	3210	
ND	1800	-	3028	2098	50	3200	3520	ATV6L0M18Q4
HD	1400	-	2341	1622	50	2470	3705	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual).

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

(4) APM-L architecture is ready for 12-pulse supply, which allows a THDi ≤ 9%.

ATV9L0C13Q4



ATV9L0C13Q4

ATV9L0C50Q4



ATV9L0C50Q4

**400 V (-15...10%) IP00 Modular Liquid-cooled 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	
ND: Normal duty HD: Heavy duty		400 V	400 V					
kW	HP	A	kVA	kA	A	A		
Altivar Process Modular Liquid-cooled								
THDi ≤48% at 100% load in Normal duty with 6-pulse supply (4)								
ND	132	-	244	169	50	250	300	ATV9L0C13Q4
HD	110	-	210	145	50	211	317	
ND	160	-	287	199	50	302	362	ATV9L0C16Q4
HD	132	-	244	169	50	250	375	
ND	200	-	350	242	50	370	444	ATV9L0C20Q4
HD	160	-	287	199	50	302	453	
ND	250	-	429	297	50	477	572	ATV9L0C25Q4
HD	200	-	350	242	50	370	555	
ND	315	-	536	371	50	590	708	ATV9L0C31Q4
HD	250	-	429	297	50	477	716	
ND	400	-	684	474	50	730	876	ATV9L0C40Q4
HD	315	-	549	380	50	590	885	
ND	500	-	847	587	50	900	1080	ATV9L0C50Q4
HD	400	-	684	474	50	730	1095	
ND	630	-	1056	732	50	1140	1368	ATV9L0C63Q4
HD	500	-	847	587	50	900	1350	
ND	800	-	1335	925	50	1420	1704	ATV9L0C80Q4
HD	630	-	1062	736	50	1140	1710	
ND	900	-	1502	1041	50	1600	1920	ATV9L0C90Q4
HD	710	-	1188	823	50	1260	1890	
ND	1000	-	1669	1156	50	1770	2124	ATV9L0M10Q4
HD	800	-	1339	928	50	1420	2130	
ND	1200	-	2005	1389	50	2140	2568	ATV9L0M12Q4
HD	1000	-	1669	1156	50	1770	2655	
ND	1500	-	2513	1741	50	2680	3216	ATV9L0M15Q4
HD	1200	-	2005	1389	50	2140	3210	
ND	1800	-	3028	2098	50	3200	3840	ATV9L0M18Q4
HD	1400	-	2341	1622	50	2470	3705	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual).

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

(4) APM-L architecture is ready for 12-pulse supply, which allows a THDi ≤9%.

## Variable speed drives

Altivar Process Modular

Modular Liquid-cooled drives

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

ATVM-CP20134



ATV6L0C80R4

ATVM-CP20135



ATV6L0M10R4

## 440 V (-15...10%) IP00 Modular Liquid-cooled drives (1)

Motor Power indicated on rating plate (2)	Line supply			Altivar Process				
	Line current (3) 440 V	Apparent power 440 V	Maximum prospective line Isc	Maximum continuous current (2)	Max. transient current for 60 s	Reference		
ND: Normal duty								
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
Altivar Process Modular Liquid-cooled								
THDi ≤48% at 100% load in Normal duty with 6-pulse supply (4)								
ND	132	-	228	174	50	250	275	ATV6L0C13R4
HD	110	-	198	151	50	211	317	
ND	160	-	266	203	50	302	332	ATV6L0C16R4
HD	132	-	228	174	50	250	375	
ND	200	-	323	246	50	370	407	ATV6L0C20R4
HD	160	-	266	203	50	302	453	
ND	250	-	394	300	50	477	525	ATV6L0C25R4
HD	200	-	323	246	50	370	555	
ND	315	-	490	373	50	590	649	ATV6L0C31R4
HD	250	-	394	300	50	477	716	
ND	400	-	627	478	50	730	803	ATV6L0C40R4
HD	315	-	506	386	50	590	885	
ND	500	-	774	590	50	900	990	ATV6L0C50R4
HD	400	-	627	478	50	730	1095	
ND	630	-	963	734	50	1140	1254	ATV6L0C63R4
HD	500	-	774	590	50	900	1350	
ND	800	-	1217	927	50	1420	1562	ATV6L0C80R4
HD	630	-	969	738	50	1140	1710	
ND	900	-	1365	1040	50	1600	1760	ATV6L0C90R4
HD	710	-	1083	825	50	1260	1890	
ND	1000	-	1518	1157	50	1770	1947	ATV6L0M10R4
HD	800	-	1220	930	50	1420	2130	
ND	1200	-	1820	1387	50	2140	2354	ATV6L0M12R4
HD	1000	-	1518	1157	50	1770	2655	
ND	1500	-	2279	1737	50	2680	2948	ATV6L0M15R4
HD	1200	-	1820	1387	50	2140	3210	
ND	1800	-	2741	2089	50	3200	3520	ATV6L0M18R4
HD	1400	-	2125	1619	50	2470	3705	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual).

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

(4) APM-L architecture is ready for 12-pulse supply, which allows a THDi ≤9%.

ATV9L\_C20134



ATV9L0C80R4

ATV9L\_C20135



ATV9L0M10R4

440 V (-15...10%) IP00 Modular Liquid-cooled 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	
ND: Normal duty		440 V	440 V					
HD: Heavy duty								
kW	HP	A	kVA	kA	A	A		
Altivar Process Modular Liquid-cooled								
THDi ≤48% at 100% load in Normal duty with 6-pulse supply (4)								
ND	132	-	228	174	50	250	300	ATV9L0C13R4
HD	110	-	198	151	50	211	317	
ND	160	-	266	203	50	302	362	ATV9L0C16R4
HD	132	-	228	174	50	250	375	
ND	200	-	323	246	50	370	444	ATV9L0C20R4
HD	160	-	266	203	50	302	453	
ND	250	-	394	300	50	477	572	ATV9L0C25R4
HD	200	-	323	246	50	370	555	
ND	315	-	490	373	50	590	708	ATV9L0C31R4
HD	250	-	394	300	50	477	716	
ND	400	-	627	478	50	730	876	ATV9L0C40R4
HD	315	-	506	386	50	590	885	
ND	500	-	774	590	50	900	1080	ATV9L0C50R4
HD	400	-	627	478	50	730	1095	
ND	630	-	963	734	50	1140	1368	ATV9L0C63R4
HD	500	-	774	590	50	900	1350	
ND	800	-	1217	927	50	1420	1704	ATV9L0C80R4
HD	630	-	969	738	50	1140	1710	
ND	900	-	1365	1040	50	1600	1920	ATV9L0C90R4
HD	710	-	1083	825	50	1260	1890	
ND	1000	-	1518	1157	50	1770	2124	ATV9L0M10R4
HD	800	-	1220	930	50	1420	2130	
ND	1200	-	1820	1387	50	2140	2568	ATV9L0M12R4
HD	1000	-	1518	1157	50	1770	2655	
ND	1500	-	2279	1737	50	2680	3216	ATV9L0M15R4
HD	1200	-	1820	1387	50	2140	3210	
ND	1800	-	2741	2089	50	3200	3840	ATV9L0M18R4
HD	1400	-	2125	1619	50	2470	3705	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual).

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

(4) APM-L architecture is ready for 12-pulse supply, which allows a THDi ≤9%.

## Variable speed drives

Altivar Process Modular

Modular Liquid-cooled drives

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

ATV6L\_CP2036



ATV6L0M15T4

ATV6L\_CP2037



ATV6L0M18T4

480 V (-15...10%) IP00 Modular Liquid-cooled drives (1)							
Motor		Line supply			Altivar Process		
Power indicated on rating plate (2)		Line current (3)	Apparent power 480 V	Maximum prospective line Isc 480 V	Maximum continuous current (2)	Max. transient current for 60 s	Reference
ND: Normal duty							
HD: Heavy duty							
kW	HP	A	kVA	kA	A	A	
<b>Altivar Process Modular Liquid-cooled</b>							
THDi ≤48% at 100% load in Normal duty with 6-pulse supply (4)							
ND	-	200	230	191	50	250	275 <a href="#">ATV6L0C13T4</a>
HD	-	150	183	152	50	211	317 <a href="#">ATV6L0C16T4</a>
ND	-	250	278	231	50	302	332 <a href="#">ATV6L0C20T4</a>
HD	-	200	230	191	50	250	375 <a href="#">ATV6L0C25T4</a>
ND	-	300	327	272	50	370	407 <a href="#">ATV6L0C31T4</a>
HD	-	250	278	231	50	302	453 <a href="#">ATV6L0C40T4</a>
ND	-	400	425	353	50	477	525 <a href="#">ATV6L0C50T4</a>
HD	-	300	327	272	50	370	555 <a href="#">ATV6L0C63T4</a>
ND	-	500	527	438	50	590	649 <a href="#">ATV6L0C80T4</a>
HD	-	400	425	353	50	477	716 <a href="#">ATV6L0C90T4</a>
ND	-	600	638	530	50	730	803 <a href="#">ATV6L0M10T4</a>
HD	-	500	540	449	50	590	885 <a href="#">ATV6L0M12T4</a>
ND	-	700	738	614	50	900	990 <a href="#">ATV6L0M15T4</a>
HD	-	600	638	530	50	730	1095 <a href="#">ATV6L0M18T4</a>
ND	-	900	938	780	50	1140	1254 <a href="#">ATV6L0M20T4</a>
HD	-	700	738	614	50	900	1350 <a href="#">ATV6L0M25T4</a>
ND	-	1100	1148	954	50	1420	1562 <a href="#">ATV6L0M30T4</a>
HD	-	900	944	785	50	1140	1710 <a href="#">ATV6L0M40T4</a>
ND	-	1300	1345	1118	50	1600	1760 <a href="#">ATV6L0M50T4</a>
HD	-	1000	1045	869	50	1260	1890 <a href="#">ATV6L0M63T4</a>
ND	-	1400	1451	1206	50	1770	1947 <a href="#">ATV6L0M80T4</a>
HD	-	1100	1151	957	50	1420	2130 <a href="#">ATV6L0M90T4</a>
ND	-	1700	1761	1464	50	2140	2354 <a href="#">ATV6L0M10T4</a>
HD	-	1400	1451	1206	50	1770	2655 <a href="#">ATV6L0M12T4</a>
ND	-	2200	2282	1897	50	2680	2948 <a href="#">ATV6L0M15T4</a>
HD	-	1700	1761	1464	50	2140	3210 <a href="#">ATV6L0M18T4</a>
ND	-	2500	2598	2160	50	3200	3520 <a href="#">ATV6L0M20T4</a>
HD	-	2000	2073	1723	50	2470	3705 <a href="#">ATV6L0M25T4</a>

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual).

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

(4) APM-L architecture is ready for 12-pulse supply, which allows a THDi ≤9%.

ATV9L\_CP20196



ATV9L0M15T4

ATV9L\_CP20137



ATV9L0M18T4

## 480 V (-15...10%) IP00 Modular Liquid-cooled 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
ND: Normal duty HD: Heavy duty	480 V	480 V				
KW HP	A	kVA	kA	A	A	
<b>Altivar Process Modular Liquid-cooled</b>						
THDi ≤48% at 100% load in Normal duty with 6-pulse supply (4)						
ND - 200	230	191	50	250	300	ATV9L0C13T4
HD - 150	183	152	50	211	317	
ND - 250	278	231	50	302	362	ATV9L0C16T4
HD - 200	230	191	50	250	375	
ND - 300	327	272	50	370	444	ATV9L0C20T4
HD - 250	278	231	50	302	453	
ND - 400	425	353	50	477	572	ATV9L0C25T4
HD - 300	327	272	50	370	555	
ND - 500	527	438	50	590	708	ATV9L0C31T4
HD - 400	425	353	50	477	716	
ND - 600	638	530	50	730	876	ATV9L0C40T4
HD - 500	540	449	50	590	885	
ND - 700	738	614	50	900	1080	ATV9L0C50T4
HD - 600	638	530	50	730	1095	
ND - 900	938	780	50	1140	1368	ATV9L0C63T4
HD - 700	738	614	50	900	1350	
ND - 1100	1148	954	50	1420	1704	ATV9L0C80T4
HD - 900	944	785	50	1140	1710	
ND - 1300	1345	1118	50	1600	1920	ATV9L0C90T4
HD - 1000	1045	869	50	1260	1890	
ND - 1400	1451	1206	50	1770	2124	ATV9L0M10T4
HD - 1100	1151	957	50	1420	2130	
ND - 1700	1761	1464	50	2140	2568	ATV9L0M12T4
HD - 1400	1451	1206	50	1770	2655	
ND - 2200	2282	1897	50	2680	3216	ATV9L0M15T4
HD - 1700	1761	1464	50	2140	3210	
ND - 2500	2598	2160	50	3200	3840	ATV9L0M18T4
HD - 2000	2073	1723	50	2470	3705	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual).

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

(4) APM-L architecture is ready for 12-pulse supply, which allows a THDi ≤9%.

## Variable speed drives

Altivar Process Modular

Modular Liquid-cooled drives

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

500 V (-15...10%) IP00 Modular Liquid-cooled drives (1)								
Motor		Line supply			Altivar Process			
Power indicated on rating plate (2)		Line current (3)	Apparent power	Maximum prospective line lsc	Maximum continuous current (2)	Max. transient current for 60 s	Reference	
ND: Normal duty HD: Heavy duty		500 V	500 V					
		kW	HP	A	kVA	kA	A	
Altivar Process Modular Liquid-cooled								
THDi ≤ 48% at 100% load in Normal duty with 6-pulse supply (4)								
ND	132	-	196	170	50	215	237	ATV6LOC20N6
HD	110	-	169	146	50	175	263	
ND	200	-	281	243	50	308	339	ATV6LOC28N6
HD	160	-	230	199	50	240	360	
ND	220	-	307	266	50	340	374	ATV6LOC31N6
HD	180	-	256	222	50	275	413	
ND	250	-	344	298	50	425	468	ATV6LOC40N6
HD	220	-	307	266	50	340	510	
ND	315	-	429	372	50	480	528	ATV6LOC45N6
HD	250	-	344	298	50	384	576	
ND	400	-	549	475	50	590	649	ATV6LOC56N6
HD	315	-	442	383	50	480	720	
ND	500	-	679	588	50	740	814	ATV6LOC71N6
HD	400	-	549	475	50	590	885	
ND	630	-	846	733	50	930	1023	ATV6LOC90N6
HD	500	-	679	588	50	740	1110	
ND	800	-	1070	927	50	1230	1353	ATV6LOM12N6
HD	710	-	957	829	50	1030	1545	
ND	1000	-	1335	1156	50	1425	1568	ATV6LOM14N6
HD	800	-	1070	927	50	1130	1695	
ND	1200	-	1603	1388	50	1620	1782	ATV6LOM16N6
HD	900	-	1204	1043	50	1330	1995	
ND	1300	-	1737	1504	50	1820	2002	ATV6LOM18N6
HD	1000	-	1335	1156	50	1425	2138	
ND	1600	-	2141	1854	50	2220	2442	ATV6LOM22N6
HD	1200	-	1602	1387	50	1720	2580	
ND	1900	-	2550	2208	50	2620	2882	ATV6LOM26N6
HD	1500	-	2005	1736	50	2120	3180	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

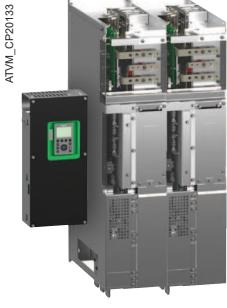
(2) These values are given for a nominal switching frequency of 2.5 kHz for use in continuous operation.  
The switching frequency is adjustable from 2 to 4.9 kHz for all ratings.

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 in the Integration Manual).

(3) Typical value for the indicated motor power and for the maximum prospective line lsc.  
(4) APM-L architecture is ready for 12-pulse supply, which allows a THDi ≤ 9%.

ATV6LOC20N6



ATV6LOC71N6

ATM\_CPB20132

ATV9L CP20132



ATV9L0C20N6

ATV9L CP20133



ATV9L0C71N6

**500 V (-15...+10%) IP00 Modular Liquid-cooled 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	
ND: Normal duty HD: Heavy duty		500 V	500 V				
kW	HP	A	kVA	kA	A	A	
<b>Altivar Process Modular Liquid-cooled</b>							
<b>THDi ≤ 48% at 100% load in Normal duty with 6-pulse supply (4)</b>							
ND	132	-	196	170	50	215	258
HD	110	-	169	146	50	175	263
ND	200	-	281	243	50	308	370
HD	160	-	230	199	50	240	360
ND	220	-	307	266	50	340	408
HD	180	-	256	222	50	275	413
ND	250	-	344	298	50	425	510
HD	220	-	307	266	50	340	510
ND	315	-	429	372	50	480	576
HD	250	-	344	298	50	384	576
ND	400	-	549	475	50	590	708
HD	315	-	442	383	50	480	720
ND	500	-	679	588	50	740	888
HD	400	-	549	475	50	590	885
ND	630	-	846	733	50	930	1116
HD	500	-	679	588	50	740	1110
ND	800	-	1070	927	50	1230	1476
HD	710	-	957	829	50	1030	1545
ND	1000	-	1335	1156	50	1425	1710
HD	800	-	1070	927	50	1130	1695
ND	1200	-	1603	1388	50	1620	1944
HD	900	-	1204	1043	50	1330	1995
ND	1300	-	1737	1504	50	1820	2184
HD	1000	-	1335	1156	50	1425	2138
ND	1600	-	2141	1854	50	2220	2664
HD	1200	-	1602	1387	50	1720	2580
ND	1900	-	2550	2208	50	2620	3144
HD	1500	-	2005	1736	50	2120	3180

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual).

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

(4) APM-L architecture is ready for 12-pulse supply, which allows a THDi ≤9%.

## Variable speed drives

Altivar Process Modular

Modular Liquid-cooled drives

Three-phase supply voltage: 600 V 50/60 Hz

ATV6L.CP20134



ATV6L0M12T6

ATV6L.CP20135



ATV6L0M18T6

## 600 V (-15...10%) IP00 Modular Liquid-cooled 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	
ND: Normal duty HD: Heavy duty								
	ND: Normal duty HD: Heavy duty	600 V	600 V					
kW	HP	A	kVA	kA	A	A		
<b>Altivar Process Modular Liquid-cooled</b>								
THDi ≤ 48% at 100% load in Normal duty with 6-pulse supply (4)								
ND	-	200	184	191	50	215	237	ATV6L0C20T6
HD	-	150	146	152	50	175	263	
ND	-	300	261	271	50	308	339	ATV6L0C28T6
HD	-	200	184	191	50	240	360	
ND	-	350	302	314	50	340	374	ATV6L0C31T6
HD	-	250	223	232	50	275	413	
ND	-	450	381	396	50	425	468	ATV6L0C40T6
HD	-	350	302	314	50	340	510	
ND	-	500	422	439	50	480	528	ATV6L0C45T6
HD	-	400	340	353	50	384	576	
ND	-	600	512	532	50	590	649	ATV6L0C56T6
HD	-	500	434	451	50	480	720	
ND	-	700	592	615	50	740	814	ATV6L0C71T6
HD	-	600	512	532	50	590	885	
ND	-	900	751	780	50	930	1023	ATV6L0C90T6
HD	-	700	592	615	50	740	1110	
ND	-	1200	996	1035	50	1230	1353	ATV6L0M12T6
HD	-	1000	838	871	50	1030	1545	
ND	-	1400	1159	1204	50	1425	1568	ATV6L0M14T6
HD	-	1100	919	955	50	1130	1695	
ND	-	1600	1325	1377	50	1620	1782	ATV6L0M16T6
HD	-	1300	1081	1123	50	1330	1995	
ND	-	1800	1490	1548	50	1820	2002	ATV6L0M18T6
HD	-	1400	1162	1208	50	1425	2138	
ND	-	2200	1823	1895	50	2220	2442	ATV6L0M22T6
HD	-	1700	1409	1464	50	1720	2580	
ND	-	2600	2156	2241	50	2620	2882	ATV6L0M26T6
HD	-	2100	1740	1808	50	2120	3180	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual).

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

(4) APM-L architecture is ready for 12-pulse supply, which allows a THDi ≤ 9%.

ATV9L\_CP20134



ATV9L0M12T6

ATV9L\_CP20135



ATV9L0M18T6

600 V (-15...+10%) IP00 Modular Liquid-cooled 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	
ND: Normal duty HD: Heavy duty		600 V	600 V					
kW	HP	A	kVA	kA	A	A		
<b>Altivar Process Modular Liquid-cooled</b>								
THDi ≤ 48% at 100% load in Normal duty with 6-pulse supply (4)								
ND	-	200	184	191	50	215	258	ATV9L0C20T6
HD	-	150	146	152	50	175	263	
ND	-	300	261	271	50	308	370	ATV9L0C28T6
HD	-	200	184	191	50	240	360	
ND	-	350	302	314	50	340	408	ATV9L0C31T6
HD	-	250	223	232	50	275	413	
ND	-	450	381	396	50	425	510	ATV9L0C40T6
HD	-	350	302	314	50	340	510	
ND	-	500	422	439	50	480	576	ATV9L0C45T6
HD	-	400	340	353	50	384	576	
ND	-	600	512	532	50	590	708	ATV9L0C56T6
HD	-	500	434	451	50	480	720	
ND	-	700	592	615	50	740	888	ATV9L0C71T6
HD	-	600	512	532	50	590	885	
ND	-	900	751	780	50	930	1116	ATV9L0C90T6
HD	-	700	592	615	50	740	1110	
ND	-	1200	996	1035	50	1230	1476	ATV9L0M12T6
HD	-	1000	838	871	50	1030	1545	
ND	-	1400	1159	1204	50	1425	1710	ATV9L0M14T6
HD	-	1100	919	955	50	1130	1695	
ND	-	1600	1325	1377	50	1620	1944	ATV9L0M16T6
HD	-	1300	1081	1123	50	1330	1995	
ND	-	1800	1490	1548	50	1820	2184	ATV9L0M18T6
HD	-	1400	1162	1208	50	1425	2138	
ND	-	2200	1823	1895	50	2220	2664	ATV9L0M22T6
HD	-	1700	1409	1464	50	1720	2580	
ND	-	2600	2156	2241	50	2620	3144	ATV9L0M26T6
HD	-	2100	1740	1808	50	2120	3180	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual).

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

(4) APM-L architecture is ready for 12-pulse supply, which allows a THDi ≤ 9%.

## Variable speed drives

Altivar Process Modular

Modular Liquid-cooled drives

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

ATV6L\_CP20136



ATV6L0M22Q6

ATV6L\_CP20136



ATV6L0M26Q6

690 V (-15...10%) IP00 Modular Liquid-cooled 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	
ND: Normal duty HD: Heavy duty		690 V	690 V					
		kW	HP	A	kVA	kA	A	
Altivar Process Modular Liquid-cooled								
THDi ≤ 48% at 100% load in Normal duty with 6-pulse supply (4)								
ND	200	-	218	261	50	215	237	ATV6L0C20Q6
HD	160	-	184	220	50	175	263	
ND	280	-	290	347	50	308	339	ATV6L0C28Q6
HD	220	-	236	282	50	240	360	
ND	315	-	322	385	50	340	374	ATV6L0C31Q6
HD	250	-	262	313	50	275	413	
ND	400	-	399	477	50	425	468	ATV6L0C40Q6
HD	315	-	322	385	50	340	510	
ND	450	-	446	533	50	480	528	ATV6L0C45Q6
HD	355	-	359	429	50	384	576	
ND	560	-	563	673	50	590	649	ATV6L0C56Q6
HD	450	-	462	552	50	480	720	
ND	710	-	700	837	50	740	814	ATV6L0C71Q6
HD	560	-	563	673	50	590	885	
ND	900	-	875	1046	50	930	1023	ATV6L0C90Q6
HD	710	-	700	837	50	740	1110	
ND	1200	-	1260	1506	50	1230	1353	ATV6L0M12Q6
HD	1000	-	976	1166	50	1030	1545	
ND	1400	-	1355	1619	50	1425	1568	ATV6L0M14Q6
HD	1100	-	1070	1279	50	1130	1695	
ND	1600	-	1547	1849	50	1620	1782	ATV6L0M16Q6
HD	1300	-	1262	1508	50	1330	1995	
ND	1800	-	1740	2080	50	1820	2002	ATV6L0M18Q6
HD	1400	-	1357	1622	50	1425	2138	
ND	2200	-	2128	2543	50	2220	2442	ATV6L0M22Q6
HD	1700	-	1644	1965	50	1720	2580	
ND	2600	-	2517	3008	50	2620	2882	ATV6L0M26Q6
HD	2100	-	2030	2426	50	2120	3180	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual).

