

The essential guide Motion & Drives

helping you easily
select the right product

2010



Improve machine efficiency, reduce energy consumption and optimise dynamics with the Altistart, Altivar and Lexium ranges. Easy to install and offering intuitive programming and extensive communication options, they can be integrated seamlessly into your control system architectures.

Altistart and Altivar

Start your motors smoothly and protect your installation's mechanics using Altistart soft starters and Altivar variable speed drives.



Lexium

Motion controllers, drives, motors and linear motion axes - Schneider Electric offers a complete range of motion products and solutions for your specific applications. All our motion products are designed for maximum ease over the entire machine lifecycle to reduce costs and make your machine processes even more productive.

Lexium 32 and Altivar 32 : consistency across the board



- Identical mounting and wiring concepts
- Common tools, software and functionality
- Common software support
- Common accessories

Motion & Drives



Soft starters and variable speed drives

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New products

Altivar 32

So slim, So smart!



More innovations

- > Slim shape product (45 mm wide)
- > Circuit-breaker connected directly to the product
- > Mounting can be vertical or on the side
- > Integrated safety functions
- > Integrated programmable logic functions
- > Built-in Bluetooth®: remote adjustment and parameter setting via mobile phone or PC
- > Configuration with the power off in its original packaging

More openness

- > Application-oriented: predefined settings and combinations of functions
- > Modbus and CANopen integrated as standard
- > Access to the majority of industrial communication networks
- > Tools adapted to each stage in the product lifecycle

More energy savings

- > New control profile for synchronous motors in speed control mode
- > Control profiles to optimise energy

Altistart 22

Cut your costs with an integrated bypass function*



More innovative

More economical


Safer

- > Reduction in your operating costs
- > Simplified wiring
- > Protection of your electrical installation
- > Space savings with a fully equipped product

* bypass = shunt

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 units and soft start/soft stop units	Soft start/soft stop units	Soft start/soft stop units
Description		<p>Compact</p> <p>Simple: easy mounting, wiring and adjustment</p> <p>Efficient: limiting of current peaks on starting, reduction of mechanical shocks, increased service life for your machines.</p> <p>Energy saving</p>	<p>• Innovative with its integrated Bypass</p> <p>• Cost-effective</p> <p>• Compact dimensions</p> <p>• Quick setup</p> <p>• Protection of motor and starter</p> <p>• Energy saving</p>	<p>Torque control system: controlled torque, prevention of pressure surges and limiting of temperature rises</p> <p>Simple: quick setup</p> <p>Protection of motor and starter: thermal protection, phase loss detection, locked rotor detection</p> <p>Energy saving</p>
Technical information	Power range for 50...60 Hz supply	0.37...15 kW	4... 400 kW	4...1200 kW
	Voltage	Single-phase 110...480 V Three-phase 110...480 V	Three-phase 208...600 V Three-phase 230...440 V	Three-phase 208...690 V
	Drive/Output frequency	–	–	–
	Motor type	Asynchronous Synchronous	Yes No	Yes No
Communication	Integrated	–	Modbus	Modbus
	As an option	Can be used with TeSys U motor starter-controller to create a complete motor starter solution	–	DeviceNet, Fipio, PROFIBUS DP
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 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		Building, 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 IP54



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 IP54 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	HVAC	Pumps and Fans	Lifts
<p>⇒ Applications: Industrial machines: hoisting, packaging, material handling, textile machines, 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: Range specifically for HVAC applications (heating, ventilation, air conditioning) in buildings.</p>	<p>⇒ Applications: Range specifically for high performance pumps and fans for the industrial and building markets.</p>	<p>⇒ Applications: Lifts</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 21</p>  <p>Variable speed drives for three-phase asynchronous motors. Variable torque building HVAC applications.</p>	<p>Altivar 61</p>  <p>Variable speed drives for three-phase asynchronous motors. Variable torque applications.</p>	<p>Altivar Lift</p>  <p>Variable speed drives for lifts and hoists.</p>
<ul style="list-style-type: none"> • Compact: "Book" format • Integrated safety functions • Open: communication cards available as options • Integrated programmable logic functions • Simple setup 	<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 functions • Motor control: high-performance in open-loop and closed loop mode 	<ul style="list-style-type: none"> • Compact size: side-by-side mounting • Simple: "plug&drive" function and "local remote" key • Open communication: communication cards specifically for building applications • EMC filters built-in • Reduction of the total harmonic distortion THDI<30% 	<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"> • Quick start-up and easy diagnostics with the multi-language graphic display terminal • Specifically designed for lift applications for greater comfort and safety • High-performance motor control in open-loop and closed loop mode
0.18...15 kW	0.37...630 kW	0.75...75 kW	0.37...800 kW	4...22 kW
Single-phase 200...240 V Three-phase 380...480 V	Single-phase 200...240 V Three-phase 200...690 V	Three-phase 200...480 V	Single-phase 200...240 V Three-phase 200...690 V	Single-phase 200...240 V Three-phase 200...480 V
0.5...800 Hz	0.5...1600 Hz up to 37 kW 0.5...500 Hz from 45...630 kW	0.5...200 Hz	0.5...1600 Hz up to 37 kW 0.5...500 Hz from 45...800 kW	0.5...1600 Hz
Yes	Yes	Yes	Yes	Yes
Yes	Yes	No	Yes	No
Modbus and CANopen	Modbus and CANopen	Modbus	Modbus and CANopen	Modbus and CANopen
EtherNet/IP, Modbus TCP, PROFIBUS DP V1, PROFIBUS DP V0, DeviceNet	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, BACnet	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, BACnet	Modbus TCP, Fipio, Modbus/Uni-Telway, Modbus Plus, EtherNet/IP, DeviceNet, PROFIBUS DP, PROFIBUS DP V1, INTERBUS S, CC-Link
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 (PLd), 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	IEC/EN 61800-3, EN 55011, EN 55022, CSA, UL, C-TICK, CE, NOM, DNV, GOST	IEC/EN 61800-3, EN55011, EN 55022, CSA, UL, C-TICK, CE, NOM
Machines	Machines, industrial processes and infrastructures	Buildings	Buildings and infrastructures	Machines

Selection guide

Integrated variable speed control solutions

Pumps and Fans Low voltage

⇒ *Applications:*

- Fans
- Pumps
- Compressors
- Screw feeders

Pumps and Fans High voltage

⇒ *Applications:*

- Energy: fans, pumps, turbine starters
- Oil and gas: pumps, compressors, aerators, extruders
- Mines and Minerals: conveyors, crushers, fans, pumps
- Water treatment: pumps, aerators.

