

The essential guide Motion & Drives

2012



ZOOM



Low harmonic drive,
Altivar 61 Plus-LH
“Ready to use”

Altivar 61 Plus-LH

Easy reduction of harmonics

The Altivar 61 Plus-LH (Low Harmonic) offer has been designed with harmonic filtering to suit applications requiring a very low harmonic level (THDI 5%).

The enclosures are supplied as IP23 or IP54 ready-assembled and ready to connect, thus offering a simple and economical “ready to use” solution which keeps setup time to a minimum.

- Wide power range from 55 to 630 kW for 380...415 V supply voltage
- Maximum motor power maintained in the event of a weak line supply by boosted DC voltage
- Power factor ($\cos \Phi \sim 1$) independent of load or energy direction
- Configurable energy recovery onto the line supply, for example for an installation with diesel generator
- Line supply short-circuits tolerated up to 100 kA

Pour plus d'informations, voir page 27

ZOOM



Altivar 32

More than 150 application-specific functions

The Altivar 32 range of variable speed drives controls asynchronous and synchronous motors rated from 0.18 to 15 kW operating in open loop mode in complex machines:

- Compact, vertical and slim format (45 mm)
- Integrated function blocks for creating simple control system functions (timers, counters, comparators, etc.)
- Machine safety functions integrated as standard (STO, SLS, SS1)
- Open design: communicates with most industrial networks

For more information, see page 18

Lexium 32 Inspired by Simplicity



The Lexium 32 servo drive range (0.15 to 7 kW) is a drive system designed for applications where high precision and dynamic positioning are critical:

- Suitable for packaging, materials processing (cutting, turning, milling, etc.) and handling, printing and textile applications
- 3 servo drive families and two types of servo motor available
- Simplified engineering: motor sizing, CAD and cabinet drawings, support for PLCopen libraries and SoMove setup software
- Integrated “Safe Torque Off” function
- Quick integration: wide selection of fieldbus modules

For more information, see page 44



Ultra slim and ultra powerful

Practical and innovative, the Altivar 32 and Lexium 32 ranges can help reduce the size of your enclosures by as much as 40%.

- Extra slim book format
- Easy to configure and setup with SoMove software
- Packed with common software tools, accessories and functions
- Homogeneous mounting and wiring systems
- High-performance communication system
- Built-in Bluetooth as standard
- Can be configured with the power off in its original packaging: configurations can be transferred remotely via mobile phone using SoMove Mobile software

SoMove and SoMove Mobile

User-friendly and efficient

SoMove is a common setup software tool for PCs, designed for Schneider Electric's latest motor control devices.

- Available as a free download from www.schneider-electric.com, SoMove allows you to prepare drive configuration files and set parameters, while making maintenance easier.
- Compatible with communication tools, such as Multi-Loader, Simple Loader, remote display terminals, etc.

SoMove Mobile is an application for mobile phones:

- Remote configuration or modification of Altivar 32 variable speed drives, Lexium 32 servo drives and many products from the Altivar range
- File and data exchange via Bluetooth, USB, e-mail, MMS, etc.

For more information, see page 50



Altistart 22

Integrated bypass function



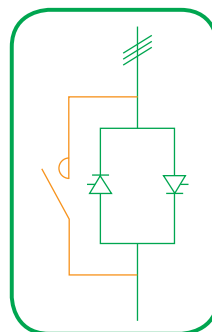
The Altistart 22 range of compact soft start/soft stop units for pumps, fans, conveyors and compressors is designed for infrastructure and industrial applications.

- Integrated bypass function for controlled starting and stopping, using both voltage and torque, of three-phase squirrel cage asynchronous motors
- Power ratings between 4 and 400 kW

With the Altistart 22 range driving your applications, you can:

- Cut your operating costs
- Reduce the number of components you need to manage (multifunction products)
- Control temperature rises due to its low heat dissipation
- Simplify wiring (6 cables instead of 12)
- Protect your electrical installation
- Save space in your enclosures with a fully equipped product

For more information, see page 10



3 controlled phases

ZOOM



Altivar 212, variable speed drive dedicated to HVAC

Altivar 212 for HVAC*

Save up to 70% on your energy bills**

Designed for pumps, fans and compressors, the new generation of Altivar 212 drives optimises the performance of motors rated from 0.75 to 75 kW (1 to 100 hp).

- Green Installation due to the Reduced Harmonic Technology (THDI <35%)
- Energy Efficient with lower line current thanks to its innovative technology (C-Less)
- Ready for Building Management System with 4 embedded protocols: Modbus, Bacnet, Apogee FLN, Metasys N2.
- Performance Oriented with dedicated functions: Flow/Pressure compensation, Energy Saving mode, Motor noise reduction...
- Oriented on Building protection (Fire mode, Damper control, Mechanical shock suppression)
- Easy and Fast configuration with remote graphic display terminal, Multi loader, Bluetooth...
- Preventive maintenance with Fault management, Automatic restart...

*HVAC: Heating, Ventilation and Air Conditioning

**compared to a conventional solution with valves

For more information, see page 15

Altivar 61Q and Altivar 71Q

A rugged water-cooled range

Altivar Q variable speed drives are suitable for applications in very dusty or corrosive atmospheres, such as tunnels, mines or marine environments, or in small rooms without air conditioning.

- Reduced noise
- Corrosion-resistant
- Saves energy as there is no need for air conditioning
- Rugged
- Easy to install
- Low maintenance (stainless steel pipes), ensuring a long service life
- High-performance: high torque at low speed
- 3 sizes designed to cover a wide range of power ratings (90 to 800 kW)
- CE, UL, CSA and Marine certifications

For more information, see page 23 and 32



Altivar 61Q with water cooling system

Motion & Drives



Soft starters and variable speed drives

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Notes



Soft starters and variable speed drives

Selection guide

Starters - Low voltage

		Simple machines		Complex machines/ Special machines
		⇒Applications: Compressors, fans, pumps, conveyors, car wash gantries, etc.	⇒Applications: Pumps, fans, turbines, compressors, conveyors, conveyor belts, lifting screws, escalators, etc.	⇒Applications: Pumps, high inertia fans and machines, compressors, conveyors, agitators, mixers, escalators, etc.
		Altistart 01	Altistart 22	Altistart 48
				
		Soft start and Soft start/soft stop units	Soft start/soft stop units	Soft start/soft stop units
Description		<ul style="list-style-type: none"> • Compact • Simple: easy mounting, wiring and adjustment • Efficient: Current peaks limitation on starting, reduction of mechanical shocks, increased service life for your machines • Energy saving 	<ul style="list-style-type: none"> • Innovative with its integrated Bypass contactor for motors up to 315 kW • Cost-effective • Compact dimensions • Quick setup • Protection of motor and starter • Energy saving • 3 controlled phases 	<ul style="list-style-type: none"> • Torque control system: controlled torque, prevention of pressure surges and limiting of temperature rises • Simple: quick setup • Protection of motor and starter: thermal protection, phase loss detection, locked rotor detection • Energy saving
Technical information		Power range for 50...60 Hz supply	0.37...15 kW	4... 400 kW
		Voltage	Single-phase 110...480 V Three-phase 110...480 V	Three-phase 208...600 V Three-phase 230...440 V
		Drive/Output frequency	–	–
		Motor type	Asynchronous Synchronous	Yes No
Communication		Integrated	–	Modbus
		As an option	Can be used with TeSys U motor starter-controller to create a complete motor starter solution	DeviceNet, Fipio, PROFIBUS DP, Ethernet
Standards and certifications		IEC/EN 60947-4-2, C-Tick, CSA, UL, CE	IEC/EN 60947-4-2, C-Tick, CSA, UL, CE, GOST, CCC, ABS, Class A EMC	IEC/EN 60947-4-2, C-Tick, CSA, UL, CE, DNV, GOST, CCC, NOM, SEPRO and TCF, Classes A and B EMC
Intended use		Buildings, Simple machines.	Machines, Infrastructures and Buildings	

Selection guide

Standard drives - Low voltage

Simple machines

⇒ Applications:

- Simple machines for industry (small handling applications, packaging, pumps, fans, etc.)
- Simple consumer machines (access barriers, rotating advertising hoardings, medical beds, treadmills, dough mixers, etc.)
- Other types of application:
 - Mobile machines and small appliances equipped with a power socket
 - Applications which traditionally use other solutions (2-speed DC motors, mechanical drives, etc.).

⇒ Applications:

Simple industrial machines (material handling and packaging, textile machines, special machines, pumps and fans).

⇒ Applications:

Simple industrial machines (material handling and packaging, textile machines, special machines, pumps and fans).

Altivar 12



Variable speed drives for small machines with 240 V three-phase asynchronous motor

Altivar 312








Variable speed drives for three-phase asynchronous motors

Altivar 31C IP55



Variable speed drives for three-phase asynchronous motors for machines in harsh environments.

Description		<ul style="list-style-type: none"> • Compact • Easy to set up (Plug & Play) • Reliable, cost-effective solution for compact machines 	<ul style="list-style-type: none"> • Open: large number of communication cards available as options • User-friendly: simplified interface • Autotuning: maximum performance 	<ul style="list-style-type: none"> • Rugged even in the most hostile environments: <ul style="list-style-type: none"> - Installed as close as possible to the motor - Integrated functions for applications requiring IP55 degree of protection - Modbus and CANopen communication protocols • Flexibility to adapt to each machine: <ul style="list-style-type: none"> - Customisable depending on the model - Easy configuration
Technical information	Power range for 50...60 Hz supply	0.18...4 kW	0.18...15 kW	0.18...15 kW
	Voltage	Single-phase 100...240 V Three-phase 200...240 V	Single-phase 200...240 V Three-phase 200...600 V	Single-phase 200...240 V Three-phase 380...500 V
	Drive/Output frequency	0.5...400 Hz	0.5...500 Hz	0.5...500 Hz
	Motor type	Asynchronous Synchronous	Yes No	Yes No
Communication	Integrated	Modbus	Modbus and CANopen	Modbus and CANopen
	As an option	–	CANopen Daisy chain, DeviceNet, PROFIBUS DP, Modbus TCP, Fipio	DeviceNet, Ethernet TCP/IP, Fipio, PROFIBUS DP
Standards and certifications		IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2, categories C1 to C3) CE, UL, CSA, C-Tick, GOST, NOM		IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2, categories C1 to C3) CE, UL, CSA, C-Tick, GOST
Intended use		Machines		

Complex machines	Complex machines/ Special machines		Pumps and Fans	
<p>⇒ Applications: Industrial machines: hoisting, packaging, material handling, special machines (wood-working machines, metal processing machinery, etc.).</p>	<p>⇒ Applications: High performance applications:</p> <ul style="list-style-type: none"> • Material handling • Hoisting • Wood-working machines • Process machinery • Textile machines • Packaging 	<p>⇒ Applications: High performance applications:</p> <ul style="list-style-type: none"> • Material handling • Hoisting • Wood-working machines • Process machinery • Textile machines • Packaging 	<p>⇒ Applications: Range specifically for high performance pumps and fans for the industrial and building markets.</p>	<p>⇒ Applications: Pumping and ventilation machines in harsh environment</p>
<p>Altivar 32</p>  <p>Variable speed drives for asynchronous motors and open-loop synchronous motors</p>	<p>Altivar 71</p>  <p>For three-phase synchronous and asynchronous motors. Constant torque applications.</p>	<p>Altivar 71Q</p>  <p>Water-cooled variable speed drives for three-phase synchronous and asynchronous motors. Constant torque applications.</p>	<p>Altivar 61</p>  <p>Variable speed drives for three-phase asynchronous motors. Variable torque applications.</p>	<p>Altivar 61Q</p>  <p>Water-cooled variable speed drives for three-phase asynchronous and synchronous motors. Variable torque applications</p>
<ul style="list-style-type: none"> • Compact: "Book" format • Integrated Safety function compliant to IEC 61508 SIL3 and PL-e • Open: communication cards available as options • Integrated programmable logic functions • Simple setup • Energy saving : Control of energy efficient permanent magnet synchronous motors 	<ul style="list-style-type: none"> • Wide range • Quick start-up and easy diagnostics: multi-language graphic display terminal • Open to most industrial communication buses • Integrated safety • Motor control: high-performance in open-loop and closed loop mode 	<ul style="list-style-type: none"> • Improved robustness with water cooling • Efficient cooling system reduced need of air conditioning • Long time operation without maintenance • Excellent protection against corrosion due to stainless steel cooling pipes • Very high starting torque for frequent start-up applications 	<ul style="list-style-type: none"> • Wide range • Easy setup and diagnostics with the multi-language graphic display terminal • Open to the main communication buses 	<ul style="list-style-type: none"> • Improved robustness with water cooling • Efficient cooling system reduced need of air conditioning • Prolonged maintenance-free operational life • Excellent protection against corrosion due to stainless steel cooling pipes
0.18...15 kW	0.37...630 kW	90...630 kW	0.37...800 kW	110...800 kW
Single-phase 200...240 V Three-phase 380...480 V	Single-phase 200...240 V Three-phase 200...690 V	Three-phase 380...480 V Three-phase 500...690 V	Single-phase 200...240 V Three-phase 200...690 V	Three-phase 380...480 V Three-phase 500...690 V
0.1...599 Hz	0...599 Hz up to 37 kW / 200...240V and 380...480V 0...500 Hz for the rest of the range	0...500 Hz	0.1...599 Hz up to 37 kW / 200...240V and 380...480V 0.1...500 Hz for the rest of the range	0.1...500 Hz
Yes	Yes	Yes	Yes	Yes
Yes	Yes	Yes	Yes	Yes
Modbus and CANopen	Modbus and CANopen	Modbus et CANopen	Modbus and CANopen	Modbus et CANopen
EtherNet/IP, Modbus TCP, PROFIBUS DP V1, EtherCAT, Devicenet	Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP, PROFIBUS DP V1, INTERBUS S, CC-Link,	Modbus TCP, Fipio, Modbus/Uni-Telway, Modbus Plus, EtherNet/IP, DeviceNet, PROFIBUS DP, PROFIBUS DP V1, INTERBUS S, CC-Link,	Modbus TCP, Fipio, Modbus/Uni-Telway, Modbus Plus, EtherNet/IP, DeviceNet, PROFIBUS DP, PROFIBUS DP V1, INTERBUS S, CC-Link, Lonworks, METASYS N2, APOGEE FLN P1, BACnet	HVAC protocols : LonWorks, BACnet, METASYS N2, APOGEE FLN P1 Industrial protocols: Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, PROFIBUS DP, PROFIBUS DP V1, DeviceNet, Ethernet IP, CC-Link, INTERBUS
IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2, Categories C2 and C3), UL508C, EN 954-1 Category 3, ISO/EN 13849-1/-2 Category 3 (PL d), IEC 61800-5-2, IEC 61508 (parts 1&2) level SIL1 SIL2 SIL3, draft standard EN 50495E, CE, UL, CSA, C-Tick, GOST, NOM.	IEC/EN 61800-3, EN 55011, EN 55022, CSA, UL, C-TICK, CE, NOM, DNV, GOST	IEC/EN 61800-3, EN 55011, EN 55022, CSA, UL, C-TICK, CE, NOM, DNV, GOST	IEC/EN 61800-3, EN 55011, EN 55022, CSA, UL, C-TICK, CE, NOM, DNV, GOST	IEC/EN 61800-3, EN 55011, EN 55022, CSA, UL, C-TICK, CE, NOM, DNV, GOST
Machines	Machines, industrial processes and infrastructures	Machines, industrial processes or infrastructures	Buildings and infrastructures	Building or infrastructures

Selection guide

Specialized drives - Low voltage

HVAC

⇒ *Applications:*

Range specifically for HVAC applications (heating, ventilation, air conditioning) in buildings.

Lifts

⇒ *Applications:*

Lifts

Altivar 212



Variable speed drives for three-phase asynchronous motors.
Variable torque building HVAC applications.

Altivar LIFT



Variable speed drives for lifts.