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

(4) APM-L architecture is ready for 12-pulse supply, which allows a THDi ≤ 9%.

Altivar Process Modular

Modular Liquid-cooled drives

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

ATV9L\_CP20136



ATV9L0M22Q6

ATV9L\_CP20136



ATV9L0M26Q6

**690 V (-15...10%) IP00 Modular Liquid-cooled drives (1)**

Motor Power indicated on rating plate (2)	Line supply			Altivar Process			Reference
	Line current (3)	Apparent power (3)	Maximum prospective line Isc	Maximum continuous current (2)	Max. transient current for 60 s		
ND: Normal duty	690 V	690 V					
HD: Heavy duty							
kW	HP	A	kVA	kA	A	A	
<b>Altivar Process Modular Liquid-cooled</b>							
<b>THDi ≤ 48% at 100% load in Normal duty with 6-pulse supply (4)</b>							
ND 200	-	218	261	50	215	258	ATV9L0C20Q6
HD 160	-	184	220	50	175	263	
ND 280	-	290	347	50	308	370	ATV9L0C28Q6
HD 220	-	236	282	50	240	360	
ND 315	-	322	385	50	340	408	ATV9L0C31Q6
HD 250	-	262	313	50	275	413	
ND 400	-	399	477	50	425	510	ATV9L0C40Q6
HD 315	-	322	385	50	340	510	
ND 450	-	446	533	50	480	576	ATV9L0C45Q6
HD 355	-	359	429	50	384	576	
ND 560	-	563	673	50	590	708	ATV9L0C56Q6
HD 450	-	462	552	50	480	720	
ND 710	-	700	837	50	740	888	ATV9L0C71Q6
HD 560	-	563	673	50	590	885	
ND 900	-	875	1046	50	930	1116	ATV9L0C90Q6
HD 710	-	700	837	50	740	1110	
ND 1200	-	1260	1506	50	1230	1476	ATV9L0M12Q6
HD 1000	-	976	1166	50	1030	1545	
ND 1400	-	1355	1619	50	1425	1710	ATV9L0M14Q6
HD 1100	-	1070	1279	50	1130	1695	
ND 1600	-	1547	1849	50	1620	1944	ATV9L0M16Q6
HD 1300	-	1262	1508	50	1330	1995	
ND 1800	-	1740	2080	50	1820	2184	ATV9L0M18Q6
HD 1400	-	1357	1622	50	1425	2138	
ND 2200	-	2128	2543	50	2220	2664	ATV9L0M22Q6
HD 1700	-	1644	1965	50	1720	2580	
ND 2600	-	2517	3008	50	2620	3144	ATV9L0M26Q6
HD 2100	-	2030	2426	50	2120	3180	

(1) Integrated motor chokes allowing a shielded motor cable length up to 300 m/984 ft in category C3.

(2) 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 to 4.9 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 in the Integration Manual).

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

(4) APM-L architecture is ready for 12-pulse supply, which allows a THDi ≤9%.



ATV9.CP19039B

MODBUOC16Q4APM

Braking units 400 V power supply										
Drive		Braking unit								
Nominal power		Reference	Power rating		Minimum resistor value	Braking power			Reference	
ND: Normal duty	HD: Heavy duty		kW	HP		Cycle (1)	1	2	3	
					Ω					
<b>400 V power supply - Standard drives</b>										
ND	110	—	ATV9A0C11Q4	160	—	3x 6.7	198	116.16	75	MODBUOC16Q4APM
HD	90	—								
ND	132	—	ATV9A0C13Q4							
HD	110	—								
ND	160	—	ATV9A0C16Q4							
HD	132	—								
ND	200	—	ATV9A0C20Q4	315	—	3x 3.35	375	220	130	MODBUOC31Q4APM
HD	160	—								
ND	250	—	ATV9A0C25Q4							
HD	200	—								
ND	315	—	ATV9A0C31Q4							
HD	250	—								
ND	355	—	ATV9A0C35Q4	500	—	3x 2.23	600	352	225	MODBUOC50Q4APM
HD	280	—								
ND	400	—	ATV9A0C40Q4							
HD	315	—								
ND	450	—	ATV9A0C45Q4							
HD	355	—								
ND	500	—	ATV9A0C50Q4							
HD	400	—								
ND	560	—	ATV9A0C56Q4	630	—	6x 3.35	750	440	260	MODBUOC63Q4APM
ND	630	—	ATV9A0C63Q4							
ND	710	—	ATV9A0C71Q4	800	—	6x 2.68 or 3x 2.23 + 3x 3.35	945	554.4	355	MODBUOC80Q4APM
ND	800	—	ATV9A0C80Q4							
<b>400 V power supply - Low Harmonic/Regenerative drives</b>										
ND	110	—	ATV9B0C11Q4	160	—	3x 6.7	198	116.16	75	MODBUOC16Q4APM
HD	90	—								
ND	132	—	ATV9B0C13Q4							
HD	110	—								
ND	160	—	ATV9B0C16Q4							
HD	132	—								
ND	200	—	ATV9B0C20Q4	315	—	3x 3.35	375	220	130	MODBUOC31Q4APM
HD	160	—								
ND	250	—	ATV9B0C25Q4							
HD	200	—								
ND	315	—	ATV9B0C31Q4							
HD	250	—								
ND	355	—	ATV9B0C35Q4	500	—	3x 2.23	600	352	225	MODBUOC50Q4APM
HD	280	—								
ND	400	—	ATV9B0C40Q4							
HD	315	—								
ND	450	—	ATV9B0C45Q4							
HD	355	—								
ND	500	—	ATV9B0C50Q4							
HD	400	—								
HD	450	—	ATV9B0C56Q4							
HD	500	—	ATV9B0C63Q4							
HD	560	—	ATV9B0C71Q4							
HD	630	—	ATV9B0C80Q4							

(1) Value of the average power that can be dissipated at 50 °C/122 °F. For a 240 s period:

- Cycle 1: 12 s braking at overload (=5%)
- Cycle 2: 120 s braking at overload (=50%)
- Cycle 3: 240 s continuous braking (=100%)



MODBUOC16Q4APM

Braking units 400 V power supply (continued)										
Drive		Braking unit								
Nominal power		Reference	Power rating		Minimum resistor value	Braking power			Reference	
ND: Normal duty	HD: Heavy duty		kW	HP		kW	HP	Ω		
400 V power supply - Liquid-cooled drives										
ND	132	-	ATV9L0C13Q4	160	-	3x 6.7	198	116.16	75	MODBUOC16Q4APM
HD	110	-								
ND	160	-	ATV9L0C16Q4							
HD	132	-								
ND	200	-	ATV9L0C20Q4	315	-	3x 3.35	375	220	130	MODBUOC31Q4APM
HD	160	-								
ND	250	-	ATV9L0C25Q4							
HD	200	-								
ND	315	-	ATV9L0C31Q4							
HD	250	-								
ND	400	-	ATV9L0C40Q4	500	-	3x 2.23	600	352	225	MODBUOC50Q4APM
HD	315	-								
ND	500	-	ATV9L0C50Q4							
HD	400	-								
ND	630	-	ATV9L0C63Q4	630	-	6x 3.35	750	440	260	MODBUOC63Q4APM
HD	500	-								
ND	800	-	ATV9L0C80Q4	800	-	6x 2.68 or 3x 2.23 + 3x 3.35	945	554.4	355	MODBUOC80Q4APM
HD	630	-								
ND	900	-	ATV9L0C90Q4							
HD	710	-								
ND	1000	-	ATV9L0M10Q4							
HD	800	-								
ND	1200	-	ATV9L0M12Q4							
HD	1000	-								
ND	1500	-	ATV9L0M15Q4							
HD	1200	-								
ND	1800	-	ATV9L0M18Q4							
HD	1400	-								

(1) Value of the average power that can be dissipated at 50 °C/122 °F. For a 240 s period:

- Cycle 1: 12 s braking at overload (=5%)
- Cycle 2: 120 s braking at overload (=50%)
- Cycle 3: 240 s continuous braking (=100%)



ATV9C19039B

MODBUOC16R4APM

Braking units 440 V power supply										
Drive		Braking unit								
Nominal power		Reference	Power rating		Minimum resistor value	Braking power			Reference	
ND: Normal duty	HD: Heavy duty		kW	HP		kW	HP	Ω		
<b>440 V power supply - Standard drives</b>										
ND	110	—	ATV9A0C11R4	160	—	3x 6.7	198	116.16	75	MODBUOC16R4APM
HD	90	—								
ND	132	—	ATV9A0C13R4							
HD	110	—								
ND	160	—	ATV9A0C16R4							
HD	132	—								
ND	200	—	ATV9A0C20R4	315	—	3x 3.35	375	220	130	MODBUOC31R4APM
HD	160	—								
ND	250	—	ATV9A0C25R4							
HD	200	—								
ND	315	—	ATV9A0C31R4							
HD	250	—								
ND	355	—	ATV9A0C35R4	500	—	3x 2.23	600	352	225	MODBUOC50R4APM
HD	280	—								
ND	400	—	ATV9A0C40R4							
HD	315	—								
ND	450	—	ATV9A0C45R4							
HD	355	—								
ND	500	—	ATV9A0C50R4							
HD	400	—								
ND	560	—	ATV9A0C56R4	630	—	6x 3.35	750	440	260	MODBUOC63R4APM
ND	630	—	ATV9A0C63R4							
ND	710	—	ATV9A0C71R4	800	—	6x 2.68 or 3x 2.23 + 3x 3.35	945	554.4	355	MODBUOC80R4APM
ND	800	—	ATV9A0C80R4							
<b>440 V power supply - Low Harmonic/Regenerative drives</b>										
ND	110	—	ATV9B0C11R4	160	—	3x 6.7	198	116.16	75	MODBUOC16R4APM
HD	90	—								
ND	132	—	ATV9B0C13R4							
HD	110	—								
ND	160	—	ATV9B0C16R4							
HD	132	—								
ND	200	—	ATV9B0C20R4	315	—	3x 3.35	375	220	130	MODBUOC31R4APM
HD	160	—								
ND	250	—	ATV9B0C25R4							
HD	200	—								
ND	315	—	ATV9B0C31R4							
HD	250	—								
ND	355	—	ATV9B0C35R4	500	—	3x 2.23	600	352	225	MODBUOC50R4APM
HD	280	—								
ND	400	—	ATV9B0C40R4							
HD	315	—								
ND	450	—	ATV9B0C45R4							
HD	355	—								
ND	500	—	ATV9B0C50R4							
HD	400	—								
HD	450	—	ATV9B0C56Q4							
HD	500	—	ATV9B0C63Q4							
HD	560	—	ATV9B0C71Q4							
HD	630	—	ATV9B0C80Q4							

(1) Value of the average power that can be dissipated at 50 °C/122 °F. For a 240 s period:

- Cycle 1: 12 s braking at overload (=5%)
- Cycle 2: 120 s braking at overload (=50%)
- Cycle 3: 240 s continuous braking (=100%)

Altivar Process Modular

Braking units 440 V power supply

Liquid-cooled drives



MODBUOC16R4APM

Braking units 440 V power supply (continued)										
Drive		Braking unit								
Nominal power		Reference	Power rating		Minimum resistor value	Braking power			Reference	
ND: Normal duty	HD: Heavy duty		kW	HP		kW	HP	Ω		
440 V power supply - Liquid-cooled drives										
ND	132	-	ATV9L0C13R4	160	-	3x 6.7	198	116.16	75	MODBUOC16R4APM
HD	110	-								
ND	160	-	ATV9L0C16R4							
HD	132	-								
ND	200	-	ATV9L0C20R4	315	-	3x 3.35	375	220	130	MODBUOC31R4APM
HD	160	-								
ND	250	-	ATV9L0C25R4							
HD	200	-								
ND	315	-	ATV9L0C31R4							
HD	250	-								
ND	400	-	ATV9L0C40R4	500	-	3x 2.23	600	352	225	MODBUOC50R4APM
HD	315	-								
ND	500	-	ATV9L0C50R4							
HD	400	-								
ND	630	-	ATV9L0C63R4	630	-	6x 3.35	750	440	260	MODBUOC63R4APM
HD	500	-								
ND	800	-	ATV9L0C80R4	800	-	6x 2.68 or 3x 2.23 + 3x 3.35	945	554.4	355	MODBUOC80R4APM
HD	630	-								
ND	900	-	ATV9L0C90R4							
HD	710	-								
ND	1000	-	ATV9L0M10R4							
HD	800	-								
ND	1200	-	ATV9L0M12R4							
HD	1000	-								
ND	1500	-	ATV9L0M15R4							
HD	1200	-								
ND	1800	-	ATV9L0M18R4							
HD	1400	-								

(1) Value of the average power that can be dissipated at 50 °C/122 °F. For a 240 s period:

- Cycle 1: 12 s braking at overload (=5%)
- Cycle 2: 120 s braking at overload (=50%)
- Cycle 3: 240 s continuous braking (=100%)



MODBUOC80T4APM

ATV9A0C19057

**Braking units 480 V power supply**

Drive		Braking unit			Reference	Braking power Cycle (1)	Reference			
Nominal power	Reference	Power rating	Minimum resistor value	1	2	3				
kW	HP	kW	HP	Ω						
<b>480 V power supply - Standard drives</b>										
ND	—	150	ATV9A0C11T4	—	250	3x 6.7	198	116.16	75	MODBUOC16T4APM
HD	—	125								
ND	—	200	ATV9A0C13T4							
HD	—	150								
ND	—	250	ATV9A0C16T4							
HD	—	200								
ND	—	300	ATV9A0C20T4	—	500	3x 3.35	375	220	130	MODBUOC31T4APM
HD	—	250								
ND	—	400	ATV9A0C25T4							
HD	—	300								
ND	—	500	ATV9A0C31T4							
HD	—	400								
ND	—	550	ATV9A0C35T4	—	700	3x 2.23	600	352	225	MODBUOC50T4APM
HD	—	450								
ND	—	600	ATV9A0C40T4							
HD	—	500								
ND	—	650	ATV9A0C45T4							
HD	—	550								
ND	—	700	ATV9A0C50T4							
HD	—	600								
ND	—	800	ATV9A0C56T4	—	900	6x 3.35	750	440	260	MODBUOC63T4APM
ND	—	900	ATV9A0C63T4							
ND	—	1000	ATV9A0C71T4	—	1100	6x 2.68 or 3x 2.23 + 3x 3.35	945	554.4	355	MODBUOC80T4APM
ND	—	1100	ATV9A0C80T4							

**480 V power supply - Low Harmonic/Regenerative drives**

ND	—	150	ATV9B0C11T4	—	250	3x 6.7	198	116.16	75	MODBUOC16T4APM
HD	—	125								
ND	—	200	ATV9B0C13T4							
HD	—	150								
ND	—	250	ATV9B0C16T4							
HD	—	200								
ND	—	300	ATV9B0C20T4	—	500	3x 3.35	375	220	130	MODBUOC31T4APM
HD	—	250								
ND	—	400	ATV9B0C25T4							
HD	—	300								
ND	—	500	ATV9B0C31T4							
HD	—	400								
ND	—	550	ATV9B0C35T4	—	700	3x 2.23	600	352	225	MODBUOC50T4APM
HD	—	450								
ND	—	600	ATV9B0C40T4							
HD	—	500								
ND	—	650	ATV9B0C45T4							
HD	—	550								
ND	—	700	ATV9B0C50T4							
HD	—	600								
HD	—	650	ATV9B0C56T4							
HD	—	700	ATV9B0C63T4							
HD	—	800	ATV9B0C71T4							
HD	—	900	ATV9B0C80T4							

(1) Value of the average power that can be dissipated at 50 °C/122 °F. For a 240 s period:

- Cycle 1: 12 s braking at overload (=5%)
- Cycle 2: 120 s braking at overload (=50%)
- Cycle 3: 240 s continuous braking (=100%)



ATV9L0C13T4

MODBUOC16T4APM

Braking units 480 V power supply (continued)										
Drive		Braking unit								
Nominal power		Reference	Power rating		Minimum resistor value	Braking power			Reference	
ND: Normal duty	HD: Heavy duty		kW	HP	Ω	Cycle (1)	1	2	3	
<b>480 V power supply - Liquid-cooled drives</b>										
ND	-	200	ATV9L0C13T4	-	250	3x 6.7	198	116.16	75	MODBUOC16T4APM
HD	-	150								
ND	-	250	ATV9L0C16T4							
HD	-	200								
ND	-	300	ATV9L0C20T4	-	500	3x 3.35	375	220	130	MODBUOC31T4APM
HD	-	250								
ND	-	400	ATV9L0C25T4							
HD	-	300								
ND	-	500	ATV9L0C31T4							
HD	-	400								
ND	-	600	ATV9L0C40T4	-	700	3x 2.23	600	352	225	MODBUOC50T4APM
HD	-	500								
ND	-	700	ATV9L0C50T4							
HD	-	600								
ND	-	900	ATV9L0C63T4	-	900	6x 3.35	750	440	260	MODBUOC63T4APM
HD	-	700								
ND	-	1100	ATV9L0C80T4	-	1100	6x 2.68 or 3x 2.23 + 3x 3.35	945	554.4	355	MODBUOC80T4APM
HD	-	900								
ND	-	1300	ATV9L0C90T4							
HD	-	1000								
ND	-	1400	ATV9L0M10T4							
HD	-	1100								
ND	-	1700	ATV9L0M12T4							
HD	-	1400								
ND	-	2200	ATV9L0M15T4							
HD	-	1700								
ND	-	2500	ATV9L0M18T4							
HD	-	2000								

(1) Value of the average power that can be dissipated at 50 °C/122 °F. For a 240 s period:

- Cycle 1: 12 s braking at overload (=5%)
- Cycle 2: 120 s braking at overload (=50%)
- Cycle 3: 240 s continuous braking (=100%)



MODBUOC40N6APM

Braking units 500 V power supply										
Drive		Braking unit								
Nominal power	Reference	Power rating		Minimum resistor value	Braking power			Reference		
ND: Normal duty HD: Heavy duty		kW	HP	Ω	1	2	3			
<b>500 V power supply - Standard drives</b>										
ND 75	—	ATV9A0C11N6	132	—	3x 11	240	140.8	85	MODBUOC20N6APM	
HD 55	—									
ND 90	—	ATV9A0C13N6								
HD 75	—									
ND 110	—	ATV9A0C16N6								
HD 90	—									
ND 132	—	ATV9A0C20N6								
HD 110	—									
ND 160	—	ATV9A0C25N6	280	—	3x 5.5	472.5	277.2	165	MODBUOC40N6APM	
HD 132	—									
ND 220	—	ATV9A0C31N6								
HD 160	—									
ND 280	—	ATV9A0C40N6								
HD 220	—									
ND 355	—	ATV9A0C50N6	450	—	3x 3.67	750	440	285	MODBUOC63N6APM	
HD 280	—									
ND 450	—	ATV9A0C63N6								
HD 355	—									
ND 560	—	ATV9A0C80N6	560	—	6x 5.5	945	554.4	330	MODBUOC80N6APM	
HD 450	—									
ND 710	—	ATV9A0M10N6	710	—	6x 4.4 or 3x 3.67 + 3x 5.5	1200	704	450	MODBUOM10N6APM	
HD 560	—									
ND 800	—	ATV9A0M12N6	800	—	6x 3.67	1500	785	550	MODBUOM12N6APM	
HD 710	—									
<b>500 V power supply - Liquid-cooled drives</b>										
ND 132	-	ATV9L0C20N6	132	—	3x 11	240	140.8	85	MODBUOC20N6APM	
HD 110	-									
ND 200	-	ATV9L0C28N6	280	—	3x 5.5	472.5	277.2	165	MODBUOC40N6APM	
HD 160	-									
ND 220	-	ATV9L0C31N6								
HD 180	-									
ND 250	-	ATV9L0C40N6								
HD 220	-									
ND 315	-	ATV9L0C45N6	450	—	3x 3.67	750	440	285	MODBUOC63N6APM	
HD 250	-									
ND 400	-	ATV9L0C56N6								
HD 315	-									
ND 500	-	ATV9L0C71N6	560	—	6x 5.5	945	554.4	330	MODBUOC80N6APM	
HD 400	-									
ND 630	-	ATV9L0C90N6	710	—	6x 4.4 or 3x 3.67 + 3x 5.5	1200	704	450	MODBUOM10N6APM	
HD 500	-									
ND 800	-	ATV9L0M12N6	800	—	6x 3.67	1500	785	550	MODBUOM12N6APM	
HD 710	-									
ND 1000	-	ATV9L0M14N6								
HD 800	-									
ND 1200	-	ATV9L0M16N6								
HD 900	-									
ND 1300	-	ATV9L0M18N6								
HD 1000	-									
ND 1600	-	ATV9L0M22N6								
HD 1200	-									
ND 1900	-	ATV9L0M26N6								
HD 1500	-									

(1) Value of the average power that can be dissipated at 50 °C/122 °F. For a 240 s period:

- Cycle 1: 12 s braking at overload (=5%)
- Cycle 2: 120 s braking at overload (=50%)
- Cycle 3: 240 s continuous braking (=100%)



MODBUOC40T6APM

Braking units 600 V power supply										
Drive		Braking unit								
Nominal power	Reference	Power rating		Minimum resistor value	Braking power			Reference		
ND: Normal duty HD: Heavy duty					Cycle (1)			1	2	3
kW	HP	kW	HP	Ω						
<b>600 V power supply - Standard drives</b>										
ND -	125	ATV9A0C11T6	-	200	3x 11	240	140.8	85	MODBUOC20T6APM	
HD -	100									
ND -	150	ATV9A0C13T6								
HD -	125									
ND -	175	ATV9A0C16T6								
HD -	150									
ND -	200	ATV9A0C20T6								
HD -	175									
ND -	250	ATV9A0C25T6	-	450	3x 5.5	472.5	277.2	165	MODBUOC40T6APM	
HD -	200									
ND -	350	ATV9A0C31T6								
HD -	250									
ND -	450	ATV9A0C40T6								
HD -	350									
ND -	550	ATV9A0C50T6	-	650	3x 3.67	750	440	285	MODBUOC63T6APM	
HD -	450									
ND -	650	ATV9A0C63T6								
HD -	550									
ND -	800	ATV9A0C80T6	-	800	6x 5.5	945	554.4	330	MODBUOC80T6APM	
HD -	650									
ND -	1000	ATV9A0M10T6	-	1000	6x 4.4 or 3x 3.67 + 3x 5.5	1200	704	450	MODBUOM10T6APM	
HD -	800									
ND -	1200	ATV9A0M12T6	-	1200	6x 3.67	1500	785	550	MODBUOM12T6APM	
HD -	1000									
<b>600 V power supply - Liquid-cooled drives</b>										
ND -	200	ATV9L0C20T6	-	200	3x 11	240	140.8	85	MODBUOC20T6APM	
HD -	150									
ND -	300	ATV9L0C28T6	-	450	3x 5.5	472.5	277.2	165	MODBUOC40T6APM	
HD -	200									
ND -	350	ATV9L0C31T6								
HD -	250									
ND -	450	ATV9L0C40T6								
HD -	350									
ND -	500	ATV9L0C45T6	-	650	3x 3.67	750	440	285	MODBUOC63T6APM	
HD -	400									
ND -	600	ATV9L0C56T6								
HD -	500									
ND -	700	ATV9L0C71T6	-	800	6x 5.5	945	554.4	330	MODBUOC80T6APM	
HD -	600									
ND -	900	ATV9L0C90T6	-	1000	6x 4.4 or 3x 3.67 + 3x 5.5	1200	704	450	MODBUOM10T6APM	
HD -	700									
ND -	1200	ATV9L0M12T6	-	1200	6x 3.67	1500	785	550	MODBUOM12T6APM	
HD -	1000									
ND -	1400	ATV9L0M14T6								
HD -	1100									
ND -	1600	ATV9L0M16T6								
HD -	1300									
ND -	1800	ATV9L0M18T6								
HD -	1400									
ND -	2200	ATV9L0M22T6								
HD -	1700									
ND -	2600	ATV9L0M26T6								
HD -	2100									