Altivar 61 Plus



High power low voltage variable speed drives for buildings and infrastructures.

Variable torque

Altivar 1100



Medium power variable speed drives for asynchronous motors (request quotation)

Description

A **simple, open** range:

- Greater flexibility: numerous possible options and communication on most industrial networks
- Easy configuration
- Ready to use

Maximum safety: the **Altivar Plus** range has a cooling system and components that have been tested in extreme conditions.

Time savings on:

- Devising quotes
- Placing orders
- Installation and start-up

Environmentally-friendly and Cost-effective:

- Perfect integration in the line supply
- No disturbance of the motor and the driven load
- High efficiency

Easy to install and set up

Compact

Technical information

Power range for 50...60 Hz supply

90...2400 kW

0.3...10 MW

Voltage

Three-phase 380...690 V

3.3 kV
6.6 kV
10 kV

Drive/Output frequency

0.5...500 Hz

Standard: 0.2...60 Hz
Option: 0.2...120 Hz

Number of quadrants

2 and 4

2 and 4 (optional)

Cooling system

Air or water cooled

Air or water cooled

Protection class

IP23/IP54
IP55 (water cooled)

IP31
IP41 (optional)

Motor type

Asynchronous
Synchronous

Yes

Yes

Yes

No

Communication

Integrated

Modbus and CANopen

Profibus, Modbus

As an option

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, BACnet

Ethernet, Devicenet, CANopen

Standards and certifications


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 (environments 1 and 2, categories C1 to C3), IEEE 519

Intended use

Buildings and infrastructures

Infrastructures

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, aerators, extruders • Mines and Minerals: conveyors, crushers, fans, pumps • Water treatment: pumps, aerators.
<p>Altivar 71 Plus</p>  <p>High power low voltage variable speed drives for industry. Constant torque</p>	<p>Altivar 1000</p>  <p>Medium power variable speed drives for asynchronous motors (request quotation)</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"> • Devising 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>
<p>90...2400 kW</p>	<p>0.5...10 MW</p>
<p>Three-phase 380...690 V</p>	<p>2.4 kV 3.3 kV</p>
<p>0.5...500 Hz</p>	<p>Standard: 5...670 Hz Option: 5...140 Hz</p>
<p>2 and 4</p>	<p>2 and 4</p>
<p>Air or water cooled</p>	<p>Air or water cooled</p>
<p>IP23/IP54 IP55 (water cooled)</p>	<p>IP41 (air cooled) IP54 (water cooled)</p>
<p>Yes</p>	<p>Yes</p>
<p>Yes</p>	<p>No</p>
<p>Modbus and CANopen</p>	<p>Ethernet, Profibus, Modbus</p>
<p>Modbus TCP, Fipio, Modbus/Uni-Telway, Modbus Plus, EtherNet/IP, DeviceNet, PROFIBUS DP, PROFIBUS DP V1, INTERBUS S, CC-Link</p>	<p>Devicenet, CANopen</p>
<p>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</p>	<p>IEC/EN 61800-5-1, IEC/EN 61800-4, IEC/EN 61800-3 (environments 1 and 2, categories C1 to C3), CE</p>
<p>Machines, industrial processes and infrastructures</p>	<p>Machines, industrial processes and infrastructures</p>

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 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	–	6	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.

Altistart 22

4...400 kW

Simple machines Soft start/soft stop units



Dimensions (en mm)	width x height x depth
Size A:	130 x 265 x 169
Size B:	145 x 295 x 207
Size C:	150 x 356 x 229
Size D:	206 x 425 x 299
Size E:	304 x 455 x 340

Supply voltage		Three-phase 208...600 V ⁽¹⁾	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	
Drive	Number of controlled phases	3	
	Types of control	Configurable voltage ramp, torque ramp	
	Operating cycle	Standard	
Functions		Bypass (integrated)	
Number of I/O	Analog inputs	1 PTC probe	
	Logic inputs	3	
	Logic outputs	–	
	Analog outputs	–	
	Relay outputs	2	
Dialogue		Integrated display terminal, SoMove Lite setup software	
Communication	Integrated	Modbus	
Standards and certifications		IEC/EN 60947-4-2, class A EMC, CE, UL, CSA, C-Tick, GOST, CCC	
Motor connection		Possible to connect the starter in the motor delta connection	

(1) Possible to connect the starter in the 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	ATS 22D17Q	Size A	
7.5	15	15	32	ATS 22D3Q	Size A	
11	22	22	47	ATS 22D47Q	Size A	
15	30	30	62	ATS 22D62Q	Size B	
18.5	37	37	75	ATS 22D75Q	Size B	
22	45	45	88	ATS 22D88Q	Size B	
30	55	55	110	ATS 22C11Q	Size C	
37	75	75	140	ATS 22C14Q	Size C	
45	90	90	170	ATS 22C17Q	Size C	
55	110	110	210	ATS 22C21Q	Size D	
75	132	132	250	ATS 22C25Q	Size D	
90	160	160	320	ATS 22C32Q	Size D	
110	220	220	410	ATS 22C41Q	Size E	
132	250	250	480	ATS 22C48Q	Size E	
160	315	355	590	ATS 22C59Q	Size E	

