Catalog | October 2021

Lexium 32 and Motors

Lexium 32 servo drives, BMH and BSH servo motors

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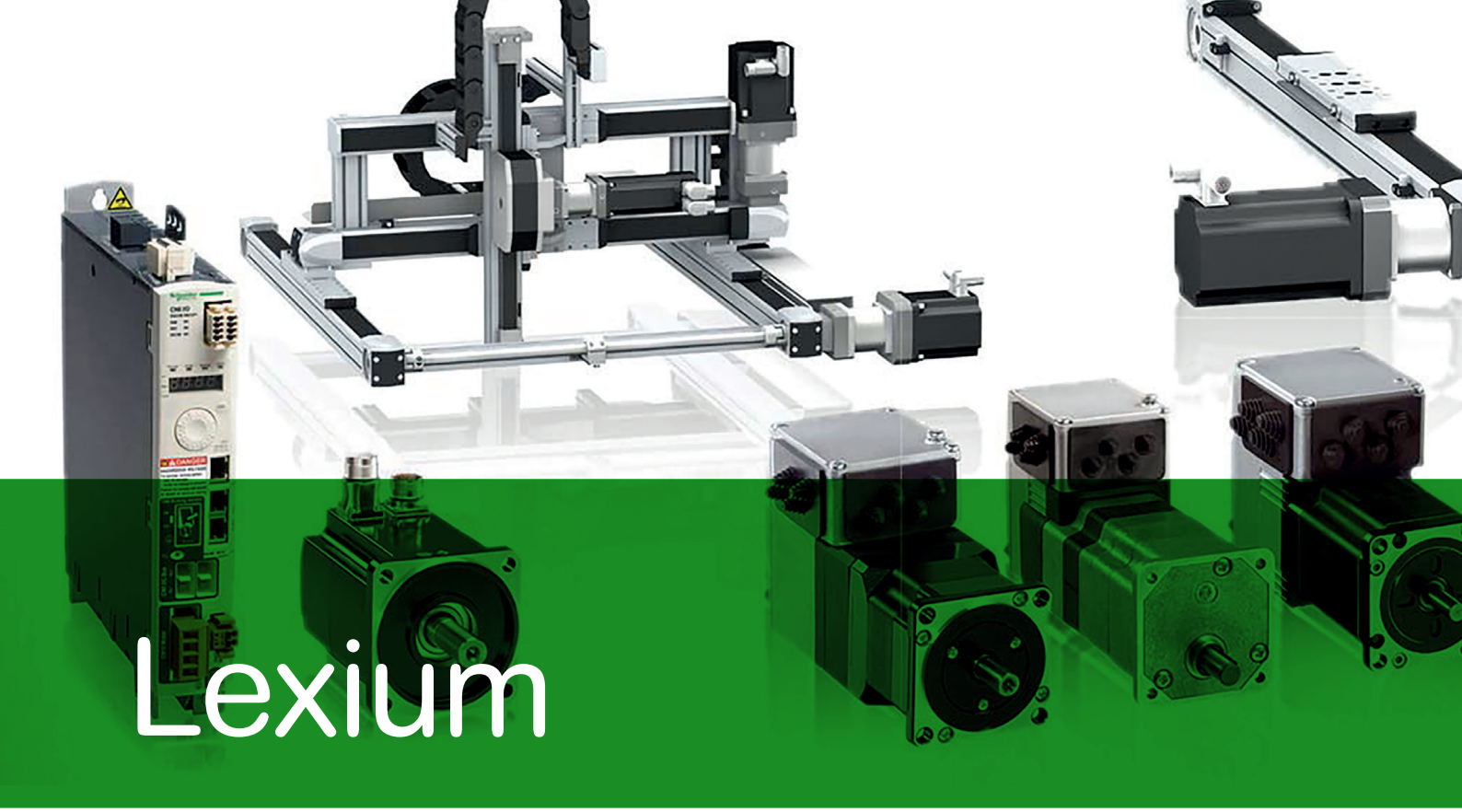

Lexium

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Advanced motion control and robotics

Lexium servo drives, motors, and robotics series are designed for a broad range of motion-centric machines. From single-axis to high-performance multi-axis machines, the **Lexium** range enables high-speed movements and precise positioning in packaging, material handling, material working, electronics, and food and beverage applications.