(1) Value of the average power that can be dissipated at 50 °C/122 °F. For a 240 s period:

- Cycle 1: 12 s braking at overload (=5%)
- Cycle 2: 120 s braking at overload (=50%)
- Cycle 3: 240 s continuous braking (=100%)



MODBUOM12Q6APM

Braking units 690 V power supply										
Drive		Braking unit								
Nominal power		Reference	Power rating		Minimum resistor value	Braking power			Reference	
ND: Normal duty	HD: Heavy duty		kW	HP		Cycle (1)	2	3		
					Ω	1	2	3		
<b>690 V power supply - Standard drives</b>										
ND	110	—	ATV9A0C11Q6	200	—	3x 11	240	140.8	85	MODBUOC20Q6APM
HD	90	—								
ND	132	—	ATV9A0C13Q6							
HD	110	—								
ND	160	—	ATV9A0C16Q6							
HD	132	—								
ND	200	—	ATV9A0C20Q6							
HD	160	—								
ND	250	—	ATV9A0C25Q6	400	—	3x 5.5	472.5	277.2	165	MODBUOC40Q6APM
HD	200	—								
ND	315	—	ATV9A0C31Q6							
HD	250	—								
ND	400	—	ATV9A0C40Q6							
HD	315	—								
ND	500	—	ATV9A0C50Q6	630	—	3x 3.67	750	440	285	MODBUOC63Q6APM
HD	400	—								
ND	630	—	ATV9A0C63Q6							
HD	500	—								
ND	800	—	ATV9A0C80Q6	800	—	6x 5.5	945	554.4	330	MODBUOC80Q6APM
HD	630	—								
ND	1000	—	ATV9A0M10Q6	1000	—	6x 4.4 or 3x 3.67 + 3x 5.5	1200	704	450	MODBUOM10Q6APM
HD	800	—								
ND	1200	—	ATV9A0M12Q6	1200	—	6x 3.67	1500	785	550	MODBUOM12Q6APM
HD	1000	—								
<b>690 V power supply - Liquid-cooled drives</b>										
ND	200	-	ATV9L0C20Q6	200	—	3x 11	240	140.8	85	MODBUOC20Q6APM
HD	160	-								
ND	280	-	ATV9L0C28Q6	400	—	3x 5.5	472.5	277.2	165	MODBUOC40Q6APM
HD	220	-								
ND	315	-	ATV9L0C31Q6							
HD	250	-								
ND	400	-	ATV9L0C40Q6							
HD	315	-								
ND	450	-	ATV9L0C45Q6	630	—	3x 3.67	750	440	285	MODBUOC63Q6APM
HD	355	-								
ND	560	-	ATV9L0C56Q6							
HD	450	-								
ND	710	-	ATV9L0C71Q6	800	—	6x 5.5	945	554.4	330	MODBUOC80Q6APM
HD	560	-								
ND	900	-	ATV9L0C90Q6	1000	—	6x 4.4 or 3x 3.67 + 3x 5.5	1200	704	450	MODBUOM10Q6APM
HD	710	-								
ND	1200	-	ATV9L0M12Q6	1200	—	6x 3.67	1500	785	550	MODBUOM12Q6APM
HD	1000	-								
ND	1400	-	ATV9L0M14Q6							
HD	1100	-								
ND	1600	-	ATV9L0M16Q6							
HD	1300	-								
ND	1800	-	ATV9L0M18Q6							
HD	1400	-								
ND	2200	-	ATV9L0M22Q6							
HD	1700	-								
ND	2600	-	ATV9L0M26Q6							
HD	2100	-								

(1) Value of the average power that can be dissipated at 50 °C/122 °F. For a 240 s period:

- Cycle 1: 12 s braking at overload (=5%)
- Cycle 2: 120 s braking at overload (=50%)
- Cycle 3: 240 s continuous braking (=100%)

## Combinations

# Variable speed drives CÔNG TY CỔ PHẦN CÔNG NGHỆ HÒA LONG

Altivar Process Modular  
Standard architectures without braking unit  
400...480 V power supply

## Combinations (continued)

Altivar Process Modular  
Standard architectures without braking unit  
500...690 V power supply

Table showing possible combinations to create architectures

Motor	Drive	Control units	Power modules	Front covers	Cabinets for IP 20/21/23/40/41/43/54 integration					
					400 mm width	600 mm width	800 mm width	1,000 mm width		
<b>Standard drives three-phase supply voltage: 400...480 V 50/60 Hz</b>										
ND 110...160		ATV6A0C11Q4...C16Q4	1 x APM6A0CTLN401	1 x APM1A0C16N401	-	1	-	-		
HD 90...132		ATV6A0C11R4...C16R4	1 x APM9A0CTLN401			-	-	-		
	ND 150...250	ATV9A0C11Q4...C16Q4	1 x APM6A0CTLN401			-	-	-		
	HD 125...200	ATV6A0C11T4...C16T4	1 x APM9A0CTLN401			-	-	-		
ND 200...315		ATV6A0C20Q4...C31Q4	1 x APM6A0CTLN401	2 x APM1A0C16N401	1 x VW3A97A01	-	1	-		
HD 160...250		ATV6A0C20R4...C31R4	1 x APM9A0CTLN401			-	-	-		
	ND 300...500	ATV9A0C20Q4...C31Q4	1 x APM6A0CTLN401			-	-	-		
	HD 250...400	ATV9A0C20R4...C31R4	1 x APM9A0CTLN401			-	-	-		
ND 355...500		ATV6A0C35Q4...C50Q4	1 x APM6A0CTLN401	3 x APM1A0C16N401	2 x VW3A97A01	-	-	1		
HD 280...400		ATV6A0C35R4...C50R4	1 x APM9A0CTLN401			-	-	-		
	ND 550...700	ATV9A0C35Q4...C50Q4	1 x APM6A0CTLN401			-	-	-		
	HD 450...600	ATV9A0C35R4...C50R4	1 x APM9A0CTLN401			-	-	-		
ND 560...630		ATV6A0C56Q4...C63Q4	1 x APM6A0CTLN401	4 x APM1A0C16N401	3 x VW3A97A01	-	2	-		
HD 450...500		ATV6A0C56R4...C63R4	1 x APM9A0CTLN401			-	-	-		
	ND 800...900	ATV6A0C56T4...C63T4	1 x APM6A0CTLN401			-	-	-		
	HD 650...700	ATV9A0C56T4...C63T4	1 x APM9A0CTLN401			-	-	-		
ND 710...800		ATV6A0C71Q4...C80Q4	1 x APM6A0CTLN401	5 x APM1A0C16N401	4 x VW3A97A01	-	1	1		
HD 560...630		ATV6A0C71R4...C80R4	1 x APM9A0CTLN401			-	1	-		
	ND 1000...1100	ATV9A0C71Q4...C80Q4	1 x APM6A0CTLN401			-	1	-		
	HD 800...900	ATV9A0C71R4...C80R4	1 x APM9A0CTLN401			-	1	-		
<b>Low Harmonic/Regenerative drives three-phase supply voltage: 400...480 V 50/60 Hz</b>										
ND 110...160		ATV6B0C11Q4...C16Q4	1 x APM6B0CTLN4	1 x APM1B0C16N4	-	-	1	-		
HD 90...132		ATV6B0C11R4...C16R4	1 x APM9B0CTLN4			-	-	-		
	ND 150...250	ATV9B0C11Q4...C16Q4	1 x APM6B0CTLN4			-	-	-		
	HD 125...200	ATV9B0C11T4...C16T4	1 x APM9B0CTLN4			-	-	-		
ND 200...315		ATV6B0C20Q4...C31Q4	1 x APM6B0CTLN4	2 x APM1B0C16N4	1 x VW3A97B01	-	-	1		
HD 160...250		ATV6B0C20R4...C31R4	1 x APM9B0CTLN4			-	-	-		
	ND 300...500	ATV6B0C20T4...C31T4	1 x APM6B0CTLN4			-	-	-		
	HD 250...400	ATV9B0C20T4...C31T4	1 x APM9B0CTLN4			-	-	-		
ND 355...500		ATV6B0C35Q4...C50Q4	1 x APM6B0CTLN4	3 x APM1B0C16N4	2 x VW3A97B01	-	1	-		
HD 280...400		ATV6B0C35R4...C50R4	1 x APM9B0CTLN4			-	-	-		
	ND 550...700	ATV9B0C35Q4...C50Q4	1 x APM6B0CTLN4			-	-	-		
	HD 450...600	ATV9B0C35R4...C50R4	1 x APM9B0CTLN4			-	-	-		
ND 560...630		ATV6B0C56Q4...C63Q4	1 x APM6B0CTLN4	4 x APM1B0C16N4	3 x VW3A97B01	-	-	2		
HD 450...500		ATV6B0C56R4...C63R4	1 x APM9B0CTLN4			-	-	-		
	ND 800...900	ATV6B0C56T4...C63T4	1 x APM6B0CTLN4			-	-	-		
	HD 650...700	ATV9B0C56T4...C63T4	1 x APM9B0CTLN4			-	-	-		
ND 710...800		ATV6B0C71Q4...C80Q4	1 x APM6B0CTLN4	5 x APM1B0C16N4	4 x VW3A97B01	-	1	-		
HD 560...630		ATV6B0C71R4...C80R4	1 x APM9B0CTLN4			-	1	-		
	ND 1000...1100	ATV9B0C71Q4...C80Q4	1 x APM6B0CTLN4			-	1	-		
	HD 800...900	ATV9B0C71R4...C80R4	1 x APM9B0CTLN4			-	1	-		
<b>Pages</b>										
(1) These cabinet recommendations are for standard integration. For flexible solutions, please contact your Schneider Electric supplier.										
(2) Cabinets must have a minimum depth of 600 mm/23.6 in., and a minimum height of:										
■ 2,150 mm/84.6 in. (including the roof-top extension) for IP20/21/23/40/41/43 standard cabinet integration										
■ 2,350 mm/92.5 in. (including the plinth and roof-top extension) for IP54 standard cabinet integration										

Table showing possible combinations to create architectures

Motor	Drive	Control units	Power modules	Front covers	Cabinets for IP 20/21/23/40/41/43/54 integration			
					400 mm width	600 mm width	800 mm width	1,000 mm width
<b>Standard drives three-phase supply voltage: 500...690 V 50/60 Hz</b>								
ND 75...132		ATV6A0C11N6...C20N6	1 x APM6A0CTLY6	1 x APM1A0C20Y6	-	1	-	-
HD 55...110		ATV9A0C11N6...C20N6	1 x APM9A0CTLY6			-	-	-
ND 110...200		ATV6A0C16Q6...C20Q6	1 x APM6A0CTLY6			-	-	-
HD 90...160		ATV9A0C16Q6...C20Q6	1 x APM9A0CTLY6			-	-	-
	ND 175...200	ATV6A0C16T6...C20T6	1 x APM6A0CTLY6	1 x APM1A0C20Y6	-	1	-	-
	HD 150...175	ATV9A0C16T6...C20T6	1 x APM6A0CTLY6			-	-	-
ND 160...280		ATV6A0C25N6...C40N6	1 x APM6A0CTLY6			-	-	-
HD 132...220		ATV9A0C25N6...C40N6	1 x APM9A0CTLY6			-	-	-
ND 250...400		ATV6A0C25Q6...C40Q6	1 x APM6A0CTLY6	2 x APM1A0C20Y6	1 x VW3A97A01	-	1	-
HD 200...315		ATV9A0C25Q6...C40Q6	1 x APM9A0CTLY6			-	-	-
	ND 250...450	ATV6A0C25T6...C40T6	1 x APM6A0CTLY6			-	-	-
	HD 200...350	ATV9A0C25T6...C40T6	1 x APM9A0CTLY6			-	-	-
ND 355...450		ATV6A0C50N6...C63N6	1 x APM6A0CTLY6	3 x APM1A0C20Y6	2 x VW3A97A01	-	-	1
HD 280...355		ATV9A0C50N6...C63N6	1 x APM9A0CTLY6			-	-	-
ND 500...630		ATV6A0C50Q6...C63Q6	1 x APM6A0CTLY6</td					

Altivar Process Modular  
Standard architectures with braking unit  
400...480 V power supply

Table showing possible combinations to create architectures

Motor		Braking units	Control units for braking units	Braking unit power modules	Front covers for braking units	Cabinets (drive + braking unit) for IP 20/21/23/40/41/43/54 integration			
						400 mm width	600 mm width	800 mm width	1,000 mm width
ND: Normal duty									
HD: Heavy duty									
kW	HP								
<b>Standard drives three-phase supply voltage: 400...480 V 50/60 Hz</b>									
ND 110...160		1 x MODBUOC16Q4PM	1 x APMB0C0CTLN4	1 x APMB0C50N4	-	-	1	-	-
HD 90...132		1 x MODBUOC16R4PM							
	ND 150...250	ND 125...200	1 x MODBUOC16T4APM						
ND 200...315		1 x MODBUOC31Q4APM	1 x APMB0C0CTLN4	1 x APMB0C50N4	-	-	-	1	-
HD 160...250		1 x MODBUOC31R4APM							
	ND 300...500	ND 250...400	1 x MODBUOC31T4APM						
ND 355...500		1 x MODBUOC50Q4APM	1 x APMB0C0CTLN4	1 x APMB0C50N4	-	1	-	1	-
HD 280...400		1 x MODBUOC50R4APM							
	ND 550...700	ND 450...600	1 x MODBUOC50T4APM						
ND 560...630		2 x MODBUOC63Q4APM	1 x APMB0C0CTLN4	2 x APMB0C50N4	1 x VW3A97A01	-	-	2	-
HD 450...500		2 x MODBUOC63R4APM							
	ND 800...900	ND 650...700	2 x MODBUOC63T4APM						
ND 710...800		2 x MODBUOC80Q4APM	1 x APMB0C0CTLN4	2 x APMB0C50N4	1 x VW3A97A01	-	2	1	-
HD 560...630		2 x MODBUOC80R4APM							
	ND 1000...1100	ND 800...900	2 x MODBUOC80T4APM						
<b>Low Harmonic/Regenerative drives three-phase supply voltage: 400...480 V 50/60 Hz</b>									
ND 110...160		1 x MODBUOC16Q4APM	1 x APMB0C0CTLN4	1 x APMB0C50N4	-	1	1	-	-
HD 90...132		1 x MODBUOC16R4PM							
	ND 150...250	ND 125...200	1 x MODBUOC16T4APM						
ND 200...315		1 x MODBUOC31Q4APM	1 x APMB0C0CTLN4	1 x APMB0C50N4	-	1	-	-	1
HD 160...250		1 x MODBUOC31R4APM							
	ND 300...500	ND 250...400	1 x MODBUOC31T4APM						
ND 355...500		1 x MODBUOC50Q4APM	1 x APMB0C0CTLN4	1 x APMB0C50N4	-	1	1	-	1
HD 280...400		1 x MODBUOC50R4APM							
	ND 550...700	ND 450...600	1 x MODBUOC50T4APM						
ND 560...630		1 x MODBUOC50Q4APM	1 x APMB0C0CTLN4	1 x APMB0C50N4	-	1	-	-	2
HD 450...500		1 x MODBUOC50R4APM							
	ND 800...900	ND 650...700	1 x MODBUOC50T4APM						
ND 710...800		1 x MODBUOC50Q4APM	1 x APMB0C0CTLN4	1 x APMB0C50N4	-	1	1	-	2
HD 560...630		1 x MODBUOC50R4APM							
	ND 1000...1100	ND 800...900	1 x MODBUOC50T4APM						
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(1) These cabinet recommendations are for standard integration. For flexible solutions, please contact your Schneider Electric supplier.

(2) Cabinets must have a minimum depth of 600 mm/23.6 in., and a minimum height of:

- 2,150 mm/84.6 in. (including the roof-top extension) for IP20/21/23/40/41/43 standard cabinet integration
- 2,350 mm/92.5 in. (including the plinth and roof-top extension) for IP54 standard cabinet integration

Table showing possible combinations to create architectures

Motor		Braking units	Control units for braking units	Braking unit power modules	Front covers for braking units	Cabinets (drive + braking unit) for IP 20/21/23/40/41/43/54 integration			
						400 mm width	600 mm width	800 mm width	1,000 mm width
ND: Normal duty									
HD: Heavy duty									
kW	HP								
<b>Standard drives three-phase supply voltage: 500...690 V 50/60 Hz</b>									
ND 75...132		1 x MODBUOC20N6APM	1 x APMB0C0CTLY6	1 x APMB0C50Y6	-	-	1	-	-
HD 55...110									
	ND 110...200	ND 90...160	1 x MODBUOC20Q6APM						
		ND 175...200	ND 150...175	1 x MODBUOC20T6APM					
ND 160...280		ND 132...220	1 x MODBUOC40N6APM	1 x APMB0C0CTLY6	1 x APMB0C50Y6	-	-	-	1
HD 120...200									
	ND 250...400	ND 200...315	1 x MODBUOC40Q6APM						
		ND 250...450	ND 200...350	1 x MODBUOC40T6APM					
ND 355...450		ND 280...355	1 x MODBUOC63N6APM	1 x APMB0C0CTLY6	1 x APMB0C50Y6	-	1	-	-
HD 280...355									
	ND 500...630	ND 400...500	1 x MODBUOC63Q6APM						
		ND 550...650	ND 450...550	1 x MODBUOC63T6APM					
ND 560		ND 450	2 x MODBUOC80N6APM	1 x APMB0C0CTLY6	2 x APMB0C50Y6	1 x VW3A97A01	-	-	2
HD 450									
	ND 800	ND 630	2 x MODBUOC80Q6APM						
		ND 800	ND 650	2 x MODBUOC80T6APM					
ND 710		ND 560	2 x MODBUOM10N6APM	1 x APMB0C0CTLY6	2 x APMB0C50Y6	1 x VW3A97A01	-	2	1
HD 560									
	ND 1000	ND 800	2 x MODBUOM10Q6APM						
		ND 1000	ND 800	2 x MODBUOM10T6APM					
ND 800		ND 710	2 x MODBUOM12N6APM	1 x APMB0C0CTLY6	2 x APMB0C50Y6	1 x VW3A97A01	-	1	2
HD 710									
	ND 1200	ND 1000	2 x MODBUOM12Q6APM						
		ND 1200	ND 1000	2 x MODBUOM12T6APM					
Pages	77	27	27	23	(1) (2)				

Altivar Process Modular

Reduced height architectures without braking unit

400...480 power supply

Altivar Process Modular

Reduced height architectures without braking unit

500...690 power supply

Table showing possible combinations to create architectures

Motor	Drive	Control units	Power modules	Mains module	Front covers	Cabinets for IP 20/21/23/40/41/43/54 integration	
						600 mm width	800 mm width
<b>ND: Normal duty</b>							
HD 90...132		ATV6A0C11Q4...C16Q4	1 x APM6A0CTLN401	1 x APM1A0C16N4RH	1 x APMCA01LCN4RH	-	1
		ATV6A0C11R4...C16R4					
		ATV9A0C11Q4...C16Q4	1 x APM9A0CTLN401				
		ATV9A0C11R4...C16R4					
ND 150...250	ND 150...250 HD 125...200	ATV6A0C11T4...C16T4	1 x APM6A0CTLN401	2 x APM1A0C16N4RH	1 x APMCA02LCN4RH	1 x VW3A97A01	2
		ATV9A0C11T4...C16T4	1 x APM9A0CTLN401				
ND 200...315 HD 160...250		ATV6A0C20Q4...C31Q4	1 x APM6A0CTLN401				
		ATV6A0C20R4...C31R4					
		ATV9A0C20Q4...C31Q4	1 x APM9A0CTLN401				
		ATV9A0C20R4...C31R4					
ND 300...500 HD 250...400	ND 300...500 HD 250...400	ATV6A0C20T4...C31T4	1 x APM6A0CTLN401	3 x APM1A0C16N4RH	1 x APMCA03LCN4RH	1 x VW3A97A01	1
		ATV9A0C20T4...C31T4	1 x APM9A0CTLN401				
ND 355...500 HD 280...400		ATV6A0C35Q4...C50Q4	1 x APM6A0CTLN401				
		ATV6A0C35R4...C50R4					
		ATV9A0C35Q4...C50Q4	1 x APM9A0CTLN401				
		ATV9A0C35R4...C50R4					
ND 550...700 HD 450...600	ND 550...700 HD 450...600	ATV6A0C35T4...C50T4	1 x APM6A0CTLN401	4 x APM1A0C16N4RH	2 x APMCA02LCN4RH	3 x VW3A97A01	4
		ATV9A0C35T4...C50T4	1 x APM9A0CTLN401				
ND 560...630 HD 450...500		ATV6A0C56Q4...C63Q4	1 x APM6A0CTLN401				
		ATV6A0C56R4...C63R4					
		ATV9A0C56Q4...C63Q4	1 x APM9A0CTLN401				
		ATV9A0C56R4...C63R4					
ND 800...900 HD 650...700	ND 800...900 HD 650...700	ATV6A0C56T4...C63T4	1 x APM6A0CTLN401	5 x APM1A0C16N4RH	1 x APMCA02LCN4RH + 1 x APMCA03LCN4RH	4 x VW3A97A01	3
		ATV9A0C56T4...C63T4	1 x APM9A0CTLN401				
ND 710...800 HD 560...630		ATV6A0C71Q4...C80Q4	1 x APM6A0CTLN401				
		ATV6A0C71R4...C80R4					
ND 1000...1100 HD 800...900	ND 1000...1100 HD 800...900	ATV9A0C71Q4...C80Q4	1 x APM9A0CTLN401				
		ATV9A0C71R4...C80R4					
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Table showing possible combinations to create architectures