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	500 V kW	Nominal current starter (IcL)	Reference	Size
4	7.5	7.5	9	17	ATS 22D17S6	Size A
7.5	15	15	18.5	32	ATS 22D32S6	Size A
11	22	22	30	47	ATS 22D47S6	Size A
15	30	30	37	62	ATS 22D62S6	Size B
18.5	37	37	45	75	ATS 22D75S6	Size B
22	45	45	55	88	ATS 22D88S6	Size B
30	55	55	75	110	ATS 22C11S6	Size C
37	75	75	90	140	ATS 22C14S6	Size C
45	90	90	110	170	ATS 22C17S6	Size C
55	110	110	132	210	ATS 22C21S6	Size D
75	132	132	160	250	ATS 22C25S6	Size D
90	160	160	220	320	ATS 22C32S6	Size D
110	220	220	250	410	ATS 22C41S6	Size E
132	250	250	315	480	ATS 22C48S6	Size E
160	315	355	400	590	ATS 22C59S6	Size E

The Altistart 22 soft start/soft stop unit is also available with a 110 VDC control power supply, reference ATS 22...S6U

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), PowerSuite software workshop			
Communication	Integrated		Modbus			
	As an option		DeviceNet, Ethernet TCP/IP, 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	455	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

Accessories and options available

Type of accessory	
Description	Remote display terminal DNV kit Line choke
Reference	Please refer to the Schneider Electric catalogue

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 120 V	Single-phase 240 V	Three-phase 240 V				
Supply voltage								
Degree of protection				IP20				
Drive	Output frequency	0.5... 400 Hz						
	Type of control	Asynchronous motor U/F, sensorless flux vector control, quadratic U/F						
	Transient overtorque	150...170						
Speed range		1 to 20						
Functions	Number of functions	40						
	Number of preset speeds	8						
	Number of I/O	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 poor heat dissipation, the ATV12H018.. is only supplied on a base plate

(2) Also exists as a multipack

Accessories and options available

Type of accessory	
Description	Remote display terminal Multi-Loader, Simple Loader Additional EMC input filter Plates Braking resistors and braking unit Line chokes Ferrite suppressors for downstream contactor opening
Reference	Please refer to the Schneider Electric catalogue

Altivar 21

0.75...75 kW

Building Drives for HVAC applications

Dimensions (in mm)		width x height x depth	
IP20		IP54	
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 210	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		IP20		IP54		
Supply voltage		200...240 V		380...480 V		
Degree of protection		IP21 and IP41 on the upper part		IP54 drive available in two manufacturing variants, ATV21W...N4 C1 EMC or ATV21W...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 RTU				
	As an option	HVAC protocols: LonWorks, METASYS N2, APOGEE FLN, BACnet				
EMC filter	Integrated	–	C2 EMC	C2 EMC	C1 EMC	
	Available as an option	C2 EMC	C1 EMC	–	–	
Motor power	kW/HP	0.75/1	ATV21H075M3X T1A	ATV21H075N4 T1A	ATV21W075N4 T1	ATV21W075N4C T1
		1.5/2	ATV21HU15M3X T1A	ATV21HU15N4 T1A	ATV21WU15N4 T1	ATV21WU15N4C T1
		2.2/3	ATV21HU22M3X T1A	ATV21HU22N4 T1A	ATV21WU22N4 T1	ATV21WU22N4C T1
		3/–	ATV21HU30M3X T2A	ATV21HU30N4 T2A	ATV21WU30N4 T2	ATV21WU30N4C T2
		4/5	ATV21HU40M3X T2A	ATV21HU40N4 T2A	ATV21WU40N4 T2	ATV21WU40N4C T2
		5.5/7.5	ATV21HU55M3X T3A	ATV21HU55N4 T2A	ATV21WU55N4 T2	ATV21WU55N4C T2
		7.5/10	ATV21HU75M3X T3A	ATV21HU75N4 T3A	ATV21WU75N4 T2	ATV21WU75N4C T2
		11/15	ATV21HD11M3X T4A	ATV21HD11N4 T3A	ATV21WD11N4 T3	ATV21WD11N4C T3
		15/20	ATV21HD15M3X T4A	ATV21HD15N4 T4A	ATV21WD15N4 T3	ATV21WD15N4C T3
		18.5/25	ATV21HD18M3X T4A	ATV21HD18N4 T4A	ATV21WD18N4 T4	ATV21WD18N4C T4
		22/30	ATV21HD22M3X T5A	ATV21HD22N4 (2) T5A	ATV21WD22N4 T5	ATV21WD22N4C T5
		30/40	ATV21HD30M3X T6A	ATV21HD30N4 (2) T5A	ATV21WD30N4 T5	ATV21WD30N4C T5
		37/50	–	ATV21HD37N4 T7A	ATV21WD37N4 T6	ATV21WD37N4C T6
		45/60	–	ATV21HD45N4 T7A	ATV21WD45N4 T6	ATV21WD45N4C T6
		55/75	–	ATV21HD55N4 T8A	ATV21WD55N4 T7	ATV21WD55N4C T7
75/100	–	ATV21HD75N4 T8A	ATV21WD75N4 T7	ATV21WD75N4C T7		

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

(2) For references ATV21HD22N4 and ATV21HD30N4, please refer to the Schneider Electric catalogue.

(3) Refer to the Schneider Electric catalogue.