Explore our offer

- **Lexium** Servo Drives and Motors
- **Lexium** Integrated Servo Drives
- **Lexium** Robotics
- **Lexium** Stepper Drives

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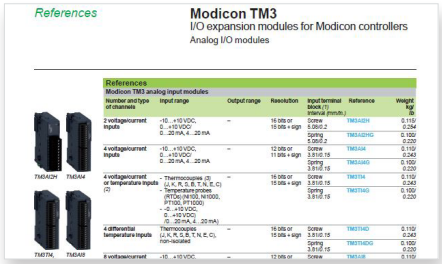

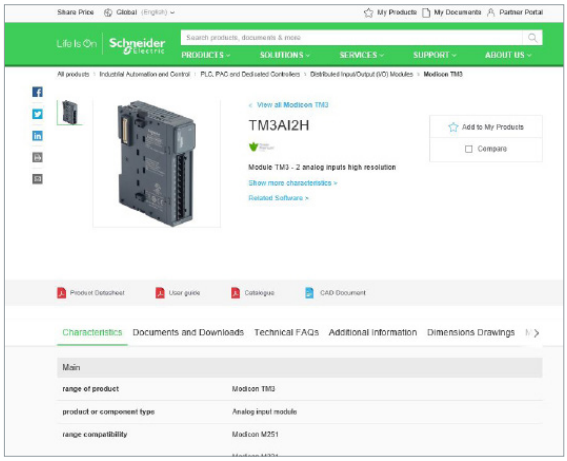

Each commercial reference presented in a catalog contains a hyperlink. Click on it to obtain the technical information of the product:

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

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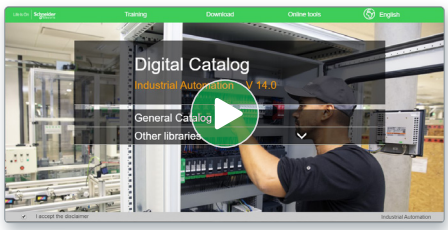

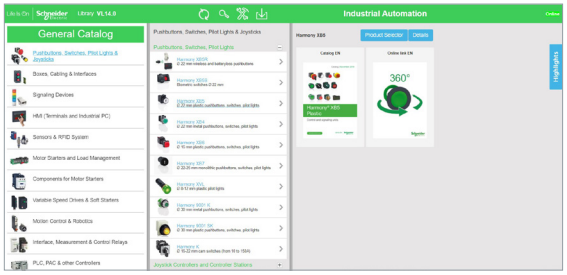

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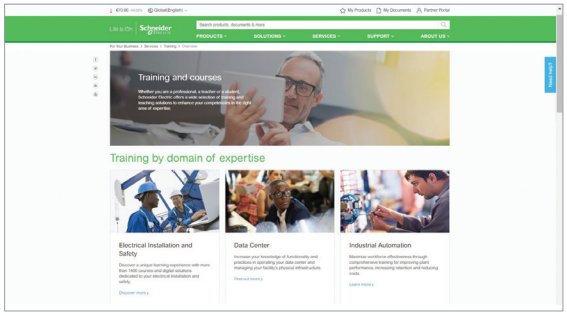

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General content

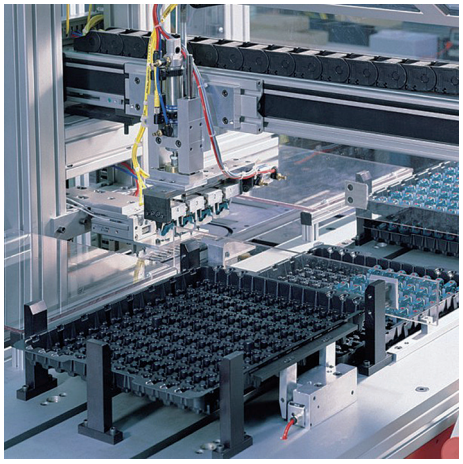
Lexium®32 and Motors

Lexium 32 and Motors
Lexium 32 Servo drives
Presentation of the range

PF080934

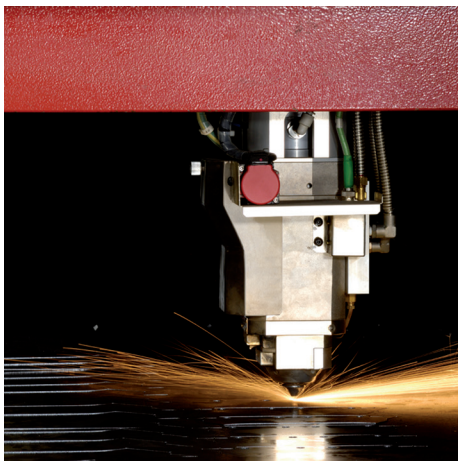
Lexium 32 servo drive controlling a packaging machine

PF080932



Lexium 32 servo drive controlling a handling machine

PF080933



Lexium 32 servo drive controlling a materials processing machine

Presentation of the range

The Lexium 32 range of servo drives includes 4 servo drive models, LXM32C, LXM32A, LXM32M and LXM32S, associated with 2 servo motor ranges, BMH and BSH models for optimum use that can adapt to demands for high performance, power, and simplicity of use in motion control applications.
It covers power ratings from 0.15 to 11 kW.