Description

- **Compact size:** side-by-side mounting
- **Simplicity:** Dedicated HVAC functions and remote graphic keypad option
- **Openness:** Integrated communications for building management systems
- **EMC filters** built-in
- **Reduction of the total harmonic distortion** THDI<30%
- **Protection class:** IP21 and IP55

- **Quick start-up** and easy diagnostics with the multi-language graphic display terminal and dedicated Lift configuration menu.
- **Dedicated Lift functions** for greater comfort and safety
- **Energy saving:** Control of energy efficient permanent magnet synchronous motors

Technical information

Power range for 50...60 Hz supply

0.75...75 kW

4...22 kW

Voltage

Three-phase 200...480 V

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

Drive/Output frequency

0.5...200 Hz

0...599 Hz

Number of quadrants

—

—

Cooling system

—

—

Protection class

—

—

Motor type

Asynchronous

Yes

Yes

Synchronous

No

Yes

Communication

Integrated

Modbus, METASYS N2, APOGEE FLN P1, BACnet

Modbus and CANopen

As an option

Lonworks

Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, DeviceNet, PROFIBUS DP, PROFIBUS DP V1, INTERBUS S, CC-Link

Standards and certifications

IEC/EN 61800-3, EN 55011, EN 55022, CSA, UL, C-TICK, CE, NOM

IEC/EN 61800-3, EN55011, EN 55022, CSA, UL, C-TICK, CE, NOM et EN81-1 (chap 12.7.3)

Intended use

Buildings

Machines

Integrated variable speed control solutions

Pumps and Fans Low voltage	Pumps and Fans Medium voltage	Complex machines/Special machines Low voltage	Complex machines/Special machines Medium voltage
<p>⇒ <i>Applications:</i></p> <ul style="list-style-type: none"> • Fans • Pumps • Compressors • Screw feeders 	<p>⇒ <i>Applications:</i></p> <ul style="list-style-type: none"> • Energy: fans, pumps, turbine starters • Oil and gas: pumps, compressors, air blowers, extruders • Mines and Minerals: conveyors, crushers, fans, pumps • Water treatment: pumps, air blowers. 	<p>⇒ <i>Applications:</i></p> <ul style="list-style-type: none"> • Fans • Pumps • Compressors • Screw feeders 	<p>⇒ <i>Applications:</i></p> <ul style="list-style-type: none"> • Energy: fans, pumps, turbine starters • Oil and gas: pumps, compressors, air blowers, extruders • Mines and Minerals: conveyors, crushers, fans, pumps • Water treatment: pumps, air blowers.
<p>Altivar 61 Plus</p>  <p>High power low voltage variable speed drives for buildings and infrastructures. Variable torque</p>	<p>Altivar 1100</p>  <p>Medium voltage variable speed drives for asynchronous motors (quotation on request)</p>	<p>Altivar 71 Plus</p>  <p>High power low voltage variable speed drives for industry. Constant torque</p>	<p>Altivar 1000</p>  <p>Medium voltage variable speed drives for asynchronous motors (quotation on request)</p>
<p>A simple, open range:</p> <ul style="list-style-type: none"> • Greater flexibility: numerous possible options and communication on most industrial networks • Easy configuration • Ready to use <p>Maximum safety: the Altivar Plus range has a cooling system and components that have been tested in extreme conditions.</p> <p>Time savings on:</p> <ul style="list-style-type: none"> • Creating quotes • Placing orders • Installation and start-up 	<p>Environmentally-friendly and Cost-effective:</p> <ul style="list-style-type: none"> • Perfect integration in the line supply • No disturbance of the motor and the driven load • High efficiency <p>Easy to install and set up</p> <p>Compact</p>	<p>A simple, open range:</p> <ul style="list-style-type: none"> • Greater flexibility: numerous possible options and communication on most industrial networks • Easy configuration • Ready to use <p>Maximum safety: the Altivar Plus range has a cooling system and components that have been tested in extreme conditions.</p> <p>Time savings on:</p> <ul style="list-style-type: none"> • Creating quotes • Placing orders • Installation and start-up 	<p>High efficiency</p> <p>For use in harsh environments</p> <p>Open to all communication networks</p>
90...2400 kW	0.3...10.5 MW	90...2000 kW	0.5...10 MW
Three-phase 380...690 V	3,3 kV 6,6 kV 10 kV	Three-phase 380...690 V	2.4 kV 3.3 kV
0.1...500 Hz	Standard : 0,2...60 Hz Option : 0,2...120 Hz	0...500 Hz	Standard: 5...70 Hz Option: 5...140 Hz
2 and 4	2	2 and 4	2 and 4
Air or water cooled	Air cooled	Air or water cooled	Air or water cooled
IP23/IP54 IP55 (water cooled)	IP31 IP41 (option)	IP23/IP54 IP55 (water cooled)	IP41 (air cooled) IP54 (water cooled)
Yes	Yes	Yes	Yes
Yes	No	Yes	No
Modbus and CANopen	PROFIBUS, Modbus	Modbus and CANopen	Ethernet, PROFIBUS, Modbus
Modbus TCP, Fipio, Modbus/Uni-Telway, Modbus Plus, EtherNet/IP, DeviceNet, PROFIBUS DP, PROFIBUS DP V1, INTERBUS S, CC-Link, Lonworks, METASYS N2, APOGEE FLN P1, BACnet	Ethernet, Devicenet, CANopen, etc.	Modbus TCP, Fipio, Modbus/Uni-Telway, Modbus Plus, EtherNet/IP, DeviceNet, PROFIBUS DP, PROFIBUS DP V1, INTERBUS S, CC-Link	Devicenet, CANopen
IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2), IEC/EN 61000-4-2, -4-3, -4-5, -4-6 (level 3), IEC/EN 61000-4-4 (level 4), IEC/EN 60529, IEC 60721-3-3 class 3C2 and 3S2, CE, DNV, GOST	IEC/EN 61800-5-1, IEC/EN 61800-4, IEC/EN 61800-3 (environnements 1 and 2, catégories C1 to C3), IEEE 519, IEC/EN 60204-11 and IEC/EN 60529	IEC/EN 61800-5-1, IEC/EN 61800-3 (environments 1 and 2), IEC/EN 61000-4-2, -4-3, -4-5, -4-6 (level 3), IEC/EN 61000-4-4 (level 4), IEC/EN 60529, IEC 60721-3-3 class 3C2 and 3S2, CE, DNV and GOST	IEC/EN 61800-5-1, IEC/EN 61800-4, IEC/EN 61800-3 (environments 1 and 2, categories C1 to C3), CE
Buildings and infrastructures	Infrastructures	Machines, industrial processes and infrastructures	Machines, industrial processes and infrastructures



Dimensions (in mm)		width x height x depth
ATS01	N103FT/N106 FT	22.5 x 100 x 100.4
	N109FT/N112 FT/N125 FT	45 x 124 x 130.7
	N206●●/N209●●/N212●●	45 x 154 x 130.7
	N222●●/N232●●	

Type	Soft start units	Soft start/soft stop units
Motor power	0.37 to 11 kW	0.75 to 15 kW
Degree of protection	IP20	
Reduction of current peaks	1 controlled phase	2 controlled phases
Adjustable starting time	1...5 s	1...10 s
Adjustable deceleration time	Freewheel stop	1... 10 s
Adjustable breakaway torque	30...80% of DOL motor starting torque	
Logic inputs	–	3 logic inputs (start, stop and startup boost)
Logic outputs	–	1 logic output
Relay outputs	–	1 relay output
Control supply voltage	110... 220 VAC ± 10%, 24 VDC ± 10%	

Soft starters for 0.37 to 11 kW motors

Motor						Starter Nominal current	Reference (2)
Motor power (1)							
Single phase	3-phase						
230 V	210 V	230 V	230 V	400 V	460 V		
kW	HP	kW	HP	kW	HP	A	
Single phase 110...230 V or 3-phase 110...480 V supply voltage, 50/60 Hz							
0,37	–	0,37	0,5	1,1	0,5	3	ATS 01N103FT
		0,55	–	–	1,5		
0,75	0,5	0,75	1	2,2	2	6	ATS 01N106FT
		1,1	1,5	3	3		
1,1	1	1,5	2	4	5	9	ATS 01N109FT
1,5	1,5	2,2	3	5,5	7,5	12	ATS 01N112FT
2,2	2	3	5	7,5	10	25	ATS 01N125FT
	3	4	7,5	9	15		
		5,5		11			

Soft start/soft stop units for 0.75 to 15 kW motors (3)

Motor		Starter Nominal current	Reference (2)
Motor power (1)			
kW	HP	A	
3-phase supply voltage: 200...240 V 50/60 Hz			
0,75/1,1	1/1,5	6	ATS 01N206LU
1,5	2	9	ATS 01N209LU
2,2/3	3/–	12	ATS 01N212LU
4/5,5	5/7,5	22	ATS 01N222LU
7,5	10	32	ATS 01N232LU
3-phase supply voltage: 380...415 V 50/60 Hz			
1,5/2,2/3	–	6	ATS 01N206QN
4	–	9	ATS 01N209QN
5,5	–	12	ATS 01N212QN
7,5/11	–	22	ATS 01N222QN
15	–	32	ATS 01N232QN
3-phase supply voltage: 440...480 V 50/60 Hz			
–	2/3	6	ATS 01N206RT
–	5	9	ATS 01N209RT
–	7,5	12	ATS 01N212RT
–	10/15	22	ATS 01N222RT
–	20	32	ATS 01N232RT

(1) Standard power ratings of motors, HP power ratings indicated according to standard UL 508.

(2) For thermal protection of the motor, please use a thermal circuit-breaker GVp ME, GV3 P or GV7 RE (see combinations pages 60545/2 and 60545/3).

(3) Control power supply built into the starter.

Starters with TeSys model U



Dimensions (in mm)		width x height x depth
ATSU01	N206LT/N209LT/N212LT	45 x 124 x 130.7
	N222LT/N232LT	45 x 154 x 130.7

Type		Soft start/soft stop units						
Motor power		0.75 to 15 kW						
Degree of protection		IP20						
Reduction of current peaks		Yes						
Adjustable starting and stopping times		1...10 s						
Adjustable breakaway torque		30... 80% of DOL motor starting torque						
Logic inputs		3 logic inputs (start, stop and startup boost)						
Logic outputs		1 logic output						
Relay outputs		1 relay output						
Control supply voltage		24 VDC, 100 mA, ± 10%						
References		Soft start/soft stop units	TeSys starter-controller model U Power base	Control unit (1)	Power connector between ATSU and TeSys model U			
Supply voltage		Three-phase 200...480 V						
Motor power								
230 V		400 V	460 V	Nominal current (IcL)				
kW	HP	kW	HP					
0.75	1	1.5	2	6 A	ATSU01N206LT	LUB12	LUC●05BL	VW3G4104
1.1	1.5	2.2/3	3	6 A	ATSU01N206LT	LUB12	LUC●12BL	
1.5	2	–	5	9 A	ATSU01N209LT	LUB12	LUC●12BL	VW3G4104
–	–	4	–	9 A	ATSU01N209LT	LUB12	LUC●12BL	
2.2	3	5.5	7.5	12 A	ATSU01N212LT	LUB12	LUC●12BL	VW3G4104
3	–	–	–	12 A	ATSU01N212LT	LUB32	LUC●18BL	
4	5	7.5	10	22 A	ATSU01N222LT	LUB32	LUC●18BL	VW3G4104
5.5	7.5	11	15	22 A	ATSU01N222LT	LUB32	LUC●32BL	
7.5	10	15	20	32 A	ATSU01N232LT	LUB32	LUC●32BL	VW3G4104

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



Dimensions (in mm)		width x height x depth	
ATS22	D17 to D47	Size A:	130 x 265 x 169
	D62 to D88	Size B:	145 x 295 x 207
	C11 to C17	Size C:	150 x 356 x 229
	C21 to C41	Size D:	206 x 425 x 299
	C48 to C59	Size E:	304 x 455 x 340

Supply voltage		Three-phase 208...600 V	Three-phase 230...440 V
Protection	Degree of protection	IP20: for ATS 22D17●●●D88 starters IP00: for ATS 22C11●●●C59 starters (protection of terminals available as an option)	
	Motor thermal protection	Class 10, 20 or 30 (1)	
Drive	Number of controlled phases	3	
	Types of control	Configurable voltage ramp, torque ramp	
	Operating cycle	Standard	
Functions		Integrated Bypass contactor	
Number of I/O	Analog inputs	1 PTC probe	
	Logic inputs	3	
	Logic outputs	-	
	Analog outputs	-	
	Relay outputs	2	
Dialogue		Integrated display terminal, SoMove setup software	
Communication	Integrated	Modbus	
Standards and certifications		IEC/EN 60947-4-2, class A EMC, CE, UL, CSA, C-Tick, GOST, CCC, ABS	
Motor connection			Possible to connect the starter in the motor delta connection (2)

(1) Soft starter sizing according to thermal protection class

Starting current	Protection class		
	Class 10	Class 20	Class 30
< = 3.5 In	Nominal*	Nominal +1**	Nominal +2***
max starting time	16s	32s	48s

* nominal size of the soft starter acc. to the nominal motor current (Motor FLA)

** oversize of the soft starter by 1 rating compared to the nominal motor current (Motor FLA)

*** oversize of the soft starter by 2 ratings compared to the nominal motor current (Motor FLA)

(2) please find the references details in ATS22 catalogue for motor delta connection

Connection in the motor power supply line				Soft start/soft stop unit 230...440 V - 50/60 Hz	
Motor					
Power indicated on rating plate					
230 V kW	400 V kW	440 V kW	Nominal current starter (IcL)	Reference	Size
4	7.5	7.5	17	ATS22D17Q	Size A
7.5	15	15	32	ATS22D32Q	Size A
11	22	22	47	ATS22D47Q	Size A
15	30	30	62	ATS22D62Q	Size B
18.5	37	37	75	ATS22D75Q	Size B
22	45	45	88	ATS22D88Q	Size B
30	55	55	110	ATS22C11Q	Size C
37	75	75	140	ATS22C14Q	Size C
45	90	90	170	ATS22C17Q	Size C
55	110	110	210	ATS22C21Q	Size D
75	132	132	250	ATS22C25Q	Size D
90	160	160	320	ATS22C32Q	Size D
110	220	220	410	ATS22C41Q	Size D
132	250	250	480	ATS22C48Q	Size E
160	315	355	590	ATS22C59Q	Size E

Connection in the motor power supply line											Soft start/soft stop unit 208...600 V - 50/60 Hz				
Motor											208...600 V		230...600V		
Motor power											Control power supplyS6				
208 V	230 V	460 V	575 V	230 V	400 V	440 V	500 V	525 V	660 V	690 V	Nominal current (IcL)	110 V		220 V	
HP				kW								Reference	Size	Reference	Size
3	5	10	15	4	7.5	7.5	9	9	11	15	17 A	ATS22D17S6U	Size A	ATS22D22S6	Size A
7.5	10	20	25	7.5	15	15	18.5	18.5	22	22	32 A	ATS22D32S6U	Size A	ATS22D38S6	Size A
–	15	30	40	11	22	22	30	30	37	37	47 A	ATS22D47S6U	Size A	ATS22D62S6	Size A
15	20	40	50	15	30	30	37	37	45	45	62 A	ATS22D62S6U	Size B	ATS22D75S6	Size B
20	25	50	60	18.5	37	37	45	45	55	55	75 A	ATS22D75S6U	Size B	ATS22D88S6	Size B
25	30	60	75	22	45	45	55	55	75	75	88 A	ATS22D88S6U	Size B	ATS22C11S6	Size B
30	40	75	100	30	55	55	75	75	90	90	110 A	ATS22C11S6U	Size C	ATS22C14S6	Size C
40	50	100	125	37	75	75	90	90	110	110	140 A	ATS22C14S6U	Size C	ATS22C17S6	Size C
50	60	125	150	45	90	90	110	110	132	160	170 A	ATS22C17S6U	Size C	ATS22C21S6	Size C
60	75	150	200	55	110	110	132	132	160	200	210 A	ATS22C21S6U	Size D	ATS22C25S6	Size D
75	100	200	250	75	132	132	160	160	220	250	250 A	ATS22C25S6U	Size D	ATS22C32S6	Size D
100	125	250	300	90	160	160	220	220	250	315	320 A	ATS22C32S6U	Size D	ATS22C41S6	Size D
125	150	300	350	110	220	220	250	250	355	400	410 A	ATS22C41S6U	Size D	ATS22C48S6	Size D
150	–	350	400	132	250	250	315	315	400	500	480 A	ATS22C48S6U	Size E	ATS22C59S6	Size E
–	200	400	500	160	315	355	400	400	560	560	590 A	ATS22C59S6U	Size E	ATS22C66S6	Size E

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



Supply voltage			Three-phase 230...415 V (1)			
Type of application			Standard		Severe (2)	
Starter control supply voltage			220...415 V			
Protection	Degree of protection		IP20: ATS48D17● to ATS48C11● starters IP00: ATS48C14● to ATS48M12● starters			
	Motor thermal protection		Class 10		Class 20 and 30	
EMC	Class A		On all starters			
	Class B		On all starters up to 170 A			
Starting mode			Torque control (patented TCS: Torque Control System)			
I/O	Analog inputs		1 PTC probe			
	Logic inputs		4 logic inputs, 2 of which are configurable			
	Logic outputs		2 configurable logic outputs			
	Relay outputs		3 relay outputs, 2 of which are configurable			
Dialogue			Integrated or remote display terminal (in option), SoMove software workshop			
Communication	Integrated		Modbus			
	With gateway		DeviceNet, Ethernet, Fipio, PROFIBUS DP			
Motor power						
230 V	400 V	Nominal current				
kW	kW	(IcL)				
3	5.5	12 A	–		ATS48D17Q	Size A
4	7.5	17 A	ATS48D17Q	Size A	ATS48D22Q	Size A
5.5	11	22 A	ATS48D22Q	Size A	ATS48D32Q	Size A
7.5	15	32 A	ATS48D32Q	Size A	ATS48D38Q	Size A
9	18.5	38 A	ATS48D38Q	Size A	ATS48D47Q	Size A
11	22	47 A	ATS48D47Q	Size A	ATS48D62Q	Size B
15	30	62 A	ATS48D62Q	Size B	ATS48D75Q	Size B
18.5	37	75 A	ATS48D75Q	Size B	ATS48D88Q	Size B
22	45	88 A	ATS48D88Q	Size B	ATS48C11Q	Size B
30	55	110 A	ATS48C11Q	Size B	ATS48C14Q	Size C
37	75	140 A	ATS48C14Q	Size C	ATS48C17Q	Size C
45	90	170 A	ATS48C17Q	Size C	ATS48C21Q	Size D
55	110	210 A	ATS48C21Q	Size D	ATS48C25Q	Size D
75	132	250 A	ATS48C25Q	Size D	ATS48C32Q	Size D
90	160	320 A	ATS48C32Q	Size D	ATS48C41Q	Size E
110	220	410 A	ATS48C41Q	Size E	ATS48C48Q	Size E
132	250	480 A	ATS48C48Q	Size E	ATS48C59Q	Size E
160	315	590 A	ATS48C59Q	Size E	ATS48C66Q	Size E
–	355	660 A	ATS48C66Q	Size E	ATS48C79Q	Size F
220	400	790 A	ATS48C79Q	Size F	ATS48M10Q	Size F
250	500	1000 A	ATS48M10Q	Size F	ATS48M12Q	Size F
355	630	1200 A	ATS48M12Q	Size F	–	