Accessories and options available

Type of accessory	
Description	Remote display terminal Additional EMC input filters Communication cards Connection accessories PC software for Altivar 21 drive
Reference	Please refer to the Schneider Electric catalogue

Altivar 312

0.18...15 kW

Simple industrial machines High performance drives



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 with integrated EMC filters	Three-phase 240 V without EMC filter	Three-phase 500V with integrated EMC filters	Three-phase 600V without EMC filter	
Supply voltage						
Degree of protection		IP20				
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 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	External as an option	Integrated C2(1) or C3 EMC	External as an option	
	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

Accessories and options available

Type of accessory	
Description	Remote graphic display terminal Multi-Loader, Simple Loader Additional EMC input filter Plates Braking resistors and braking unit Line chokes Ferrite suppressors for downstream contactor opening
Reference	Please refer to the Schneider Electric catalogue

Altivar 31C

0.18...15 kW

Simple machines Enclosed drives



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

Supply voltage			Single-phase 200...240 V		Three-phase 380...500 V	
Degree of protection			IP54			
Description			Enclosure equipped with an ATV31 drive with external heatsink. Removable covers for adding 1 switch-disconnector or 1 circuit-breaker, 3 buttons and/or LEDs, 1 potentiometer			
Motor power	kW/HP	0.18/0.25	ATV31C018M2	Size 1	–	
		0.37/0.5	ATV31C037M2	Size 1	ATV31C037N4	Size 2
		0.55/0.75	ATV31C055M2	Size 1	ATV31C055N4	Size 2
		0.75/1	ATV31C075M2	Size 1	ATV31C075N4	Size 2
		1.1/1.5	ATV31CU11M2	Size 2	ATV31CU11N4	Size 2
		1.5/2	ATV31CU15M2	Size 2	ATV31CU15N4	Size 2
		2.2/3	ATV31CU22M2	Size 3	ATV31CU22N4	Size 3
		3/–	–		ATV31CU30N4	Size 3
		4/5	–		ATV31CU40N4	Size 3
		5.5/7.5	–		ATV31CU55N4 (1)	Size 4
		7.5/10	–		ATV31CU75N4 (1)	Size 4
		11/15	–		ATV31CD11N4 (1)	Size 5
		15/20	–		ATV31CD15N4 (1)	Size 5

(1) Drive in metal enclosure without cover.

Accessories and options available

Type of accessory	
Description	Additional EMC input filters Line chokes
Reference	Please refer to the Schneider Electric catalogue



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		0.5...599 Hz			
	Type of control	Asynchronous motor	Standard (voltage/frequency) Performance (sensorless flux vector control) Pump/fan (Kn ² quadratic ratio) Energy saving ratio			
		Synchronous motor	Profile for open loop 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			
		Logic inputs	6			
		Analog outputs	1			
		Logic outputs	1: 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.			
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	ATV32H037N4	T1
		0.55/3/4	ATV32H055M2	T1	ATV32H055N4	T1
		0.75/1	ATV32H075M2	T1	ATV32H075N4	T1
		1.1/11/2	ATV32HU11M2	T2	ATV32HU11N4	T1
		1.5/2	ATV32HU15M2	T2	ATV32HU15N4	T1
		2.2/3	ATV32HU22M2	T2	ATV32HU22N4	T2
		3/-	-	-	ATV32HU30N4	T2
		4/5	-	-	ATV32HU40N4	T2
		5.5/71/2	-	-	ATV32HU55N4	T4
		7.5/10	-	-	ATV32HU75N4	T4
		11/15	-	-	ATV32HD11N4	T5
		15/20	-	-	ATV32HD15N4	T5

Accessories and options available

Type of accessory

Description

Panel cut-out adaptor for mounting control unit at 90°
Mechanical base kit for mounting GV2 circuit-breaker
IP54 remote display terminal
IP65 remote display terminal
Remote graphic display terminal
Simple Loader tool
Multi-Loader tool
USB/RJ45 cable for programming via SoMove software
EMC filters
Motor chokes
Braking resistors
Communication modules
DC bus cable

Reference

Please refer to the Schneider Electric catalogue

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		0.5...1600 Hz up to 37 kW; 0.5...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			Remote graphic display terminal or SoMove software workshop					
Communication	Integrated		Modbus and CANopen					
	As an option		HVAC protocols: LonWorks, BACnet, METASYS N2, APOGEE FLN Industrial: Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DP, PROFIBUS DPv1, DeviceNet, Ethernet IP, CC-Link, INTERBUS					
Cards (available as an option)			Multi-pump cards, I/O extension cards, "Controller Inside" programmable card					
Reduction of current harmonics			DC choke integrated or supplied with the drive					
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
200/300	–	–	–	–	ATV61HC20N4	T12		
220/350	–	–	–	–	ATV61HC22N4	T12		
250/400	–	–	–	–	ATV61HC25N4	T13		
280/450	–	–	–	–	ATV61HC28N4	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

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

Altivar 61

0.37...800 kW

Pumping and ventilation machines Drives for industry and infrastructure



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	0.5...1600 Hz up to 37 kW; 0.5...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 or SoMove software workshop				
Communication	Integrated	Modbus and CANopen				
	As an option	HVAC protocols: LonWorks, BACnet, METASYS N2, APOGEE FLN Industrial: Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DP, PROFIBUS DPv1, DeviceNet, Ethernet IP, CC-Link, INTERBUS				
Cards (available as an option)		Multi-pump cards, I/O extension cards, "Controller Inside" programmable card				
Reduction of current harmonics		DC choke integrated or supplied with the product				
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

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	0.5...1600 Hz up to 37 kW; 0.5...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 or SoMove software workshop				
Communication	Integrated	Modbus and CANopen				
	As an option	HVAC protocols: LonWorks, BACnet, METASYS N2, APOGEE P1 Industrial: Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DP, Profibus DPv1, DeviceNet, Ethernet IP, CC-Link INTERBUS				
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.