Motor	Drive	Control units	Power modules	Mains module	Front covers	Cabinets for IP 20/21/23/40/41/43/54 integration	
						600 mm width	800 mm width
<b>ND: Normal duty</b>							
HD 55...110		ATV6A0C11N6...C20N6	1 x APM6A0CTLY6	1 x APM1A0C20Y6RH	1 x APMCA01LCY6RH	-	1
		ATV9A0C11N6...C20N6	1 x APM9A0CTLY6				
		ATV6A0C16Q6...C20Q6	1 x APM6A0CTLY6				
		ATV9A0C16Q6...C20Q6	1 x APM9A0CTLY6				
ND 110...200	ND 175...200 HD 150...175	ATV6A0C16T6...C20T6	1 x APM6A0CTLY6	2 x APM1A0C16Y6RH	1 x APMCA02LCY6RH	1 x VW3A97A01	2
		ATV9A0C16T6...C20T6	1 x APM9A0CTLY6				
ND 160...280 HD 132...220		ATV6A0C25N6...C40N6	1 x APM6A0CTLY6	3 x APM1A0C16Y6RH	1 x APMCA03LCY6RH	2 x VW3A97A01	1
		ATV9A0C25N6...C40N6	1 x APM9A0CTLY6				
		ATV6A0C25Q6...C40Q6	1 x APM6A0CTLY6				
		ATV9A0C25Q6...C40Q6	1 x APM9A0CTLY6				
ND 250...400	ND 250...450 HD 200...350	ATV6A0C25T6...C40T6	1 x APM6A0CTLY6	4 x APM1A0C16Y6RH	2 x APMCA02LCY6RH	3 x VW3A97A01	4
		ATV9A0C25T6...C40T6	1 x APM9A0CTLY6				
ND 355...450 HD 280...355		ATV6A0C50N6...C63N6	1 x APM6A0CTLY6	5 x APM1A0C16Y6RH	1 x APMCA02LCY6RH	4 x VW3A97A01	1
		ATV9A0C50N6...C63N6	1 x APM9A0CTLY6				
		ATV6A0C50Q6...C63Q6	1 x APM6A0CTLY6				
		ATV9A0C50Q6...C63Q6	1 x APM9A0CTLY6				
ND 550...650 HD 400...500	ND 550...650 HD 450...550	ATV6A0C50T6...N63T6	1 x APM6A0CTLY6	6 x APM1A0C16Y6RH	2 x APMCA03LCY6RH	5 x VW3A97A01	2
		ATV9A0C50T6...N63T6	1 x APM9A0CTLY6				
ND 560 HD 450		ATV6A0C80N6	1 x APM6A0CTLY6	5 x APM1A0C16Y6RH	1 x APMCA02LCY6RH	4 x VW3A97A01	1
		ATV9A0C80N6	1 x APM9A0CTLY6				
		ATV6A0C80Q6	1 x APM6A0CTLY6				
		ATV9A0C80Q6	1 x APM9A0CTLY6				
ND 800 HD 630	ND 800 HD 650	ATV6A0C80T6	1 x APM6A0CTLY6	6 x APM1A0C16Y6RH	2 x APMCA03LCY6RH	5 x VW3A97A01	2
		ATV9A0C80T6	1 x APM9A0CTLY6				

Altivar Process Modular

Reduced height architectures with braking unit

400...480 V power supply

Altivar Process Modular

Reduced height architectures with braking unit

500...690 V power supply

Table showing possible combinations to create architectures

Motor		Braking units	Control units for braking units	Braking unit power modules	Front covers for braking units	Cabinets (drive + braking unit) for IP 20/21/23/40/41/43/54 integration	
						600 mm width	800 mm width
ND: Normal duty							
HD: Heavy duty							
kW	HP						
<b>Standard drives three-phase supply voltage: 400...480 V 50/60 Hz - reduced height version</b>							
ND 110...160 HD 90...132		1 x MODBUOC16Q4APM 1 x MODBUOC16R4APM	1 x APMB0C0TLN4	1 x APMB0C50N4	–	2	–
	ND 150...250 HD 125...200	1 x MODBUOC16T4APM					
ND 200...315 HD 160...250		1 x MODBUOC31Q4APM 1 x MODBUOC31R4APM	1 x APMB0C0TLN4	1 x APMB0C50N4	–	1	1
	ND 300...500 HD 250...400	1 x MODBUOC31T4APM					
ND 355...500 HD 280...400		1 x MODBUOC50Q4APM 1 x MODBUOC50R4APM	1 x APMB0C0TLN4	1 x APMB0C50N4	–	3	–
	ND 550...700 HD 450...600	1 x MODBUOC50T4APM					
ND 560...630 HD 450...500		2 x MODBUOC63Q4APM 2 x MODBUOC63R4APM	1 x APMB0C0TLN4	2 x APMB0C50N4	1 x VW3A97A01	5	–
	ND 800...900 HD 650...700	2 x MODBUOC63T4APM					
ND 710...800 HD 560...630		2 x MODBUOC80Q4APM 2 x MODBUOC80R4APM	1 x APMB0C0TLN4	2 x APMB0C50N4	1 x VW3A97A01	4	1
	ND 1000...1100 HD 800...900	2 x MODBUOC80T4APM					
<b>Pages</b>		71	27	27	23	(1) (2)	

Table showing possible combinations to create architectures

Motor		Braking units	Control units for braking units	Braking unit power modules	Front covers for braking units	Cabinets (drive + braking unit) for IP 20/21/23/40/41/43/54 integration	
						600 mm width	800 mm width
ND: Normal duty							
HD: Heavy duty							
kW	HP						
<b>Standard drives three-phase supply voltage: 500...690 V 50/60 Hz - reduced height version</b>							
ND 75...132 HD 55...110		1 x MODBUOC20N6APM	1 x APMB0C0TLY6	1 x APMB0C50Y6	–	2	–
ND 110...200 HD 90...160		1 x MODBUOC20Q6APM					
	ND 175...200 HD 150...175	1 x MODBUOC20T6APM					
ND 160...280 HD 132...220		1 x MODBUOC40N6APM	1 x APMB0C0TLY6	1 x APMB0C50Y6	–	1	1
ND 250...400 HD 200...315		1 x MODBUOC40Q6APM					
	ND 250...450 HD 200...350	1 x MODBUOC40T6APM					
ND 355...450 HD 280...355		1 x MODBUOC63N6APM	1 x APMB0C0TLY6	1 x APMB0C50Y6	–	3	–
ND 500...630 HD 400...500		1 x MODBUOC63Q6APM					
	ND 550...650 HD 450...550	1 x MODBUOC63T6APM					
ND 560 HD 450		2 x MODBUOC80N6APM	1 x APMB0C0TLY6	2 x APMB0C50Y6	1 x VW3A97A01	5	–
ND 800 HD 630		2 x MODBUOC80Q6APM					
	ND 800 HD 650	2 x MODBUOC80T6APM					
ND 710 HD 560		2 x MODBUOM10N6APM	1 x APMB0C0TLY6	2 x APMB0C50Y6	1 x VW3A97A01	4	1
ND 1000 HD 800		2 x MODBUOM10Q6APM					
	ND 1000 HD 800	2 x MODBUOM10T6APM					
ND 800 HD 710		2 x MODBUOM12N6APM	1 x APMB0C0TLY6	2 x APMB0C50Y6	1 x VW3A97A01	3	2
ND 1200 HD 1000		2 x MODBUOM12Q6APM					
	ND 1200 HD 1000	2 x MODBUOM12T6APM					
<b>Pages</b>		77	27	27	23	(1) (2)	

(1) These cabinet recommendations are for standard integration. For flexible solutions, please contact your Schneider Electric supplier.

(2) Cabinets must have a minimum depth of 600 mm/23.6 in., and a minimum height of:

- 2,150 mm/84.6 in. (including the roof-top extension) for IP20/21/23/40/41/43 standard cabinet integration
- 2,350 mm/92.5 in. (including the plinth and roof-top extension) for IP54 standard cabinet integration

Altivar Process Modular

Standard liquid-cooled architectures without braking unit

Universal version 380...480 V power supply

Altivar Process Modular

Standard liquid-cooled architectures without braking unit

Universal version 500...690 V power supply

Table showing possible combinations to create architectures

Motor	Drive	Control units	Power modules	Line choke module	Motor protection module	Cabinet cooling module (3)	Cabinets for IP 20/21/23/40/41/43/54/55/66 integration
ND: Normal duty							600 mm width
HD: Heavy duty							
kW	HP						
<b>Standard liquid-cooled drives three-phase supply voltage: 380...480 V 50/60 Hz - Universal version</b>							
ND 132...200 HD 110...160		ATV6L0C13Q4...C20Q4 ATV9L0C13Q4...C20Q4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	1xAPM1L0C20N4 1xAPM1L0LCMN4	1xAPM1L0MPMN4	1xAPM1L0CCM230	1
ND 250...315 HD 200...250		ATV6L0C25Q4...C31Q4 ATV9L0C25Q4...C31Q4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	1xAPM1L0C31N4			
ND 132...200 HD 110...160		ATV6L0C13R4...C20R4 ATV9L0C13R4...C20R4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	1xAPM1L0C20N4			
ND 250...315 HD 200...250		ATV6L0C25R4...C31R4 ATV9L0C25R4...C31R4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	1xAPM1L0C31N4			
	ND 200...300 HD 150...250	ATV6L0C13T4...C20T4 ATV9L0C13T4...C20T4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	1xAPM1L0C20N4		1xAPM1L0CCM115	
	ND 400...500 HD 300...400	ATV6L0C25T4...C31T4 ATV9L0C25T4...C31T4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	1xAPM1L0C31N4			
ND 400 HD 315		ATV6L0C40Q4 ATV9L0C40Q4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	2xAPM1L0C20N4	2xAPM1L0LCMN4	2xAPM1L0CCM230	2
ND 500...630 HD 400...500		ATV6L0C50Q4...C63Q4 ATV9L0C50Q4...C63Q4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	2xAPM1L0C31N4			
ND 400 HD 315		ATV6L0C40R4 ATV9L0C40R4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	2xAPM1L0C20N4			
ND 500...630 HD 400...500		ATV6L0C50R4...C63R4 ATV9L0C50R4...C63R4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	2xAPM1L0C31N4			
	ND 600 HD 500	ATV6L0C40T4 ATV9L0C40T4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	2xAPM1L0C20N4		2xAPM1L0CCM115	
	ND 700...900 HD 600...700	ATV6L0C50T4...C63T4 ATV9L0C50T4...C63T4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	2xAPM1L0C31N4			
ND 800...900 HD 710...710		ATV6L0C80Q4...C90Q4 ATV9L0C80Q4...C90Q4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	3xAPM1L0C31N4	3xAPM1L0LCMN4	3xAPM1L0CCM230	3
ND 800...900 HD 710...710		ATV6L0C80R4...C90R4 ATV9L0C80R4...C90R4	1xAPM6L0CTLN4 1xAPM9L0CTLN4				
	ND 1100...1300 HD 900...1000	ATV6L0C80T4...C90T4 ATV9L0C80T4...C90T4	1xAPM6L0CTLN4 1xAPM9L0CTLN4			3xAPM1L0CCM115	
ND 1000...1200 HD 800...1000		ATV6L0M10Q4...M12Q4 ATV9L0M10Q4...M12Q4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	4xAPM1L0C31N4	4xAPM1L0LCMN4	4xAPM1L0CCM230	4
ND 1000...1200 HD 800...1000		ATV6L0M10R4...M12R4 ATV9L0M10R4...M12R4	1xAPM6L0CTLN4 1xAPM9L0CTLN4				
	ND 1400...1700 HD 1100...1400	ATV6L0M10T4...M12T4 ATV9L0M10T4...M12T4	1xAPM6L0CTLN4 1xAPM9L0CTLN4			4xAPM1L0CCM115	
ND 1500 HD 1200		ATV6L0M15Q4 ATV9L0M15Q4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	5xAPM1L0C31N4	5xAPM1L0LCMN4	5xAPM1L0CCM230	5
ND 1500 HD 1200		ATV6L0M15R4 ATV9L0M15R4	1xAPM6L0CTLN4 1xAPM9L0CTLN4				
	ND 2200 HD 1700	ATV6L0M15T4 ATV9L0M15T4	1xAPM6L0CTLN4 1xAPM9L0CTLN4			5xAPM1L0CCM115	
ND 1800 HD 1400		ATV6L0M18Q4 ATV9L0M18Q4	1xAPM6L0CTLN4 1xAPM9L0CTLN4	6xAPM1L0C31N4	6xAPM1L0LCMN4	6xAPM1L0CCM230	6
ND 1800 HD 1400		ATV6L0M18R4 ATV9L0M18R4	1xAPM6L0CTLN4 1xAPM9L0CTLN4				
	ND 2500 HD 2000	ATV6L0M18T4 ATV9L0M18T4	1xAPM6L0CTLN4 1xAPM9L0CTLN4			6xAPM1L0CCM115	

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(1) These cabinet recommendations are for standard integration. For flexible solutions, please contact your Schneider Electric supplier.

(2) Cabinets must have a minimum depth of 600 mm/23.6 in., and a minimum height of:

- 2,150 mm/84.6 in. (including the roof-top extension) for IP20/21/23/40/41/43 standard cabinet integration
- 2,350 mm/92.5 in. (including the plinth and roof-top extension) for IP54 standard cabinet integration

(3) Depending on the available control voltage, a module with 115 VAC or 230 VAC can be used.

Table showing possible combinations to create architectures

Motor	Drive	Control units	Power modules	Line choke module	Motor protection module	Cabinet cooling module (3)	Cabinets for IP 20/21/23/40/41/43/54/55/66 integration
ND: Normal duty							600 mm width
HD: Heavy duty							
kW	HP						
<b>Standard liquid-cooled drives three-phase supply voltage: 500...690 V 50/60 Hz - Universal version</b>							
ND 132...200 HD 110...160		ATV6L0C20N6...C28N6 ATV9L0C20N6...C28N6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	1xAPM1L0C28Y6	1xAPM1L0LCMY6	1xAPM1L0MPMY6	1xAPM1L0CCM230
ND 220...315 HD 180...250		ATV6L0C31N6...C45N6 ATV9L0C31N6...C45N6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	1xAPM1L0C45Y6			
ND 200...280 HD 160...220		ATV6L0C20Q6...C28Q6 ATV9L0C20Q6...C28Q6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	1xAPM1L0C28Y6			
ND 315...450 HD 250...355		ATV6L0C31Q6...C45Q6 ATV9L0C31Q6...C45Q6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	1xAPM1L0C45Y6			
	ND 200...300 HD 150...200	ATV6L0C20T6...C28T6 ATV9L0C20T6...C28T6	1xAPM6L0CTLY6 1xAPM9L0CTLY6				1xAPM1L0CCM115
	ND 350...500 HD 250...400	ATV6L0C31T6...C45T6 ATV9L0C31T6...C45T6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	1xAPM1L0C45Y6			
ND 400 HD 315		ATV6L0C56N6 ATV9L0C56N6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	2xAPM1L0C28Y6	2xAPM1L0LCMY6	2xAPM1L0MPMY6	2xAPM1L0CCM230
ND 500...630 HD 400...500		ATV6L0C56Q6 ATV9L0C56Q6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	2xAPM1L0C45Y6			
ND 560 HD 450		ATV6L0C56Q6 ATV9L0C56Q6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	2xAPM1L0C28Y6			
ND 710...900 HD 560...710		ATV6L0C71Q6...C90Q6 ATV9L0C71Q6...C90Q6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	2xAPM1L0C45Y6			
	ND 600 HD 500	ATV6L0C56T6 ATV9L0C56T6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	2xAPM1L0C28Y6			2xAPM1L0CCM115
	ND 700...900 HD 600...700	ATV6L0C71T6...C90T6 ATV9L0C71T6...C90T6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	2xAPM1L0C45Y6			
ND 800...1000 HD 710...800		ATV6L0M12N6...M14N6 ATV9L0M12N6...M14N6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	3xAPM1L0C45Y6	3xAPM1L0LCMY6	3xAPM1L0MPMY6	3xAPM1L0CCM230
ND 1200...1400 HD 1000...1100		ATV6L0M12Q6...M14Q6 ATV9L0M12Q6...M14Q6	1xAPM6L0CTLY6 1xAPM9L0CTLY6				
	ND 1200...1400 HD 1000...1100	ATV6L0M12T6...M14T6 ATV9L0M12T6...M14T6	1xAPM6L0CTLY6 1xAPM9L0CTLY6			3xAPM1L0CCM115	
ND 1200...1300 HD 900...1000		ATV6L0M16N6...M18N6 ATV9L0M16N6...M18N6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	4xAPM1L0C45Y6	4xAPM1L0LCMY6	4xAPM1L0MPMY6	4xAPM1L0CCM230
ND 1600...1800 HD 1300...1400		ATV6L0M16Q6...M18Q6 ATV9L0M16Q6...M18Q6	1xAPM6L0CTLY6 1xAPM9L0CTLY6				
	ND 1600...1800 HD 1300...1400	ATV6L0M16T6...M18T6 ATV9L0M16T6...M18T6	1xAPM6L0CTLY6 1xAPM9L0CTLY6			4xAPM1L0CCM115	
ND 1600 HD 1200		ATV6L0M22N6 ATV9L0M22N6	1xAPM6L0CTLY6 1xAPM9L0CTLY6	5xAPM1L0C45Y6	5xAPM1L0LCMY6		

## Altivar Process Modular

Standard liquid-cooled architectures without braking unit

Compact version 380...480 V power supply

Table showing possible combinations to create architectures

Motor	Drive	Control units	Power modules	Line filter module	Line paralleling module	Motor protection module	Cabinets for IP 20/21/23/40/41/43/54/55/66 integration			
							400 mm width	600 mm width	800 mm width	
<b>ND: Normal duty</b>										
HD: Heavy duty										
kW	HP									
<b>Standard liquid-cooled drives three-phase supply voltage: 380...480 V 50/60 Hz - Compact version</b>										
ND 132...200 HD 110...160		ATV6L0C13Q4...C20Q4	1xAPM6L0CTLN4	1xAPM1L0C20N4	1xAPM1L0LFMN4	1xAPM1L0PMN4	1xAPM1L0MPMN4	1	-	-
ND 250...315 HD 200...250		ATV9L0C13Q4...C20Q4	1xAPM9L0CTLN4							
ND 132...200 HD 110...160		ATV6L0C25Q4...C31Q4	1xAPM6L0CTLN4	1xAPM1L0C31N4						
ND 250...315 HD 200...250		ATV9L0C25Q4...C31Q4	1xAPM9L0CTLN4							
ND 132...200 HD 110...160		ATV6L0C13R4...C20R4	1xAPM6L0CTLN4	1xAPM1L0C20N4						
ND 250...315 HD 200...250		ATV9L0C13R4...C20R4	1xAPM9L0CTLN4							
ND 132...200 HD 110...160		ATV6L0C25R4...C31R4	1xAPM6L0CTLN4	1xAPM1L0C31N4						
ND 250...315 HD 200...250		ATV9L0C25R4...C31R4	1xAPM9L0CTLN4							
ND 200...300 HD 150...250		ATV6L0C13T4...C20T4	1xAPM6L0CTLN4	1xAPM1L0C20N4						
ND 400...500 HD 300...400		ATV9L0C13T4...C20T4	1xAPM9L0CTLN4							
ND 400...500 HD 300...400		ATV6L0C25T4...C31T4	1xAPM6L0CTLN4	1xAPM1L0C31N4						
ND 400...500 HD 300...400		ATV9L0C25T4...C31T4	1xAPM9L0CTLN4							
ND 400 HD 315		ATV6L0C40Q4	1xAPM6L0CTLN4	2xAPM1L0C20N4	1xAPM1L0LFMN4	2xAPM1L0PMN4	2xAPM1L0MPMN4	-	1	-
ND 500...630 HD 400...500		ATV9L0C40Q4	1xAPM9L0CTLN4							
ND 400 HD 315		ATV6L0C50Q4...C63Q4	1xAPM6L0CTLN4	2xAPM1L0C31N4						
ND 400 HD 315		ATV9L0C50Q4...C63Q4	1xAPM9L0CTLN4							
ND 400 HD 315		ATV6L0C40R4	1xAPM6L0CTLN4	2xAPM1L0C20N4						
ND 500...630 HD 400...500		ATV9L0C40R4	1xAPM9L0CTLN4							
ND 600 HD 500		ATV6L0C40T4	1xAPM6L0CTLN4	2xAPM1L0C20N4						
ND 700...900 HD 600...700		ATV9L0C40T4	1xAPM9L0CTLN4							
ND 800...900 HD 710...710		ATV6L0C50T4...C63T4	1xAPM6L0CTLN4	2xAPM1L0C31N4						
ND 800...900 HD 710...710		ATV9L0C50T4...C63T4	1xAPM9L0CTLN4							
ND 1100...1300 HD 900...1000		ATV6L0C80Q4...C90Q4	1xAPM6L0CTLN4	3xAPM1L0C31N4	1xAPM1L0LFMN4	3xAPM1L0PMN4	3xAPM1L0MPMN4	-	-	1
ND 800...900 HD 710...710		ATV9L0C80Q4...C90Q4	1xAPM9L0CTLN4							
ND 1100...1300 HD 900...1000		ATV6L0C80R4...C90R4	1xAPM6L0CTLN4							
ND 1100...1300 HD 900...1000		ATV9L0C80R4...C90R4	1xAPM9L0CTLN4							
ND 1000...1200 HD 800...1000		ATV6L0M10Q4...M12Q4	1xAPM6L0CTLN4	4xAPM1L0C31N4	2xAPM1L0LFMN4	4xAPM1L0PMN4	4xAPM1L0MPMN4	-	2	-
ND 1000...1200 HD 800...1000		ATV9L0M10Q4...M12Q4	1xAPM9L0CTLN4							
ND 1400...1700 HD 1100...1400		ATV6L0M10R4...M12R4	1xAPM6L0CTLN4							
ND 1400...1700 HD 1100...1400		ATV9L0M10R4...M12R4	1xAPM9L0CTLN4							
ND 1500 HD 1200		ATV6L0M15Q4	1xAPM6L0CTLN4	5xAPM1L0C31N4	2xAPM1L0LFMN4	5xAPM1L0PMN4	5xAPM1L0MPMN4	-	1	1
ND 1500 HD 1200		ATV9L0M15Q4	1xAPM9L0CTLN4							
ND 2200 HD 1700		ATV6L0M15R4	1xAPM6L0CTLN4							
ND 2200 HD 1700		ATV9L0M15R4	1xAPM9L0CTLN4							
ND 1800 HD 1400		ATV6L0M15T4	1xAPM6L0CTLN4							
ND 1800 HD 1400		ATV9L0M15T4	1xAPM9L0CTLN4							
ND 2500 HD 2000		ATV6L0M18Q4	1xAPM6L0CTLN4							
ND 2500 HD 2000		ATV9L0M18Q4	1xAPM9L0CTLN4							
ND 1800 HD 1400		ATV6L0M18R4	1xAPM6L0CTLN4							
ND 1800 HD 1400		ATV9L0M18R4	1xAPM9L0CTLN4							
ND 2500 HD 2000		ATV6L0M18T4	1xAPM6L0CTLN4							
ND 2500 HD 2000		ATV9L0M18T4	1xAPM9L0CTLN4							

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(1) These cabinet recommendations are for standard integration. For flexible solutions, please contact your Schneider Electric supplier.