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

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

Soft start/soft stop units

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



Supply voltage												Three-phase 208...690 V (1)				
Type of application												Standard		Severe (2)		
Starter control supply voltage												110...230 V				
Characteristics												Identical to 230...415 V starters				
Motor power												Nominal current (IcL)				
208 V	230 V	460 V	575 V	230 V	400 V	440 V	500 V	525 V	660 V	690 V						
HP				kW												
2	3	7.5	10	3	5.5	5.5	7.5	7.5	9	11	12 A	–		ATS48D17Y	Size A	
3	5	10	15	4	7.5	7.5	9	9	11	15	17 A	ATS48D17Y	Size A	ATS48D22Y	Size A	
5	7.5	15	20	5.5	11	11	11	11	15	18.5	22 A	ATS48D22Y	Size A	ATS48D32Y	Size A	
7.5	10	20	25	7.5	15	15	18.5	18.5	22	22	32 A	ATS48D32Y	Size A	ATS48D38Y	Size A	
10	–	25	30	9	18.5	18.5	22	22	30	30	38 A	ATS48D38Y	Size A	ATS48D47Y	Size A	
–	15	30	40	11	22	22	30	30	37	37	47 A	ATS48D47Y	Size A	ATS48D62Y	Size B	
15	20	40	50	15	30	30	37	37	45	45	62 A	ATS48D62Y	Size B	ATS48D75Y	Size B	
20	25	50	60	18.5	37	37	45	45	55	55	75 A	ATS48D75Y	Size B	ATS48D88Y	Size B	
25	30	60	75	22	45	45	55	55	75	75	88 A	ATS48D88Y	Size B	ATS48C11Y	Size B	
30	40	75	100	30	55	55	75	75	90	90	110 A	ATS48C11Y	Size B	ATS48C14Y	Size C	
40	50	100	125	37	75	75	90	90	110	110	140 A	ATS48C14Y	Size C	ATS48C17Y	Size C	
50	60	125	150	45	90	90	110	110	132	160	170 A	ATS48C17Y	Size C	ATS48C21Y	Size D	
60	75	150	200	55	110	110	132	132	160	200	210 A	ATS48C21Y	Size D	ATS48C25Y	Size D	
75	100	200	250	75	132	132	160	160	220	250	250 A	ATS48C25Y	Size D	ATS48C32Y	Size D	
100	125	250	300	90	160	160	220	220	250	315	320 A	ATS48C32Y	Size D	ATS48C41Y	Size E	
125	150	300	350	110	220	220	250	250	355	400	410 A	ATS48C41Y	Size E	ATS48C48Y	Size E	
150	–	350	400	132	250	250	315	315	400	500	480 A	ATS48C48Y	Size E	ATS48C59Y	Size E	
–	200	400	500	160	315	355	400	400	560	560	590 A	ATS48C59Y	Size E	ATS48C66Y	Size E	
200	250	500	600	–	355	400	–	–	630	630	660 A	ATS48C66Y	Size E	ATS48C79Y	Size F	
250	300	600	800	220	400	500	500	500	710	710	790 A	ATS48C79Y	Size F	ATS48M10Y	Size F	
350	350	800	1000	250	500	630	630	630	900	900	1000 A	ATS48M10Y	Size F	ATS48M12Y	Size F	
400	450	1000	1200	355	630	710	800	800	–	–	1200 A	ATS48M12Y	Size F	–		

(1) Starter connection in the motor delta connection: up to 500 V only, add "S316" at the end of the reference

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

Altivar 12

0.18...4 kW

Simple machines Ultra-compact drives



Dimensions (in mm)	width x height x depth
1C1: 72 x 143 x 102.2	2F3: 105 x 143 x 131.2
1C2: 72 x 143 x 102.2	3F3: 140 x 184 x 141.2
1C3: 72 x 143 x 121.2	
2C1: 105 x 142 x 156.2	
2C2: 105 x 142 x 156.2	

Type of drive		Single-phase	Single-phase	Three-phase				
Supply voltage		120 V	240 V	240 V				
Degree of protection		IP20						
Drive	Output frequency	0.5... 400 Hz						
	Type of control	Asynchronous motor						
	Transient overtorque	U/F, sensorless flux vector control, quadratic Kn ²						
Speed range		150...170 of the nominal torque						
Functions		1 to 20						
Number of I/O	Number of functions	40						
	Number of preset speeds	8						
	Analog inputs	1 configurable analog input						
	Logic inputs	4 assignable logic inputs						
	Analog outputs	1 configurable analog output						
Relay outputs		1 protected relay logic output						
Dialogue		Integrated or remote display terminal, SoMove software workshop, or mobile phone via Bluetooth®						
Communication		Integrated Modbus						
Cards (available as an option)								
Reduction of current harmonics								
EMC filter	Integrated		C1 EMC					
	As an option							
Motor power	kW/HP	0.18/0.25	ATV12H018F1 (1)	1C1	ATV12H018M2 (1) (2)	1C2	ATV12H018M3 (1)	1C3
		0.37/0.5	ATV12H037F1	1C1	ATV12H037M2 (2)	1C1	ATV12H037M3	1C3
		0.55/0.75	–		ATV12H055M2 (2)	1C2	–	
		0.75/1	ATV12H075F1	2C1	ATV12H075M2 (2)	1C2	ATV12H075M3	1C3
		1.5/2	–		ATV12HU15M2 (2)	2C2	ATV12H015M3	2F3
		2.2/3	–		ATV12HU22M2 (2)	2C2	ATV12H022M3	2F3
		3/3	–		–		ATV12H030M3	3F3
		4/5	–		–		ATV12H040M3	3F3

(1) Because of the low heat dissipation, the ATV12H018.. is only supplied on a base plate

(2) Also exists as a multipack

Dimensions (in mm)		width x height x depth	
IP21		IP55	
T1A: 107 x 143 x 150	T1: 215 x 297 x 192		
T2A: 142 x 184 x 150	T2: 230 x 340 x 208		
T3A: 180 x 232 x 170	T3: 290 x 560 x 315		
T4A: 245 x 329.5 x 190	T4: 310 x 665 x 315		
T5A: 240 x 420 x 214	T5: 284 x 720 x 315		
T6A: 320 x 630 x 290	T5: 284 x 880 x 343		
T7A: 240 x 550 x 266	T5: 362 x 1000 x 364		
T8A: 320 x 630 x 290			



Type of drive		IP21		IP55		
Supply voltage		200...240 V		380...480 V		
Degree of protection		IP21 and IP41 on the upper part		IP55 drive available in two manufacturing variants, ATV212W...N4 C1 EMC or ATV212W...N4C C2 EMC		
Output frequency		0.5...200 Hz				
Type of control		Kn ² quadratic ratio, sensorless flux vector control, voltage/frequency ratio (2 points), energy saving ratio				
Speed range		1 to 10				
I/O	Analog inputs	1 switch-configurable current or voltage analog input and 1 voltage analog input, configurable as a PTC probe input				
	Logic inputs	3 programmable logic inputs				
	Analog outputs	1 switch-configurable current or voltage analog output				
	Relay outputs	2 relay logic outputs				
Dialogue		Integrated display terminal with local controls (1) or remote display terminal or PC software (3)				
Communication (see page 4/11)	Integrated	Modbus, APOGEE FLN P1, Metasys N2, BACnet				
	As an option	LonWorks				
EMC filter	Integrated	–	C2 EMC	C2 EMC	C1 EMC	
	Available as an option	C2 EMC	C1 EMC	–	–	
Motor power	kW/HP	0.75/1	ATV212H075M3X T1A	ATV212H075N4 T1A	ATV212W075N4 T1	ATV212W075N4C T1
		1.5/2	ATV212HU15M3X T1A	ATV212HU15N4 T1A	ATV212WU15N4 T1	ATV212WU15N4C T1
		2.2/3	ATV212HU22M3X T1A	ATV212HU22N4 T1A	ATV212WU22N4 T1	ATV212WU22N4C T1
		3/–	ATV212HU30M3X T2A	ATV212HU30N4 T2A	ATV212WU30N4 T2	ATV212WU30N4C T2
		4/5	ATV212HU40M3X T2A	ATV212HU40N4 T2A	ATV212WU40N4 T2	ATV212WU40N4C T2
		5.5/7.5	ATV212HU55M3X T3A	ATV212HU55N4 T2A	ATV212WU55N4 T2	ATV212WU55N4C T2
		7.5/10	ATV212HU75M3X T3A	ATV212HU75N4 T3A	ATV212WU75N4 T2	ATV212WU75N4C T2
		11/15	ATV212HD11M3X T4A	ATV212HD11N4 T3A	ATV212WD11N4 T3	ATV212WD11N4C T3
		15/20	ATV212HD15M3X T4A	ATV212HD15N4 T4A	ATV212WD15N4 T3	ATV212WD15N4C T3
		18.5/25	ATV212HD18M3X T4A	ATV212HD18N4 T4A	ATV212WD18N4 T4	ATV212WD18N4C T4
		22/30 (4)	–	ATV212HD22N4S T4A	–	–
		22/30	ATV212HD22M3X T5A	ATV212HD22N4(2) T5A	ATV212WD22N4 T5	ATV212WD22N4C T5
		30/40	ATV212HD30M3X T6A	ATV212HD30N4(2) T5A	ATV212WD30N4 T5	ATV212WD30N4C T5
		37/50	–	ATV212HD37N4 T7A	ATV212WD37N4 T6	ATV212WD37N4C T6
		45/60	–	ATV212HD45N4 T7A	ATV212WD45N4 T6	ATV212WD45N4C T6
		55/75	–	ATV212HD55N4 T8A	ATV212WD55N4 T7	ATV212WD55N4C T7
75/100	–	ATV212HD75N4 T8A	ATV212WD75N4 T7	ATV212WD75N4C T7		

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

(2) For references ATV212HD22N4 and ATV212HD30N4, please refer to the Schneider Electric catalogue.

(3) PC Software is available as a free download from www.schneider-electric.com

(4) Optimized size and weight



Dimensions (in mm)		width x height x depth	
T 1: 72 x 145 x 122		T 6: 107 x 143 x 152	
T 2: 72 x 145 x 132		T 7: 142 x 184 x 152	
T 3: 72 x 145 x 132		T 8: 180 x 232 x 172	
T 4: 72 x 145 x 142		T 9: 245 x 330 x 192	
T 5: 105 x 143 x 132			

Type of drive		Single-phase 240 V	Three-phase 240 V	Three-phase 500V	Three-phase 600V		
Supply voltage		with integrated EMC filters	without EMC filter	with integrated EMC filters	without EMC filter		
Degree of protection		IP31 & IP41 on upper part and IP21 on terminals					
Drive	Output frequency	0.5...500 Hz					
	Type of control	Asynchronous motor					
	Transient overtorque	Standard (voltage / frequency) - Performance (sensorless flux vector control) Energy saving ratio, pump & Fan ratio (Kn ² quadratic ratio) 170 ... 200% of the nominal motor torque					
Speed range		1 to 50					
Functions	Number of functions	50					
	Number of preset speeds	16					
	Number of I/O	Analog inputs	3				
		Logic inputs	6				
		Analog outputs	1				
		Logic outputs	-				
Relay outputs	2						
Dialogue		Integrated 4-digit display, remote terminals (IP54 or IP65), Altivar 61/71 remote graphic display terminal					
Communication	Integrated	Modbus and CANopen					
	As an option	CANopen Daisy chain, Modbus TCP, DeviceNet, PROFIBUS DP, Fipio					
Reduction of current harmonics							
EMC filter	Integrated	C2 EMC		Integrated C2(1) or C3 EMC			
	As an option	C1 EMC		-			
Motor power	kW/HP	0.18/0.25	ATV312H018M2 T3	ATV312H018M3 T1	-	-	
		0.37/0.5	ATV312H037M2 T3	ATV312H037M3 T1	ATV312H037N4 T5	-	-
		0.55/0.75	ATV312H055M2 T4	ATV312H055M3 T2	ATV312H055N4 T5	-	-
		0.75/1	ATV312H075M2 T4	ATV312H075M3 T2	ATV312H075N4 T6	ATV312H075S6 T6	-
		1.1/1.5	ATV312HU11M2 T6	ATV312HU11M3 T5	ATV312HU11N4 T6	-	-
		1.5/2	ATV312HU15M2 T6	ATV312HU15M3 T5	ATV312HU15N4 T6	ATV312HU15S6 T6	-
		2.2/3	ATV312HU22M2 (2) T7	ATV312HU22M3 T6	ATV312HU22N4 T7	ATV312HU22S6 T7	-
		3/-	-	ATV312HU30M3 T7	ATV312HU30N4 T7	-	-
		4/5	-	ATV312HU40M3 T7	ATV312HU40N4 T7	ATV312HU40S6 T7	-
		5.5/7.5	-	ATV312HU55M3 T8	ATV312HU55N4 T8	ATV312HU55S6 T8	-
		7.5/10	-	ATV312HU75M3 T8	ATV312HU75N4 T8	ATV312HU75S6 T8	-
		11/15	-	ATV312HD11M3 T9	ATV312HD11N4 T9	ATV312HD11S6 T9	-
		15/20	-	ATV312HD15M3 T9	ATV312HD15N4 T9	ATV312HD15S6 T9	-

(1) C2 up to 4 kW

(2) Supplied with integrated C3 EMC filter

Altivar 31C

0.18...15 kW

Simple machines Enclosed IP55 drives



Dimensions (in mm)	width x height x depth
Size 1: 210 x 240 x 163 / Size 2: 215 x 297 x 192	
Size 3: 230 x 340 x 208 / Size 4: 320 x 512 x 282	
Size 5: 440 x 625 x 282	

Supply voltage			Single-phase 200...240 V		Three-phase 380...500 V	
Degree of protection			IP55			
Description			Enclosure equipped with an Altivar 31 drive with external heatsink. Removable covers for adding 1 switch-disconnector or 1 circuit-breaker, 3 buttons and/or LEDs, 1 potentiometer			
Motor power	kW/HP	0.18/0.25	ATV31C018M2	Size 1	-	
		0.37/0.5	ATV31C037M2	Size 1	ATV31C037N4	Size 2
		0.55/0.75	ATV31C055M2	Size 1	ATV31C055N4	Size 2
		0.75/1	ATV31C075M2	Size 1	ATV31C075N4	Size 2
		1.1/1.5	ATV31CU11M2	Size 2	ATV31CU11N4	Size 2
		1.5/2	ATV31CU15M2	Size 2	ATV31CU15N4	Size 2
		2.2/3	ATV31CU22M2	Size 3	ATV31CU22N4	Size 3
		3/-	-	-	ATV31CU30N4	Size 3
		4/5	-	-	ATV31CU40N4	Size 3
		5.5/7.5	-	-	ATV31CU55N4 (1)	Size 4
		7.5/10	-	-	ATV31CU75N4 (1)	Size 4
		11/15	-	-	ATV31CD11N4 (1)	Size 5
		15/20	-	-	ATV31CD15N4 (1)	Size 5

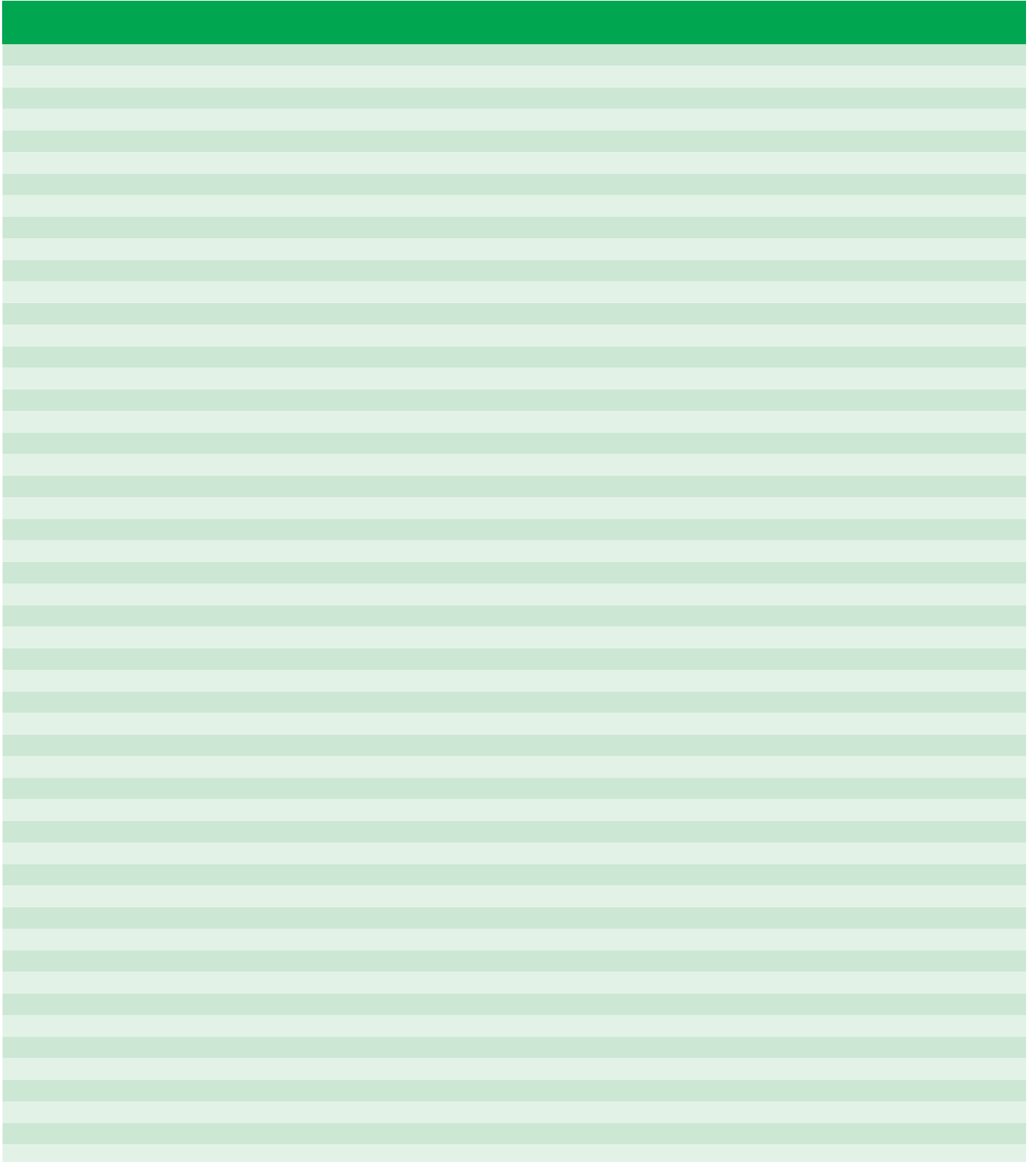
(1) Standard enclosed drive



Dimensions (in mm)	width x height x depth
T1:	45 x 317 x 245
T2:	60 x 317 x 245
T4:	150 x 308 x 232 (EMC plate installed)
T4:	150 x 232 x 232 (EMC plate not installed)
T5:	180 x 404 x 232 (EMC plate installed)
T5:	180 x 330 x 232 (EMC plate not installed)