Altivar 61

0.37...2400 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

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	: 616 x 2159 x 659
E2	: 816 x 2159 x 659
E3	: 1016 x 2159 x 659
E4	: 1220 x 2159 x 659

Enclosure types		Three-phase 380...480 V - 500 V - 690 V (1)
Degree of protection		
Drive	Output frequency	0.5...1600 Hz up to 37 kW; 0.5...500 Hz from 45...2400 kW
	Type of control	Asynchronous motor Synchronous motor
		Kn ² quadratic ratio, flux vector control with or without sensor, voltage/frequency ratio (2 or 5 points), energy saving ratio 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
		Remote graphic display terminal or SoMove software workshop
		Modbus and CANopen
Dialogue		
Communication	Integrated	
	As an option	HVAC protocols: LonWorks, BACnet, METASYS N2, APOGEE P1 Industrial: Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DPv1, DeviceNet, INTERBUS
Cards (available as an option)		Multi-pump cards, I/O extension cards, "Controller Inside" programmable card
Reduction of current harmonics		Integrated DC choke
EMC filter	Integrated	C2 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	ATV61 EXC2D90N	E1	110	ATV61 EXC2C11Y	E1
	110/150	ATV61EXC2C11N4	E1	110	ATV61 EXC2C11N	E1	132	ATV61 EXC2C13Y	E1
	132/200	ATV61EXC2C13N4	E1	132	ATV61 EXC2C13N	E1	160	ATV61 EXC2C16Y	E1
	160/250	ATV61EXC2C16N4	E1	160	ATV61 EXC2C16N	E1	200	ATV61 EXC2C20Y	E1
	220/350	ATV61EXC2C22N4	E1	200	ATV61 EXC2C20N	E2	250	ATV61 EXC2C25Y	E2
	250/400	ATV61EXC2C25N4	E2	250	ATV61 EXC2C25N	E2	315	ATV61 EXC2C31Y	E2
	315/500	ATV61EXC2C31N4	E2	315	ATV61 EXC2C31N	E2	400	ATV61 EXC2C40Y	E2
	400/600	ATV61EXC2C40N4	E3	400	ATV61 EXC2C40N	E4	500	ATV61 EXC2C50Y	E4
	500/700	ATV61EXC2C50N4	E3	500	ATV61 EXC2C50N	E4	630	ATV61 EXC2C63Y	E4
	630/900	ATV61EXC2C63N4	E4	630	ATV61 EXC2C63N	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

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	: 616 x 2264 x 659	E9	: 616 x 2359 x 659
E6	: 816 x 2264 x 659	E10	: 816 x 2359 x 659
E7	: 1016 x 2264 x 659	E11	: 608 x 2359 x 659
E8	: 1216 x 2264 x 659	E12	: 808 x 2359 x 6590
		E13	: 1008 x 2359 x 659
		E14	: 1208 x 2359 x 659

IP54	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	ATV61EXC5D90N	E5	–		
	110/150	ATV61EXC5C11N4	E5	110	ATV61EXC5C11N	E5	110	ATV61EXC5C11Y	E5			
	132/200	ATV61EXC5C13N4	E5	132	ATV61EXC5C13N	E5	132	ATV61EXC5C13Y	E5			
	160/250	ATV61EXC5C16N4	E5	160	ATV61EXC5C16N	E5	160	ATV61EXC5C16Y	E5			
	220/350	ATV61EXC5C22N4	E5	200	ATV61EXC5C20N	E6	200	ATV61EXC5C20Y	E5			
	250/400	ATV61EXC5C25N4	E6	250	ATV61EXC5C25N	E6	250	ATV61EXC5C25Y	E6			
	315/500	ATV61EXC5C31N4	E6	315	ATV61EXC5C31N	E6	315	ATV61EXC5C31Y	E6			
	400/600	ATV61EXC5C40N4	E7	400	ATV61EXC5C40N	E8	400	ATV61EXC5C40Y	E6			
	500/700	ATV61EXC5C50N4	E7	500	ATV61EXC5C50N	E8	500	ATV61EXC5C50Y	E8			
	630/900	ATV61EXC5C63N4	E8	630	ATV61EXC5C63N	E8	630	ATV61EXC5C63Y	E8			
										800	ATV61EXC5C80Y	E8

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



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. 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. 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 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		Single-phase	Three-phase	Three-phase			
Supply voltage		200...240 V (3) (4)	200...240 V (3) (4)	380...480 V (3)			
Degree of protection		IP20 for unprotected drives and IP41 on the upper part					
Drive	Output frequency	0.1...1600 Hz up to 37 kW, 0.1...500 Hz from 45 to 500 kW					
	Type of control	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 (...383)				
Transient overtorque		220% of nominal motor torque for 2 seconds, and 170% for 60 seconds					
Speed range		1...1000 in closed loop mode with encoder feedback, 1...100 in open loop mode					
Functions	Number of functions		> 150				
	Number of preset speeds		16				
	Number of I/O	Analog inputs	2...4				
		Logic inputs	6...20				
	Analog outputs	1...3					
	Logic outputs	0...8					
	Relay outputs	2...4					
Safety input	1						
Dialogue		Remote graphic display terminal or SoMove software workshop					
Communication	Integrated	Modbus and CANopen					
	As an option	Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DP, PROFIBUS DPv1, DeviceNet, Ethernet IP, CC-Link, INTERBUS					
Cards (available as an option)		Encoder interface cards, I/O extension cards, "Controller Inside" programmable card, "Crane" card					
Reduction of current harmonics		DC choke integrated or supplied with the product					
EMC filter	Integrated	C2 EMC up to 4 kW					
	As an option	External C2 EMC from 5.5 kW					
Motor power	kW/HP	0.37/0.5	ATV71H075M3	T2	ATV71H037M3	T2	–
		0.75/1	ATV71HU15M3	T2	ATV71H075M3	T2	ATV71H075N4
	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.