The Lexium 32 servo drive offer is designed to simplify the life cycle of machines. SoMove setup software, side-by-side mounting, and color-coded plug-in connectors, easily accessible on the front panel or on top of the servo drives, all help to make installation, setup, and maintenance easier. Maintenance is also quicker and cheaper thanks to the new duplication and backup tools, such as the memory card. Please consult our catalog "SoMove, Setup software for motor control devices".

Performance is improved through optimized motor control achieved through reduced vibration with automatic parameter calculation, a speed observer, and an additional band-stop filter. This optimization helps to increase machine productivity.

The compact size of the servo drives and servo motors provides maximum power in the minimum space, which helps to reduce overall machine size and costs.

Integrated communication or optional communication cards, depending on the model, as well as standard encoders, enable adaptation to numerous types of control system architecture for industry.

An integrated safety function and access to additional safety functions reduce design times and make it easier to comply with safety standards.

Applications for industrial machines

The Lexium 32 servo drive incorporates functions which are suitable for common applications, including:
- Printing: cutting, machines with position control, etc.
- Packaging and wrapping: cutting to length, rotary knife, bottling, capsuling, labeling, etc.
- Textiles: winding, spinning, weaving, embroidery, etc.
- Handling: conveying, palletization, warehousing, pick and place, etc.
- Transfer machines (gantry cranes, hoists), etc.
- Clamping, "on the fly" cutting operations (flying shear, printing, marking), etc.
- Materials processing

The offer

The Lexium 32 range of servo drives covers motor power ratings between 0.15 kW and 11 kW with three types of power supply:
- 110…120 V single-phase, 0.15 kW to 0.8 kW (**LXM32●●●●M2**)
- 200…240 V single-phase, 0.3 kW to 1.6 kW (**LXM32●●●●M2**)
- 208…480 V three-phase, 0.4 kW to 11 kW (**LXM32●●●●N4**)

Compliance with international standards and certifications

The entire range conforms to international standards IEC/EN 61800-5-1, IEC/EN 61800-3, is UL and CSA certified, and has been developed to meet the requirements of directives regarding protection of the environment (RoHS) as well as those of European Directives to obtain the CE mark.

Compliance with electromagnetic compatibility (EMC) requirements

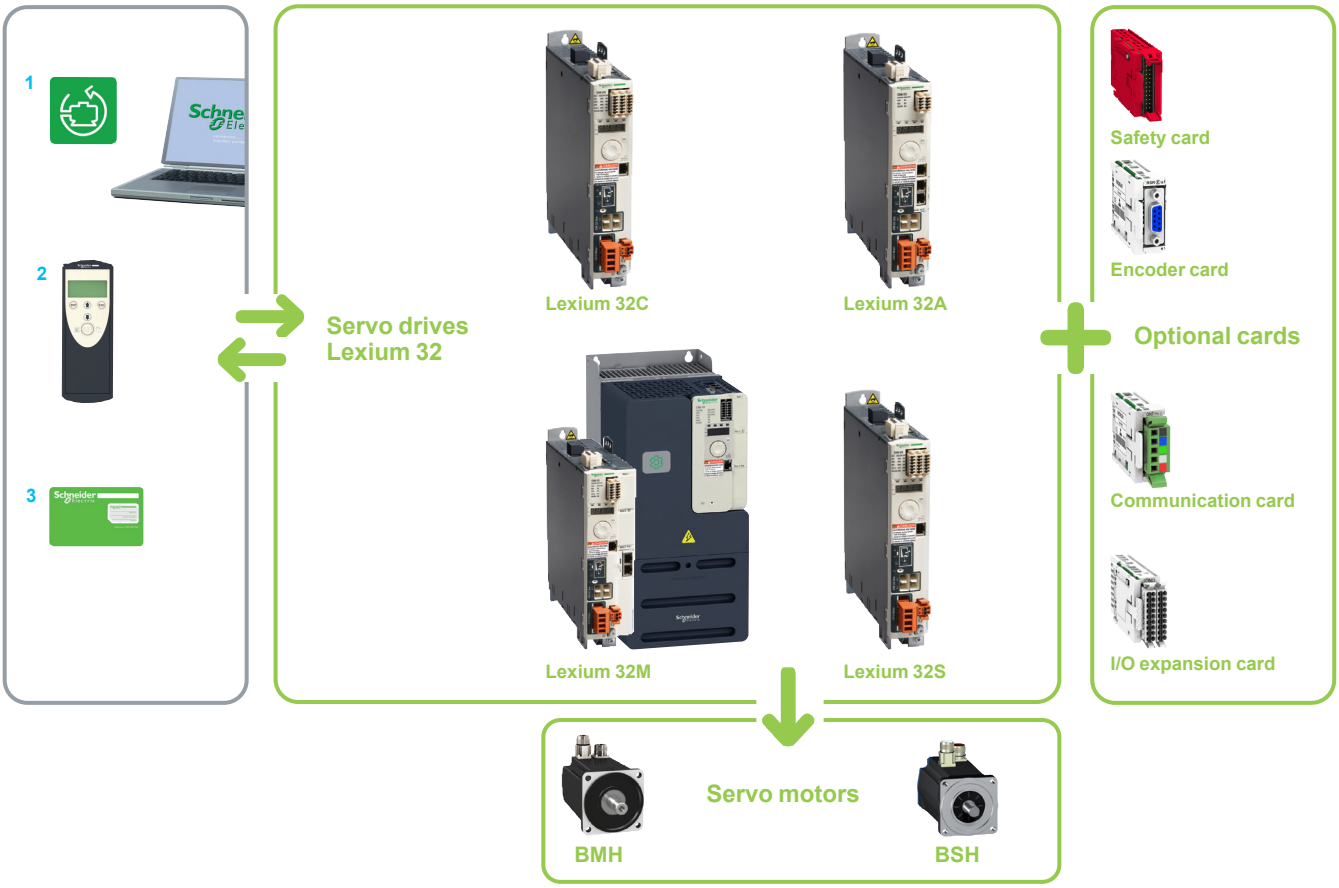
The integration of a category C3 EMC filter in Lexium 32 servo drives and compliance with EMC simplify installation and make it very inexpensive to bring the device into conformity to obtain the CE mark.