Type of drive		Single-phase 240 V with integrated EMC filter	Three-phase 500 V with integrated EMC filter
Degree of protection		IP20	
Drive	Output frequency	0.1...599 Hz	
	Type of control	Asynchronous motor	
		Synchronous motor	
	Transient overtorque	170...200% of the nominal motor torque	
Speed range		1 to 50	
Functions	Number of functions		150
	Number of I/O	Analog inputs	3 - Response time : 3ms, resolution 10 bits
		Logic inputs	6 - Response time : 8 ms, configurable in PTC and IN pwm
		Analog outputs	1 - Updating time : 2 ms
	Logic outputs	1 - Sampling time : 2 ms, configurable as voltage (0-10 V) or current (0-20 mA)	
Relay outputs	2		
Dialogue		4-digit display, remote display terminal (IP54 or IP55), remote graphic display terminal, SoMove setup software and SoMove Mobile application for mobile phone.	
Communication	Integrated	Modbus and CANopen - Bluetooth® link	
	As an option	DeviceNet, PROFIBUS DP V1, EtherNet/IP, Modbus TCP, EtherCat	
Reduction of current harmonics			
EMC filter	Integrated	C2 EMC	
	As an option	C1 EMC	
Motor power	kW	HP	
	0.18	1/4	ATV32H018M2 T1
	0.37	1/2	ATV32H037M2 T1
	0.55	3/4	ATV32H055M2 T1
	0.75	1	ATV32H075M2 T1
	1.1	1 1/2	ATV32HU11M2 T2
	1.5	2	ATV32HU15M2 T2
	2.2	3	ATV32HU22M2 T2
	3	-	-
	4	5	-
	5.5	7 1/2	-
	7.5	10	-
	11	15	-
15	20	-	

Notes



Dimensions (in mm)		width x height x depth	
T2	: 130 x 230 x 175	T3	: 155 x 260 x 187
T4	: 175 x 295 x 187	T5A	: 210 x 295 x 213
T5B	: 230 x 400 x 213	T6	: 240 x 420 x 236
T7A	: 240 x 550 x 266	T7B	: 320 x 550 x 266
T8	: 320 x 630 x 290	T9	: 320 x 920 x 377
T10	: 360 x 1022 x 377	T11	: 340 x 1190 x 377
T12	: 440 x 1190 x 377	T13	: 595 x 1190 x 377
T14	: 890 x 1390 x 377	T15	: 1120 x 1390 x 377



Type of drive			Single-phase	Three-phase	Three-phase			
Supply voltage			200...240 V	200...240 V	380...480 V			
Degree of protection			IP20 for unprotected drives and IP41 on the upper part					
Drive	Output frequency		0.1...599 Hz up to 37 kW; 0.1...500 Hz from 45 to 800 kW					
	Type of control	Asynchronous motor	Kn ² quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio					
		Synchronous motor	Vector control without speed feedback					
	Transient overtorque		120...130% of the nominal drive current for 60 seconds					
Speed range			1...100 in open loop mode					
Functions	Number of functions		> 150					
	Number of preset speeds		16					
	Number of I/O		Analog inputs 2...4/Logic inputs 6...20					
			Analog outputs 1...3/Logic outputs 0...8					
			Relay outputs 2...4					
Dialogue			Safety input 1					
Communication	Integrated		Remote graphic display terminal, SoMove setup software (3)					
	As an option		Modbus and CANopen					
Cards (available as an option)			HVAC protocols: LonWorks, BACnet, METASYS N2, APOGEE FLN P1 Industrial protocols: Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-Link					
Reduction of current harmonics			DC choke integrated or supplied with the drive or AFE Altivar (Active Front End)					
EMC filter	Integrated		C2 EMC	C2 EMC up to 7.5 kW	C2 EMC up to 4 kW C3 EMC from 5.5 to 630 kW			
	As an option		C1 EMC	C1 EMC	C1 EMC from 0.75 to 630 kW			
Motor power	kW/HP	0.37/0.5	ATV61H075M3	T2	–	–		
		0.75/1	ATV61HU15M3	T2	ATV61H075M3	T2	ATV61H075N4	T2
		1.5/2	ATV61HU22M3	T3	ATV61HU15M3	T2	ATV61HU15N4	T2
		2.2/3	ATV61HU30M3	T3	ATV61HU22M3	T3	ATV61HU22N4	T2
		3/–	ATV61HU40M3 (1)	T3	ATV61HU30M3	T3	ATV61HU30N4	T3
		4/5	ATV61HU55M3 (1)	T4	ATV61HU40M3	T3	ATV61HU40N4	T3
		5.5/7.5	ATV61HU75M3 (1)	T5A	ATV61HU55M3	T4	ATV61HU55N4	T4
		7.5/10	–	–	ATV61HU75M3	T5A	ATV61HU75N4	T4
		11/15	–	–	ATV61HD11M3X(2)	T5B	ATV61HD11N4	T5A
		15/20	–	–	ATV61HD15M3X(2)	T5B	ATV61HD15N4	T5B
		18.5/25	–	–	ATV61HD18M3X(2)	T6	ATV61HD18N4	T5A
		22/30	–	–	ATV61HD22M3X(2)	T6	ATV61HD22N4	T6
		30/40	–	–	ATV61HD30M3X(2)	T7B	ATV61HD30N4	T7A
		37/50	–	–	ATV61HD37M3X(2)	T7B	ATV61HD37N4	T7A
		45/60	–	–	ATV61HD45M3X(2)	T7B	ATV61HD45N4	T8
		55/75	–	–	ATV61HD55M3X(2)	T9	ATV61HD55N4	T8
		75/100	–	–	ATV61HD75M3X(2)	T9	ATV61HD75N4	T8
		90/125	–	–	ATV61HD90M3X(2)	T10	ATV61HD90N4	T9
		110/150	–	–	–	–	ATV61HC11N4	T9
		132/200	–	–	–	–	ATV61HC13N4	T10
		160/250	–	–	–	–	ATV61HC16N4	T11
		220/350	–	–	–	–	ATV61HC22N4	T12
		250/400	–	–	–	–	ATV61HC25N4	T13
		315/500	–	–	–	–	ATV61HC31N4	T13
		400/600	–	–	–	–	ATV61HC40N4	T14
		500/700	–	–	–	–	ATV61HC50N4	T14
		630/900	–	–	–	–	ATV61HC63N4	T15

(1) Must be used with a line choke, refer to the Schneider Electric catalogue.

(2) Drive supplied without EMC filter

(3) SoMove setup software : available from 2011. Altivar 61 is also supported by Powersuite software workshop.

For all other variants, please refer to the Schneider Electric catalogue.



Dimensions (in mm)	width x height x depth
T6	: 240 x 420 x 236
T8	: 320 x 630 x 290
T11	: 340 x 1190 x 377
T13	: 595 x 1190 x 377
T15	: 1120 x 1390 x 377

Type of drive		Three-phase				
Supply voltage		500...690 V				
Degree of protection		IP20 and IP41 on the upper part				
Drive	Output frequency	0.1...599 Hz up to 37 kW; 0.1...500 Hz from 45 to 800 kW				
	Type of control	Asynchronous motor	Kn ² quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio			
		Synchronous motor	Vector control without speed feedback			
	Transient overtorque	120...130% of the nominal drive current for 60 seconds				
Speed range		1...100 in open loop mode				
Functions	Number of functions	> 150				
	Number of preset speeds	16				
	Number of I/O	Analog inputs 2...4/Logic inputs 6...20 Analog outputs 1...3/Logic outputs 0...8 Relay outputs 2...4 Safety input 1				
Dialogue		Remote graphic display terminal, SoMove setup software (1)				
Communication	Integrated	Modbus and CANopen				
	As an option	HVAC protocols: LonWorks, BACnet, METASYS N2, APOGEE FLN P1 Industrial protocols: Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, PROFIBUS DP V0 et V1, INTERBUS, CC-Link				
Cards (available as an option)		Multi-pump cards, I/O extension cards, "Controller Inside" programmable card				
Reduction of current harmonics		DC choke integrated or supplied with the product or AFE Altivar (Active Front End)				
EMC filter		Integrated				
Motor power	kW/HP	500 V	575 V	690 V		
		kW	HP	kW		
		2.2	3	3	ATV61HU30Y	T6
		3	—	4	ATV61HU40Y	T6
		4	5	5.5	ATV61HU55Y	T6
		5.5	7.5	7.5	ATV61HU75Y	T6
		7.5	10	11	ATV61HD11Y	T6
		11	15	15	ATV61HD15Y	T6
		15	20	18.5	ATV61HD18Y	T6
		18.5	25	22	ATV61HD22Y	T6
		22	30	30	ATV61HD30Y	T6
		30	40	37	ATV61HD37Y	T8
		37	50	45	ATV61HD45Y	T8
		45	60	55	ATV61HD55Y	T8
		55	75	75	ATV61HD75Y	T8
		75	100	90	ATV61HD90Y	T8
		90	125	110	ATV61HC11Y	T11
		110	150	132	ATV61HC13Y	T11
		132	—	160	ATV61HC16Y	T11
		160	200	200	ATV61HC20Y	T11
		200	250	250	ATV61HC25Y	T13
		250	350	315	ATV61HC31Y	T13
		315	450	400	ATV61HC40Y	T13
		400	550	500	ATV61HC50Y	T15
		500	700	630	ATV61HC63Y	T15
		630	800	800	ATV61HC80Y	T15

(1) SoMove setup software : available from 2011. Altivar 61 is also supported by Powersuite software workshop.

For all other variants, please refer to the Schneider Electric catalogue.



Dimensions (in mm)		width x height x depth	
ATV61W...			
TA2 : 235 x 490 x 272	TD : 310 x 665 x 315		
TA3 : 235 x 490 x 286	TE : 284 x 720 x 315		
TB : 255 x 525 x 286	TF : 284 x 880 x 343		
TC : 290 x 560 x 315	TG : 362 x 1000 x 364		

Type of drive		Three-phase 380...480 V				
Degree of protection		Type 12 (1) / IP54				
Drive	Output frequency	0.1...599 Hz up to 37 kW; 0.1...500 Hz from 45 to 800 kW				
	Type of control	Asynchronous motor	Kn ² quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio			
	Synchronous motor	Vector control without speed feedback				
	Transient overtorque	120...130% of the nominal drive current for 60 seconds				
Speed range		1...100 in open loop mode				
Functions	Number of functions	> 150				
	Number of preset speeds	16				
	Number of I/O	Analog inputs 2...4/Logic inputs 6...20 Analog outputs 1...3/Logic outputs 0...8 Relay outputs 2...4 Safety input 1				
Dialogue		Remote graphic display terminal, SoMove setup software (2)				
Communication	Integrated	Modbus and CANopen				
	As an option	HVAC protocols: LonWorks, BACnet, METASYS N2, APOGEE FLN P1 Industrial protocols: Modbus TCP Daisy Chain, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-Link				
Cards (available as an option)		Multi-pump cards, I/O extension cards, "Controller Inside" programmable card				
Reduction of current harmonics		Integrated DC choke				
EMC filter	Integrated	C2 EMC				
	As an option	-				
Motor power	kW/HP	0.75/1	ATV61W075N4	TA2	ATV61E5075N4	TA2
		1.5/2	ATV61WU15N4	TA2	ATV61E5U15N4	TA2
		2.2/3	ATV61WU22N4	TA2	ATV61E5U22N4	TA2
		3/-	ATV61WU30N4	TA3	ATV61E5U30N4	TA3
		4/5	ATV61WU40N4	TA3	ATV61E5U40N4	TA3
		5.5/7.5	ATV61WU55N4	TB	ATV61E5U55N4	TB
		7.5/10	ATV61WU75N4	TB	ATV61E5U75N4	TB
		11/15	ATV61WD11N4	TC	ATV61E5D11N4	TC
		15/20	ATV61WD15N4	TD	ATV61E5D15N4	TD
		18.5/25	ATV61WD18N4	TD	ATV61E5D18N4	TD
		22/30	ATV61WD22N4	TE	ATV61E5D22N4	TE
		30/40	ATV61WD30N4	TF	ATV61E5D30N4	TF
		37/50	ATV61WD37N4	TF	ATV61E5D37N4	TF
		45/60	ATV61WD45N4	TG	ATV61E5D45N4	TG
		55/75	ATV61WD55N4	TG	ATV61E5D55N4	TG
75/100	ATV61WD75N4	TG	ATV61E5D75N4	TG		
90/125	ATV61WD90N4	TG	ATV61E5D90N4	TG		

Drive with integrated C1 filter: add the letter **C** at the end of the reference. For example, ATV61W075N4 becomes ATV61W075N4C

For other variants, please refer to the Schneider Electric catalogue.

(1) For ATV61W... range only.

(2) SoMove setup software : available from 2011. Altivar 61 is also supported by Powersuite software workshop.

Altivar 61

0.37...800 kW

Pumping and ventilation machines

IP54 Altivar 61 kit with preassembled enclosure



Drive	Kit
ATV61HC11N4	VW3A9541
ATV61HC13N4	VW3A9542
ATV61HC16N4	VW3A9543
ATV61HC22N4	VW3A9544
ATV61HC25N4	VW3A9545
ATV61HC31N4	
ATV61HC25N4	VW3A9546
ATV61HC31N4	
ATV61HC40N4	VW3A9547
ATV61HC50N4	
ATV61HC63N4	VW3A9548
	VW3A7102 braking unit
	VW3A9549
	Additional empty enclosure (600 mm)
	VW3A9550
	Additional empty enclosure (800 mm)
	VW3A9551



Dimensions (in mm)	width x height x depth
T11	: 330 x 950 x 377
T13	: 585 x 950 x 377
T15	: 1110 x 1150 x 377

Type of drive		Three-phase	Three-phase		
Supply voltage		380...480 V	500...690 V		
Degree of protection		Sideways and front IP31 - Top IP20 - Bottom IP00			
Drive	Output frequency	0.1...500Hz			
	Type of control	Asynchronous motor	Kn ² quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio		
		Synchronous motor	Vector control without speed feedback		
	Transient overtorque	120...130% of the nominal drive current for 60 seconds			
Speed range		1...100 in open loop mode			
Functions	Number of functions	> 150			
	Number of preset speeds	16			
	Number of I/O	Analog inputs 2...4/Logic inputs 6...20 Analog outputs 1...3/Logic outputs 0...8 Relay outputs 2...4 Safety input 1			
Dialogue		Remote graphic display terminal, SoMove setup software (2)			
Communication	Integrated	Modbus and CANopen			
	As an option	HVAC protocols: LonWorks, BACnet, METASYS N2, APOGEE FLN P1 Industrial protocols: Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profbus DP, Profbus DP V1, DeviceNet, EthernetIP, CC-Link, INTERBUS			
Cards (available as an option)		Multi-pump cards, I/O extension cards, "Controller Inside" programmable card			
Reduction of current harmonics		Optional AC choke, Altivar AFE (Active Front End)			
EMC filter	Integrated	C3 EMC			
	As an option	C1 EMC			
Motor power	kW/HP	110/150	ATV61QC11N4	T11	-
		132/200	ATV61QC13N4	T11	-
		160/250	ATV61QC16N4	T11	-
		200/300	ATV61QC20N4	T13	-
		250/400	ATV61QC25N4	T13	-
		315/500	ATV61QC31N4	T13	-
		400/600	ATV61QC40N4	T15	-
		500/700	ATV61QC50N4	T15	-
630/900	ATV61QC63N4	T15	-		

500 V	575 V	690 V		
kW	HP	kW		
110	150	132	-	ATV61QC13Y T11
132	-	160	-	ATV61QC16Y T11
160	200	200	-	ATV61QC20Y T11
200	250	250	-	ATV61QC25Y T13
250	350	315	-	ATV61QC31Y T13
315	450	400	-	ATV61QC40Y T13
400	550	500	-	ATV61QC50Y T15
500	700	630	-	ATV61QC63Y T15
630	800	800	-	ATV61QC80Y T15

(1) SoMove setup software : available during 2011. Altivar 61 also works with the PowerSuite software workshop.

Altivar 61 Plus

90...2400 kW

Pumping and ventilation machines Solutions in IP23 and IP54 ready-assembled enclosures



Dimensions (in mm)	width x height x depth
ATV61EXC2C...	
E1	: 600 x 2162 x 642
E2	: 800 x 2162 x 642
E3	: 1000 x 2162 x 642
E4	: 1200 x 2162 x 642

Enclosure types		Three-phase 380...480 V - 500 V - 690 V (1)
Degree of protection		IP23, IP54
Drive	Output frequency	0.1...599 Hz up to 37 kW; 0.1...500 Hz from 45...2400 kW
	Type of control	Asynchronous motor K α^2 quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio
		Synchronous motor Vector control without speed feedback
	Transient overtorque	120...130% of the nominal drive current for 60 seconds
Speed range		1...100 in open loop mode
Functions	Number of functions	> 150
	Number of preset speeds	16
	Number of I/O	Analog inputs 2...4/Logic inputs 6...20
		Analog outputs 1...3/Logic outputs 0...8
		Relay outputs 2...4
Dialogue		Safety input 1 Remote graphic display terminal, SoMove setup software (2)
Communication	Integrated	Modbus and CANopen
	As an option	HVAC protocols: LonWorks, BACnet, METASYS N2, APOGEE FLN P1 Industrial protocols: Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-Link.
Cards (available as an option)		Multi-pump cards, I/O extension cards, "Controller Inside" programmable card
Reduction of current harmonics		DC choke or Integrated AC choke, variant 12 pulse, AFE Altivar (Active Front End)
EMC filter	Integrated	C3 EMC
Equipment		A wide range of options listed in the catalogue provides add-ons for the standard offer as required. As well as the options listed in the catalogue, it is possible to customise the equipment. Just contact our teams of experts directly. - Water cooling solution - Integration of specific options



IP23	Three-phase 380...415 V			Three-phase 500 V			Three-phase 690 V		
	kW/HP	Dimensions		kW	Dimensions		kW	Dimensions	
	90/125	ATV61EXC2D90N4	E1	90	ATV61 EXC2D90N	E1	-		
	110/150	ATV61EXC2C11N4	E1	110	ATV61 EXC2C11N	E1	110	ATV61 EXC2C11Y	E1
	132/200	ATV61EXC2C13N4	E1	132	ATV61 EXC2C13N	E1	132	ATV61 EXC2C13Y	E1
	160/250	ATV61EXC2C16N4	E1	160	ATV61 EXC2C16N	E1	160	ATV61 EXC2C16Y	E1
	220/350	ATV61EXC2C22N4	E1	200	ATV61 EXC2C20N	E2	200	ATV61 EXC2C20Y	E1
	250/400	ATV61EXC2C25N4	E2	250	ATV61 EXC2C25N	E2	250	ATV61 EXC2C25Y	E2
	315/500	ATV61EXC2C31N4	E2	315	ATV61 EXC2C31N	E2	315	ATV61 EXC2C31Y	E2
	400/600	ATV61EXC2C40N4	E3	400	ATV61 EXC2C40N	E4	400	ATV61 EXC2C40Y	E2
	500/700	ATV61EXC2C50N4	E3	500	ATV61 EXC2C50N	E4	500	ATV61 EXC2C50Y	E4
	630/900	ATV61EXC2C63N4	E4	630	ATV61 EXC2C63N	E4	630	ATV61 EXC2C63Y	E4
							800	ATV61 EXC2C80Y	E4

(1) The Altivar 61 range in ready-assembled enclosure consists of: an ATV61H... drive, a switch and fast-acting fuses, an IP65 remote mounting kit for graphic display terminal
(2) SoMove setup software : available from 2011. Altivar 61 is also supported by Powersuite software workshop.