(2) Cabinets must have a minimum depth of 600 mm/23.6 in., and a minimum height of:

- 2,150 mm/84.6 in. (including the roof-top extension) for IP20/21/23/40/41/43 standard cabinet integration
- 2,350 mm/92.5 in. (including the plinth and roof-top extension) for IP54 standard cabinet integration

Table showing possible combinations to create architectures

Motor	Drive	Control units	Power modules	Line filter module	Line paralleling module	Motor protection module	Cabinets for IP 20/21/23/40/41/43/54/55/66 integration			
							400 mm width	600 mm width	800 mm width	
<b>ND: Normal duty</b>										
HD: Heavy duty										
kW	HP									
<b>Standard liquid-cooled drives three-phase supply voltage: 500...690 V 50/60 Hz - Compact version</b>										
ND 132...200 HD 110...160		ATV6L0C20N6...C28N6	1xAPM6L0CTLY6	1xAPM1L0C28Y6	1xAPM1L0LFMY6	1xAPM1L0PMY6	1xAPM1L0MPMY6	-	-	-
ND 220...315 HD 180...250		ATV9L0C20N6...C28N6	1xAPM9L0CTLY6							
ND 200...280 HD 160...220		ATV6L0C31N6...C45N6	1xAPM6L0CTLY6	1xAPM1L0C45Y6						
ND 315...450 HD 250...355		ATV9L0C31N6...C45N6	1xAPM9L0CTLY6							
ND 200...300 HD 150...200		ATV6L0C20T6...C28T6	1xAPM6L0CTLY6	1xAPM1L0C28Y6						
ND 350...500 HD 250...400		ATV9L0C20T6...C28T6	1xAPM9L0CTLY6							
ND 400...500 HD 300...400		ATV6L0C31T6...C45T6	1xAPM6L0CTLY6	1xAPM1L0C45Y6						
ND 400 HD 315		ATV9L0C31T6...C45T6	1xAPM9L0CTLY6							

**Module compatibility table**

Safety module			
Description	Reference	Compatibility	Slot
Safety module	VW3A3802	ATV900	C (2)
Encoder interface modules			
Description	Reference	Compatibility	Slot
Digital encoder interface module	VW3A3420	ATV900	B
Analog encoder interface module	VW3A3422	ATV900	B
Resolver interface module	VW3A3423	ATV900	B
HTL encoder interface module	VW3A3424	ATV900	B
Additional I/O modules			
Description	Reference	Compatibility	Slot
Extended I/O module (1)	VW3A3203	ATV600 and ATV900	A or B or C (2)
Extended relay module (1)	VW3A3204	ATV600 and ATV900	A or B or C (2)
Fieldbus modules			
Description	Reference	Compatibility	Slot
EtherNet/IP and Modbus TCP dual port	VW3A3720	ATV600	A
EtherNet/IP, Modbus TCP, and MD-Link dual port	VW3A3721	ATV600	A
CANopen daisy chain	VW3A3608	ATV600 and ATV900	A
CANopen SUB-D	VW3A3618	ATV600 and ATV900	A
CANopen screw terminal block	VW3A3628	ATV600 and ATV900	A
PROFINET	VW3A3627	ATV600 and ATV900	A
PROFIBUS DP V1	VW3A3607	ATV600 and ATV900	A
POWERLINK Network	VW3A3619	ATV600 and ATV900	A
BACnet MS/TP	VW3A3725	ATV600	A
EtherCAT	VW3A3601	ATV900	A
DeviceNet	VW3A3609	ATV600 and ATV900	A

(1) These references can only be used once per drive, e.g. VW3A3203 in slot A and VW3A3204 in slot B.

(2) The Altivar 900 drive must be equipped with an additional module support VW3A3800 to be able to insert the safety module VW3A3802.



Altivar Process drives slots

For more information on compatible options and accessories, please contact your Schneider Electric supplier or consult the product selector available on our [partner portal](#).

For more details on I/O, encoder, and communication modules, please refer to the Altivar Process ATV600 and ATV900 catalogs:



Altivar Process catalogs  
Click to open the documents

### 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 selection according to IEC considers components loaded to a maximum of 80% up to 1600 A nominal current to avoid the temperature rise test requirement according to IEC 61439-1.

The selection according to UL considers the requirement for disconnect switches not carrying full load currents more than 80% of their nominal current.

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 must be provided.

Selecting short-circuit protection devices (fuses or circuit breakers) is key to helping to protect the overall installation against potential damage caused by short-circuits. It is recommended that you refer to the APM Integration Manuals.



NS1250N Micrologic 5.0

+



LC1F1400••

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ATV6A0C71Q4

### IEC standard motor starters

Nominal power ND: Normal duty HD: Heavy duty	Drive Reference (1)	Circuit breaker Type (2)	Rating at 50 °C		Line contactor	
			kW	HP	A	A
<b>Three-phase supply voltage: 400 V 50/60 Hz</b>						
ND 110	—	ATV•A0C11Q4	NSX250N Micrologic 2.2 250	250	3000 (4)	LC1F225••
HD 90			NSX250N Micrologic 2.2 250	250	3000 (4)	LC1F185••
ND 132	—	ATV•A0C13Q4	NSX400N Micrologic 2.3 400	400	4800 (4)	LC1F265••
HD 110			NSX250N Micrologic 2.2 250	250	3000 (4)	LC1F225••
ND 160	—	ATV•A0C16Q4	NSX400N Micrologic 2.3 400	400	4800 (4)	LC1F330••
HD 132			NSX400N Micrologic 2.3 400	400	4800 (4)	LC1F265••
ND 200	—	ATV•A0C20Q4	NSX630N Micrologic 2.3 630	600	6900 (4)	LC1F500••
HD 160			NSX400N Micrologic 2.3 400	400	4800 (4)	LC1F400••
ND 250	—	ATV•A0C25Q4	NSX630N Micrologic 2.3 630	600	6900 (4)	LC1F500••
HD 200			NSX630N Micrologic 2.3 630	600	6900 (4)	LC1F500••
ND 315	—	ATV•A0C31Q4	NS800N Micrologic 5.0	800	1600 (5)	LC1F630••
HD 250			NSX630N Micrologic 2.3 630	600	6900 (4)	LC1F500••
ND 355	—	ATV•A0C35Q4	NS800N Micrologic 5.0	800	1600 (5)	LC1F630••
HD 280			NS630N Micrologic 5.0	630	1260 (5)	LC1F630••
ND 400	—	ATV•A0C40Q4	NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250••
HD 315			NS800N Micrologic 5.0	800	1600 (5)	LC1F630••
ND 450	—	ATV•A0C45Q4	NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250••
HD 355			NS800N Micrologic 5.0	800	1600 (5)	LC1F630••
ND 500	—	ATV•A0C50Q4	NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1250••
HD 400			NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250••
ND 560	—	ATV•A0C56Q4	NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1400••
HD 450			NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250••
ND 630	—	ATV•A0C63Q4	NS1600N Micrologic 5.0	1600	3200 (5)	LC1F1700••
HD 500			NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1400••
ND 710	—	ATV•A0C71Q4	NS1600N Micrologic 5.0	1600	3200 (5)	LC1F2100••
HD 560			NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1400••
ND 800	—	ATV•A0C80Q4	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (5)	LC1F2100••
HD 630			NS1600N Micrologic 5.0	1600	3200 (5)	LC1F1700••

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for  $I_{cu}$  min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) Rated instantaneous short-circuit current setting  $I_{li}$ : fixed

(5) Rated instantaneous short-circuit current setting  $I_{li}$ : 2

CÔNG TY CỔ PHẦN CÔNG NGHỆ HƠI LONG  
Combinations for customer Variable speed drives assembly (continued)

Altivar Process Modular  
Motor starters  
IEC 440 V Standard drives



IEC standard motor starters							
Nominal power		Drive	Circuit breaker			Line contactor	
ND: Normal duty		Reference (1)	Type (2)	Rating at 50 °C	I <sub>i</sub>	Reference (3)	Rating at 60 °C
KW	HP				A	A	A
<b>Three-phase supply voltage: 440 V 50/60 Hz</b>							
ND 110	—	ATV•A0C11R4	NSX250N Micrologic 2.2 250	250	3000 (4)	LC1F185••	240
HD 90			NSX250N Micrologic 2.2 250	250	3000 (4)	LC1D115••	200
ND 132	—	ATV•A0C13R4	NSX400H Micrologic 2.3 400	400	4800 (4)	LC1F225••	280
HD 110			NSX250N Micrologic 2.2 250	250	3000 (4)	LC1F185••	240
ND 160	—	ATV•A0C16R4	NSX400H Micrologic 2.3 400	400	4800 (4)	LC1F330••	360
HD 132			NSX400H Micrologic 2.3 400	400	4800 (4)	LC1F225••	280
ND 200	—	ATV•A0C20R4	NSX630H Micrologic 2.3 630	600	6900 (4)	LC1F400••	430
HD 160			NSX400H Micrologic 2.3 400	400	4800 (4)	LC1F330••	360
ND 250	—	ATV•A0C25R4	NSX630H Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
HD 200			NSX630H Micrologic 2.3 630	600	6900 (4)	LC1F400••	430
ND 315	—	ATV•A0C31R4	NS630bN Micrologic 5.0	630	1260 (5)	LC1F630••	850
HD 250			NS630H Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
ND 355	—	ATV•A0C35R4	NS800N Micrologic 5.0	800	1600 (5)	LC1F630••	850
HD 280			NSX630H Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
ND 400	—	ATV•A0C40R4	NS800N Micrologic 5.0	800	1600 (5)	LC1F630••	850
HD 315			NS630bN Micrologic 5.0	630	1260 (5)	LC1F630••	850
ND 450	—	ATV•A0C45R4	NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250••	1060
HD 355			NS800N Micrologic 5.0	800	1600 (5)	LC1F630••	850
ND 500	—	ATV•A0C50R4	NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250••	1060
HD 400			NS800N Micrologic 5.0	800	1600 (5)	LC1F630••	850
ND 560	—	ATV•A0C56R4	NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1400••	1190
HD 450			NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250••	1060
ND 630	—	ATV•A0C63R4	NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1700••	1450
HD 500			NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250••	1060
ND 710	—	ATV•A0C71R4	NS1600N Micrologic 5.0	1600	3200 (5)	LC1F1700••	1450
HD 560			NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1400••	1190
ND 800	—	ATV•A0C80R4	NS1600N Micrologic 5.0	1600	3200 (5)	LC1F2100••	1750
HD 630			NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1700••	1450

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for I<sub>cu</sub> min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) Rated instantaneous short-circuit current setting I<sub>i</sub>: fixed

(5) Rated instantaneous short-circuit current setting I<sub>i</sub>: 2



LLL36600U31X

+



LC1F400••

+



ATV9A0C25T4

UL standard motor starters						
Nominal power		Drive Reference (1)	Circuit breaker	Line contactor		
ND: Normal duty	HD: Heavy duty		Type (2)	Rating at 50 °C	li	Reference (3) Rating at 60 °C
KW	HP			A	A	A
<b>Three-phase supply voltage: 480 V 50/60 Hz</b>						
ND	—	150	ATV•A0C11T4	JLL36250U31X	250	500 (4) LC1F185•• 240
HD	—	125		JLL36250U31X	250	500 (4) LC1D115•• 200
ND	—	200	ATV•A0C13T4	LLL36400U31X	400	800 (4) LC1F225•• 280
HD	—	150		JLL36250U31X	250	500 (4) LC1F185•• 240
ND	—	250	ATV•A0C16T4	LLL36400U31X	400	800 (4) LC1F330•• 360
HD	—	200		LLL36400U31X	400	800 (4) LC1F225•• 280
ND	—	300	ATV•A0C20T4	LLL36600U31X	600	1200 (4) LC1F400•• 430
HD	—	250		LLL36600U31X	400	800 (4) LC1F330•• 360
ND	—	400	ATV•A0C25T4	LLL36600U31X	600	1200 (4) LC1F500•• 580
HD	—	300		LLL36600U31X	600	1200 (4) LC1F400•• 430
ND	—	500	ATV•A0C31T4	PLL34080U31A	736	1600 (4) LC1F630•• 850
HD	—	400		LLL36600U31X	600	1200 (4) LC1F500•• 580
ND	—	550	ATV•A0C35T4	PLL34080U31A	736	1600 (4) LC1F630•• 850
HD	—	450		PLL34080U31A	736	1600 (4) LC1F630•• 850
ND	—	600	ATV•A0C40T4	PLL34100U44A	920	2000 (4) LC1F630•• 850
HD	—	500		PLL34080U31A	736	1600 (4) LC1F630•• 850
ND	—	650	ATV•A0C45T4	PLL34100U44A	920	2000 (4) LC1F1250•• 1060
HD	—	550		PLL34080U31A	736	1600 (4) LC1F630•• 850
ND	—	700	ATV•A0C50T4	PLL34100U44A	920	2000 (4) LC1F1250•• 1060
HD	—	600		PLL34100U44A	920	2000 (4) LC1F630•• 850
ND	—	800	ATV•A0C56T4	PLL34120U44A	1104	2400 (4) LC1F1250•• 1060
HD	—	650		PLL34100U44A	920	2000 (4) LC1F1250•• 1060
ND	—	900	ATV•A0C63T4	RLF36160U44A	1472	3200 (4) LC1F1400•• 1190
HD	—	700		PLL34120U44A	1104	2400 (4) LC1F1250•• 1060
ND	—	1000	ATV•A0C71T4	RLF36160U44A	1472	3200 (4) LC1F1700•• 1450
HD	—	800		PLL34120U44A	1104	2400 (4) LC1F1250•• 1060
ND	—	1100	ATV•A0C80T4	RLF36160U44A	1472	3200 (4) LC1F1700•• 1450
HD	—	900		RLF36160U44A	1472	3200 (4) LC1F1400•• 1190

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for lcu min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) Rated instantaneous short-circuit current setting li: fixed

(5) Rated instantaneous short-circuit current setting li: 2



JRL36250U31X

+



LC1D115••

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ATV6A0C13T6

### IEC and UL standard motor starters

Nominal power <b>ND: Normal duty</b> <b>HD: Heavy duty</b>	Drive Reference (1)	Circuit breaker			Line contactor		
		Type (2)	Rating at 50 °C	I <sub>II</sub>	Reference (3)	Rating at 60 °C	
KW HP			A	A	A	A	
<b>Three-phase supply voltage: 500 V 50/60 Hz</b>							
ND 75	—	ATV•A0C11N6	NSX160L Micrologic 2.2 160	160	2400 (4)	LC1D115••	200
HD 55			NSX160L Micrologic 2.2 160	160	2400 (4)	LC1D80••	125
ND 90	—	ATV•A0C13N6	NSX250L Micrologic 2.2 250	250	3000 (4)	LC1D115••	200
HD 75			NSX160L Micrologic 2.2 160	160	2400 (4)	LC1D115••	200
ND 110	—	ATV•A0C16N6	NSX250L Micrologic 2.2 250	250	3000 (4)	LC1D115••	200
HD 90			NSX250L Micrologic 2.2 250	250	3000 (4)	LC1D115••	200
ND 132	—	ATV•A0C20N6	NSX250L Micrologic 2.2 250	250	3000 (4)	LC1F185••	240
HD 110			NSX250L Micrologic 2.2 250	250	3000 (4)	LC1D115••	200
ND 160	—	ATV•A0C25N6	NSX400L Micrologic 2.3 400	400	4800 (4)	LC1F265••	300
HD 132			NSX250L Micrologic 2.2 250	250	3000 (4)	LC1F185••	240
ND 220	—	ATV•A0C31N6	NSX400L Micrologic 2.3 400	400	4800 (4)	LC1F400••	430
HD 160			NSX400L Micrologic 2.3 400	400	4800 (4)	LC1F265••	300
ND 280	—	ATV•A0C40N6	NSX630L Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
HD 220			NSX400L Micrologic 2.3 400	400	4800 (4)	LC1F400••	430
ND 355	—	ATV•A0C50N6	NS630bH Micrologic 5.0	630	1260 (5)	LC1F630••	850
HD 280			NSX630L Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
ND 450	—	ATV•A0C63N6	NS800H Micrologic 5.0	800	1600 (5)	LC1F630••	850
HD 355			NS630bH Micrologic 5.0	630	1260 (5)	LC1F630••	850
ND 560	—	ATV•A0C80N6	NS1000H Micrologic 5.0	1000	2000 (5)	LC1F1250••	1060
HD 450			NS800H Micrologic 5.0	800	1600 (5)	LC1F630••	850
ND 710	—	ATV•A0M10N6	NS1250H Micrologic 5.0	1250	2500 (5)	LC1F1700••	1450
HD 560			NS1000H Micrologic 5.0	1000	2000 (5)	LC1F1250••	1060
ND 800	—	ATV•A0M12N6	NS1600H Micrologic 5.0	1600	3200 (5)	LC1F1700••	1450
HD 710			NS1250H Micrologic 5.0	1250	2500 (5)	LC1F1700••	1450
<b>Three-phase supply voltage: 600 V 50/60 Hz</b>							
ND — 125	ATV•A0C11T6	HRL36150U31X		150	300 (4)	LC1D115••	200
HD 100		HRL36150U31X		150	300 (4)	LC1D80••	125
ND — 150	ATV•A0C13T6	JRL36250U31X		250	500 (4)	LC1D115••	200
HD 125		HRL36150U31X		150	300 (4)	LC1D115••	200
ND — 175	ATV•A0C16T6	JRL36250U31X		250	500 (4)	LC1D115••	200
HD 150		JRL36250U31X		250	500 (4)	LC1D115••	200
ND — 200	ATV•A0C20T6	JRL36250U31X		250	500 (4)	LC1F185••	240
HD 175		JRL36250U31X		250	500 (4)	LC1D115••	200
ND — 250	ATV•A0C25T6	LRL36400U31X		400	800 (4)	LC1F225••	280
HD 200		JRL36250U31X		250	500 (4)	LC1F185••	240
ND — 350	ATV•A0C31T6	LRL36400U31X		400	800 (4)	LC1F400••	430
HD 250		LRL36400U31X		400	800 (4)	LC1F225••	280
ND — 450	ATV•A0C40T6	LRL36600U31X		600	1200 (4)	LC1F500••	580
HD 350		LRL36400U31X		400	800 (4)	LC1F400••	430
ND — 550	ATV•A0C50T6	LRL36600U31X		600	1200 (4)	LC1F500••	580
HD 450		LRL36600U31X		600	1200 (4)	LC1F500••	580
ND — 650	ATV•A0C63T6	MTZ2 08L Micrologic 3.0 X		736	1600 (4)	LC1F630••	850
HD 550		LRL36600U31X		600	1200 (4)	LC1F500••	580
ND — 800	ATV•A0C80T6	MTZ2 12L Micrologic 6.0 X		1104	2400 (4)	LC1F630••	850
HD 650		MTZ2 08L Micrologic 3.0 X		736	1600 (4)	LC1F630••	850
ND — 1000	ATV•A0M10T6	MTZ2 12L Micrologic 6.0 X		1104	2400 (4)	LC1F1250••	1060
HD 800		MTZ2 12L Micrologic 6.0 X		1104	2400 (4)	LC1F630••	850
ND — 1200	ATV•A0M12T6	MTZ2 16L Micrologic 6.0 X		1472	3200 (4)	LC1F1700••	1450
HD 1000		MTZ2 12L Micrologic 6.0 X		1104	2400 (4)	LC1F1250••	1060

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for I<sub>cu</sub> min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) Rated instantaneous short-circuit current setting I<sub>II</sub>: fixed

(5) Rated instantaneous short-circuit current setting I<sub>II</sub>: 2



NSX400HB1 Micrologic 2.3 400

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LC1F330••

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ATV9A0C25Q6

### IEC standard motor starters

Nominal power ND: Normal duty HD: Heavy duty	Drive Reference (1)	Circuit breaker			Line contactor		
		Type (2)	Rating at 50 °C	I <sub>i</sub>	Reference (3)	Rating at 60 °C	
KW HP			A	A	A	A	
<b>Three-phase supply voltage: 690 V 50/60 Hz</b>							
ND 110	—	ATV•A0C11Q6	NSX250HB1 Micrologic 2.2 160	160	2400 (4)	LC1D115••	200
HD 90			NSX250HB1 Micrologic 2.2 160	160	2400 (4)	LC1D80••	125
ND 132	—	ATV•A0C13Q6	NSX250HB1 Micrologic 2.2 250	250	3000 (4)	LC1D115••	200
HD 110			NSX250HB1 Micrologic 2.2 160	160	2400 (4)	LC1D115••	200
ND 160	—	ATV•A0C16Q6	NSX250HB1 Micrologic 2.2 250	250	3000 (4)	LC1F185••	240
HD 132			NSX250HB1 Micrologic 2.2 250	250	3000 (4)	LC1D115••	200
ND 200	—	ATV•A0C20Q6	NSX250HB1 Micrologic 2.2 250	250	3000 (4)	LC1F225••	280
HD 160			NSX250HB1 Micrologic 2.2 250	250	3000 (4)	LC1F185••	240
ND 250	—	ATV•A0C25Q6	NSX400HB1 Micrologic 2.3 400	400	4800 (4)	LC1F330••	360
HD 200			NSX400HB1 Micrologic 2.3 400	400	4800 (4)	LC1F225••	280
ND 315	—	ATV•A0C31Q6	NSX400HB1 Micrologic 2.3 400	400	4800 (4)	LC1F400••	430
HD 250			NSX400HB1 Micrologic 2.3 400	400	4800 (4)	LC1F330••	360
ND 400	—	ATV•A0C40Q6	NSX630HB1 Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
HD 315			NSX400HB1 Micrologic 2.3 400	400	4800 (4)	LC1F400••	430
ND 500	—	ATV•A0C50Q6	NS630bLB Micrologic 5.0	630	1260 (5)	LC1F630••	850
HD 400			NSX630HB1 Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
ND 630	—	ATV•A0C63Q6	NS800LB Micrologic 5.0	800	1600 (5)	LC1F630••	850
HD 500			NS630bLB Micrologic 5.0	630	1260 (5)	LC1F630••	850
ND 800	—	ATV•A0C80Q6	MTZ2 10H1 Micrologic 5.0 X	1000	2000 (5)	LC1F1250••	1060
HD 630			NS800LB Micrologic 5.0	800	1600 (5)	LC1F630••	850
ND 1000	—	ATV•A0M10Q6	MTZ2 12H1 Micrologic 5.0 X	1250	2500 (5)	LC1F1700••	1450
HD 800			MTZ2 10H1 Micrologic 5.0 X	1000	2000 (5)	LC1F1250••	1060
ND 1200	—	ATV•A0M12Q6	MTZ2 16H1 Micrologic 5.0 X	1600	3200 (5)	LC1F2100••	1750
HD 1000			MTZ2 12H1 Micrologic 5.0 X	1250	2500 (5)	LC1F1700••	1450

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for Icu min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) Rated instantaneous short-circuit current setting I<sub>i</sub>: fixed

(5) Rated instantaneous short-circuit current setting I<sub>i</sub>: 2

## INDUSTRIAL AUTOMATION

CÔNG TY CỔ PHẦN CÔNG NGHỆ HƠI LONG  
Combinations for customer Variable speed drives assembly (continued)

Altivar Process Modular  
Motor starters  
IEC 400 V Low Harmonic/Regen drives



NSX630N Micrologic 2.3 630

+



LC1F500••

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ATV9B0C25Q4

IEC standard motor starters							
Nominal power		Drive	Circuit breaker			Line contactor	
ND: Normal duty		Reference (1)	Type (2)	Rating at 50 °C	I <sub>i</sub>	Reference (3)	Rating at 60 °C
KW	HP			A	A	A	A
<b>Three-phase supply voltage: 400 V 50/60 Hz</b>							
ND 110	—	ATV•B0C11Q4	NSX250N Micrologic 2.2 250	250	3000 (4)	LC1F225••	280
HD 90			NSX250N Micrologic 2.2 250	250	3000 (4)	LC1F185••	240
ND 132	—	ATV•B0C13Q4	NSX400N Micrologic 2.3 400	400	4800 (4)	LC1F265••	300
HD 110			NSX250N Micrologic 2.2 250	250	3000 (4)	LC1F225••	280
ND 160	—	ATV•B0C16Q4	NSX400N Micrologic 2.3 400	400	4800 (4)	LC1F330••	360
HD 132			NSX400N Micrologic 2.3 400	400	4800 (4)	LC1F265••	300
ND 200	—	ATV•B0C20Q4	NSX630N Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
HD 160			NSX400N Micrologic 2.3 400	400	4800 (4)	LC1F400••	430
ND 250	—	ATV•B0C25Q4	NSX630N Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
HD 200			NSX630N Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
ND 315	—	ATV•B0C31Q4	NS800N Micrologic 5.0	800	1600 (5)	LC1F630••	850
HD 250			NSX630N Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
ND 355	—	ATV•B0C35Q4	NS800N Micrologic 5.0	800	1600 (5)	LC1F630••	850
HD 280			NS630bN Micrologic 5.0	630	1260 (5)	LC1F630••	850
ND 400	—	ATV•B0C40Q4	NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250••	1060
HD 315			NS800N Micrologic 5.0	800	1600 (5)	LC1F630••	850
ND 450	—	ATV•B0C45Q4	NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250••	1060
HD 355			NS800N Micrologic 5.0	800	1600 (5)	LC1F630••	850
ND 500	—	ATV•B0C50Q4	NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1250••	1060
HD 400			NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250••	1060
ND 560	—	ATV•B0C56Q4	NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1400••	1190
HD 450			NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250••	1060
ND 630	—	ATV•B0C63Q4	NS1600N Micrologic 5.0	1600	3200 (5)	LC1F1700••	1450
HD 500			NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1400••	1190
ND 710	—	ATV•B0C71Q4	NS1600N Micrologic 5.0	1600	3200 (5)	LC1F2100••	1750
HD 560			NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1400••	1190
ND 800	—	ATV•B0C80Q4	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (5)	LC1F2100••	1750
HD 630			NS1600N Micrologic 5.0	1600	3200 (5)	LC1F1700••	1450