Additional filters, available as an option, can be installed by the customer to reduce the level of conducted and radiated emissions (see page 28). They also enable the servo drive to be used with cable lengths of up to 100 metres/*328 feet*, to meet the requirements of applications in a wide variety of fields.

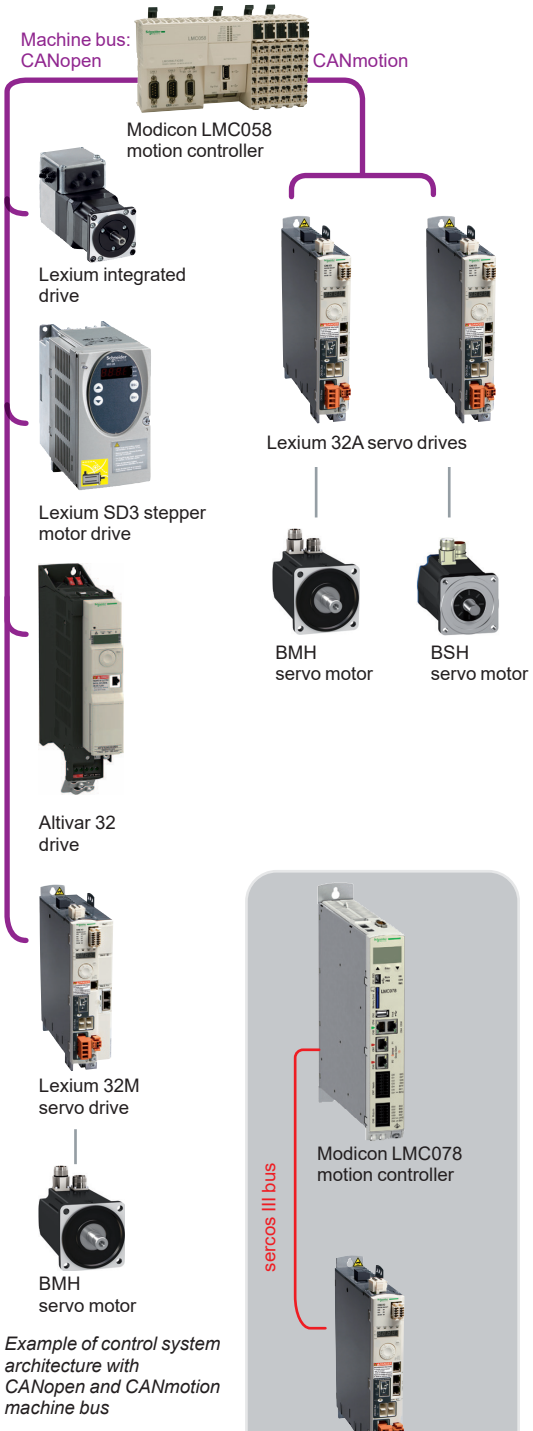
Accessories and options

External accessories and options such as braking resistors, line chokes, etc. enhance this offer.