IP23 offer available up to 2400 kW. For ratings above 800 kW, please consult your Regional Sales Office.

Dimensions (in mm)		width x height x depth	
ATV61EX...			
E5 : 600 x 2262 x 642	E9 : 600 x 2362 x 642		
E6 : 800 x 2262 x 642	E10 : 800 x 2362 x 642		
E7 : 1000 x 2262 x 642	E11 : 1000 x 2362 x 642		
E8 : 1200 x 2262 x 642	E12 : 1200 x 2362 x 642		
	E13 : 1400 x 2362 x 642		
	E14 : 1600 x 2362 x 642		

IP54 (1)	Three-phase 380...415 V			Three-phase 500 V			Three-phase 690 V					
	Compact floor-standing enclosure			kW/HP	Dimensions		kW	Dimensions		kW	Dimensions	
	90 / 125	ATV61EXC5D90N4	E5	90	ATV61EXC5D90N	E5	90	ATV61EXC5D90N	E5	–		
	110/150	ATV61EXC5C11N4	E5	110	ATV61EXC5C11N	E5	110	ATV61EXC5C11N	E5	110	ATV61EXC5C11Y	E5
	132/200	ATV61EXC5C13N4	E5	132	ATV61EXC5C13N	E5	132	ATV61EXC5C13N	E5	132	ATV61EXC5C13Y	E5
	160/250	ATV61EXC5C16N4	E5	160	ATV61EXC5C16N	E5	160	ATV61EXC5C16N	E5	160	ATV61EXC5C16Y	E5
	220/350	ATV61EXC5C22N4	E5	200	ATV61EXC5C20N	E6	200	ATV61EXC5C20N	E6	200	ATV61EXC5C20Y	E5
	250/400	ATV61EXC5C25N4	E6	250	ATV61EXC5C25N	E6	250	ATV61EXC5C25N	E6	250	ATV61EXC5C25Y	E6
	315/500	ATV61EXC5C31N4	E6	315	ATV61EXC5C31N	E6	315	ATV61EXC5C31N	E6	315	ATV61EXC5C31Y	E6
	400/600	ATV61EXC5C40N4	E7	400	ATV61EXC5C40N	E8	400	ATV61EXC5C40N	E8	400	ATV61EXC5C40Y	E6
	500/700	ATV61EXC5C50N4	E7	500	ATV61EXC5C50N	E8	500	ATV61EXC5C50N	E8	500	ATV61EXC5C50Y	E8
	630/900	ATV61EXC5C63N4	E8	630	ATV61EXC5C63N	E8	630	ATV61EXC5C63N	E8	630	ATV61EXC5C63Y	E8
										800	ATV61EXC5C80Y	E8

(1) The IP54 offer is available for power ratings up to 800 kW. For higher power ratings up to 2400 kW, consult your customer care centre.

IP54 (2)	Three-phase 380...415 V			Three-phase 500 V			Three-phase 690 V					
	Separate air flow			kW/HP	Dimensions		kW	Dimensions		kW	Dimensions	
	90 / 125	ATV61EXS5D90N4	E9	90	ATV61EXS5D90N	E11	90	ATV61EXS5D90N	E11	–		
	110/150	ATV61EXS5C11N4	E9	110	ATV61EXS5C11N	E11	110	ATV61EXS5C11N	E11	110	ATV61EXS5C11Y	E11
	132/200	ATV61EXS5C13N4	E9	132	ATV61EXS5C13N	E11	132	ATV61EXS5C13N	E11	132	ATV61EXS5C13Y	E11
	160/250	ATV61EXS5C16N4	E9	160	ATV61EXS5C16N	E11	160	ATV61EXS5C16N	E11	160	ATV61EXS5C16Y	E11
	220/350	ATV61EXS5C22N4	E9	200	ATV61EXS5C20N	E12	200	ATV61EXS5C20N	E12	200	ATV61EXS5C20Y	E11
	250/400	ATV61EXS5C25N4	E10	250	ATV61EXS5C25N	E12	250	ATV61EXS5C25N	E12	250	ATV61EXS5C25Y	E12
	315/500	ATV61EXS5C31N4	E10	315	ATV61EXS5C31N	E12	315	ATV61EXS5C31N	E12	315	ATV61EXS5C31Y	E12
	400/600	ATV61EXS5C40N4	E13	400	ATV61EXS5C40N	E14	400	ATV61EXS5C40N	E14	400	ATV61EXS5C40Y	E12
	500/700	ATV61EXS5C50N4	E13	500	ATV61EXS5C50N	E14	500	ATV61EXS5C50N	E14	500	ATV61EXS5C50Y	E14
	630/900	ATV61EXS5C63N4	E14	630	ATV61EXS5C63N	E14	630	ATV61EXS5C63N	E14	630	ATV61EXS5C63Y	E14
										800	ATV61EXS5C80Y	E14

(2) The IP54 offer with separate air flow is available for power ratings up to 800 kW. For higher power ratings up to 2400 kW, consult your customer care centre.

Altivar 61 Plus-LH

55...630 kW

Pumping and ventilation machines Low harmonic solution in IP23 and IP54 enclosures

Dimensions (in mm)		width x height x depth	
ATV61EX●●●●●N4H			
E1	: 400 x 2157 x 642	E8	: 400 x 2237 x 642
E2	: 600 x 2157 x 642	E9	: 600 x 2237 x 642
E3	: 800 x 2157 x 642	E10	: 800 x 2237 x 642
E4	: 1200 x 2157 x 642	E11	: 1200 x 2237 x 642
E5	: 1600 x 2157 x 642	E12	: 1600 x 2237 x 642
E6	: 2000 x 2157 x 642	E13	: 2000 x 2237 x 642
E7	: 2400 x 2157 x 642	E14	: 2400 x 2237 x 642



Enclosure types			Three-phase 380...480 V (1)			
Degree of protection			IP23, IP54			
Drive	Output frequency		0.1...500 Hz			
	Type of control	Asynchronous motor	Kn ² quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio			
		Synchronous motor	Vector control without speed feedback			
	Overload		120% for 60 seconds per 10minutes			
Speed range			1...100 in open loop mode			
Functions	Number of functions		> 150			
	Number of preset speeds		16			
	Number of I/O		Analog inputs 2...4/Logic inputs 6...20			
			Analog outputs 1...3/Logic outputs 0...8			
			Relay outputs 2...4			
Dialogue			Safety input 1			
Communication	Integrated		Remote graphic display terminal, SoMove setup software (2)			
	As an option		Modbus and CANopen			
Cards (available as an option)			HVAC protocols: LonWorks, BACnet, METASYS N2, APOGEE FLN P1			
EMC filter			Industrial protocols: Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-Link.			
Equipment			Multi-pump cards, I/O extension cards, "Controller Inside" programmable card			
EMC filter			C3 EMC			
Equipment			A wide range of options listed in the catalogue provides add-ons for the standard offer as required. As well as the options listed in the catalogue, it is possible to customise the equipment. Just contact our teams of experts directly. - Integration of specific options			
Motorpower	kW	55	ATV61EXC2D55N4H	E1	ATV61EXC5D55N4H	E8
		75	ATV61EXC2D75N4H	E2	ATV61EXC5D75N4H	E9
		90	ATV61EXC2D90N4H	E2	ATV61EXC5D90N4H	E9
		110	ATV61EXC2C11N4H	E2	ATV61EXC5C11N4H	E9
		132	ATV61EXC2C13N4H	E3	ATV61EXC5C13N4H	E10
		160	ATV61EXC2C16N4H	E3	ATV61EXC5C16N4H	E10
		220	ATV61EXC2C22N4H	E4	ATV61EXC5C22N4H	E11
		250	ATV61EXC2C25N4H	E5	ATV61EXC5C25N4H	E12
		315	ATV61EXC2C31N4H	E5	ATV61EXC5C31N4H	E12
		400	ATV61EXC2C40N4H	E6	ATV61EXC5C40N4H	E13
		500	ATV61EXC2C50N4H	E6	ATV61EXC5C50N4H	E13
		630	ATV61EXC2C63N4H	E7	ATV61EXC5C63N4H	E14

(1) The Altivar 61 range in a ready-assembled enclosure consists of: an ATV61H...drive, an active in feed converter, a clean power filter, a switch and fast-acting fuses, an IP65 remote mounting kit for graphic display terminal.

(2) SoMove setup software : available from 2011. Altivar 61 is also supported by Powersuite software workshop.



Type of card	I/O extension Logic	Extended
Description	1 relay logic output ("C/O" contact) 4 x 24 VDC positive or negative logic inputs 2 x 24 VDC open collector positive or negative logic outputs 1 input for PTC probes	1 x 0...20 mA differential current analog input 1 software-configurable voltage (0...10 VDC) or current (0...20 mA) analog input 2 software-configurable voltage ($\pm 10V$, 0...10 VDC) or current (0...20 mA) analog inputs 1 relay logic output ("C/O" contact) 4 x 24 VDC positive or negative logic inputs 2 x 24 VDC open collector positive or negative logic outputs 1 input for PTC probes 1 frequency control input
Reference	VW3A3201	VW3A3202

"Controller Inside" programmable card



Type of card	Programmable "Controller Inside"
Description	10 logic inputs, 2 of which can be used for 2 counters or 4 of which can be used for 2 incremental encoders 2 analog inputs, 6 logic outputs, 2 analog outputs, a master port for the CANopen bus, a PC port for programming with the PS 1131 software workshop.
Reference	VW3A3501

Multi-pump cards



Type of card	Multi-pump
Description	The pump switching card ensures compatibility of applications developed on the Altivar 38.
Reference	VW3A3502
Description	This card is specific to pump switching. It ensures optimum flow for an impeccable quality of service. Its algorithm both saves energy and prolongs equipment service life.
Reference	VW3A3502
Description	The VWA3503 "Water Solution" card can be used to support all multi-pump applications.
Reference	VW3A3503
Description	This card offers all the functions needed to manage a pumping, booster, irrigation station, etc with the operational safety of a control and monitoring system.
Reference	VW3A3503

Accessories and options

Braking resistors



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

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

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

Other accessories (see references in the Schneider Electric Catalogue)

- > Resistance braking units (integrated in ATV61 drives up to 220 kW)
- > Additional EMC input filters
- > AC line chokes
- > Optional DC chokes
- > Passive filters
- > Sinus filters
- > Motor chokes
- > Altivar AFE (Active Front End)
- > Regenerative network braking unit

Dimensions (in mm)		width x height x depth
T2	: 130 x 230 x 175	T3 : 155 x 260 x 187
T4	: 175 x 295 x 187	T5A : 210 x 295 x 213
T5B	: 230 x 400 x 213	T6 : 240 x 420 x 236
T7A	: 240 x 550 x 266	T7B : 320 x 550 x 266
T8	: 320 x 630 x 290	T9 : 320 x 920 x 377
T10	: 360 x 1022 x 377	T11 : 340 x 1190 x 377
T12	: 440 x 1190 x 377	T13 : 595 x 1190 x 377
T14	: 890 x 1390 x 377	T15 : 1120 x 1390 x 377



Type of drive		Single-phase	Three-phase	Three-phase				
Supply voltage		200...240 V (3)	200...240 V (3)	380...480 V (3)				
Degree of protection		IP20 for unprotected drives and IP41 on the upper part						
Drive	Output frequency	0...599 Hz up to 37 kW - 0...500 Hz from 45...630 kW						
	Type of control	Asynchronous motor	Flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), ENA System					
		Synchronous motor	Vector control with and without speed feedback (4)					
	Transient overtorque	220% of nominal motor torque for 2 seconds, and 170% for 60 seconds						
Speed range		1...1000 in closed loop mode with encoder feedback, 1...100 in open loop mode						
Functions	Number of functions	> 150						
	Number of preset speeds	16						
	Number of I/O	Analog inputs	2...4					
		Logic inputs	6...20					
		Analog outputs	1...3					
	Logic outputs	0...8						
	Relay outputs	2...4						
Safety input	1							
Dialogue		Remote graphic display terminal, SoMove setup software (5)						
Communication	Integrated	Modbus and CANopen						
	As an option	Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-Link.						
Cards (available as an option)		Encoder interface cards, I/O extension cards, "Controller Inside" programmable card						
Reduction of current harmonics		DC choke integrated or supplied with the product or Altivar AFE (Active Front End).						
EMC filter	Integrated	C2 EMC up to 4 kW, C3 EMC from 5,5 to 500 kW						
	As an option	C1 EMC from 0.75 to 500 kW						
Motor power	kW/HP	0.37/0.5	ATV71H075M3	T2	ATV71H037M3	T2	–	
		0.75/1	ATV71HU15M3	T2	ATV71H075M3	T2	ATV71H075N4	T2
		1.5/2	ATV71HU22M3	T3	ATV71HU15M3	T2	ATV71HU15N4	T2
		2.2/3	ATV71HU30M3	T3	ATV71HU22M3	T3	ATV71HU22N4	T2
		3/–	ATV71HU40M3 (1)	T3	ATV71HU30M3	T3	ATV71HU30N4	T3
		4/5	ATV71HU55M3 (1)	T4	ATV71HU40M3	T3	ATV71HU40N4	T3
		5.5/7.5	ATV71HU75M3 (1)	T5A	ATV71HU55M3	T4	ATV71HU55N4	T4
		7.5/10	–	–	ATV71HU75M3	T5A	ATV71HU75N4	T4
		11/15	–	–	ATV71HD11M3X (2)	T5B	ATV71HD11N4	T5A
		15/20	–	–	ATV71HD15M3X (2)	T5B	ATV71HD15N4	T5B
		18.5/25	–	–	ATV71HD18M3X (2)	T6	ATV71HD18N4	T5B
		22/30	–	–	ATV71HD22M3X (2)	T6	ATV71HD22N4	T6
		30/40	–	–	ATV71HD30M3X (2)	T7B	ATV71HD30N4	T7A
		37/50	–	–	ATV71HD37M3X (2)	T7B	ATV71HD37N4	T7A
		45/60	–	–	ATV71HD45M3X (2)	T7B	ATV71HD45N4	T8
		55/75	–	–	ATV71HD55M3X (2)	T9	ATV71HD55N4	T8
		75/100	–	–	ATV71HD75M3X (2)	T10	ATV71HD75N4	T8
		90/125	–	–	–	–	ATV71HD90N4	T9
		110/150	–	–	–	–	ATV71HC11N4	T10
		132/200	–	–	–	–	ATV71HC13N4	T11
		160/250	–	–	–	–	ATV71HC16N4	T12
		200/300	–	–	–	–	ATV71HC20N4	T13
		220/350	–	–	–	–	ATV71HC25N4	T13
		280/450	–	–	–	–	ATV71HC28N4	T13
		315/500	–	–	–	–	ATV71HC31N4	T14
		355/–	–	–	–	–	ATV71HC40N4	T14
		500/700	–	–	–	–	ATV71HC50N4	T15

(1) Must be used with a line choke, Refer to the Schneider Electric catalogue.

(2) Drive supplied without EMC filter.

(3) A three-phase 380...480 V range on base plate is available from 0.75 to 11 kW. Please refer to the Schneider Electric catalogue.

(4) Vector control with speed feedback for synchronous motors is supported by the S383 variant of the Altivar 71.

(5) SoMove setup software : available from 2011. Altivar 71 is also supported by Powersuite software workshop.

Altivar 71

0.37...630 kW

Complex, high-power machines High performance drives



Dimensions (in mm)		width x height x depth
T2	: 130 x 230 x 175	T3 : 155 x 260 x 187
T4	: 175 x 295 x 187	T5A : 210 x 295 x 213
T5B	: 230 x 400 x 213	T6 : 240 x 420 x 236
T7A	: 240 x 550 x 266	T7B : 320 x 550 x 266
T8	: 320 x 630 x 290	T9 : 320 x 920 x 377
T10	: 360 x 1022 x 377	T11 : 340 x 1190 x 377
T12	: 440 x 1190 x 377	T13 : 595 x 1190 x 377
T14	: 890 x 1390 x 377	T15 : 1120 x 1390 x 377

Type of drive		Three-phase				
Supply voltage		500... 690 V				
Degree of protection		IP20 for unprotected drives and IP41 on the upper part				
Drive	Output frequency	0...599 Hz up to 37 kW - 0...500 Hz from 45...630 kW				
	Type of control	Asynchronous motor	Flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), ENA System			
		Synchronous motor	Vector control with and without speed feedback (1)			
	Transient overtorque	220% of nominal motor torque for 2 seconds, and 170% for 60 seconds				
Speed range		1...1000 in closed loop mode with encoder feedback, 1...100 in open loop mode				
Functions	Number of functions		> 150			
	Number of preset speeds		16			
	Number of I/O	Analog inputs	2...4			
		Logic inputs	6...20			
	Analog outputs	1...3				
	Logic outputs	0...8				
	Relay outputs	2...4				
Safety input	1					
Dialogue		Remote graphic display terminal, SoMove setup software (2)				
Communication	Integrated	Modbus and CANopen				
	As an option	Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, PROFIBUS DP V0 and V1, INTERBUS, CC-Link.				
Cards (available as an option)		Encoder interface cards, I/O extension cards, "Controller Inside" programmable card				
Reduction of current harmonics		DC choke integrated or DC choke optional or AFE Altivar (Active Front End)				
EMC filter		Integrated C3 EMC				
Motor power	kW/HP	500 V	575 V	690 V		
		kW	HP	kW		
		1.5	2	2.2	ATV71HU22Y	T6
		2.2	3	3	ATV71HU30Y	T6
		3	–	4	ATV71HU40Y	T6
		4	5	5.5	ATV71HU55Y	T6
		5.5	7.5	7.5	ATV71HU75Y	T6
		7.5	10	11	ATV71HD11Y	T6
		11	15	15	ATV71HD15Y	T6
		15	20	18.5	ATV71HD18Y	T6
		18.5	25	22	ATV71HD22Y	T6
		22	30	30	ATV71HD30Y	T6
		30	40	37	ATV71HD37Y	T8
		37	50	45	ATV71HD45Y	T8
		45	60	55	ATV71HD55Y	T8
		55	75	75	ATV71HD75Y	T8
		75	100	90	ATV71HD90Y	T8
		90	125	110	ATV71HC11Y	T11
		110	150	132	ATV71HC13Y	T11
		132	–	160	ATV71HC16Y	T11
		160	200	200	ATV71HC20Y	T13
		200	250	250	ATV71HC25Y	T13
		250	350	315	ATV71HC31Y	T13
		315	450	400	ATV71HC40Y	T15
		400	550	500	ATV71HC50Y	T15
		500	700	630	ATV71HC63Y	T15

(1) Vector control with speed feedback for synchronous motors is supported by the S383 variant of the Altivar 71.