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for I<sub>cu</sub> min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) Rated instantaneous short-circuit current setting I<sub>i</sub>: fixed

(5) Rated instantaneous short-circuit current setting I<sub>i</sub>: 2



NSX250N Micrologic 2.2 250

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LC1D115••

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ATV6B0C11R4

**IEC standard motor starters**

Nominal power ND: Normal duty HD: Heavy duty	Drive Reference (1)	Circuit breaker Type (2)	Rating at 50 °C		Line contactor	
			kW	HP	I <sub>1</sub>	Reference (3)
<b>Three-phase supply voltage: 440 V 50/60 Hz</b>						
ND 110	—	ATV•B0C11R4	NSX250N Micrologic 2.2 250	250	3000 (4)	LC1D115•• 200
HD 90			NSX250N Micrologic 2.2 250	250	3000 (4)	LC1D115•• 200
ND 132	—	ATV•B0C13R4	NSX250N Micrologic 2.2 250	250	3000 (4)	LC1F185•• 240
HD 110			NSX250N Micrologic 2.2 250	250	3000 (4)	LC1D115•• 200
ND 160	—	ATV•B0C16R4	NSX400H Micrologic 2.3 400	400	4800 (4)	LC1F265•• 300
HD 132			NSX250N Micrologic 2.2 250	250	3000 (4)	LC1F185•• 240
ND 200	—	ATV•B0C20R4	NSX400H Micrologic 2.3 400	400	4800 (4)	LC1F330•• 360
HD 160			NSX400H Micrologic 2.3 400	400	4800 (4)	LC1F265•• 300
ND 250	—	ATV•B0C25R4	NSX630H Micrologic 2.3 630	600	6900 (4)	LC1F500•• 580
HD 200			NSX400H Micrologic 2.3 400	400	4800 (4)	LC1F330•• 360
ND 315	—	ATV•B0C31R4	NSX630H Micrologic 2.3 630	600	6900 (4)	LC1F500•• 580
HD 250			NSX630H Micrologic 2.3 630	600	6900 (4)	LC1F500•• 580
ND 355	—	ATV•B0C35R4	NS630bN Micrologic 5.0	630	1260 (5)	LC1F630•• 850
HD 280			NSX630H Micrologic 2.3 630	600	6900 (4)	LC1F500•• 580
ND 400	—	ATV•B0C40R4	NS800N Micrologic 5.0	800	1600 (5)	LC1F630•• 850
HD 315			NSX630H Micrologic 2.3 630	600	6900 (4)	LC1F500•• 580
ND 450	—	ATV•B0C45R4	NS800N Micrologic 5.0	800	1600 (5)	LC1F630•• 850
HD 355			NS630bN Micrologic 5.0	630	1260 (5)	LC1F630•• 850
ND 500	—	ATV•B0C50R4	NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250•• 1060
HD 400			NS800N Micrologic 5.0	800	1600 (5)	LC1F630•• 850
ND 560	—	ATV•B0C56R4	NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250•• 1060
HD 450			NS800N Micrologic 5.0	800	1600 (5)	LC1F630•• 850
ND 630	—	ATV•B0C63R4	NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1400•• 1190
HD 500			NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250•• 1060
ND 710	—	ATV•B0C71R4	NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1700•• 1450
HD 560			NS1000N Micrologic 5.0	1000	2000 (5)	LC1F1250•• 1060
ND 800	—	ATV•B0C80R4	NS1600N Micrologic 5.0	1600	3200 (5)	LC1F1700•• 1450
HD 630			NS1250N Micrologic 5.0	1250	2500 (5)	LC1F1400•• 1190

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for I<sub>cu</sub> min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) Rated instantaneous short-circuit current setting I<sub>1</sub>: fixed

(5) Rated instantaneous short-circuit current setting I<sub>1</sub>: 2

**CÔNG TY CỔ PHẦN CÔNG NGHỆ HƠI LONG**  
**Combinations for customer assembly (continued)**

Variable speed drives

Altivar Process Modular

Motor starters

UL 480 V Low Harmonic/Regen drives



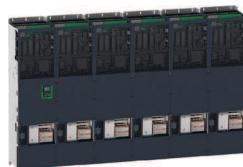
RLF36160U44A

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LC1F1700••

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ATV9B0C80T4

**UL standard motor starters**

Nominal power ND: Normal duty HD: Heavy duty	Drive Reference (1)	Circuit breaker			Line contactor	
		Type (2)	Rating at 50 °C	I <sub>li</sub>	Reference (3)	Rating at 60 °C
KW HP			A	A	A	A
<b>Three-phase supply voltage: 480 V 50/60 Hz</b>						
ND - 150	ATV•B0C11T4	JLL36250U31X	250	500 (4)	LC1D115••	200
HD 125		JLL36250U31X	250	500 (4)	LC1D115••	200
ND - 200	ATV•B0C13T4	JLL36250U31X	250	500 (4)	LC1F225••	280
HD 150		JLL36250U31X	250	500 (4)	LC1D115••	200
ND - 250	ATV•B0C16T4	LLL36400U31X	400	800 (4)	LC1F330••	360
HD 200		LLL36250U31X	250	500 (4)	LC1F225••	280
ND - 300	ATV•B0C20T4	LLL36400U31X	400	800 (4)	LC1F400••	430
HD 250		LLL36400U31X	400	800 (4)	LC1F330••	360
ND - 400	ATV•B0C25T4	LLL36600U31X	600	1200 (4)	LC1F500••	580
HD 300		LLL36400U31X	400	800 (4)	LC1F400••	430
ND - 500	ATV•B0C31T4	PLL34080U31A	736	1600 (4)	LC1F630••	850
HD 400		LLL36600U31X	600	1200 (4)	LC1F500••	580
ND - 550	ATV•B0C35T4	PLL34080U31A	736	1600 (4)	LC1F630••	850
HD 450		LLL36600U44X	600	1200 (4)	LC1F500••	580
ND - 600	ATV•B0C40T4	PLL34080U31A	736	1600 (4)	LC1F630••	850
HD 500		PLL34080U31A	736	1600 (4)	LC1F630••	850
ND - 650	ATV•B0C45T4	PLL34100U44A	920	2000 (4)	LC1F630••	850
HD 550		PLL34080U31A	736	1600 (4)	LC1F630••	850
ND - 700	ATV•B0C50T4	PLL34100U44A	920	2000 (4)	LC1F630••	850
HD 600		PLL34080U31A	736	1600 (4)	LC1F630••	850
ND - 800	ATV•B0C56T4	PLL34120U44A	1104	2400 (4)	LC1F1250••	1060
HD 650		PLL34100U44A	920	2000 (4)	LC1F630••	850
ND - 900	ATV•B0C63T4	PLL34120U44A	1104	2400 (4)	LC1F1400••	1190
HD 700		PLL34100U44A	920	2000 (4)	LC1F630••	850
ND - 1000	ATV•B0C71T4	RLF36160U44A	1472	3200 (4)	LC1F1700••	1450
HD 800		PLL34120U44A	1104	2400 (4)	LC1F1250••	1060
ND - 1100	ATV•B0C80T4	RLF36160U44A	1472	3200 (4)	LC1F1700••	1450
HD 900		PLL34120U44A	1104	2400 (4)	LC1F1400••	1190

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for I<sub>cu</sub> min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) Rated instantaneous short-circuit current setting I<sub>li</sub>: fixed

(5) Rated instantaneous short-circuit current setting I<sub>li</sub>: 2



LRL36600U31X

+



LC1F500•

+



ATV6A0C50T6

## IEC and UL standard motor starters

Nominal power ND: Normal duty HD: Heavy duty	Drive Reference (1)	Circuit breaker Type (2)	Rating at 50 °C		Line contactor	
			kW HP	li	Reference (3)	Rating at 60 °C
<b>Three-phase supply voltage: 500 V 50/60 Hz</b>						
ND 75	—	ATV•B0C11N6	NSX160L Micrologic 2.2 160	160	2400 (4)	LC1D80•• 125
HD 55			NSX100L Micrologic 2.2 100	100	1500 (4)	LC1D80•• 125
ND 90	—	ATV•B0C13N6	NSX160L Micrologic 2.2 160	160	2400 (4)	LC1D115•• 200
HD 75			NSX160L Micrologic 2.2 160	160	2400 (4)	LC1D80•• 125
ND 110	—	ATV•B0C16N6	NSX250L Micrologic 2.2 250	250	3000 (4)	LC1D115•• 200
HD 90			NSX160L Micrologic 2.2 160	160	2400 (4)	LC1D115•• 200
ND 132	—	ATV•B0C20N6	NSX250L Micrologic 2.2 250	250	3000 (4)	LC1F185•• 240
HD 110			NSX250L Micrologic 2.2 250	250	3000 (4)	LC1D115•• 200
ND 160	—	ATV•B0C25N6	NSX400L Micrologic 2.3 400	400	4800 (4)	LC1F225•• 280
HD 132			NSX250L Micrologic 2.2 250	250	3000 (4)	LC1F185•• 240
ND 220	—	ATV•B0C31N6	NSX400L Micrologic 2.3 400	400	4800 (4)	LC1F330•• 360
HD 160			NSX400L Micrologic 2.3 400	400	4800 (4)	LC1F225•• 280
ND 280	—	ATV•B0C40N6	NSX630L Micrologic 2.3 630	600	6900 (4)	LC1F500•• 580
HD 220			NSX400L Micrologic 2.3 400	400	4800 (4)	LC1F330•• 360
ND 355	—	ATV•B0C50N6	NSX630L Micrologic 2.3 630	600	6900 (4)	LC1F630•• 850
HD 280			NSX630L Micrologic 2.3 630	600	6900 (4)	LC1F500•• 580
ND 450	—	ATV•B0C63N6	NS800H Micrologic 5.0	800	1600 (5)	LC1F630•• 850
HD 355			NSX630L Micrologic 2.3 630	600	6900 (4)	LC1F500•• 580
ND 560	—	ATV•B0C80N6	NS1000H Micrologic 5.0	1000	2000 (5)	LC1F1250•• 1060
HD 450			NS800H Micrologic 5.0	800	1600 (5)	LC1F630•• 850
ND 710	—	ATV•B0M10N6	NS1250H Micrologic 5.0	1250	2500 (5)	LC1F1400•• 1190
HD 560			NS1000H Micrologic 5.0	1000	2000 (5)	LC1F1250•• 1060
ND 800	—	ATV•B0M12N6	NS1250H Micrologic 5.0	1250	2500 (5)	LC1F1700•• 1450
HD 710			NS1250H Micrologic 5.0	1250	2500 (5)	LC1F1400•• 1190
<b>Three-phase supply voltage: 600 V 50/60 Hz</b>						
ND —	125	ATV•B0C11T6	HRL36150U31X	150	300 (4)	LC1D115•• 200
HD	100		HRL36150U31X	150	300 (4)	LC1D80•• 125
ND —	150	ATV•B0C13T6	JRL36250U31X	250	500 (4)	LC1D115•• 200
HD	125		HRL36150U31X	150	300 (4)	LC1D115•• 200
ND —	175	ATV•B0C16T6	JRL36250U31X	250	500 (4)	LC1D115•• 200
HD	150		JRL36250U31X	250	500 (4)	LC1D115•• 200
ND —	200	ATV•B0C20T6	JRL36250U31X	250	500 (4)	LC1F185•• 240
HD	175		JRL36250U31X	250	500 (4)	LC1D115•• 200
ND —	250	ATV•B0C25T6	JRL36250U31X	250	500 (4)	LC1F225•• 280
HD	200		JRL36250U31X	250	500 (4)	LC1D115•• 200
ND —	350	ATV•B0C31T6	LRL36400U31X	400	800 (4)	LC1F330•• 360
HD	250		JRL36250U31X	250	500 (4)	LC1F225•• 280
ND —	450	ATV•B0C40T6	LRL36600U31X	600	1200 (4)	LC1F500•• 580
HD	350		LRL36400U31X	400	800 (4)	LC1F330•• 360
ND —	550	ATV•B0C50T6	LRL36600U31X	600	1200 (4)	LC1F500•• 580
HD	450		LRL36600U31X	600	1200 (4)	LC1F500•• 580
ND —	650	ATV•B0C63T6	MTZ2 08L Micrologic 3.0 X	736	1600 (4)	LC1F630•• 850
HD	550		LRL36600U31X	600	1200 (4)	LC1F500•• 580
ND —	800	ATV•B0C80T6	MTZ2 12L Micrologic 6.0 X	1104	2400 (4)	LC1F630•• 850
HD	650		MTZ2 08L Micrologic 3.0 X	736	1600 (4)	LC1F630•• 850
ND —	1000	ATV•B0M10T6	MTZ2 12L Micrologic 6.0 X	1104	2400 (4)	LC1F1250•• 1060
HD	800		MTZ2 12L Micrologic 6.0 X	1104	2400 (4)	LC1F630•• 850
ND —	1200	ATV•B0M12T6	MTZ2 16L Micrologic 6.0 X	1472	3200 (4)	LC1F1400•• 1190
HD	1000		MTZ2 12L Micrologic 6.0 X	1104	2400 (4)	LC1F1250•• 1060

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for Icu min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) Rated instantaneous short-circuit current setting li: fixed

(5) Rated instantaneous short-circuit current setting li: 2

CÔNG TY CỔ PHẦN CÔNG NGHỆ HƠI LONG  
Combinations for customer Variable speed drives  
assembly (continued)

Altivar Process Modular  
Motor starters  
IEC 690 V Low Harmonic/Regen drives



MTZ2 16H1



LC1F1700••



ATV6B0M10Q6

IEC standard motor starters							
Nominal power		Drive	Circuit breaker			Line contactor	
ND: Normal duty		Reference (1)	Type (2)	Rating at 50 °C	I <sub>li</sub>	Reference (3)	Rating at 60 °C
kW	HP				A	A	A
<b>Three-phase supply voltage: 690 V 50/60 Hz</b>							
ND 110	—	ATV•B0C11Q6	NSX250HB1 Micrologic 2.2 160	160	2400 (4)	LC1D115••	200
HD 90			NSX250HB1 Micrologic 2.2 160	160	2400 (4)	LC1D80••	125
ND 132	—	ATV•B0C13Q6	NSX250HB1 Micrologic 2.2 160	160	2400 (4)	LC1D115••	200
HD 110			NSX250HB1 Micrologic 2.2 160	160	2400 (4)	LC1D115••	200
ND 160	—	ATV•B0C16Q6	NSX250HB1 Micrologic 2.2 250	250	3000 (4)	LC1D115••	200
HD 132			NSX250HB1 Micrologic 2.2 160	160	2400 (4)	LC1D115••	200
ND 200	—	ATV•B0C20Q6	NSX250HB1 Micrologic 2.2 250	250	3000 (4)	LC1F185••	240
HD 160			NSX250HB1 Micrologic 2.2 250	250	3000 (4)	LC1D115••	200
ND 250	—	ATV•B0C25Q6	NSX400HB1 Micrologic 2.3 400	400	4800 (4)	LC1F265••	300
HD 200			NSX250HB1 Micrologic 2.2 250	250	3000 (4)	LC1F185••	240
ND 315	—	ATV•B0C31Q6	NSX400HB1 Micrologic 2.3 400	400	4800 (4)	LC1F330••	360
HD 250			NSX400HB1 Micrologic 2.3 400	400	4800 (4)	LC1F265••	300
ND 400	—	ATV•B0C40Q6	NSX630HB1 Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
HD 315			NSX400HB1 Micrologic 2.3 400	400	4800 (4)	LC1F330••	360
ND 500	—	ATV•B0C50Q6	NSX630HB1 Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
HD 400			NSX630HB1 Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
ND 630	—	ATV•B0C63Q6	NS800LB Micrologic 5.0	800	1600 (5)	LC1F630••	850
HD 500			NSX630HB1 Micrologic 2.3 630	600	6900 (4)	LC1F500••	580
ND 800	—	ATV•B0C80Q6	MTZ2 10H1 Micrologic 5.0 X	1000	2000 (5)	LC1F1250••	1060
HD 630			NS800LB Micrologic 5.0	800	1600 (5)	LC1F630••	850
ND 1000	—	ATV•B0M10Q6	MTZ2 12H1 Micrologic 5.0 X	1250	2500 (5)	LC1F1400••	1190
HD 800			MTZ2 10H1 Micrologic 5.0 X	1000	2000 (5)	LC1F1250••	1060
ND 1200	—	ATV•B0M12Q6	MTZ2 16H1 Micrologic 5.0 X	1600	3200 (5)	LC1F1700••	1450
HD 1000			MTZ2 12H1 Micrologic 5.0 X	1250	2500 (5)	LC1F1400••	1190

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for I<sub>cu</sub> min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) Rated instantaneous short-circuit current setting I<sub>li</sub>: fixed

(5) Rated instantaneous short-circuit current setting I<sub>li</sub>: 2

INDUSTRIAL AUTOMATION



NS1000N Micrologic 5.0

+



LC1F1250••

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ATV9L0C50Q4

IEC standard motor starters							
Nominal power		Drive Reference (1)	Circuit breaker			Line contactor	
ND: Normal duty	HD: Heavy duty		Type (2)	Rating at 50 °C	I <sub>i</sub>	Reference (3)	Rating at 60 °C
KW	HP			A	A	A	A
<b>Three-phase supply voltage: 400 V 50/60 Hz</b>							
ND 132	—	ATV•L0C13Q4	NSX400N Micrologic 2.3 400	400	4800 (5)	LC1F330••	360
HD 110			NSX400N Micrologic 2.3 400	400	4800 (5)	LC1F225••	280
ND 160	—	ATV•L0C16Q4	NSX400N Micrologic 2.3 400	400	4800 (5)	LC1F330••	360
HD 132			NSX400N Micrologic 2.3 400	400	4800 (5)	LC1F330••	360
ND 200	—	ATV•L0C20Q4	NSX630N Micrologic 2.3 630	600	6900 (5)	LC1F500••	580
HD 160			NSX400N Micrologic 2.3 400	400	4800 (5)	LC1F330••	360
ND 250	—	ATV•L0C25Q4	NSX630N Micrologic 2.3 630	600	6900 (5)	LC1F500••	580
HD 200			NSX630N Micrologic 2.3 630	600	6900 (5)	LC1F500••	580
ND 315	—	ATV•L0C31Q4	NS800N Micrologic 5.0	800	1600 (6)	LC1F630••	850
HD 250			NSX630N Micrologic 2.3 630	600	6900 (5)	LC1F500••	580
ND 400	—	ATV•L0C40Q4	NS1000N Micrologic 5.0	1000	2000 (6)	LC1F1250••	1060
HD 315			NS800N Micrologic 5.0	800	1600 (6)	LC1F630••	850
ND 500	—	ATV•L0C50Q4	NS1250N Micrologic 5.0	1250	2500 (6)	LC1F1250••	1060
HD 400			NS1000N Micrologic 5.0	1000	2000 (6)	LC1F1250••	1060
ND 630	—	ATV•L0C63Q4	NS1600N Micrologic 5.0	1600	3200 (6)	LC1F1700••	1450
HD 500			NS1250N Micrologic 5.0	1250	2500 (6)	LC1F1250••	1060
ND 800	—	ATV•L0C80Q4	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2100••	1750
HD 630			NS1600N Micrologic 5.0	1600	3200 (6)	LC1F1700••	1450
ND 900	—	ATV•L0C90Q4	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2600••	2600
HD 710			NS1600N Micrologic 5.0	1600	3200 (6)	LC1F2100••	1750
ND 1000	—	ATV•L0M10Q4 (4)	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2100••	1750
HD 800		ATV•L0M10Q4	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2100••	1750
ND 1200	—	ATV•L0M12Q4 (4)	MTZ2 25H1 Micrologic 5.0 X	2500	5000 (6)	LC1F2600••	2600
HD 1000			MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2100••	1750
ND 1500	—	ATV•L0M15Q4 (4)	MTZ2 32H1 Micrologic 5.0 X	3200	6400 (6)	LC1F2600••	2600
HD 1200			MTZ2 25H1 Micrologic 5.0 X	2500	5000 (6)	LC1F2600••	2600
ND 1800	—	ATV•L0M18Q4 (4)	MTZ2 32H1 Micrologic 5.0 X	3200	6400 (6)	3 x LC1F1700••	3262
HD 1400			MTZ2 25H1 Micrologic 5.0 X	2500	5000 (6)	LC1F2600••	2600

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for Icu min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) A temperature rise test is required to fulfill IEC 61439-1.

(5) Rated instantaneous short-circuit current setting I<sub>i</sub>: fixed

(6) Rated instantaneous short-circuit current setting I<sub>i</sub>: 2

**CÔNG TY CỔ PHẦN CÔNG NGHỆ HƠI LONG**  
**Combinations for customer assembly (continued)**

Variable speed drives  
 Altivar Process Modular  
 Motor starters  
 IEC 440 V - 6-pulse Liquid-cooled drives



NSX400H Micrologic 2.3 400

+



LC1F265••

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ATV9LOC13R4

**IEC standard motor starters**

Nominal power		Drive	Circuit breaker			Line contactor	
ND: Normal duty	HD: Heavy duty	Reference (1)	Type (2)	Rating at 50 °C	I <sub>li</sub>	Reference (3)	Rating at 60 °C
kW	HP			A	A	A	A
<b>Three-phase supply voltage: 440 V 50/60 Hz</b>							
ND 132	—	ATV•LOC13R4	NSX400H Micrologic 2.3 400	400	4800 (5)	LC1F265••	300
HD 110			NSX250N Micrologic 2.2 250	250	3000 (5)	LC1F225••	280
ND 160	—	ATV•LOC16R4	NSX400H Micrologic 2.3 400	400	4800 (5)	LC1F330••	360
HD 132			NSX400H Micrologic 2.3 400	400	4800 (5)	LC1F265••	300
ND 200	—	ATV•LOC20R4	NSX630H Micrologic 2.3 630	600	6900 (5)	LC1F400••	430
HD 160			NSX400H Micrologic 2.3 400	400	4800 (5)	LC1F330••	360
ND 250	—	ATV•LOC25R4	NSX630H Micrologic 2.3 630	600	6900 (5)	LC1F500••	580
HD 200			NSX630H Micrologic 2.3 630	600	6900 (5)	LC1F400••	430
ND 315	—	ATV•LOC31R4	NS630bN Micrologic 5.0	630	1260 (6)	LC1F630••	850
HD 250			NSX630H Micrologic 2.3 630	600	6900 (5)	LC1F500••	580
ND 400	—	ATV•LOC40R4	NS800N Micrologic 5.0	800	1600 (6)	LC1F630••	850
HD 315			NS800N Micrologic 5.0	800	1600 (6)	LC1F630••	850
ND 500	—	ATV•LOC50R4	NS1000N Micrologic 5.0	1000	2000 (6)	LC1F1250••	1060
HD 400			NS800N Micrologic 5.0	800	1600 (6)	LC1F630••	850
ND 630	—	ATV•LOC63R4	NS1250N Micrologic 5.0	1250	2500 (6)	LC1F1700••	1450
HD 500			NS1000N Micrologic 5.0	1000	2000 (6)	LC1F1250••	1060
ND 800	—	ATV•LOC80R4	NS1600N Micrologic 5.0	1600	3200 (6)	LC1F2100••	1750
HD 630			NS1250N Micrologic 5.0	1250	2500 (6)	LC1F1700••	1450
ND 900	—	ATV•LOC90R4	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2100••	1750
HD 710			NS1600N Micrologic 5.0	1600	3200 (6)	LC1F1700••	1450
ND 1000	—	ATV•LOM10R4 (4)	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2600••	2600
HD 800		ATV•LOM10R4	NS1600N Micrologic 5.0	1600	3200 (6)	LC1F2100••	1750
ND 1200	—	ATV•LOM12R4 (4)	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2600••	2600
HD 1000		ATV•LOM12R4	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2600••	2600
ND 1500	—	ATV•LOM15R4 (4)	MTZ2 25H1 Micrologic 5.0 X	2500	5000 (6)	LC1F2600••	2600
HD 1200			MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2600••	2600
ND 1800	—	ATV•LOM18R4 (4)	MTZ2 32H1 Micrologic 5.0 X	3200	6400 (6)	3 x LC1F1700••	3262
HD 1400			MTZ2 25H1 Micrologic 5.0 X	2500	5000 (6)	LC1F2600••	2600

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for Icu min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) A temperature rise test is required to fulfill IEC 61439-1.