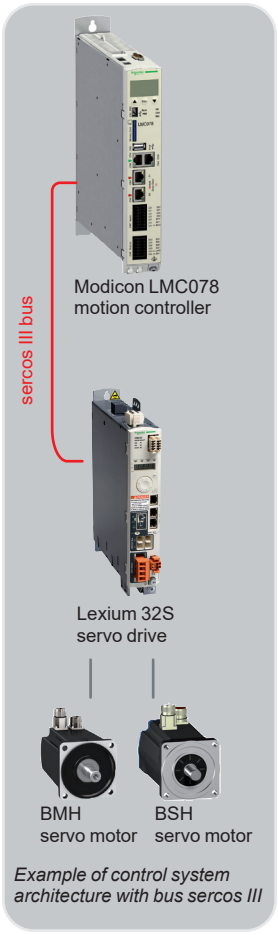
Simplicity, from installation to maintenance



SoMove setup software 1	SoMove setup software is used in just the same way as it is on other Schneider Electric drives and starters, to configure and optimize control loops in automatic or manual mode using the Oscilloscope function and for maintenance of the Lexium 32 drive. It can be used with a Bluetooth® wireless connection (see page 11).
Multi-Loader tool 2	The Multi-Loader tool enables configurations to be copied from a PC or a servo drive and loaded onto another servo drive. The servo drives can be powered-down (see page 11).
Memory card 3	This stores the servo drive parameters. When replacing a Lexium 32 servo drive, this function helps to ensure immediate startup by removing the need to program the drive. This optimizes maintenance time and reduces costs (see page 11.
Auto-tuning	Adapted to each user, the 3 auto-tuning levels - automatic, semi-automatic, and expert - allow you to achieve a high level of machine performance, whatever the application.
Human-Machine Interface (HMI)	The display can be used to control and configure the servo drive, display states and detected faults, access parameters and modify them in manual mode using the navigation button.
Mounting and maintenance	Several Lexium 32 servo drives can be mounted side by side to save space. Connecting the servo drives is simplified by color-coded plug-in connectors, which are easily accessed on the front panel or on top of the drive.



Example of control system architecture with CANopen and CANmotion machine bus



Example of control system architecture with bus sercos III

High performance

The Lexium 32 servo drive offer increases machine performance due to the following characteristics:

- Overload capacity: The high peak current (up to 4 times the direct current) increases the range of movement.
- Power density: The compact size of the servo drives offers maximum efficiency in a small space.
- High bandwidth: Better speed stability and faster acceleration improve the quality of control.
- Motor control: Less vibration, a speed observer, and an additional band-stop filter enhance the quality of control.

Design suitable for different control system structures

Its versatile specifications provide the Lexium 32 range of servo drives with excellent flexibility for integration in different control system structures.

Depending on the model, the Lexium 32 servo drive has logic or analog inputs and outputs as standard, which can be configured to adapt better to applications.
It also has control interfaces for easy access to the various architecture levels:

- It has a control interface for control via pulse train.
- It has a sercos interface (Lexium 32S).
- It integrates a combined CANopen/CANmotion port for enhanced control system performance.
- It can also be connected to the main industrial communication networks and buses using various communication cards.

The following protocols are available: PROFIBUS DP V1, DeviceNet, EtherNet/IP, EtherCAT, PROFINET and Modbus TCP.

Dedicated safety functions

The Lexium 32 range of servo drives is an integral part of a control system's safety system, featuring as it does an integrated Safe Torque Off (STO) function, which helps to prevent unintended servo motor operation.
This function complies with standard IEC/EN 61508 level SIL3 governing electrical installations and the power drive systems standard IEC/EN 61800-1.
It simplifies the setup of installations requiring complex safety equipment and improves performance during maintenance operations by reducing the time required for servicing.

An additional eSM module is available for accessing enhanced safety functions.

BMH and BSH servo motors - dynamic and powerful

BMH and BSH servo motors are synchronous three-phase motors. They feature a SinCos Hiperface® encoder for automatic transmission of data from the servo motor to the servo drive and are available with or without a holding brake.

BMH servo motors

BMH servo motors are medium inertia motors. They are particularly suitable for high-load applications and allow the movement to be adjusted in a more robust manner.

This product offer covers a continuous stall torque range from 1.2 Nm to 100 Nm for nominal speeds from 1,200 to 5,000 rpm.

BSH servo motors

BSH servo motors satisfy requirements for precision and high dynamic performance, due to the low rotor inertia. They are compact, and offer a high power density.