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	0.1...1600 Hz up to 37 kW, 0.1...500 Hz from 45 to 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 (...383)			
	Transient overtorque	220% of nominal motor torque for 2 seconds, and 170% for 60 seconds				
Speed range		1...1000 in closed loop mode with encoder feedback, 1...100 in open loop mode				
Functions	Number of functions		> 150			
	Number of preset speeds		16			
	Number of I/O	Analog inputs	2...4			
		Logic inputs	6...20			
		Analog outputs	1...3			
		Logic outputs	0...8			
		Relay outputs	2...4			
Safety input		1				
Dialogue		Remote graphic display terminal or SoMove software workshop				
Communication	Integrated	Modbus and CANopen				
	As an option	Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DP, PROFIBUS DPv1, DeviceNet, Ethernet IP, CC-Link, INTERBUS				
Cards (available as an option)		Encoder interface cards, I/O extension cards, "Controller Inside" programmable card, "Crane" card				
Reduction of current harmonics		DC choke integrated or supplied with the drive				
EMC filter		Integrated				
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

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



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				
		(3)		With switch		
Degree of protection		UL Type 12 (1) / IP54				
Drive	Output frequency	0.1...1600 Hz up to 37 kW, 0.1...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 or SoMove software workshop				
Communication	Integrated	Modbus and CANopen				
	As an option	Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DP, Profibus DPv1, DeviceNet, InterBus, CC-Link, Ethernet IP				
Cards (available as an option)		Encoder interface cards, I/O extension cards, "Controller Inside" programmable card, "Crane" 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.

Altivar 71

0.37...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

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 : 616 x 2159 x 659	E3 : 1016 x 2159 x 659		
E2 : 816 x 2159 x 659	E4 : 1216 x 2159 x 659		

Type of drive		Three-phase 380...480 V (1)	
Degree of protection			
Drive	Output frequency	0.1...1600 Hz up to 37 kW, 0.1...500 Hz from 45...2000 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 or SoMove software workshop	
Communication	Integrated	Modbus and CANopen	
	As an option	Modbus TCP, Modbus/Uni-Telway, Fipio, Modbus Plus, Profibus DP, Profibus DPv1, DeviceNet, INTERBUS, CC-Link, Ethernet IP.	
Cards (available as an option)		Encoder interface cards, I/O extension cards, "Controller Inside" programmable card, "Crane" card	
Reduction of current harmonics		Optional chokes and passive filters	
EMC filter	Integrated	C2 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

(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

IP23 offer available up to 2000 kW. For ratings above 630 kW, please consult your Regional Sales Office.

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	: 616 x 2264 x 659	E9	: 616 x 2359 x 659
E6	: 816 x 2264 x 659	E10	: 816 x 2359 x 659
E7	: 1016 x 2264 x 659	E11	: 608 x 2359 x 659
E8	: 1216 x 2264 x 659	E12	: 808 x 2359 x 6590
		E13	: 1008 x 2359 x 659
		E14	: 1208 x 2359 x 659

IP54	Three-phase 380...415 V			Three-phase 500 V			Three-phase 690 V		
	Compact floor-standing enclosure		Dimensions	kW	Dimensions		kW	Dimensions	
	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

IP54	Three-phase 380...415 V			Three-phase 500 V			Three-phase 690 V		
	Separate air flow		Dimensions	kW	Dimensions		kW	Dimensions	
	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

Altivar 71 Lift

2.2...75 kW

Complex, high-power machines Drives for lifts



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		

Type of drive		Single-phase	Three-phase	Three-phase				
Supply voltage		200 V	200 V	380 V				
Degree of protection		IP20 for unprotected drives and IP41 on the upper part						
Drive	Output frequency	0.1...1600 Hz up to 37 kW, 0.1...500 Hz from 45 to 500 kW						
	Type of control	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 or SoMove software workshop						
Communication	Integrated	Modbus and CANopen						
	As an option	Fipio, Ethernet, Modbus Plus, 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		DC choke integrated 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	1.5/2	ATV71LU22M3Z	T3	–	–		
		2.2/3	ATV71LU30M3Z	T3	ATV71LU22M3Z	T3	–	
		3/–	ATV71LU40M3Z	T3	ATV71LU30M3Z	T3	ATV71LU30N4Z	T3
		4/5	ATV71LU55M3Z	T4	ATV71LU40M3Z	T3	ATV71LU40N4Z	T3
		5.5/7.5	ATV71LU75M3Z	T5A	ATV71LU55M3Z	T4	ATV71LU55N4Z	T4
		7.5/10	–	–	ATV71LU75M3Z	T5A	ATV71LU75N4Z	T4
		11/15	–	–	ATV71LD11M3XZ	T5B	ATV71LD11N4Z	T5A
		15/20	–	–	ATV71LD15M3XZ	T5B	ATV71LD15N4Z	T5B
		18.5/25	–	–	ATV71LD18M3XZ	T6	ATV71LD18N4Z	T5B
		22/30	–	–	ATV71LD22M3XZ	T6	ATV71LD22N4Z	T6
		30/40	–	–	ATV71LD30M3XZ	T6	ATV71LD30N4Z	T7A
		37/50	–	–	ATV71LD37M3XZ	T7B	ATV71LD37N4Z	T7A
		45/60	–	–	ATV71LD45M3XZ	T7B	ATV71LD45N4Z	T8
		55/75	–	–	–	–	ATV71LD55N4Z	T8
		75/100	–	–	–	–	ATV71LD75N4Z	T8