(2) SoMove setup software : available from 2011. Altivar 71 is also supported by Powersuite software workshop..

For all other variants, please refer to the Schneider Electric catalogue.

Altivar 71

0.75...75 kW

Complex, high-power machines IP54 drives



Dimensions (in mm)		width x height x depth
ATV71W..., ATV71E5... up to 75 kW		
TA2	: 235 x 490 x 272	TD : 310 x 665 x 315
TA3	: 235 x 490 x 286	TE : 284 x 720 x 315
TB	: 255 x 525 x 286	TF : 284 x 880 x 343
TC	: 290 x 560 x 315	TG : 362 x 1000 x 364

Type of drive		Three-phase 380...480 V				
					With switch	
Degree of protection		UL Type 12 (1) / IP54				
Drive	Output frequency	0...599 Hz up to 37 kW - 0...500 Hz from 45...75 kW				
	Type of control	Asynchronous motor	Flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), ENA System			
		Synchronous motor	Vector control without speed feedback			
	Transient overtorque	220% of nominal motor torque for 2 seconds, and 170% for 60 seconds				
Speed range		1...1000 in closed loop mode with encoder feedback, 1...100 in open loop mode				
Functions	Number of functions	> 150				
	Number of preset speeds	16				
	Number of I/O	Analog inputs	2...4			
		Logic inputs	6...20			
		Analog outputs	1...3			
	Logic outputs	0...8				
	Relay outputs	2...4				
Safety input	1					
Dialogue		Remote graphic display terminal, SoMove setup software (2)				
Communication	Integrated	Modbus and CANopen				
	As an option	Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, PROFIBUS DP V0 et V1, INTERBUS, CC-Link.				
Cards (available as an option)		Encoder interface cards, I/O extension cards, "Controller Inside" programmable card				
Reduction of current harmonics		Optional chokes and passive filters				
EMC filter	Integrated	C2 EMC				
	As an option	External C1 EMC				
Motor power	kW/HP	0.75/1	ATV71W075N4	TA2	ATV71E5075N4	TA2
		1.5/2	ATV71WU15N4	TA2	ATV71E5U15N4	TA2
		2.2/3	ATV71WU22N4	TA2	ATV71E5U22N4	TA2
		3/-	ATV71WU30N4	TA3	ATV71E5U30N4	TA3
		4/5	ATV71WU40N4	TA3	ATV71E5U40N4	TA3
		5.5/7.5	ATV71WU55N4	TB	ATV71E5U55N4	TB
		7.5/10	ATV71WU75N4	TB	ATV71E5U75N4	TB
		11/15	ATV71WD11N4	TC	ATV71E5D11N4	TC
		15/20	ATV71WD15N4	TD	ATV71E5D15N4	TD
		18.5/25	ATV71WD18N4	TD	ATV71E5D18N4	TD
		22/30	ATV71WD22N4	TD	ATV71E5D22N4	TD
		30/40	ATV71WD30N4	TF	ATV71E5D30N4	TF
		37/50	ATV71WD37N4	TF	ATV71E5D37N4	TF
		45/60	ATV71WD45N4	TG	ATV71E5D45N4	TG
		55/75	ATV71WD55N4	TG	ATV71E5D55N4	TG
75/100	ATV71WD75N4	TG	ATV71E5D75N4	TG		

(1) For ATV71W... range only.

(2) SoMove setup software : available from 2011. Altivar 71 is also supported by Powersuite software workshop.

Altivar 71

90...500 kW

Complex, high-power machines

IP54 Altivar 71 kit with preassembled enclosure



Drive		Kit
ATV71HD90N4		VW3A9541
ATV71HC11N4		VW3A9542
ATV71HC13N4		VW3A9543
ATV71HC16N4		VW3A9544
ATV71HC20N4		VW3A9545
ATV71HC25N4		
ATV71HC28N4		
ATV71HC20N4	With VW3A7101 braking unit	VW3A9546
ATV71HC25N4	With VW3A7101 braking unit	
ATV71HC28N4	With VW3A7101 braking unit	
ATV71HC31N4	Without braking unit	VW3A9547
ATV71HC40N4		
ATV71HC50N4		VW3A9548
	VW3A7102 braking unit	VW3A9549
	Additional empty enclosure (600 mm)	VW3A9550
	Additional empty enclosure (800 mm)	VW3A9551



Dimensions (in mm)	width x height x depth
T11	: 330 x 950 x 377
T13	: 585 x 950 x 377
T15	: 1110 x 1150 x 377

Type of drive		Three-phase	Three-phase		
Supply voltage		380...480 V	500...690 V		
Degree of protection		Sideways and front IP31 - Top IP20 - Bottom IP00			
Drive	Output frequency	0.1...500Hz			
	Type of control	Asynchronous motor	Flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), ENA System		
		Synchronous motor	Vector control without speed feedback		
	Transient overtorque	220% of nominal motor torque for 2 seconds, and 170% for 60 seconds			
Speed range		1...1000 in closed loop mode with encoder feedback, 1...100 in open loop mode			
Functions	Number of functions		> 150		
	Number of preset speeds		16		
	Number of I/O	Analog inputs	2...4		
		Logic inputs	6...20		
		Analog outputs	1...3		
		Logic outputs	0...8		
		Relay outputs	2...4		
		Safety input	1		
Dialogue		Remote graphic display terminal, SoMove setup software (1)			
Communication	Integrated	Modbus and CANopen			
	As an option	Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profbus DP, Profbus DP V1, DeviceNet, EthernetIP, CC-Link, INTERBUS			
Cards (available as an option)		Multi-pump cards, I/O extension cards, "Controller Inside" programmable card			
Reduction of current harmonics		Optional AC choke, Altivar AFE (Active Front End)			
EMC filter	Integrated	C3 EMC			
	As an option	C1 EMC			
Motor power	kW/HP	90/125	ATV71QD90N4	T11	–
		110/150	ATV71QC11N4	T11	–
		132/200	ATV71QC13N4	T11	–
		160/250	ATV71QC16N4	T13	–
		200/300	ATV71QC20N4	T13	–
		250/400	ATV71QC25N4	T13	–
		315/500	ATV71QC31N4	T15	–
		400/600	ATV71QC40N4	T15	–
		500/700	ATV71QC50N4	T15	–

	500 V	575 V	690 V		
	kW	HP	kW		
	90	125	110	–	ATV71QC11Y T11
	110	150	132	–	ATV71QC13Y T11
	132	-	160	–	ATV71QC16Y T11
	160	200	200	–	ATV71QC20Y T13
	200	250	250	–	ATV71QC25Y T13
	250	350	315	–	ATV71QC31Y T13
	315	450	400	–	ATV71QC40Y T15
	400	550	500	–	ATV71QC50Y T15
	500	700	630	–	ATV71QC63Y T15

(1) SoMove setup software : available during 2011. Altivar 71 also works with the PowerSuite software workshop.

Altivar 71 Plus

90...2000 kW

Complex, high-power machines
Solutions in IP23 and IP54 ready-assembled enclosures



Dimensions (in mm)		width x height x depth	
ATV71EXC2C...			
E1 : 600 x 2162 x 642	E3 : 1000 x 2162 x 642		
E2 : 800 x 2162 x 642	E4 : 1200 x 2162 x 642		

Type of drive		Three-phase 380...480 V (1)	
Degree of protection		IP23, IP54	
Drive	Output frequency	0...500 Hz	
	Type of control	Asynchronous motor Flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), ENA System	
		Synchronous motor Vector control without speed feedback	
	Transient overtorque	220% of nominal motor torque for 2 seconds, and 170% for 60 seconds	
Speed range		1...1000 in closed loop mode with encoder feedback, 1...100 in open loop mode	
Functions	Number of functions	> 150	
	Number of preset speeds	16	
	Number of I/O	Analog inputs	2...4
		Logic inputs	6...20
	Analog outputs	1...3	
	Logic outputs	0...8	
	Relay outputs	2...4	
Safety input	1		
Dialogue		Remote graphic display terminal, SoMove setup software (2)	
Communication	Integrated	Modbus and CANopen	
	As an option	Modbus TCP, Modbus/Uni-Telway, EtherNet/IP, EtherCAT, DeviceNet, PROFIBUS DP V0 et V1, INTERBUS, CC-Link.	
Cards (available as an option)		Encoder interface cards, I/O extension cards, "Controller Inside" programmable card,	
Reduction of current harmonics		DC choke or Integrated AC choke, variant 12 pulse, AFE Altivar (Active Front End)	
EMC filter	Integrated	C3 EMC	
	As an option	External C1 EMC	
Equipment		A wide range of options listed in the catalogue provides add-ons for the standard offer as required. As well as the options listed in the catalogue, it is possible to customise the equipment. Just contact our teams of experts direct. - Water cooling solution - Integration of specific options	

IP23	Three-phase 380...415 V			Three-phase 500 V			Three-phase 690 V		
	kW/HP	Dimensions		kW	Dimensions		kW	Dimensions	
	90/125	ATV71EXC2D90N4	E1	90	ATV71 EXC2D90N	E1	-		
	110/150	ATV71EXC2C11N4	E1	110	ATV71 EXC2C11N	E1	110	ATV71 EXC2C11Y	E1
	132/200	ATV71EXC2C13N4	E1	132	ATV71 EXC2C13N	E1	132	ATV71 EXC2C13Y	E1
	160/250	ATV71EXC2C16N4	E1	160	ATV71 EXC2C16N	E2	160	ATV71 EXC2C16Y	E1
	200/300	ATV71EXC2C20N4	E2	200	ATV71 EXC2C20N	E2	200	ATV71 EXC2C20Y	E2
	250/400	ATV71EXC2C25N4	E2	250	ATV71 EXC2C25N	E2	250	ATV71 EXC2C25Y	E2
	280/450	ATV71EXC2C28N4	E2	-	-	-	-		
	315/500	ATV71EXC2C31N4	E3	315	ATV71 EXC2C31N	E4	315	ATV71 EXC2C31Y	E2
	400/600	ATV71EXC2C40N4	E3	400	ATV71 EXC2C40N	E4	400	ATV71 EXC2C40Y	E4
	500/700	ATV71EXC2C50N4	E4	500	ATV71 EXC2C50N	E4	500	ATV71 EXC2C50Y	E4
							630	ATV71EXC2C63N4	E4

(1) The Altivar 71 range in ready-assembled enclosure consists of:

- An ATV71H... drive
- A switch and fast-acting fuses
- An IP65 remote mounting kit for graphic display terminal

(2) SoMove setup software : available from 2011. Altivar 71 is also supported by Powersuite software workshop.

IP23 offer available up to 2000 kW. For ratings above 630 kW, please consult your Customer Care Centre.

Altivar 71 Plus

90...2000 kW

Complex, high-power machines
Solutions in IP23 and IP54 ready-assembled enclosures



Dimensions (in mm)		width x height x depth	
ATV71EX...			
E5 : 600 x 2262 x 642	E9 : 600 x 2362 x 642		
E6 : 800 x 2262 x 642	E10 : 800 x 2362 x 642		
E7 : 1000 x 2262 x 642	E11 : 1000 x 2362 x 642		
E8 : 1200 x 2262 x 642	E12 : 1200 x 2362 x 642		
	E13 : 1400 x 2362 x 642		
	E14 : 1600 x 2362 x 642		

IP54 (1)	Three-phase 380...415 V			Three-phase 500 V			Three-phase 690 V		
	kW/HP	Dimensions		kW	Dimensions		kW	Dimensions	
Compact floor-standing enclosure	90/125	ATV71EXC5D90N4	E5	90	ATV71EXC5D90N	E5	–		
	110/150	ATV71EXC5C11N4	E5	110	ATV71EXC5C11N	E5	110	ATV71EXC5C11Y	E5
	132/200	ATV71EXC5C13N4	E5	132	ATV71EXC5C13N	E5	132	ATV71EXC5C13Y	E5
	160/250	ATV71EXC5C16N4	E5	160	ATV71EXC5C16N	E6	160	ATV71EXC5C16Y	E5
	220/350	ATV71EXC5C20N4	E6	200	ATV71EXC5C20N	E6	200	ATV71EXC5C20Y	E6
	250/400	ATV71EXC5C25N4	E6	250	ATV71EXC5C25N	E6	250	ATV71EXC5C25Y	E6
	280/450	ATV71EXC5C28N4	E6	–	–	–	–		
	315/500	ATV71EXC5C31N4	E7	315	ATV71EXC5C31N	E8	315	ATV71EXC5C31Y	E6
	400/600	ATV71EXC5C40N4	E7	400	ATV71EXC5C40N	E8	400	ATV71EXC5C40Y	E8
	500/700	ATV71EXC5C50N4	E8	500	ATV71EXC5C50N	E8	500	ATV71EXC5C50Y	E8
							630	ATV71EXC5C63Y	E8

(1) The IP54 offer is available for power ratings up to 630 kW. For higher power ratings up to 2000 kW, consult your customer care centre.

IP54 (2)	Three-phase 380...415 V			Three-phase 500 V			Three-phase 690 V		
	kW/HP	Dimensions		kW	Dimensions		kW	Dimensions	
Separate air flow	90/125	ATV71EXS5D90N4	E9	90	ATV71EXS5D90N	E11	–		
	110/150	ATV71EXS5C11N4	E9	110	ATV71EXS5C11N	E11	110	ATV71EXS5C11Y	E11
	132/200	ATV71EXS5C13N4	E9	132	ATV71EXS5C13N	E11	132	ATV71EXS5C13Y	E11
	160/250	ATV71EXS5C16N4	E9	160	ATV71EXS5C16N	E12	160	ATV71EXS5C16Y	E11
	220/350	ATV71EXS5C20N4	E10	200	ATV71EXS5C20N	E12	200	ATV71EXS5C20Y	E12
	250/400	ATV71EXS5C25N4	E10	250	ATV71EXS5C25N	E12	250	ATV71EXS5C25Y	E12
	280/450	ATV71EXS5C28N4	E10	–	–	–	–		
	315/500	ATV71EXS5C31N4	E13	315	ATV71EXS5C31N	E14	315	ATV71EXS5C31Y	E12
	400/600	ATV71EXS5C40N4	E13	400	ATV71EXS5C40N	E14	400	ATV71EXS5C40Y	E14
	500/700	ATV71EXS5C50N4	E14	500	ATV71EXS5C50N	E14	500	ATV71EXS5C50Y	E14
							630	ATV71EXS5C63Y	E14

(2) The IP54 offer with separate air flow is available for power ratings up to 630 kW. For higher power ratings up to 2000 kW, consult your customer care centre.



Dimensions (in mm) width x height x depth without remote graphic terminal	
T4 : 175 x 295 x 161	T6 : 240 x 420 x 210
T5A : 210 x 295 x 187	T7 : 240 x 550 x 230
T5B : 230 x 400 x 187	

Type of drive		Three-phase	Three-phase			
Supply voltage		200...240 V	380...480 V			
Degree of protection		IP20 for unprotected drives and IP41 on the upper part				
Drive	Output frequency	0...599 Hz				
	Type of control	Asynchronous motor	Flux vector control with or without sensor, voltage/frequency ratio			
		Synchronous motor	Vector control with and without speed feedback			
	Transient overtorque		220% of nominal motor torque for 2 seconds, and 170% for 60 seconds			
Speed range		1...1000 in closed loop mode with encoder feedback, 1...100 in open loop mode				
Functions	Number of functions		> 150			
	Number of preset speeds		16			
	Number of I/O	Analog inputs	2...4			
		Logic inputs	6...20			
		Analog outputs	1...3			
		Logic outputs	0...8			
		Relay outputs	2...4			
Safety input		1				
Dialogue		Remote graphic display terminal, SoMove setup software (1)				
Communication	Integrated	Modbus and CANopen				
	As an option	Ethernet, PROFIBUS DP, DeviceNet, Uni-Telway, INTERBUS				
Cards (available as an option)		Encoder interface cards, I/O extension cards, "Controller Inside" programmable card, Encoder emulation card				
Reduction of current harmonics		Integrated DC choke or supplied with the product				
EMC filter	Integrated	C2 EMC up to 5.5 kW				
	As an option	External C2 EMC from 7.5 kW				
Motor power	kW / HP / A	4 / 5 / 10	–	ATV71LD10N4Z	T4	
		5,5 / 7,5 / 14	–	ATV71LD14N4Z	T4	
		5,5 / 7,5 / 27	ATV71LD27M3Z	T5B	–	
		7,5 / 10 / 17	–	–	ATV71LD17N4Z	T5A
		7,5 / 10 / 33	ATV71LD33M3Z	T5B	–	
		11 / 15 / 27	–	–	ATV71LD27N4Z	T5B
		11 / 15 / 54	ATV71LD54M3Z	T6	–	
		15 / 20 / 33	–	–	ATV71LD33N4Z	T5B
		15 / 20 / 66	ATV71LD66M3Z	T6	–	
		22 / 30 / 48	–	–	ATV71LD48N4Z	T7

(1) SoMove setup software : available from 2011. Altivar LIFT is also supported by Powersuite software workshop.