This product offer covers a continuous stall torque range from 0.21 Nm to 33.4 Nm for nominal speeds from 2,500 to 9,000 rpm.

Main functions

Type of servo drive		LXM32C	LXM32A	LXM32M	LXM32S
Communication	Integrated	□ Modbus serial link, □ Pulse train, □ ± 10 V	□ Modbus serial link, □ CANopen/CANmotion machine bus	□ Modbus serial link, □ Pulse train	□ Modbus serial link, □ sercos III
	As an option	–	–	□ CANopen/CANmotion machine bus, □ DeviceNet, □ EtherNet/IP, □ PROFIBUS DP V1, □ EtherCAT, □ PROFINET, □ Modbus TCP	–
	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	□ Homing, □ Manual mode (JOG), □ Speed control, □ Current control, □ Position control
	Functions	□ Auto-tuning, □ Monitoring, □ Stopping, □ Conversion			
		–	□ Stop window, □ Rapid entry of position values, □ Rotary axes, □ Position register	□ Stop window, □ Rapid entry of position values, □ Rotary axes, □ Position register	□ Stop window, □ Rapid entry of position values
24 V ⎓ logic inputs *(1)*		6, reassignable	4, reassignable	4, reassignable	4, reassignable
24 V ⎓ capture inputs *(1) (2)*		–	1	2	2
24 V ⎓ logic outputs *(1)*		5, reassignable	2, reassignable	3, 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	–	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	–	RS 422 link	–
Human/Machine Interface (via integrated display terminal)		□ Manual mode (positive/negative, fast/slow), □ Auto-tuning, □ Simple startup, □ Display of information and detected errors	□ Manual mode (positive/negative, fast/slow), □ Auto-tuning, □ Simple startup, □ Display of information and detected errors, □ Homing		
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	Motion controller via CANopen and CANmotion machine bus	Schneider Electric or third-party PLCs via communication buses and networks	Modicon LMC078 motion controller on sercos III network

Type of servo motor		BMH	BSH
Application type		□ High load , □ With robust adjustment of the movement	□ High dynamic response, □ Power density
Flange size		70, 100, 140 and 190mm *(2.76, 3.94, 5.51 and 7.48 in)*	40, 55, 70, 100, and 140 mm *(1.57, 2.17, 2.76, 3.94 and 5.51 in)*
Continuous stall torque		1.2 to 100 Nm	0.21 to 33.4 Nm
Encoder type	Single-turn SinCos	32,768 points/turn and 131,072 points/turn	131,072 points/turn
	Multi-turn SinCos	32,768 points/turn x 4,096 turns and 131,072 points/turn x 4,096 turns	131,072 points/turn x 4,096 turns
Degree of protection	Casing	IP 65 (IP 67 conformity kit as an option)	
	Shaft end	IP 54: horizontal mounting (IMB5) or vertical mounting (IMV1 with shaft end at the top) IP 50: vertical mounting IMV3 with shaft end at the bottom, or IP 65 (IP 67 conformity kit as an option)	

(1) Unless otherwise stated, the logic I/O can be used in positive logic (Sink inputs, Source outputs) or negative logic (Source inputs, Sink outputs).
(2) The capture inputs can be used as standard logic inputs.