(5) Rated instantaneous short-circuit current setting I<sub>li</sub>: fixed

(6) Rated instantaneous short-circuit current setting I<sub>li</sub>: 2



RLF36160U44A

+



LC1F1400••

+



ATV6LOC80T4

### UL standard motor starters

Nominal power ND: Normal duty HD: Heavy duty	Drive Reference (1)	Circuit breaker Type (2)	Rating at 50 °C li		Line contactor Reference (3)	Rating at 60 °C
			kW HP	A		
<b>Three-phase supply voltage: 480 V 50/60 Hz</b>						
ND - 200	ATV•L0C13T4	LLL36400U31X	400	800 (4)	LC1F265••	300
HD 150		JLL36250U31X	250	500 (4)	LC1F185••	240
ND - 250	ATV•L0C16T4	LLL36400U31X	400	800 (4)	LC1F330••	360
HD 200		LLL36400U31X	400	800 (4)	LC1F265••	300
ND - 300	ATV•L0C20T4	LLL36600U31X	600	1200 (4)	LC1F400••	430
HD 250		LLL36400U31X	400	800 (4)	LC1F330••	360
ND - 400	ATV•L0C25T4	LLL36600U31X	600	1200 (4)	LC1F500••	580
HD 300		LLL36600U31X	600	1200 (4)	LC1F400••	430
ND - 500	ATV•L0C31T4	PLL34080U31A	736	1600 (4)	LC1F630••	850
HD 400		LLL36600U31X	600	1200 (4)	LC1F500••	580
ND - 600	ATV•L0C40T4	PLL34100U44A	920	2000 (4)	LC1F630••	850
HD 500		PLL34080U31A	736	1600 (4)	LC1F630••	850
ND - 700	ATV•L0C50T4	PLL34120U44A	1104	2400 (4)	LC1F1250••	1060
HD 600		PLL34100U44A	920	2000 (4)	LC1F630••	850
ND - 900	ATV•L0C63T4	RLF36160U44A	1472	3200 (4)	LC1F1400••	1190
HD 700		PLL34120U44A	1104	2400 (4)	LC1F1250••	1060
ND - 1100	ATV•L0C80T4	RLF36160U44A	1472	3200 (4)	LC1F1700••	1450
HD 900		RLF36160U44A	1472	3200 (4)	LC1F1400••	1190
ND - 1300	ATV•L0C90T4	RLF36200U44A	1840	4000 (4)	LC1F2100••	1750
HD 1000		RLF36160U44A	1472	3200 (4)	LC1F1700••	1450
ND - 1400	ATV•L0M10T4	RLF36200U44A	1840	4000 (4)	LC1F2600••	2600
HD 1100		RLF36160U44A	1472	3200 (4)	LC1F1700••	1450
ND - 1700	ATV•L0M12T4	RLF36250U44A	2300	5000 (4)	LC1F2600••	2600
HD 1400		RLF36200U44A	1840	4000 (4)	LC1F2600••	2600
ND - 2200	ATV•L0M15T4	MTZ3 40H Micrologic 6.0 X	3680	8000 (4)	3 x LC1F1700••	3262
HD 1700		RLF36250U44A	2300	5000 (4)	LC1F2600••	2600
ND - 2500	ATV•L0M18T4	MTZ3 40H Micrologic 6.0 X	3680	8000 (4)	3 x LC1F1700••	3262
HD 2000		RLF36300U44A	2760	6000 (4)	LC1F2600••	2600

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for Icu min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) Rated instantaneous short-circuit current setting li: 2

CÔNG TY CỔ PHẦN CÔNG NGHỆ HƠI LONG  
Combinations for customer assembly (continued)

Variable speed drives

Altivar Process Modular

Motor starters

IEC 500 V - 6-pulse Liquid-cooled drives



MTZ2 20H1



LC1F2600••



ATV6LOM18N6

**IEC standard motor starters**

Nominal power		Drive Reference (1)	Circuit breaker			Line contactor	
ND: Normal duty	HD: Heavy duty		Type (2)	Rating at 50 °C	I <sub>II</sub>	Reference (3)	Rating at 60 °C
kW	HP			A	A	A	A
<b>Three-phase supply voltage: 500 V 50/60 Hz</b>							
ND 132	—	ATV•L0C20N6	NSX400H Micrologic 2.3 400	400	4800 (5)	LC1F265••	300
HD 110			NSX250N Micrologic 2.2 250	250	3000 (5)	LC1F225••	280
ND 200	—	ATV•L0C28N6	NSX400H Micrologic 2.3 400	400	4800 (5)	LC1F330••	360
HD 160			NSX400H Micrologic 2.3 400	400	4800 (5)	LC1F265••	300
ND 220	—	ATV•L0C31N6	NSX630H Micrologic 2.3 630	600	6900 (5)	LC1F400••	430
HD 180			NSX400H Micrologic 2.3 400	400	4800 (5)	LC1F330••	360
ND 250	—	ATV•L0C40N6	NSX630H Micrologic 2.3 630	600	6900 (5)	LC1F500••	580
HD 220			NSX630H Micrologic 2.3 630	600	6900 (5)	LC1F400••	430
ND 315	—	ATV•L0C45N6	NS630bN Micrologic 5.0	630	1260 (5)	LC1F630••	850
HD 250			NSX630H Micrologic 2.3 630	600	6900 (5)	LC1F500••	580
ND 400	—	ATV•L0C56N6	NS800N Micrologic 5.0	800	1600 (6)	LC1F630••	850
HD 315			NS800N Micrologic 5.0	800	1600 (6)	LC1F630••	850
ND 500	—	ATV•L0C71N6	NS1000N Micrologic 5.0	1000	2000 (6)	LC1F1250••	1060
HD 400			NS800N Micrologic 5.0	800	1600 (6)	LC1F630••	850
ND 630	—	ATV•L0C90N6	NS1250N Micrologic 5.0	1250	2500 (6)	LC1F1700••	1450
HD 500			NS1000N Micrologic 5.0	1000	2000 (6)	LC1F1250••	1060
ND 800	—	ATV•L0M12N6	NS1600N Micrologic 5.0	1600	3200 (6)	LC1F2100••	1750
HD 710			NS1250N Micrologic 5.0	1250	2500 (6)	LC1F1700••	1450
ND 1000	—	ATV•L0M14N6	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2100••	1750
HD 800			NS1600N Micrologic 5.0	1600	3200 (6)	LC1F1700••	1450
ND 1200	—	ATV•L0M16N6 (4)	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2600••	2600
HD 900		ATV•L0M16N6	NS1600N Micrologic 5.0	1600	3200 (6)	LC1F2100••	1750
ND 1300	—	ATV•L0M18N6 (4)	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2600••	2600
HD 1000		ATV•L0M18N6	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2600••	2600
ND 1600	—	ATV•L0M22N6 (4)	MTZ2 25H1 Micrologic 5.0 X	2500	5000 (6)	LC1F2600••	2600
HD 1200			MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2600••	2600
ND 1900	—	ATV•L0M26N6 (4)	MTZ2 32H1 Micrologic 5.0 X	3200	6400 (6)	3 x LC1F1700••	3262
HD 1500			MTZ2 25H1 Micrologic 5.0 X	2500	5000 (6)	LC1F2600••	2600

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for I<sub>cu</sub> min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) A temperature rise test is required to fulfill IEC 61439-1.

(5) Rated instantaneous short-circuit current setting I<sub>II</sub>: fixed

(6) Rated instantaneous short-circuit current setting I<sub>II</sub>: 2



MTZ2 12L



LC1F1250••



ATV6L0M12T6

**UL standard motor starters**

Nominal power ND: Normal duty HD: Heavy duty	Drive Reference (1)	Circuit breaker Type (2)	Rating at 50 °C li		Line contactor Reference (3)	Rating at 60 °C
			kW HP	A		
<b>Three-phase supply voltage: 600 V 50/60 Hz</b>						
ND – 200	ATV•L0C20T6	JRL36250U31X	250	500 (4)	LC1F185••	240
HD 150		JRL36250U31X	250	500 (4)	LC1D115••	200
ND – 300	ATV•L0C28T6	LRL36400U31X	400	800 (4)	LC1F330••	360
HD 200		LRL36400U31X	250	500 (4)	LC1F185••	240
ND – 350	ATV•L0C31T6	LRL36400U31X	400	800 (4)	LC1F400••	430
HD 250		LRL36400U31X	400	800 (4)	LC1F225••	280
ND – 450	ATV•L0C40T6	LRL36600U31X	600	1200 (4)	LC1F500••	580
HD 350		LRL36600U31X	400	800 (4)	LC1F400••	430
ND – 500	ATV•L0C45T6	LRL36600U31X	600	1200 (4)	LC1F500••	580
HD 400		LRL36600U31X	600	1200 (4)	LC1F400••	430
ND – 600	ATV•L0C56T6	MTZ2 08L Micrologic 3.0 X	736	1600 (4)	LC1F630••	850
HD 500		LRL36600U31X	600	1200 (4)	LC1F500••	580
ND – 700	ATV•L0C71T6	MTZ2 12L Micrologic 6.0 X	1104	2400 (4)	LC1F630••	850
HD 600		MTZ2 08L Micrologic 3.0 X	736	1600 (4)	LC1F630••	850
ND – 900	ATV•L0C90T6	MTZ2 12L Micrologic 6.0 X	1104	2400 (4)	LC1F1250	1060
HD 700		MTZ2 12L Micrologic 6.0 X	1104	2400 (4)	LC1F630••	850
ND – 1200	ATV•L0M12T6	MTZ2 16L Micrologic 6.0 X	1472	3200 (4)	LC1F1700••	1450
HD 1000		MTZ2 12L Micrologic 6.0 X	1104	2400 (4)	LC1F1250••	1060
ND – 1400	ATV•L0M14T6	MTZ2 16L Micrologic 6.0 X	1472	3200 (4)	LC1F1700••	1450
HD 1100		MTZ2 16L Micrologic 6.0 X	1472	3200 (4)	LC1F1400••	1190
ND – 1600	ATV•L0M16T6	MTZ2 20L Micrologic 6.0 X	1840	4000 (4)	LC1F2100••	1750
HD 1300		MTZ2 16L Micrologic 6.0 X	1472	3200 (4)	LC1F1700••	1450
ND – 1800	ATV•L0M18T6	MTZ2 25L Micrologic 6.0 X	2300	5000 (4)	LC1F2600••	2600
HD 1400		MTZ2 16L Micrologic 6.0 X	1472	3200 (4)	LC1F2100••	1750
ND – 2200	ATV•L0M22T6	MTZ2 25L Micrologic 6.0 X	2300	5000 (4)	LC1F2600••	2600
HD 1700		MTZ2 20L Micrologic 6.0 X	1840	4000 (4)	LC1F2600••	2600
ND – 2600	ATV•L0M26T6	MTZ2 30L Micrologic 6.0 X	2760	6000 (4)	3 x LC1F1700••	3262
HD 2100		MTZ2 25L Micrologic 6.0 X	2300	5000 (4)	LC1F2600••	2600

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

(2) The type of circuit breaker is selected for Icu min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) Rated instantaneous short-circuit current setting li: 2

CÔNG TY CỔ PHẦN CÔNG NGHỆ HƠI LONG  
Combinations for customer Variable speed drives assembly (continued)

Altivar Process Modular  
Motor starters  
IEC 690 V - 6-pulse Liquid-cooled drives



MTZ2 32H1



LC1F2600••



ATV6L0M26Q6

**IEC standard motor starters**

Nominal power <b>ND: Normal duty</b> <b>HD: Heavy duty</b>	Drive Reference (1)	Circuit breaker			Line contactor	
		Type (2)	Rating I <sub>i</sub> at 50 °C		Reference (3)	Rating at 60 °C
kW HP			A	A	A	A
<b>Three-phase supply voltage: 690 V 50/60 Hz</b>						
ND 200 –	ATV•L0C20Q6	NSX400HB1 Micrologic 2.3 400	400	4800 (5)	LC1F225••	280
HD 160		NSX250HB1 Micrologic 2.2 250	250	3000 (5)	LC1F185••	240
ND 280 –	ATV•L0C28Q6	NSX400HB1 Micrologic 2.3 400	400	4800 (5)	LC1F400••	430
HD 220		NSX400HB1 Micrologic 2.3 400	400	4800 (5)	LC1F265••	300
ND 315 –	ATV•L0C31Q6	NSX630HB1 Micrologic 2.3 630	600	6900 (5)	LC1F400••	430
HD 250		NSX400HB1 Micrologic 2.3 400	400	4800 (5)	LC1F330••	360
ND 400 –	ATV•L0C40Q6	NSX630HB1 Micrologic 2.3 630	600	6900 (5)	LC1F500••	580
HD 315		NSX630HB1 Micrologic 2.3 630	600	6900 (5)	LC1F400••	430
ND 450 –	ATV•L0C45Q6	NSX630HB1 Micrologic 2.3 630	600	6900 (5)	LC1F500••	580
HD 355		NSX630HB1 Micrologic 2.3 630	600	6900 (5)	LC1F500••	580
ND 560 –	ATV•L0C56Q6	NS800LB Micrologic 5.0	800	1600 (6)	LC1F630••	850
HD 450		NSX630HB1 Micrologic 2.3 630	600	6900 (5)	LC1F500••	580
ND 710 –	ATV•L0C71Q6	MTZ2 10H1 Micrologic 5.0 X	1000	2000 (6)	LC1F1250••	1060
HD 560		NS800LB Micrologic 5.0	800	1600 (6)	LC1F630••	850
ND 900 –	ATV•L0C90Q6	MTZ2 12H1 Micrologic 5.0 X	1250	2500 (6)	LC1F1400••	1190
HD 710		MTZ2 10H1 Micrologic 5.0 X	1000	2000 (6)	LC1F1250••	1060
ND 1200 –	ATV•L0M12Q6	MTZ2 16H1 Micrologic 5.0 X	1600	3200 (6)	LC1F2100••	1750
HD 1000		MTZ2 12H1 Micrologic 5.0 X	1250	2500 (6)	LC1F1700••	1450
ND 1400 –	ATV•L0M14Q6	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2100••	1750
HD 1100		MTZ2 16H1 Micrologic 5.0 X	1600	3200 (6)	LC1F1700••	1450
ND 1600 –	ATV•L0M16Q6	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2600••	2600
HD 1300		MTZ2 16H1 Micrologic 5.0 X	1600	3200 (6)	LC1F2100••	1750
ND 1800 –	ATV•L0M18Q6 (4)	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2100••	1750
HD 1400	ATV•L0M18Q6	MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2100••	1750
ND 2200 –	ATV•L0M22Q6 (4)	MTZ2 25H1 Micrologic 5.0 X	2500	5000 (6)	LC1F2600••	2600
HD 1700		MTZ2 20H1 Micrologic 5.0 X	2000	4000 (6)	LC1F2100••	1750
ND 2600 –	ATV•L0M26Q6 (4)	MTZ2 32H1 Micrologic 5.0 X	3200	6400 (6)	LC1F2600••	2600
HD 2100		MTZ2 25H1 Micrologic 5.0 X	2500	5000 (6)	LC1F2600••	2600

(1) Replace the dot • with "6" for ATV6A0 or "9" for ATV9A0.

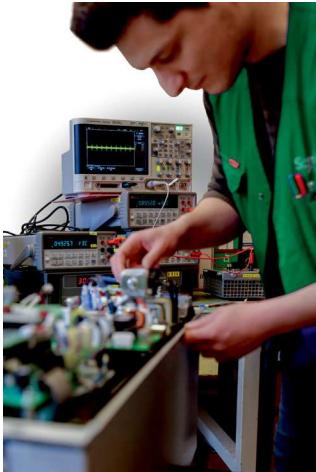
(2) The type of circuit breaker is selected for I<sub>cu</sub> min. 50 kA.

(3) Replace the dots •• with the control circuit voltage code indicated in the documentation for the contactor.

(4) A temperature rise test is required to fulfill IEC 61439-1.

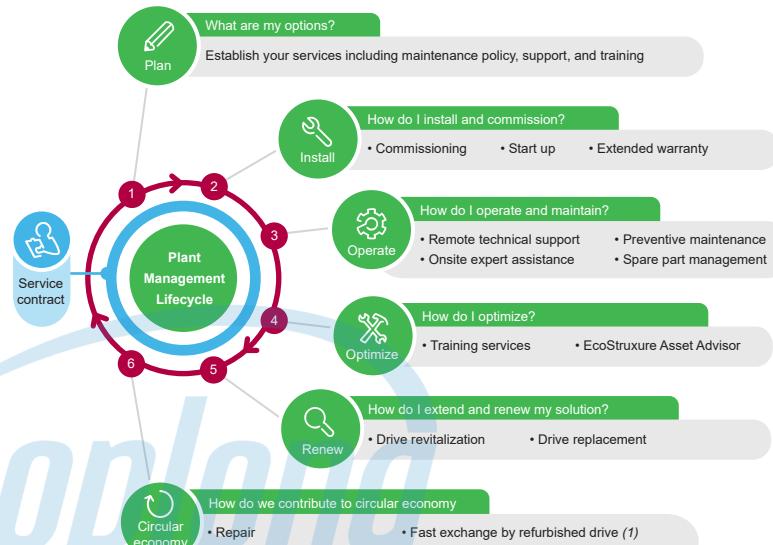
(5) Rated instantaneous short-circuit current setting I<sub>i</sub>: fixed

(6) Rated instantaneous short-circuit current setting I<sub>i</sub>: 2



### Drives support and services offer by Schneider Electric

Variable speed drives are an important part of your operation, with downtime having a significant impact on your business. Protecting that investment through comprehensive drive services means that you can continue to deliver optimally throughout the lifecycle of your drive. Our range of services is designed to help you get more out of your drives, your operation, and to improve your environmental impact.



#### Install

- **Extended Warranty** service helps you control your maintenance costs. Schneider Electric will provide a replacement drive or repair the drive on site during a period of 1 or 3 years more than the standard warranty, in all conditions covered by the extended warranty.
- **Start-up** service is the first essential step in maintenance and optimal operational performance of the drive. Our comprehensive review checks up to 100 parameters and is especially designed for drives in simple applications.
- **Commissioning** service helps to ensure a reliable start for operations with more complex applications and drive systems. The unique requirements of your process need to be carefully considered to ensure efficient operations.



#### Operate

- **Preventive Maintenance** service performs predetermined maintenance actions according to a drive product-specific schedule. The work is carried out by certified technical experts following Schneider Electric instructions. This service minimizes unplanned downtime and extends your equipment lifetime.
- **Remote Technical Support** brings you expert product assistance over phone, email, chat, or Web for any technical questions relating to your drives, including configuration, diagnostics, and maintenance. Our global support team is multi-lingual with support available up to R&D level experts if needed.
- **On-Site Expert Assistance** service offers you highly skilled field service experts to troubleshoot and resolve drive equipment-related matters at your site, as a back-up source of expertise for your personnel.
- **Spare Part Management** service identifies and manages your critical spare parts either on your site or offsite. This service ensures that you have access to the spares you need without you having to invest in capital to maintain the stock.

(1) Services available in countries that have the right structure and capabilities.



### Drives support and services offer by Schneider Electric (continued)

#### Optimize

- **Training** service offers eLearning, classroom, and onsite training provision to enhance the technical installation, commissioning, and maintenance competencies of your personnel. Added competence translates into further process efficiency and reliability, as well as employee satisfaction.
- **EcoStruxure Asset Advisor** service enables you to move from reactive to predictive maintenance and access actionable insight provided by the advisor. The service predicts drive- and motor-related actions through connected devices and advanced algorithms monitored by Schneider Electric's experts.



#### Renew

- **Drive Revitalization** is an excellent choice if you prefer to use your aging drives longer and want to extend their service life with affordable and comprehensive inspection and replacement of all critical parts.
- **Drive Replacement** involves modernizing equipment by replacing the previous aged or obsolete drive with a new one matched to the purpose. The service can be extended with engineering in case the device and process requires more advanced engineering.



#### Circular economy with drives

- **Spare Parts** are available from our local, regional, and global stocks. Original equipment parts from Schneider Electric are reliable and easily available. They will help to keep your drive in operation for longer.
- **Repair** allows you to extend the life of your drive. The affected drive can be replaced, or repaired on site or at our repair centers, depending on the type of drive in question.
- **Fast exchange by refurbished drive (1)** gives a second life to inoperative drives. In this case, we offer an immediate exchange with a replacement refurbished drive and take back the product, repair it, and keep it ready for the next exchange..
- **Take-back and recycling (1)** is the last step to improve your environmental impact. Unrepairable products are dismantled, and raw materials are collected and given a second life. Up to 85% of the product components can be recycled.



### Service contracts secure recovery, availability and outcome

**Service contracts** manage the safety and performance of your assets through well-defined maintenance plans tailored to your operational needs. The predefined service contract – Advantage Service Plan – and fully customizable “à la carte” service contract are built from services in the “Operate” and “Optimize” phases and service levels defining availability, response, and lead times matching your particular needs. You will enjoy priority access to Schneider Electric support when you need it, as well as having an expert partner to plan the long-term evolution of your drives.



### mySchneider app

With the mySchneider app you have easy 24/7 access to product information and expert support. All registered users have access to additional features, such as real-time notifications, order tracking, product pricing, and availability. The mySchneider app is available for download from the IOS and Android app store.

### Schneider Electric – helping you succeed

Schneider Electric, the leader in digital transformation of energy management and automation, has operations in more than 100 countries. With this global footprint we have certified drives field service representatives, regional expert and advanced level support up to product R&D to provide you the right support across the lifecycle of your drives. Furthermore, we offer an extensive network of local and global repair centers and a logistics chain that underpins our ability to respond to your needs.

To order services or find out more, please contact your local Schneider Electric service center.

(1) Services available in countries that have the right structure and capabilities.