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

"Crane" cards

Type of card	"Crane" card for overhead cranes
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
Application-specific functions	Management of load sway up to heights of 30 m
References	Sensorless: Management of the stop and slowdown limit switches on translational and directional movements VW3A3510



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	–	VW3A3407

Type of card	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

Type of accessory	
Description	Additional EMC input filters AC line chokes Optional DC chokes Passive filters Sinus filters Motor chokes Braking units Braking resistors
Reference	Please refer to the Schneider Electric catalogue

Communication accessories



Type of accessory	Remote graphic display terminal	Remote mounting kit (1)
Description	This display terminal is attached to the front of the drive. It includes the integrated 7-segment display terminal for drives supplied without a graphic display terminal.	A remote mounting kit for mounting on an enclosure door with IP54 degree of protection. It includes: <ul style="list-style-type: none"> ■ All the mechanical fittings ■ Fixing accessories
References	VW3A1101	VW3A1102

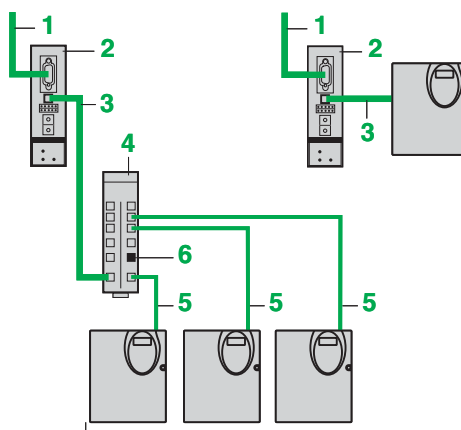
(1) Use a VW3A1104Rpp remote-mounting cordset, to be ordered separately (please refer to the Schneider Electric catalogue.)

Other accessories available

Type of accessory	
Description	Multi-Loader configuration tool Simple Loader configuration tool Bluetooth adaptor SoMove multilingual configuration software workshop for PC SoMobile software for mobile phones Connection accessories for CANopen communication bus (tap junctions, adaptor, connector, cables, etc.) Modbus connection accessories (communication module, gateways, splitter boxes, cordsets and cables, etc.)
Reference	Please refer to the Schneider Electric catalogue



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



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

Transparent
Ready



Drives Altivar 61, Altivar 71	Modbus TCP	Modbus TCP Daisy Chain	Modbus/Uni-Telway	Fipio
Maximum number of drives controlled	–	–	–	–
Transmission speed	10/100 Mbps	10/100 Mbps	147/247 Mbps	62 Mbps
References	VW3A3310	VW3A3310d	VW3A3303	VW3A3311

Drives Altivar 61, Altivar 71	Modbus Plus	Profibus DP	Profibus DPv1	INTERBUS
Maximum number of drives controlled	64	126	126	64
Transmission speed	1 Mbps	9600 bps...12 Mbps	9600 bps...12 Mbps	1 Mbps
References	VW3A3302	VW3A3307	VW3A3307S371	VW3A3304

Drives Altivar 61, Altivar 71	CC-Link	Ethernet/IP	DeviceNet
Maximum number of drives controlled	64	–	63
Transmission speed	...10 Mbps	10/100 Mbps	125/250/500 Kbps
References	VW3A3317	VW3A3316	VW3A3309

Drives Altivar 61	LonWORKS	METASYS N2	APOGEE FLN	BACnet
Connector	1 removable 3-way screw terminal block	1 removable 4-way screw terminal block	1 removable 4-way screw terminal block	1 removable 4-way screw terminal block
Transmission speed	78 Kbps	–	–	–
References	VW3A3312	VW3A3313	VW3A3314	VW3A3315

For other connection accessories, please refer to the Schneider Electric catalogue.

Selection guide

	⇒ Applications :	⇒ Applications :
	Lexium 32 is the perfect drive system for applications involving high-precision, dynamic positioning.	Lexium SDx stepper drives and motors are used for short-distance positioning applications requiring maximum accuracy and high torque.
	Servo Drives	Servo Motors
	Lexium 32	Lexium BMH
		
		Lexium BSH
		
	Stepper Drives	Stepper Motors
	Lexium SD2	Lexium BRS2
		
	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 all important 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.

100...370 W
24...48 VDC, 115 to 240 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 300 kg
Speed up to 8 m/s
Available as individual components or completely pre-assembled, customised systems with drives and motors

Selection guide

⇒ Applications :

Lexium Motion Controllers can be used as a stand-alone motion and automation controllers for machines without a PLC or as pure motion controllers for machines in which a PLC takes care of automation control.

Axis controller

Lexium Motion Controllers



Machines

Packaging machines
Material handling machines
Material working machines
Assembling machines

Description

The compact LMC Lexium Motion Controllers are used to control multiple synchronised axes via a motion bus and feature high performance coupled with economy.

Technical information

Synchronisation of up to 4 axes in 2 ms
Synchronisation of up to 8 axes in 4 ms

PLCopen function blocks single / multi axis control
Application function blocks (Rotary knife, Flying shear, Clamping, Grouping/Ungrouping)

Communication interfaces

Modbus, CANmotion, Profibus DP, DeviceNet, Ethernet TCP/IP (for programming)

Lexium Controller Motion control Motion controller



Controller type		Optimised	Standard	Extended	
Drive synchronisation	Up to 4 axes	2 ms			
CAN Motion bus	Up to 8 axes	4 ms			
Interpolation of drive position loops		250 µs			
Internal memory	RAM	1 MB			
	Flash Eeprom	1 MB			
	Protected RAM	60 Kb			
Expert application	Application function blocks	yes			
	Single-axis PLCopen control	yes			
	Multi-axis PLCopen control	yes			
	2D interpolation	yes			
Number of logic inputs		8 + 4 Fast inputs			
Number of logic outputs		8	8		
Communication	Modbus	yes	yes	yes	yes
	CANopen automation	–	yes	yes	yes
	Ethernet TCP/IP	–	yes	yes	yes
	Profibus DP V1	–	–	yes	–
	Device Net	–	–	–	yes
Reference		LMC10	LMC20	LMC20A1307	LMC20A1309