Lexium 32 and Motors

Lexium 32 Servo drives

Servo drive/BMH servo motor combinations

Lexium 32 servo drive/BMH servo motor combinations

Nominal operating point (1)			Stall torques	Servo drives		Servo motor	
Nominal torque	Nominal speed	Nominal power	M_0 / M_{max} (2)	Reference	Continuous output current (rms)	Reference	Rotor inertia
Nm	rpm	W	Nm/Nm		A		kgcm²
100…120 V single-phase supply voltage with integrated EMC filter							
1.35	2500	350	1.4/4.2	**LXM32●D18M2**	6	**BMH0701T**	0.59
2.3	2500	600	2.5/6.4	**LXM32●D30M2**	10	**BMH0702T**	1.13
3.1	2000	650	3.4/8.7	**LXM32●D30M2**	10	**BMH0703T**	1.67
3.3	2000	700	3.4/8.9	**LXM32●D30M2**	10	**BMH1001T**	3.2
3.5	2000	750	6/10.3	**LXM32●D30M2**	10	**BMH1002T**	6.3
200…240 V single-phase supply voltage with integrated EMC filter							
1.1	4000	450	1.4/4	**LXM32●U90M2**	3	**BMH0701T**	0.59
2.1	4000	900	2.5/7.4	**LXM32●D18M2**	6	**BMH0702T**	1.13
2.9	3000	900	3.4/10.2	**LXM32●D18M2**	6	**BMH0703T**	1.67
2.8	3000	900	3.4/10.2	**LXM32●D18M2**	6	**BMH1001T**	3.2
4.6	3000	1450	6/18.4	**LXM32●D30M2**	10	**BMH1002T**	6.3
5.6	2500	1450	8/23.5	**LXM32●D30M2**	10	**BMH1003T**	9.4
8.9	1500	1450	10.3/30.8	**LXM32●D30M2**	10	**BMH1401P**	16.5
208…480 V three-phase supply voltage with integrated EMC filter							
1.1	3000	350	1.2/4.2	**LXM32●U60N4**	1.5	**BMH0701P**	0.59
1.3	5000	700	1.4/4.2	**LXM32●D12N4**	3	**BMH0701P**	0.59
1.9	4000	800	3.3/10.8	**LXM32●D12N4**	3	**BMH1001P**	3.2
2.2	3000	700	2.5/7.4	**LXM32●D12N4**	3	**BMH0702P**	1.13
2.4	5000	1300	3.4/10.2	**LXM32●D18N4**	6	**BMH0703P**	1.67
3.1	4000	1300	3.4/10.2	**LXM32●D18N4**	6	**BMH1001P**	3.2
3.9	4000	1600	5.9/18.4	**LXM32●D18N4**	6	**BMH1002P**	6.3
6.2	4000	2600	8.4/25.1	**LXM32●D30N4**	10	**BMH1003P**	9.4
7.6	3000	2400	10.3/30.8	**LXM32●D30N4**	10	**BMH1401P**	16.5
12.1	3000	3800	16.8/50.3	**LXM32●D72N4**	24	**BMH1402P**	32.0
14.2	3000	4500	24/71.8	**LXM32●D72N4**	24	**BMH1403P**	47.5
18.4	2500	4800	30/77.7	**LXM32●D72N4**	24	**BMH1901P**	67.7
22.3	2500	5900	37.4/101	**LXM32●D72N4**	24	**BMH1902P**	130
36	1500	5700	43.2/123	**LXM32●D72N4**	24	**BMH1903P**	194
~ 480 V three-phase supply voltage with integrated EMC filter							
16.5	3000	5180	30/86.6	**LXM32MD85N4**	32	**BMH1901P**	67.7
29	2000	6070	48/115.5	**LXM32MD85N4**	32	**BMH1902P**	130
35	2000	7330	57.6/141.3	**LXM32MD85N4**	32	**BMH1903P**	194
16.5	3000	5180	30/89.7	**LXM32MC10N4**	40	**BMH1901P**	67.7
29	2000	6070	48/130.7	**LXM32MC10N4**	40	**BMH1902P**	130
37	2000	7750	65/162.7	**LXM32MC10N4**	40	**BMH1903P**	194
46.8	2000	9600	100/230	**LXM32MC10N4**	40	**BMH1904P**	276.7

(1) These values are given according to the supply voltage.
(2) M_0: Continuous stall torque, M_{max}: Peak stall torque.