Type of card	I/O extension	Extended
	Logic	
Description	1 relay logic output ("C/O" contact) 4 x 24 VDC positive or negative logic inputs 2 x 24 VDC open collector positive or negative logic outputs 1 input for PTC probes	1 x 0...20 mA differential current analog input 1 software-configurable voltage (0...10 VDC) or current (0...20 mA) analog input 2 software-configurable voltage ($\pm 10V$, 0...10 VDC) or current (0...20 mA) analog inputs 1 relay logic output ("C/O" contact) 4 x 24 VDC positive or negative logic inputs 2 x 24 VDC open collector positive or negative logic outputs, 1 input for PTC probes, 1 frequency control input
Reference	VW3A3201	VW3A3202

"Controller Inside" programmable card



Type of card	Programmable "Controller Inside"
Description	10 logic inputs, 2 of which can be used for 2 counters or 4 of which can be used for 2 incremental encoders 2 analog inputs, 6 logic outputs, 2 analog outputs, a master port for the CANOpen bus, a PC port for programming with the PS 1131 software workshop
Reference	VW3A3501

Encoder interface cards



Type of card	Encoder interface with		
	Differential outputs (RS422)	Open collector outputs (NPN)	Push-pull outputs
Operating frequency	300 kHz		
Reference	5 V	VW3A3401	–
	12 V	–	VW3A3403
	15 V	VW3A3402	VW3A3404
	24 V	–	–
			VW3A3405
			VW3A3406
			VW3A3407

Type of card (1)	Resolver	Universal	Sincos Absolute	Incremental with emulation
Speed feedback resolution	12 bits	16 bits	16 bits	10,000
Encoder type supported	Resolver with 2, 4, 6 or 8 poles	"SinCos, SinCosHiperface EnDat, SSI"	Sincos Absolute	"Incremental RS 422 - 5 V or 15 V"
References	VW3A3408	VW3A3409	VW3A3410	VW3A3411

Supported by Altivar LIFT and Altivar71 with S383 firmware version



Communication tools	Remote display terminal (IP54 & IP65)	Remote graphic display terminal	Multi-loader	Simple Loader	Dongle Bluetooth® (TM)
Altistart 01					
Altistart 22	x				x
Altistart 48	x				
Altivar 12	x		x	x	x
Altivar 212	x	x	x	x	x
Altivar 312	x	x	x	x	x
Altivar 31C	x			x	x
Altivar 32	x	x	x	x	
Altivar LIFT		x	x	x	x
Altivar 61		x	x	x	x
Altivar 71		x	x	x	x
Altivar 61 Plus		x	x	x	x
Altivar 71 Plus		x	x	x	x
Altivar 61Q (Water Cooled)		x	x	x	x
Altivar 71Q (Water Cooled)		x	x	x	x

Accessories & Options	ALTISTART			ALTIVAR													
	01	22	48	12	21	212	312	31C	32	61	71	LIFT	61 Plus	71 Plus	61Q	71Q	
Panel cut-out adaptor for mounting control unit at 90°						x											
Ferrite suppressors for downstream contactor opening				x	x		x	x									
Additional EMC filter	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	
Passive filters							x	x			x	x	x	x	x	x	
Sinus filters							x	x			x	x	x	x	x	x	
Line choke	x				x	x	x	x	x	x	x	x	x	x	x	x	
Motor chokes	x		x	x	x	x	x	x	x	x	x	x	x	x	x	x	
EMC conformity kit	x		x														
UL Type 1 conformity kit			x	x			x										
Mechanical base kit for mounting GV2 circuit-breaker						x											
Mounting plates	x			x		x	x	x	x	x		x				x	
Braking resistors for vertical movements								x	x								
Braking resistors and braking units	x			x	x	x	x	x	x	x	x	x	x	x	x	x	
References	If options or accessories not listed, please refer to the Schneider Electric catalogue.																

For Altivar 1000 or 1100, please consult our Customer Care Centre.



Industrial protocols	ALTISTART			ALTIVAR													
	01	22	48	12	212	312	31C	32	61	71	LIFT	61 Plus	71 Plus	61Q	71Q	1000	1100
Canopen						●	●	●	●	●	●	●	●	●	●	○	
CANopen Daisy chain						○											
CC-Link									○	○	○	○	○	○	○		
DeviceNet			△			○	○	○	○	○	○	○	○	○	○	○	
EtherCAT			△					○	●	●							
Ethernet			△														●
Ethernet IP								○	○	○	○	○	○	○	○		
Ethernet TCP/IP							○			○							
Fipio			○			○	○		○			○		○			
INTERBUS S									○	○	○	○	○	○	○		
Modbus		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Modbus Plus									○			○		○			
Modbus TCP						○		○	○	○	○	○	○	○	○		
Modbus/ Unitelway									○	○	○	○	○	○	○		
PROFIBUS DP			△			○	○	○	○	○	○	○	○	○	○	●	●
PROFIBUS DP V0								○	○	○	○	○	○	○	○		
PROFIBUS DP V1								○	○	○	○	○	○	○	○		
References	Please refer to the Schneider Electric catalogue or consult our Customer Care Centre.																

HVAC protocols	ALTISTART			ALTIVAR													
	01	22	48	12	212	312	31C	32	61	71	LIFT	61 Plus	71 Plus	61Q	71Q	1000	1100
Lonworks					○				○			○		○			
Metasys N2					●				○			○		○			
Apogee FLN					●				○			○		○			
BACnet					●				○			○		○			
References	Please refer to the Schneider Electric catalogue or consult our Customer Care Centre.																

● Embedded ○ Option △ Gateway

Communication modules



Altistart 48/Altivar 31 starters/drives		Ethernet/Modbus	DeviceNet/Modbus	Fipio/Modbus	PROFIBUS DP/Modbus	
Parameter setting		–	–	–	Standard configurator	ABC configurator program
References	Bridge	TSXETG100	–	–	–	–
	Gateway	–	LUFP9	LUFP1	LA9P307	LUFP7
Cable references	L = 0.3 m	–	VW3A8306R03	VW3A8306R03	–	VW3A8306R03
	L = 1 m	–	VW3A8306R10	VW3A8306R10	VW3P07306R10	VW3A8306R10
	L = 3 m	VW3A8306D30	VW3A8306R30	VW3A8306R30	–	VW3A8306R30

Controllers, drives, motors and linear motion axes

Selection guide

	⇒ <i>Applications :</i> Lexium 32 is the perfect drive system for applications involving high-precision, dynamic positioning.	⇒ <i>Applications :</i> Lexium SDx stepper drives and motors are used for short-distance positioning applications requiring maximum accuracy and high torque.		
	Servo Drives	Servo Motors	Stepper Drives	Stepper Motors
	Lexium 32	Lexium BMH	Lexium SD2	Lexium BRS2
				
		Lexium BSH	Lexium SD3	Lexium BRS3
				
Machines	Packaging machines Material handling machines Material working machines Assembling machines		Printing machines Labelling machines Screen printing machines	
Description	The Lexium 32 servo range consists of three high-performance book-size servo drive models – Lexium 32 Compact, Lexium 32 Advanced and Lexium 32 Modular – and two motor families – the versatile medium-inertia Lexium BMH and the dynamic low-inertia Lexium BSH.		The Lexium SDx stepper motor drive range consists of two high-precision stepper drive lines – the three-phase stepper drives Lexium SD3 and the two-phase stepper drives Lexium SD2. These drive lines are complemented by two perfectly matched stepper motor families – Lexium BRS3 three-phase stepper motors and Lexium BRS2 two-phase stepper motors.	
Power range	0.15...7 kW		up to 750 W	
Voltage range	115...240 VAC, 400...480 VAC		24...48 VDC, 115...240 VAC	
Speed	up to 8000 rpm		up to 1000 rpm	
Torque	up to 84 Nm		up to 16.5 Nm	
Communication interfaces	CANopen, CANmotion, PROFIBUS DP, DeviceNet, EtherNet/IP		CANopen, CANmotion, PROFIBUS DP or Pulse/Direction	
	Safety function (STO) on board Enhanced Safety Module (SS1, SS2, SLS, SOS) Encoder module for digital and analog encoders and resolvers		Safety function (STO) on board (Lexium SD3 28)	

⇒ *Applications :*

Lexium Integrated Drives allow for extremely space-saving decentralised motion solutions.

⇒ *Applications :*

The Lexium Linear Motion products are designed for maximum flexibility, performance and cost-effectiveness. This range offers products for all linear movements in the automation industry from single-axis to multi-axis systems.

Integrated Drives

Lexium ILA



Lexium ILE



Lexium ILS



Lexium ILP / ILT



Linear Motion

Lexium PAS



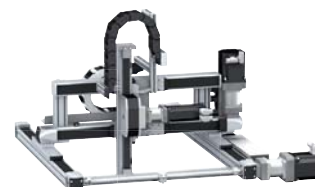
Lexium CAS



Lexium TAS



Lexium MAX



Format adjustment
Printing machines
Material handling machines

Material handling machines
Material working machines
On-the-fly working machines
Assembling machines

The Lexium ILx Integrated Drives comprise motor, positioning controller, power electronics, fieldbus and "Safe Torque Off" safety function in an extremely compact single device. Lexium ILx Integrated Drives are available with multiple motor technologies (servo, brushless DC, stepper).

Lexium Linear Motion is a comprehensive linear motion range comprising Lexium PAS portal axes, Lexium TAS linear tables, Lexium CAS cantilever and telescopic axes and Lexium MAX multi-axis systems.

150 - 305 W
12...48 VDC, 95 to 264 VAC
up to 9000 rpm
up to 12 Nm

RS485, CANopen, PROFIBUS DP, DeviceNet, EtherNet/IP, EtherCAT, Ethernet POWERLINK, Modbus TCP, Pulse/Direction

Safety function (STO) on board
(Lexium ILA, Lexium ILE, Lexium ILS)

Stand-alone device with controller inside (Lexium ILP)

Single axes:

Stroke up to 5.5 m
Load up to 150 kg
Speed up to 8 m/s

Multi axes:

Stroke up to 5.5 m
Load up to 130 kg
Speed up to 4 m/s
Available as individual components or completely pre-assembled, customised systems with drives and motors



Main functions		Lexium 32 Compact	Lexium 32 Advanced	Lexium 32 Modular
Communication	Integrated	Modbus serial link Pulse train	Modbus serial link CANopen, CANmotion machine bus	Modbus serial link Pulse train
	As an option	–	–	CANopen, CANmotion machine bus, DeviceNet, EtherNet/IP, PROFIBUS DP, EtherCAT, I/O module
	Operating modes	Manual mode (JOG) Electronic gearbox Speed control Current control	Homing Manual mode (JOG) Speed control Current control Position control	Homing Manual mode (JOG) Motion sequence Electronic gearbox Speed control Current control Position control
	Functions	Auto-tuning, monitoring, stopping, conversion –	Stop window Rapid entry of position values	Stop window Rapid entry of position values Rotary axes Position register
24 V $\overline{\text{N}}$ logic inputs	6, reassignable	3, reassignable	4, reassignable	
24 V $\overline{\text{N}}$ capture inputs (1) (2)	–	1	2	
24 V $\overline{\text{N}}$ logic outputs (1)	5, reassignable	2, reassignable	3, reassignable	
Analog inputs	2	–		
Pulse control input	1, configurable as: RS 422 link 5 V or 24 V push-pull 5 V or 24 V open collector			
ESIM PTO output	RS 422 link			
Safety functions	Integrated	"Safe Torque Off" STO		
	As an option	–		Safe Stop 1 (SS1) and Safe Stop 2 (SS2) Safe Operating Stop (SOS) Safe Limited Speed (SLS)
Sensor	Integrated	SinCos Hiperface® sensor		
	As an option	–		Resolver encoder Analog encoder Digital encoder
Architecture		Control via: Logic or analog I/O	Control via: Motion controller via CANopen and CANmotion machine bus	Control via: Schneider Electric or third-party PLCs via communication buses and networks
Type of servo drive		LXM 32C	LXM 32A	LXM 32M



Main functions

Application type		High load, With robust adjustment of the movement	High dynamic range, Power density
Flange size		70, 100, 140 and 190 mm	55, 70, 100 and 140 mm
Continuous stall torque		1.2 to 84 Nm	0.5 to 33.4 Nm
Encoder type		Single turn SinCos: 32,768 points/turn and 131,072 points/turn Multiturn SinCos: 32,768 points/turn x 4096 turns and 131,072 points/turn x 4096 turns	Single turn SinCos: 131,072 points/turn Multiturn SinCos: 131,072 points/turn x 4096 turns
Degree of protection	Casing	IP 65 (IP 67 conformity kit as an option)	
	Shaft end	IP 50 or IP 65 (IP 67 conformity kit as an option)	
Type of servo motor		Lexium BMH	Lexium BSH



Lexium 32 servo drive/BMH or BSH servo motor combinations

Servo motors				Lexium 32C, 32A and 32M servo drives			
BMH (IP50, IP65 or IP67)				BSH (IP50, IP65 or IP67)			
				Lexium 32C, 32A and 32M servo drives			
				100...120 V single-phase supply voltage with integrated EMC filter			
				LXM 32U90M2			
				Continuous output current: 3 A rms			
				Nominal operating point			Stall torques
Type of servo motor	Rotor inertia	Type of servo motor	Rotor inertia	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}
	kgcm ²		kgcm ²	Nm	rpm	W	Nm/Nm
		BSH 0551T	0.06	0.49	3000	150	0.5/1.5
		BSH 0552T	0.10	0.77	3000	250	0.8/1.9
		BSH 0553T	0.13				
BMH 0701T	0.59						
		BSH 0701T	0.25				
		BSH 0702T	0.41				
BMH 0702T	1.13						
BMH 0703T	1.67						
		BSH 1001T	1.40				
BMH1001T	3.2						
BMH1002T	6.3						



Lexium 32 servo drive/BMH or BSH servo motor combinations

Servo motors				Lexium 32C, 32A and 32M servo drives			
BMH (IP50, IP65 or IP67)				BSH (IP 50, IP65 or IP67)			
				Lexium 32C, 32A and 32M servo drives			
				200...240 V single-phase supply voltage with integrated EMC filter			
				LXM 32U45M2			
				Continuous output current: 1.5 A rms			
				Nominal operating point			Stall torques
Type of servo motor	Rotor inertia	Type of servo motor	Rotor inertia	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}
	kgcm ²		kgcm ²	Nm	rpm	W	Nm/Nm
		BSH 0551T	0.06	0.45	6000	300	0.5/1.4
		BSH 0552T	0.10				
		BSH 0553T	0.13				
		BSH 0701T	0.25				
BMH 0701T	0.59						
		BSH 0702T	0.41				
		BSH 0703T	0.58				
BMH 0702T	1.13						
		BSH 1001T	1.40				
BMH 0703T	1.67						
BMH 1001T	3.2						
		BSH 1002T	2.31				
BMH 1002T	6.3						
BMH 1003T	9.4						
BMH 1401P	16.5						

LXM 32●U18M2 Continuous output current: 6 A rms				LXM 32●D30M2 Continuous output current: 10 A rms			
Nominal operating point			Stall torques	Nominal operating point			Stall torques
Nominal torque	Nominal speed	Nominal power	M_0/M_{max}	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}
Nm	rpm	W	Nm/Nm	Nm	rpm	W	Nm/Nm
1.14	3000	350	1.2/3.3				
1.35	2500	350	1.4/4.2				
1.36	2500	350	1.4/3.5				
				2.07	2500	550	2.2/6.1
				2.3	2500	600	2.5/6.4
				3.1	2000	650	3.4/8.7
				2.75	2500	700	3.3/6.3
				3.3	2000	700	3.4/8.9
				3.5	2000	750	6/10.3

LXM 32●U90 M2 Continuous output current: 3 A rms				LXM 32●D18M2 Continuous output current: 6 A rms				LXM 32●D30M2 Continuous output current: 10 A rms			
Nominal operating point			Stall torques	Nominal operating point			Stall torques	Nominal operating point			Stall torques
Nominal torque	Nominal speed	Nominal power	M_0/M_{max}	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}	Nominal torque	Nominal speed	Nominal power	M_0/M_{max}
Nm	rpm	W	Nm/Nm	Nm	rpm	W	Nm/Nm	Nm	rpm	W	Nm/Nm
0.74	6000	450	0.8/2.5								
0.84	6000	550	1.2/3								
0.94	5000	500	1.3/3.5								
1.1	4000	450	1.4/4								
				1.8	5000	950	2.2/7.2				
				2.1	4000	900	2.6/7.4				
				2.1	4000	900	2.5/7.4				
				2.2	4000	900	2.7/7.5				
				2.9	3000	900	3.4/10.2				
				2.8	3000	900	3.4/10.2				
								3.7	4000	1500	5.8/16.4
								4.6	3000	1450	6/18.4
								5.6	2500	1450	8.2/22.8
								6.9	2000	1450	10.3/30.8



Lexium 32 servo drive/BMH or BSH servo motor combinations

Servo motors				Lexium 32C, 32A and 32M servo drives								
				380...480 V three-phase supply voltage with integrated EMC filter								
BMH (IP50, IP65 or IP67)		BSH (IP50, IP 65 or IP67)		LXM 32●U60N4 Continuous output current: 1.5 A rms				LXM 32●D12N4 Continuous output current: 3 A rms				
Type of servo motor	Rotor inertia kgcm ²	Type of servo motor	Rotor inertia kgcm ²	Nominal operating point			Stall torques	Nominal operating point			Stall torques	
				Nominal torque Nm	Nominal speed rpm	Nominal power W	M ₀ /M _{max}	Nominal torque Nm	Nominal speed rpm	Nominal power W	M ₀ /M _{max}	
		BSH 0551P	0.06	0.48	6000	300	0.5/1.5					
		BSH 0552P	0.10	0.65	6000	400	0.8/2.5					
		BSH 0553P	0.13	0.65	6000	400	1.05/3.5					
BMH 0701P	0.59			1.1	3000	350	1.2/4.2					
BMH 0701P	0.59							1.3	5000	700	1.4/4.2	
		BSH 0701P	0.25					1.32	5000	700	1.4/3.5	
		BSH 0702P	0.41					1.64	5000	850	2.2/7.6	
BMH 1001P	3.2							1.9	4000	800	3.3/10.8	
BMH 0702P	1.13							2.2	3000	700	2.5/7.4	
BMH 0703P	1.67											
		BSH 0703P	0.58									
		BSH 1001P	1.40									
BMH 1001P	3.2											
BMH 1002P	6.3											
		BSH 1002P	2.31									
BMH 1003P	9.4											
		BSH 1003P	3.2									
BMH 1401P	16.5											
		BSH 1004P	4.2									
		BSH 1401P	7.4									
BMH 1402P	32.0											
		BSH 1402T	12.7									
		BSH 1403T	17.9									
BMH 1403P	47.5											
		BSH 1404P	23.7									
BMH 1901P	67.7											
BMH 1902P	130											
BMH 1903P	194											

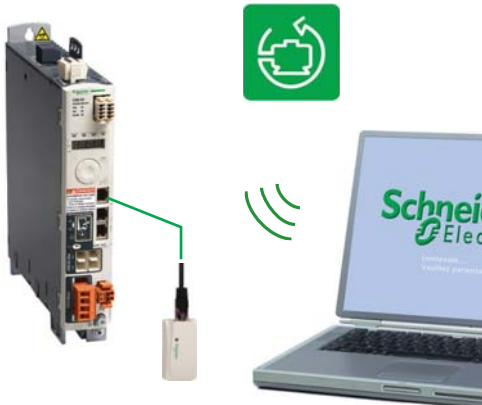


Multi-Loader configuration tool	
Use	For downloading configurations from a PC or drive and duplicating them on another drive. The drives do not need to be powered-up. Supplied with: 1 cordset equipped with 2 RJ45 connectors 1 cordset equipped with one type A USB connector and one mini B USB connector 1 x 2 GB SD memory card 1 x female/female RJ 45 adaptor 4 AA 1.5 V LR6 round batteries
Reference	VW3 A8 121



	Single memory card	Pack of 25 memory cards
Use	Used to store parameters of the Lexium 32 servo drive. Another Lexium 32 servo drive can be commissioned immediately if the application is undergoing maintenance or duplication.	
Reference	VW3 M8 705	VW3 M8 704

Memory card recorder	
Use	Writes data from the Lexium 32 servo drive to the memory card. This recorder is not supplied by Schneider Electric.
Reference	See the User's manual



SoMove setup software

The SoMove setup software is used to configure, adjust, debug and maintain the Lexium 32 servo drive, as for all other Schneider Electric variable speed drives and starters. It communicates via Bluetooth® wireless link with the servo drive, which is equipped with the Modbus-Bluetooth® adaptor (VW3 A8 114).