Software solutions



Easy Motion... for configuring motion control functions

- Axis parameter setting
- Drive and controller adjustment and diagnostics
- Creation of position registers via the Teach function
- Management of axis operating modes and manual control
- Configuration of positioning tasks
- Editing cam profiles
- Application back up and restore



Motion Pro... for configuring and programming motion control functions

- Retains the same benefits as Easy Motion mode for motion control
- Creates the whole application, control system function and motion control function, using the programming editor conforming to standard IEC 61131
- Saves the machine signature
- Protection of application programs



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
	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 $\overline{\text{logic}}$ inputs		6, reassignable	3, reassignable	4, reassignable
24 V $\overline{\text{capture}}$ inputs (1) (2)		–	1	2
24 V $\overline{\text{logic}}$ 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 205 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)	IP 65
	Shaft end	IP 50 or IP 65 (IP 67 conformity kit as an option)	IP 50 or IP 65
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 (IP 50, IP65 or IP 67)		BSH (IP 50 or IP 65)		100...120 V single-phase supply voltage with integrated EMC filter			
				LXM 32●U90M2			
				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 (IP 50, IP65 or IP 67)		BSH (IP 50 or IP 65)		200...240 V single-phase supply voltage with integrated EMC filter			
				LXM 32●U45M2			
				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_o/M_{max}	Nominal torque	Nominal speed	Nominal power	M_o/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_o/M_{max}	Nominal torque	Nominal speed	Nominal power	M_o/M_{max}	Nominal torque	Nominal speed	Nominal power	M_o/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 (IP 50, IP65 or IP 67)		BSH (IP 50 or IP 65)		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	Type of servo motor	Rotor inertia	Nominal operating point			Stall torques	Nominal operating point			Stall torques	
	kgcm ²		kgcm ²	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	
		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 2051P	71.4											
BMH 2052P	129											
BMH 2053P	190											



Table 1.2.1 - Nominal operating point and stall torques of the motor

LXM 32●D18N4 Continuous output current: 6 A rms				LXM 32●D30N4 Continuous output current: 10 A rms				LXM 32●D72N4 Continuous output current: 24 A rms			
Nominal operating point			Stall torques M_0/M_{max}	Nominal operating point			Stall torques M_0/M_{max}	Nominal operating point			Stall torques M_0/M_{max}
Nominal torque	Nominal speed	Nominal power		Nominal torque	Nominal speed	Nominal power		Nominal torque	Nominal speed	Nominal power	
Nm	rpm	W	Nm/Nm	Nm	rpm	W	Nm/Nm	Nm	rpm	W	Nm/Nm
2.4	5000	1300	3.4/10.2								
2.44	5000	1300	3.1/11.3								
2.7	4000	1100	3.3/9.6								
3.1	4000	1300	3.4/10.2								
3.9	4000	1600	6.2/18.4								
4	4000	1700	5.8/18.3								
				5.2	5000	2700	8.4/25.1				
				6.3	3000	2000	8/28.3				
				7.7	3000	2400	10.3/30.8				
				8.3	2500	2100	10/37.9				
				9.5	2500	2500	11.1/27				
								11.2	3000	3500	18.5/55.3
								12.3	3000	3900	19.5/59.3
								12.9	3000	4100	27.8/90.2
								14.9	3000	4700	24/75
								19	2500	5000	33.4/103.6
								25.8	2000	5400	34.4/103.4
								41.6	1500	6500	62.5/170
								52.2	1200	6500	84/232



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



Communication modules

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

Reference	Module 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



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	Module 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	Module description	Part number
	eSM safety module allows	VW3 M3 501

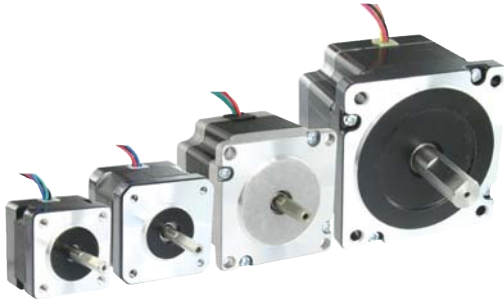
Connection elements

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 205●P, BSH 1402T, BSH 1403T, BSH 1404P
To servo drive	LXM 32●●●●●●	LXM 32●D72N4	LXM 32●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)]
Length	3 m	3 m	3 m
Reference	VW3 M5 101 R30	VW3 M5 102 R30	VW3 M5 103 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...370W	100...350W	100...350W	100...350W
Drive/motor combinations	Nominal speed	500...9000 min ⁻¹	1500...7000 min ⁻¹	0...1000 min ⁻¹	0...1000 min ⁻¹
Drive characteristics	Nominal torque	0.26...0.78 Nm	0.18...0.5 Nm	0.45...6 Nm	0.11...5.87 Nm
Motor characteristics	Safety function	"Safe Torque Off"			
Motor characteristics	Type of sensor (resolution) (1)	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	Index pulse monitoring
	Motor flange size	57	66	57, 85	36, 42, 57, 85
Accessories		Cable, Connector kits, Installation sets, Commissioning tools, Planetary gearboxes			Cable, Connector kits, Installation sets, Commissioning tools
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)
ILS1 for CANopen, PROFIBUS DP, RS485, Pulse-Direction, Motion Sequence Mode					
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
ILA2 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
ILS1 for CANopen, PROFIBUS DP, RS485, Pulse-Direction, Motion Sequence Mode			
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 S	Lexium PAS B
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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