A	ATV6A0C25Q6	45	ATV6B0C16T6	55	ATV6L0C20Q6	69	ATV6L0M18T6	67	
APM1A0C16N4RH	20	ATV6A0C25R4	37	ATV6B0C20N6	53	ATV6L0C20R4	61	ATV6L0M22N6	65
APM1A0C16N401	20	ATV6A0C25T4	39	ATV6B0C20Q4	47	ATV6L0C20T4	63	ATV6L0M22Q6	69
APM1A0C20Y6	20	ATV6A0C25T6	43	ATV6B0C20Q6	57	ATV6L0C20T6	67	ATV6L0M22T6	67
APM1A0C20Y6RH	20	ATV6A0C31N6	41	ATV6B0C20R4	49	ATV6L0C25Q4	59	ATV6L0M26N6	65
APM1B0C16N4	20	ATV6A0C31Q4	35	ATV6B0C20T4	51	ATV6L0C25R4	61	ATV6L0M26Q6	69
APM1B0C20Y6	20	ATV6A0C31Q6	45	ATV6B0C20T6	55	ATV6L0C25T4	63	ATV6L0M26T6	67
APM1L0C20N4	20	ATV6A0C31R4	37	ATV6B0C25N6	53	ATV6L0C28N6	65	ATV9A0C11N6	42
APM1L0C28Y6	20	ATV6A0C31T4	39	ATV6B0C25Q4	47	ATV6L0C28Q6	69	ATV9A0C11Q4	36
APM1L0C31N4	20	ATV6A0C31T6	43	ATV6B0C25Q6	57	ATV6L0C28T6	67	ATV9A0C11Q6	46
APM1L0C45Y6	20	ATV6A0C35Q4	35	ATV6B0C25R4	49	ATV6L0C31N6	65	ATV9A0C11R4	38
APM1L0CCM115	27	ATV6A0C35R4	37	ATV6B0C25T4	51	ATV6L0C31Q4	59	ATV9A0C11T4	40
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APM1L0LCMN4	27	ATV6A0C40N6	41	ATV6B0C31N6	53	ATV6L0C31R4	61	ATV9A0C13N6	42
APM1L0LCMY6	27	ATV6A0C40Q4	35	ATV6B0C31Q4	47	ATV6L0C31T4	63	ATV9A0C13Q4	36
APM1L0LFMN4	26	ATV6A0C40Q6	45	ATV6B0C31Q6	57	ATV6L0C31T6	67	ATV9A0C13Q6	46
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APM1L0MPMN4	27	ATV6A0C45Q4	35	ATV6B0C35Q4	47	ATV6L0C40R4	61	ATV9A0C16N6	42
APM1L0MPMY6	27	ATV6A0C45R4	37	ATV6B0C35R4	49	ATV6L0C40T4	63	ATV9A0C16Q4	36
APM6A0CTLN401	22	ATV6A0C45T4	39	ATV6B0C35T4	51	ATV6L0C40T6	67	ATV9A0C16Q6	46
APM6A0CTLY6	22	ATV6A0C50N6	41	ATV6B0C40N6	53	ATV6L0C45N6	65	ATV9A0C16R4	38
APM6B0CTLN4	22	ATV6A0C50Q4	35	ATV6B0C40Q4	47	ATV6L0C45Q6	69	ATV9A0C16T4	40
APM6B0CTLY6	22	ATV6A0C50Q6	45	ATV6B0C40Q6	57	ATV6L0C45T6	67	ATV9A0C16T6	44
APM6L0CTLN4	22	ATV6A0C50R4	37	ATV6B0C40R4	49	ATV6L0C50Q4	59	ATV9A0C20N6	42
APM6L0CTLY6	22	ATV6A0C50T4	39	ATV6B0C40T4	51	ATV6L0C50R4	61	ATV9A0C20Q4	36
APM9A0CTLN401	22	ATV6A0C50T6	43	ATV6B0C40T6	55	ATV6L0C50T4	63	ATV9A0C20Q6	46
APM9A0CTLY6	22	ATV6A0C56Q4	35	ATV6B0C45Q4	47	ATV6L0C56N6	65	ATV9A0C20R4	38
APM9B0CTLN4	22	ATV6A0C56R4	37	ATV6B0C45R4	49	ATV6L0C56Q6	69	ATV9A0C20T4	40
APM9B0CTLY6	22	ATV6A0C56T4	39	ATV6B0C45T4	51	ATV6L0C56T6	67	ATV9A0C20T6	44
APM9L0CTLN4	22	ATV6A0C63N6	41	ATV6B0C50N6	53	ATV6L0C63Q4	59	ATV9A0C25N6	42
APM9L0CTLY6	22	ATV6A0C63Q4	35	ATV6B0C50Q4	47	ATV6L0C63R4	61	ATV9A0C25Q4	36
APMB0C50N4	27	ATV6A0C63Q6	45	ATV6B0C50Q6	57	ATV6L0C63T4	63	ATV9A0C25Q6	46
APMB0C63Y6	27	ATV6A0C63R4	37	ATV6B0C50R4	49	ATV6L0C71N6	65	ATV9A0C25R4	38
APMBC0CTLN4	27	ATV6A0C63T4	39	ATV6B0C50T4	51	ATV6L0C71Q6	69	ATV9A0C25T4	40
APMBC0CTLY6	27	ATV6A0C63T6	43	ATV6B0C50T6	55	ATV6L0C71T6	67	ATV9A0C25T6	44
APMCA01LCN4RH	21	ATV6A0C71Q4	35	ATV6B0C56Q4	47	ATV6L0C80Q4	59	ATV9A0C31N6	42
APMCA01LCY6RH	21	ATV6A0C71R4	37	ATV6B0C56R4	49	ATV6L0C80R4	61	ATV9A0C31Q4	36
APMCA02LCN4RH	21	ATV6A0C71T4	39	ATV6B0C56T4	51	ATV6L0C80T4	63	ATV9A0C31Q6	46
APMCA02LCY6RH	21	ATV6A0C80N6	41	ATV6B0C63N6	53	ATV6L0C90N6	65	ATV9A0C31R4	38
APMCA03LCN4RH	21	ATV6A0C80Q4	35	ATV6B0C63Q4	47	ATV6L0C90Q4	59	ATV9A0C31T4	40
APMCA03LCY6RH	21	ATV6A0C80Q6	45	ATV6B0C63Q6	57	ATV6L0C90Q6	69	ATV9A0C31T6	44
ATV6A0C11N6	41	ATV6A0C80R4	37	ATV6B0C63R4	49	ATV6L0C90R4	61	ATV9A0C35Q4	36
ATV6A0C11Q4	35	ATV6A0C80T4	39	ATV6B0C63T4	51	ATV6L0C90T4	63	ATV9A0C35R4	38
ATV6A0C11Q6	45	ATV6A0C80T6	43	ATV6B0C63T6	55	ATV6L0C90T6	67	ATV9A0C35T4	40
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<b>ATV9A0C71Q4</b>	<b>36</b>	<b>ATV9B0C56Q4</b>	<b>48</b>	<b>ATV9L0C80Q4</b>	<b>60</b>	<b>MODBUOC63T6APM</b>	<b>76</b>	<b>VW3A99ACFAA01</b>	<b>25</b>
<b>ATV9A0C71R4</b>	<b>38</b>	<b>ATV9B0C56R4</b>	<b>50</b>	<b>ATV9L0C80R4</b>	<b>62</b>	<b>MODBUOC80N6APM</b>	<b>77</b>	<b>VW3A99ACFABM</b>	<b>25</b>
<b>ATV9A0C71T4</b>	<b>40</b>	<b>ATV9B0C56T4</b>	<b>52</b>	<b>ATV9L0C80T4</b>	<b>64</b>	<b>MODBUOC80Q4APM</b>	<b>71</b>	<b>VW3A99ACFCB</b>	<b>25</b>
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<b>ATV9A0C80Q4</b>	<b>36</b>	<b>ATV9B0C63Q4</b>	<b>48</b>	<b>ATV9L0C90Q4</b>	<b>60</b>	<b>MODBUOC80Q6APM</b>	<b>79</b>	<b>VW3A99ACFCBM01</b>	<b>25</b>
<b>ATV9A0C80Q6</b>	<b>46</b>	<b>ATV9B0C63Q6</b>	<b>58</b>	<b>ATV9L0C90Q6</b>	<b>70</b>	<b>MODBUOC80R4APM</b>	<b>73</b>	<b>VW3A99ACFCBM02</b>	<b>25</b>
<b>ATV9A0C80R4</b>	<b>38</b>	<b>ATV9B0C63R4</b>	<b>50</b>	<b>ATV9L0C90R4</b>	<b>62</b>	<b>MODBUOC80T4APM</b>	<b>74</b>	<b>VW3A99ACFCBN01</b>	<b>25</b>
<b>ATV9A0C80T4</b>	<b>40</b>	<b>ATV9B0C63T4</b>	<b>52</b>	<b>ATV9L0C90T4</b>	<b>64</b>	<b>MODBUOC80T6APM</b>	<b>75</b>	<b>VW3A99ACFEBN01</b>	<b>25</b>
<b>ATV9A0C80T6</b>	<b>44</b>	<b>ATV9B0C63T6</b>	<b>56</b>	<b>ATV9L0C90T6</b>	<b>68</b>	<b>MODBUOC80T6APM</b>	<b>76</b>	<b>VW3A99ACFEBN02</b>	<b>25</b>
<b>ATV9A0M10N6</b>	<b>42</b>	<b>ATV9B0C71Q4</b>	<b>48</b>	<b>ATV9L0M10Q4</b>	<b>60</b>	<b>MODBUOM10N6APM</b>	<b>77</b>	<b>VW3A99ACFEC</b>	<b>25</b>
<b>ATV9A0M10Q6</b>	<b>46</b>	<b>ATV9B0C71R4</b>	<b>50</b>	<b>ATV9L0M10R4</b>	<b>62</b>	<b>MODBUOM10Q6APM</b>	<b>79</b>	<b>VW3A99ACFEC01</b>	<b>25</b>
<b>ATV9A0M10T6</b>	<b>44</b>	<b>ATV9B0C71T4</b>	<b>52</b>	<b>ATV9L0M10T4</b>	<b>64</b>	<b>MODBUOM10T6APM</b>	<b>78</b>	<b>VW3A99AR01</b>	<b>25</b>
<b>ATV9A0M12N6</b>	<b>42</b>	<b>ATV9B0C80N6</b>	<b>54</b>	<b>ATV9L0M12N6</b>	<b>66</b>	<b>MODBUOM12N6APM</b>	<b>77</b>	<b>VW3A99BCA02</b>	<b>26</b>
<b>ATV9A0M12Q6</b>	<b>46</b>	<b>ATV9B0C80Q4</b>	<b>48</b>	<b>ATV9L0M12Q4</b>	<b>60</b>	<b>MODBUOM12Q6APM</b>	<b>79</b>	<b>VW3A99BCA03</b>	<b>25</b>
<b>ATV9A0M12T6</b>	<b>44</b>	<b>ATV9B0C80Q6</b>	<b>58</b>	<b>ATV9L0M12Q6</b>	<b>70</b>	<b>MODBUOM12T6APM</b>	<b>78</b>	<b>VW3A99BCFAB</b>	<b>25</b>
<b>ATV9B0C11N6</b>	<b>54</b>	<b>ATV9B0C80R4</b>	<b>50</b>	<b>ATV9L0M12R4</b>	<b>62</b>	<b>T</b>		<b>VW3A99BCFAB01</b>	<b>25</b>
<b>ATV9B0C11Q4</b>	<b>48</b>	<b>ATV9B0C80T4</b>	<b>52</b>	<b>ATV9L0M12T4</b>	<b>64</b>	<b>TCSEGWB131W</b>	<b>29</b>	<b>VW3A99BCFCD</b>	<b>25</b>
<b>ATV9B0C11Q6</b>	<b>58</b>	<b>ATV9B0C80T6</b>	<b>56</b>	<b>ATV9L0M12T6</b>	<b>68</b>	<b>V</b>		<b>VW3A99BCFC01</b>	<b>25</b>
<b>ATV9B0C11R4</b>	<b>50</b>	<b>ATV9B0M10N6</b>	<b>54</b>	<b>ATV9L0M14N6</b>	<b>66</b>	<b>VW3A83BMR015</b>	<b>23</b>	<b>VW3A99BR01</b>	<b>25</b>
<b>ATV9B0C11T4</b>	<b>52</b>	<b>ATV9B0M10Q6</b>	<b>58</b>	<b>ATV9L0M14Q6</b>	<b>70</b>	<b>VW3A83BMR050</b>	<b>23</b>	<b>VW3A99LR01</b>	<b>26</b>
<b>ATV9B0C11T6</b>	<b>56</b>	<b>ATV9B0M10T6</b>	<b>56</b>	<b>ATV9L0M14T6</b>	<b>68</b>	<b>VW3A83BMR100</b>	<b>26</b>	<b>VW3A1104R10</b>	<b>29</b>
<b>ATV9B0C13N6</b>	<b>54</b>	<b>ATV9B0M12N6</b>	<b>54</b>	<b>ATV9L0M15Q4</b>	<b>60</b>	<b>VW3A83CDG020</b>	<b>23</b>	<b>VW3A1104R30</b>	<b>29</b>
<b>ATV9B0C13Q4</b>	<b>48</b>	<b>ATV9B0M12Q6</b>	<b>58</b>	<b>ATV9L0M15R4</b>	<b>62</b>	<b>VW3A83CDG030</b>	<b>23</b>	<b>VW3A1104R50</b>	<b>29</b>
<b>ATV9B0C13Q6</b>	<b>58</b>	<b>ATV9B0M12T6</b>	<b>56</b>	<b>ATV9L0M15T4</b>	<b>64</b>	<b>VW3A83CDG050</b>	<b>23</b>	<b>VW3A1104R100</b>	<b>29</b>
<b>ATV9B0C13R4</b>	<b>50</b>	<b>ATV9L0C13Q4</b>	<b>60</b>	<b>ATV9L0M16N6</b>	<b>66</b>	<b>VW3A83CDG100</b>	<b>23</b>	<b>VW3A1111</b>	<b>29</b>
<b>ATV9B0C13T4</b>	<b>52</b>	<b>ATV9L0C13R4</b>	<b>62</b>	<b>ATV9L0M16Q6</b>	<b>70</b>	<b>VW3A97A01</b>	<b>23</b>	<b>VW3A1112</b>	<b>29</b>
<b>ATV9B0C13T6</b>	<b>56</b>	<b>ATV9L0C13T4</b>	<b>64</b>	<b>ATV9L0M16T6</b>	<b>68</b>	<b>VW3A97B01</b>	<b>23</b>	<b>VW3A1115</b>	<b>29</b>
<b>ATV9B0C16N6</b>	<b>54</b>	<b>ATV9L0C16Q4</b>	<b>60</b>	<b>ATV9L0M18N6</b>	<b>66</b>	<b>VW3A98ABMAAA</b>	<b>24</b>	<b>VX5VAM001</b>	<b>28</b>
<b>ATV9B0C16Q4</b>	<b>48</b>	<b>ATV9L0C16R4</b>	<b>62</b>	<b>ATV9L0M18Q4</b>	<b>60</b>	<b>VW3A98ABMCAB</b>	<b>24</b>	<b>VX5VAML001</b>	<b>28</b>
<b>ATV9B0C16Q6</b>	<b>58</b>	<b>ATV9L0C16T4</b>	<b>64</b>	<b>ATV9L0M18Q6</b>	<b>70</b>	<b>VW3A98ABMCAC</b>	<b>24</b>	<b>VX5VAML002</b>	<b>28</b>
<b>ATV9B0C16R4</b>	<b>50</b>	<b>ATV9L0C20N6</b>	<b>66</b>	<b>ATV9L0M18R4</b>	<b>62</b>	<b>VW3A98ABMDCE</b>	<b>24</b>	<b>VX5VAML003</b>	<b>28</b>
<b>ATV9B0C16T4</b>	<b>52</b>	<b>ATV9L0C20Q4</b>	<b>60</b>	<b>ATV9L0M18T4</b>	<b>64</b>	<b>VW3A98ABMDCF</b>	<b>24</b>	<b>Z</b>	
<b>ATV9B0C16T6</b>	<b>56</b>	<b>ATV9L0C20Q6</b>	<b>70</b>	<b>ATV9L0M18T6</b>	<b>68</b>	<b>VW3A98ABPC1</b>	<b>24</b>	<b>ZB5AZ905</b>	<b>29</b>
<b>ATV9B0C20N6</b>	<b>54</b>	<b>ATV9L0C20R4</b>	<b>62</b>	<b>ATV9L0M22N6</b>	<b>66</b>	<b>VW3A98ABPDCE1</b>	<b>24</b>		
<b>ATV9B0C20Q4</b>	<b>48</b>	<b>ATV9L0C20T4</b>	<b>64</b>	<b>ATV9L0M22Q6</b>	<b>70</b>	<b>VW3A98ABPDCF</b>	<b>24</b>		
<b>ATV9B0C20Q6</b>	<b>58</b>	<b>ATV9L0C20T6</b>	<b>68</b>	<b>ATV9L0M22T6</b>	<b>68</b>	<b>VW3A98BBMAB</b>	<b>24</b>		
<b>ATV9B0C20R4</b>	<b>50</b>	<b>ATV9L0C25Q4</b>	<b>60</b>	<b>ATV9L0M26N6</b>	<b>66</b>	<b>VW3A98BBMCAD</b>	<b>24</b>		
<b>ATV9B0C20T4</b>	<b>52</b>	<b>ATV9L0C25R4</b>	<b>62</b>	<b>ATV9L0M26Q6</b>	<b>70</b>	<b>VW3A98BBMDCG</b>	<b>24</b>		
<b>ATV9B0C20T6</b>	<b>56</b>	<b>ATV9L0C25T4</b>	<b>64</b>	<b>ATV9L0M26T6</b>	<b>68</b>	<b>VW3A98BBPC</b>	<b>24</b>		
<b>ATV9B0C25N6</b>	<b>54</b>	<b>ATV9L0C28N6</b>	<b>66</b>	<b>M</b>		<b>VW3A98BBPDHG</b>	<b>24</b>		
<b>ATV9B0C25Q4</b>	<b>48</b>	<b>ATV9L0C28Q6</b>	<b>70</b>	<b>MODBUOC16Q4APM</b>	<b>71</b>	<b>VW3A98BBPDCK</b>	<b>24</b>		
<b>ATV9B0C25Q6</b>	<b>58</b>	<b>ATV9L0C28T6</b>	<b>68</b>	<b>MODBUOC16R4APM</b>	<b>72</b>	<b>VW3A98CF3169</b>	<b>24</b>		
<b>ATV9B0C25R4</b>	<b>50</b>	<b>ATV9L0C31N6</b>	<b>66</b>	<b>MODBUOC16T4APM</b>	<b>73</b>	<b>VW3A98CF4040</b>	<b>24</b>		
<b>ATV9B0C25T4</b>	<b>52</b>	<b>ATV9L0C31Q4</b>	<b>60</b>	<b>MODBUOC31Q4APM</b>	<b>75</b>	<b>VW3A98CTM01</b>	<b>24</b>		
<b>ATV9B0C25T6</b>	<b>56</b>	<b>ATV9L0C31Q6</b>	<b>70</b>	<b>MODBUOC31T4APM</b>	<b>76</b>	<b>VW3A98CTM02</b>	<b>24</b>		
<b>ATV9B0C31N6</b>	<b>54</b>	<b>ATV9L0C31R4</b>	<b>62</b>	<b>MODBUOC20Q6APM</b>	<b>77</b>	<b>VW3A98CTM03</b>	<b>25</b>		
<b>ATV9B0C31Q4</b>	<b>48</b>	<b>ATV9L0C31T4</b>	<b>64</b>	<b>MODBUOC20T6APM</b>	<b>78</b>	<b>VW3A98CTM04</b>	<b>25</b>		
<b>ATV9B0C31Q6</b>	<b>58</b>	<b>ATV9L0C31T6</b>	<b>68</b>	<b>MODBUOC31Q4APM</b>	<b>71</b>	<b>VW3A98LBPC1</b>	<b>26</b>		
<b>ATV9B0C31R4</b>	<b>50</b>	<b>ATV9L0C40N6</b>	<b>66</b>	<b>MODBUOC40N6APM</b>	<b>72</b>	<b>VW3A98LBPC2</b>	<b>26</b>		
<b>ATV9B0C31T4</b>	<b>52</b>	<b>ATV9L0C40Q4</b>	<b>60</b>	<b>MODBUOC40Q6APM</b>	<b>73</b>	<b>VW3A98LBPC3</b>	<b>26</b>		
<b>ATV9B0C31T6</b>	<b>56</b>	<b>ATV9L0C40Q6</b>	<b>70</b>	<b>MODBUOC40T6APM</b>	<b>74</b>	<b>VW3A98LGHC1</b>	<b>26</b>		
<b>ATV9B0C35Q4</b>	<b>48</b>	<b>ATV9L0C40R4</b>	<b>62</b>	<b>MODBUOC50Q4APM</b>	<b>75</b>	<b>VW3A98LGHC2</b>	<b>26</b>		
<b>ATV9B0C35R4</b>	<b>50</b>	<b>ATV9L0C40T4</b>	<b>64</b>	<b>MODBUOC50R4APM</b>	<b>76</b>	<b>VW3A98LTMC1</b>	<b>26</b>		
<b>ATV9B0C35T4</b>	<b>52</b>	<b>ATV9L0C40T6</b>	<b>68</b>	<b>MODBUOC50T4APM</b>	<b>77</b>	<b>VW3A99ACA01</b>	<b>26</b>		
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<b>ATV9B0C40Q4</b>	<b>48</b>	<b>ATV9L0C45Q6</b>	<b>70</b>	<b>MODBUOC63Q4APM</b>	<b>71</b>	<b>VW3A99ACA03</b>	<b>25</b>		
<b>ATV9B0C40Q6</b>	<b>58</b>	<b>ATV9L0C45T6</b>	<b>68</b>	<b>MODBUOC63Q6APM</b>	<b>72</b>	<b>VW3A99ACA04</b>	<b>25</b>		
<b>ATV9B0C40R4</b>	<b>50</b>	<b>ATV9L0C50Q4</b>	<b>60</b>	<b>MODBUOC63R4APM</b>	<b>73</b>	<b>VW3A99ACA05</b>	<b>26</b>		
<b>ATV9B0C40T4</b>	<b>52</b>	<b>ATV9L0C50R4</b>	<b>62</b>	<b>MODBUOC63T4APM</b>	<b>74</b>	<b>VW3A99ACA06</b>	<b>26</b>		
<b>ATV9B0C40T6</b>	<b>56</b>	<b>ATV9L0C50T4</b>	<b>64</b>	<b>MODBUOC63T6APM</b>	<b>75</b>	<b>VW3A99ACA07</b>	<b>26</b>		
<b>ATV9B0C45Q4</b>	<b>48</b>	<b>ATV9L0C56N6</b>	<b>66</b>	<b>MODBUOC63T6APM</b>	<b>76</b>	<b>VW3A99ACA08</b>	<b>26</b>		
<b>ATV9B0C45R4</b>	<b>50</b>	<b>ATV9L0C56Q6</b>	<b>70</b>	<b>MODBUOC63T6APM</b>	<b>77</b>	<b>VW3A99ACA09</b>	<b>26</b>		
<b>ATV9B0C45T4</b>	<b>52</b>	<b>ATV9L0C56T6</b>	<b>68</b>	<b>MODBUOC63T6APM</b>	<b>78</b>	<b>VW3A99ACA10</b>	<b>26</b>		
<b>ATV9B0C50N6</b>	<b>54</b>	<b>ATV9L0C63Q4</b>	<b>60</b>	<b>MODBUOC63T6APM</b>	<b>79</b>	<b>VW3A99ACA11</b>	<b>25</b>		
<b>ATV9B0C50Q4</b>	<b>48</b>	<b>ATV9L0C63R4</b>	<b>62</b>	<b>MODBUOC63T6APM</b>	<b>79</b>	<b>VW3A99ACA12</b>	<b>25</b>		
<b>ATV9B0C50Q6</b>	<b>58</b>	<b>ATV9L0C63T4</b>	<b>64</b>	<b>MODBUOC63T6APM</b>	<b>79</b>	<b>VW3A99ACA13</b>	<b>25</b>		
<b>ATV9B0C50R4</b>	<b>50</b>	<b>ATV9L0C71N6</b>	<b>66</b>	<b>MODBUOC63T6APM</b>	<b>79</b>				
<b>ATV9B0C50T4</b>	<b>52</b>	<b>ATV9L0C71Q6</b>	<b>70</b>	<b>MODBUOC63T6APM</b>	<b>79</b>				

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