SoMove Mobile application for mobile phone

The SoMove Mobile software converts any compatible mobile phone into a remote graphic display terminal, offering an identical Human-Machine Interface. Particularly suitable for on-site or remote maintenance operations, the SoMove Mobile software can be used to print out and save configurations, import them from a PC and export them to a PC, or to a servo drive equipped with the Modbus adaptor via the Bluetooth® wireless link.



Communication modules

Lexium 32M can be connected to the following communication buses and networks: CANopen and CANmotion, DeviceNet, Profibus DP V1, EtherNet/IP, I/O module

Reference	Description	Part Number
	CANopen / CANmotion module with 2 * RJ 45 connectors	VW3 A3 608
	CANopen / CANmotion module with SUB-D 9 connector	VW3 A3 618
	DeviceNet module	VW3 M3 301
	Profibus DP V1 module	VW3 A3 607
	EtherNet/IP module	VW3 A3 616
	Module CANopen / CANmotion one 5-way screw terminal block	VW3 A3 628
	Module EtherCAT with 2 RJ45 connectors	VW3 A3 601
	I/O module with 4DI, 2DO, 2AI, 2AO	VW3 M3 302



Second encoder modules

Lexium 32M has an input for an additional encoder to connect third party motor (motor encoder) or to improve positioning accuracy (machine encoder)

Reference	Description	Machine	Motor
	Module for resolver encoder		x
	Module for digital encoder (A/B/I, BiSS, EndDat 2.2, SSI)	x	
	Module for analog encoder (1 Vpp/Hall, 1 Vpp, Hiperface)	x (Hiperface only)	x



Safety module

eSM safety module allows Lexium 32M servo drives to access additional IEC/EN 61800-5-2 safety functions: SS1, SS2, SLS, SOS

Reference	Description	Part Number
	eSM safety module allows	VW3 M3 501

Connection elements

Power cordsets

Description	Cables equipped with one M23 industrial connector (servo motor end)		Cables equipped with one M40 industrial connector (servo motor end)	
From servo motor	BMH 070●●, BMH 100●●, BMH 1401P, BSH 055●●, BSH 070●●, BSH 100●●, BSH 1401P	BMH 1402P, BMH 1403P	BMH 1901P, BSH 1402T, BSH 1403T, BSH 1404P	BMH 1902P, BMH 1903P
To servo drive	LXM 32●●●●●●	LXM 32●D72N4	LXM 32●D72N4	LXM32.D72N4
Composition	[[4 x 1.5 mm ²] + (2 x 1 mm ²)]	[[4 x 2.5 mm ²] + (2 x 1 mm ²)]	[[4 x 4 mm ²] + (2 x 1 mm ²)]	[[4 x 6 mm ²] + (2 x 1 mm ²)]
Length	3 m	3 m	3 m	3 m
Reference	VW3 M5 101 R30	VW3 M5 102 R30	VW3 M5 103 R30	VW3 M5 105 R30

Encoder cordsets

Description	SinCos Hiperface® encoder cables equipped with an M23 industrial connector (servo motor end) and an RJ45 connector with 8 + 2 contacts (servo drive end)
From servo motor	BMH ●●●●●, BSH ●●●●●
To servo drive	LXM 32●●●●●●
Composition	[3 x (2 x 0.14 mm ²) + (2 x 0.34 mm ²)]
Length	3 m
Reference	VW3 M8 102 R30



Assignment of BRS2 2-phase stepper motors and SD2 stepper motor drives

BRS2 2-phase stepper motors	SD21●●U20C	SD21●●U50C
	24...48 V; 3 A	24...48 V; 5 A
BRS236	0.07 Nm	–
BRS242	0.23...0.53 Nm	–
BRS257	0.64...1.69 Nm	0.64...1.69 Nm
BRS285	–	2.96...9.20 Nm



Assignment of BRS3 3-phase stepper motors and SD3 stepper motor drives

BRS3 3-phase stepper motors	SD326●U25	SD328●U25	SD326●U68	SD328●U68
	115 V / 230 V; 2.5 A; including mains filter		115 V / 230 V; 6.8 A; including mains filter and fan	
BRS368	1.7 Nm / 1.5 Nm		–	
BRS397	2.3 Nm / 2.0 Nm		–	
BRS39A	4.5 Nm / 4.0 Nm		–	
BRS39B	6.8 Nm / 6.0 Nm		–	
BRS3AC	–		13.5 Nm / 12.0 Nm	
BRS3AD	–		19.7 Nm / 16.5 Nm	



Assignment of stepper motors, stepper motor drives SD3 15

3-phase stepper motors	SD3 15
	24...48 VDC; max. 10 A
Motors with F winding	
BRS 364F	0.46 Nm / 0.40 Nm
BRS 366F	0.92 Nm / 0.80 Nm
BRS 368F	1.50 Nm / 1.30 Nm
BRS 397F	2.00 Nm / 1.85 Nm
BRS 39AF	4.20 Nm / 3.40 Nm
BRS 39BF	5.55 Nm / 4.80 Nm
Motors with H winding	
BRS 364H	0.51 Nm / 0.45 Nm
BRS 366H	1.02 Nm / 0.90 Nm
BRS 368H	1.70 Nm / 1.50 Nm
BRS 397H	2.26 Nm / 2.00 Nm
BRS 39AH	4.80 Nm / 4.00 Nm
BRS 39BH	6.50 Nm / 5.75 Nm



Integrated Drives		Lexium ILA	Lexium ILE	Lexium ILS	Lexium ILP / ILT
Type of process		Dynamic process and accurate positioning	Automatic format adjustment	Short distance movements with accurate positioning	
Type of technology		Integrated drive with servo motor	Integrated drive with dc brushless motor	Integrated drive with three-phase stepper motor	Integrated drive with two-phase stepper motor
Main characteristics		Highly dynamic Compact Integrated holding brake in option	High holding torque without power Integrated gearbox in option	High torque at low speed	
Dynamic		★★★★	★★	★★★	★★★
Precision and stability		★★★★	★★	★★★★	★★★★
Energy saving		★★★★★	★★★★	★★	★★
Motor inertia		Medium			
Control interface	Control signals	Input/output		Pulse/direction Input/output	Pulse/direction Input/output
	Bus and networks	CANopen, PROFIBUS DP, RS 485 serial link, DeviceNet, EtherCAT, Modbus TCP, Ethernet Powerlink, EtherNet/IP			CANopen, RS485
	Motion bus	-			
Association	Nominal power	150...305W	100...350W	100...350W	150 - 305 W
Drive/motor combinations	Nominal speed	500...9000 rpm	1500...7000 rpm	0...1000 rpm	0...2000 rpm
Drive characteristics	Nominal torque	0.26...0.78 Nm	0.18...0.5 Nm	0.45...6 Nm	0.11...5.87 Nm
Power Supply	Safety function	"Safe Torque Off"			
Motor characteristics	Type of sensor (resolution)	Single turn SinCos encoder (16,384 increments/turn) Multiturn SinCos encoder (16,384 increments/turn × 4096 turns)	Absolute value encoder (12...1380 increments/turn)	Index pulse monitoring	
Accessories	Motor flange size	57	66	57, 85	36, 42, 57, 85
References		ILA	ILE	ILS	ILP ILT



Lexium ILA with Servo Motor	Nominal Torque (Nm)	Maximum Torque (Nm)	Nominal Speed (Rpm)	Maximum Speed (Rpm)	Nominal Power (W)
ILA1 for CANopen, PROFIBUS DP, RS485					
ILA1●571P	0.26	0.6	5500	7500	150
ILA1●571T	0.26	0.43	7500	11500	200
ILA1●572P	0.45	0.72	4300	6200	200
ILA1●572T	0.41	0.61	5000	7500	215
ILA2 for DeviceNet, EtherCAT, EtherNet/IP, Modbus TCP, Ethernet Powerlink					
ILA2●571P	0.44	0.62	5100	7000	235
ILA2●571T	0.31	0.45	7000	9000	255
ILA2●572P	0.78	1.62	3400	4300	275
ILA2●572T	0.57	0.85	5100	6800	305



Lexium ILE with included spurwheel gearbox.

Ratios: 18:1, 38:1, 54:1, 115:1

Lexium ILE with included worm gearbox with hollow shaft.

Ratios: 24:1, 54:1, 92:1, 115:1

Lexium ILE with Brushless DC Motor	Nominal Torque (Nm)	Detent Torque (Nm)	Nominal Speed (Rpm)	Maximum Speed (Rpm)
ILE1 for CANopen, PROFIBUS DP, RS485				
ILE1●661	0.24	0.08	4800	5000
ILE1●661 spurwheel gearing	up to 11.0	up to 8.0	44	44
ILE1●661 worm gearing	up to 10.6	up to 16.7	44	44
ILE2 for DeviceNet, EtherCAT, EtherNet/IP, Modbus TCP, Ethernet Powerlink				
ILE2●661	0.26	0.08	6000	7000
ILE2●661 spurwheel gearing	up to 12	up to 9.19	44	44
ILE2●661 worm gearing	up to 10.6	up to 16.7	44	44
ILE2●662	0.5	0.106	5000	7000



Lexium ILS with three-phase Stepper Motor	Maximum Torque (Nm)	Holding Torque (Nm)	Speed (Rpm)
ILS1 for CANopen, PROFIBUS DP, RS485, Pulse-Direction, Motion Sequence Mode			
ILS1●571●	0.45	0.51	1000
ILS1●572●	0.9	1.02	600
ILS1●573●	1.5	1.7	450
ILS1●851●	2.0	2.0	450
ILS1●852●	4.0	4.0	200
ILS1●853P	6.0	6.0	120
ILS1●853T	4.5	4.5	300
ILS2 for DeviceNet, EtherCAT, EtherNet/IP, Modbus TCP, Ethernet Powerlink			
ILS2●571●	0.45	0.51	1100
ILS2●572●	0.9	1.02	900
ILS2●573●	1.5	1.7	600
ILS2●851●	2.0	2.0	600
ILS2●852●	4.0	4.0	380
ILS2●853P	6.0	6.0	200
ILS2●853T	4.5	4.5	300

Lexium ILP/ILT Motion Control Lexium Integrated Drives



Lexium ILP, Lexium ILT with two-phase Stepper Motor	Nominal Torque (Nm)	Holding Torque (Nm)	Maximum Speed (Rpm)
ILP for RS485 with programmable interface			
ILP2R361	0.11	0.11	1800
ILP2R421	0.19	0.19	1500
ILP2R422	0.33	0.33	1500
ILP2R423	0.39	0.39	1500
ILP2R571	0.63	0.63	1500
ILP2R572	0.86	0.86	1500
ILP2R573	1.44	1.44	1500
ILP2R574	1.77	1.77	1500
ILP2R851	2.13	2.13	1000
ILP2R852	3.12	3.12	1000
ILP2R853	5.87	5.87	1000
ILT for Pulse/Direction, CANopen			
ILT2●361	0.11	0.11	1800
ILT2●421	0.19	0.19	1500
ILT2●422	0.33	0.33	1500
ILT2●423	0.39	0.39	1500
ILT2●571	0.63	0.63	1500
ILT2●572	0.86	0.86	1500
ILT2●573	1.44	1.44	1500
ILT2●574	1.77	1.77	1500
ILT2●851	2.13	2.13	1000
ILT2●852	3.12	3.12	1000
ILT2●853	5.87	5.87	1000

Lexium Linear Motion Motion Control Linear axes



Product		Lexium PAS B	Lexium PAS S
Axis type		Portal axes	
Movement	Number of directions	1	
	Movement type	Typically horizontal	
	Position of the load	On carriage	
Drive		Toothed belt	Ballscrew
Type of guide		Ball or roller	Ball
Main characteristics		High dynamic response, Long stroke length, High positioning speed	High precision movement (positioning, repeatability, guiding), High feed forces, High rigidity
Dynamic response		★★★★★	★★★
Precision		★★★	★★★★★
Maximum payload		100 kg	100 kg
Maximum driving force		2600 N	4520 N
Maximum speed of movement of the load		8 m/s	1.25 m/s
Maximum working stroke		5500 mm	3000 mm
Repeatability		± 0.05 mm	± 0.02 mm
Options		Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution), Wide range of sensors, Choice of carriage type for adapting to the load, Option to add carriages, Protective metal strip.	Choice of pitch, Protective metal strip, Wide range of sensors, Choice of carriage type for adapting to the load, Option to add carriages, Option to add ballscrew supports for longer axes
Reference		PAS 4●B	PAS 4●S

Multi-axis systems



Product		Lexium MAX H	Lexium MAX S
Axis type		Double portal axes	
Movement	Number of directions	1	
	Movement type	Combination of two parallel axes	
	Position of the load	On two parallel carriages	
Multi-axis system type		PAS 4●B axes + PAS 4●H support axis (driven by the load)	PAS 4●B + PAS 4●B axes (shaft-driven)
Drive		Toothed belt on one axis	Toothed belt on both axes
Type of guide		Ball or roller	Ball or roller
Main characteristics		Long stroke length, High dynamic response, High precision movement (positioning, guiding)	Long stroke length, High precision movement (positioning, guiding), High feed forces
Maximum payload		250 kg	300 kg
Maximum working stroke	On the X-axis	5500 mm	
	On the Y-axis	–	
	On the Z-axis	–	
Options		Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution), Protective metal strip, Anti-corrosion version, Anti-static belt, Wide range of sensors, Several different motor mounting options, Variable distance between the two axes	
Reference		MAX H	MAX S



Lexium TAS	Lexium CAS 4	Lexium CAS 3	Lexium CAS 2
Linear tables	Cantilever axes with mobile structure on profile	Cantilever axes with mobile structure on parallel rods	Telescopic axes
1			
Typically horizontal	Typically vertical		Typically horizontal
On carriage	On the side of the profile or on the 2 end blocks	On the 2 end blocks	On carriage
Ballscrew	Toothed belt	Toothed belt or rack	Toothed belt
Double, ball	Ball or roller	Ball	Ball or roller
High precision movement (positioning, repeatability, guiding), High feed forces, High rigidity, Feed movement without mechanical backlash	Long stroke length, High feed forces, Option to mount the load on the side of the profile or on the end blocks, High rigidity	Compact, Mobile structure with light travel weight	Long stroke length from a compact unit, High rigidity, High dynamic response
★★	★★★★	★★★★	★★★★
★★★★★	★★★	★★★	★★
150 kg	50 kg	18 kg	35 kg
2580 N	2150 N	705 N	1500 N
1 m/s	3 m/s	3 m/s	3 m/s
1500 mm	1200 mm	500 mm	2400 mm
± 0.02 mm	± 0.05 mm	± 0.05 mm	± 0.1 mm
Choice of pitch , Several different motor mounting options	Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution), Protective metal strip, Anti-corrosion version, Wide range of sensors	Anti-corrosion version, Anti-static belt	Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution), Choice of carriage type for adapting to the load
TAS 4	CAS 4	CAS 3	CAS 2



Lexium MAX P	Lexium MAX R2	Lexium MAX R3
Linear positioners	Portal robots	
2		3
Horizontal and vertical: Combination of one X-axis and one Z-axis	Horizontal: Combination of two perpendicular axes X and Y	Horizontal and vertical: Combination of two perpendicular axes X and Y and one Z-axis
On the side or on the end blocks of the Z-axis profile	On the Y-axis carriage	On the side or on the end blocks of the Z-axis profile
MAX S + CAS 4 axes MAX S + CAS 3 axes	MAX S + MAX H axes MAX S + PAS 4●B axes	MAX S + MAX H + CAS 4 axes MAX S + MAX H + CAS 3 axes
Toothed belt on each axis		
Ball or roller		
Dynamic load positioning	Long stroke length on both axes	Long stroke length on three axes
50 kg	130 kg	50 kg
5500 mm		
–	1500 mm	1500 mm
1200 mm	–	1200 mm
Choice of guide type: Ball (for applications requiring high forces and torques) or roller (simple, cost-effective solution), Wide range of sensors Supplied as standard: Protective metal strip , Anti-corrosion version		
MAX P	MAX R●2	MAX R●3

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Design : IGS-CP
Photos : Schneider Electric
Print :