Lexium 32 and Motors

Lexium 32 Servo drives

Servo drive/BSH servo motor combinations

Lexium 32 servo drive/BSH servo motor combinations

Nominal operating point *(1)*			Stall torques	Servo drives		Servo motor	
Nominal torque	Nominal speed	Nominal power	M_0 / M_{max} *(2)*	Reference	Continuous output current (rms)	Reference	Rotor inertia
Nm	rpm	W	Nm/Nm		A		kgcm²
100…120 V single-phase supply voltage with integrated EMC filter							
0.49	3000	150	0.5/1.5	**LXM32●U90M2**	3	**BSH0551T**	0.06
0.77	3000	250	0.8/1.9	**LXM32●U90M2**	3	**BSH0552T**	0.10
1.14	3000	350	1.2/3.3	**LXM32●D18M2**	6	**BSH0553T**	0.13
1.36	2500	350	1.4/3.5	**LXM32●D18M2**	6	**BSH0701T**	0.25
2.07	2500	550	2.2/6.1	**LXM32●D30M2**	10	**BSH0702T**	0.41
2.75	2500	700	3.3/6.3	**LXM32●D30M2**	10	**BSH1001T**	1.40
200…240 V single-phase supply voltage with integrated EMC filter							
0.184	4000	77	0.21/0.8	**LXM32●U45M2**	1.5	**BSH0401P**	0.02
0.184	4000	166	0.38/1.37	**LXM32●U45M2**	1.5	**BSH0402P**	0.04
0.45	6000	300	0.5/1.4	**LXM32●U45M2**	1.5	**BSH0551T**	0.06
0.74	6000	450	0.8/2.5	**LXM32●U90M2**	3	**BSH0552T**	0.10
0.84	6000	550	1.2/3	**LXM32●U90M2**	3	**BSH0553T**	0.13
0.94	5000	500	1.3/3.5	**LXM32●D18M2**	6	**BSH0701T**	0.25
1.8	5000	950	2.2/7.2	**LXM32●D18M2**	6	**BSH0702T**	0.41
2.1	4000	900	2.6/7.4	**LXM32●D30M2**	10	**BSH0703T**	0.58
2.2	4000	900	2.7/7.5	**LXM32●D30M2**	10	**BSH1001T**	1.40
3.7	4000	1500	5.8/16.4	**LXM32●D30M2**	1.5	**BSH1002T**	2.31
208…480 V three-phase supply voltage with integrated EMC filter							
0.292	9000	152	0.21/0.8	**LXM32●U60N4**	1.5	**BSH0401P**	0.02
0.292	9000	275	0.38/1.37	**LXM32●U60N4**	1.5	**BSH0402P**	0.04
0.48	6000	300	0.5/1.5	**LXM32●U60N4**	1.5	**BSH0551P**	0.06
0.65	6000	400	0.8/2.5	**LXM32●U60N4**	1.5	**BSH0552P**	0.10
0.65	6000	400	1.05/3.5	**LXM32●U60N4**	1.5	**BSH0553P**	0.13
1.32	5000	700	1.4/3.5	**LXM32●D12N4**	3	**BSH0701P**	0.25
1.64	5000	850	2.2/7.6	**LXM32●D12N4**	3	**BSH0702P**	0.41
2.44	5000	1300	3.1/11.3	**LXM32●D18N4**	6	**BSH0703P**	0.58
2.7	4000	1100	3.3/9.6	**LXM32●D18N4**	6	**BSH1001P**	1.40
4	4000	1700	5.8/18.3	**LXM32●D18N4**	6	**BSH1002P**	2.31
6.3	3000	2000	8/28.3	**LXM32●D30N4**	10	**BSH1003P**	3.2
8.3	2500	2100	10/37.9	**LXM32●D30N4**	10	**BSH1004P**	4.2
9.5	2500	2500	11.1/27	**LXM32●D30N4**	10	**BSH1401P**	7.4
12.3	3000	3900	19.5/59.3	**LXM32●D72N4**	24	**BSH1402T**	12.7
12.9	3000	4100	27.8/90.2	**LXM32●D72N4**	24	**BSH1403T**	17.9
19	2500	5000	33.4/103.6	**LXM32●D72N4**	24	**BSH1404P**	23.7

(1) These values are given according to the supply voltage.
(2) M_0: Continuous stall torque, M_{max}: Peak stall torque.


PF516055

LXM32C●●●●●


PF516056

LXM32A●●●●●


PF516056

LXM32S●●●●●

Lexium 32C, 32A, 32M and 32S servo drives

Output current at 8 kHz		Nominal power at 8 kHz	Line current *(2)*	Max. prospective line Isc	Reference	Weight
Continuous (rms)	Peak (rms) *(1)*					
A	A	kW	A	kA		kg/*lb*
Single-phase supply voltage: 115 V ∼ 50/60 Hz, with integrated EMC filter *(3)*						
1.5	3	0.15	2.9	1	LXM32CU45M2	1.600/ *3.527*
					LXM32AU45M2	
					LXM32MU45M2	1.700/ *3.748*
					LXM32SU45M2	
3	6	0.3	5.4	1	LXM32CU90M2	1.700/ *3.748*
					LXM32AU90M2	
					LXM32MU90M2	1.800/ *3.968*
					LXM32SU90M2	
6	10	0.5	8.5	1	LXM32CD18M2	1.800/ *3.968*
					LXM32AD18M2	
					LXM32MD18M2	1.900/ *4.189*
					LXM32SD18M2	
10	15	0.8	12.9	1	LXM32CD30M2	2.000/ *4.409*
					LXM32AD30M2	
					LXM32MD30M2	2.100/ *4.630*
					LXM32SD30M2	
Single-phase supply voltage: 230 V ∼ 50/60 Hz, with integrated EMC filter *(3)*						
1.5	4.5	0.3	2.9	1	LXM32CU45M2	1.600/ *3.527*
					LXM32AU45M2	
					LXM32MU45M2	1.700/ *3.748*
					LXM32SU45M2	
3	9	0.5	4.5	1	LXM32CU90M2	1.700/ *3.748*
					LXM32AU90M2	
					LXM32MU90M2	1.800/ *3.968*
					LXM32SU90M2	
6	18	1	8.4	1	LXM32CD18M2	1.800/ *3.968*
					LXM32AD18M2	
					LXM32MD18M2	1.900/ *4.189*
					LXM32SD18M2	
10	30	1.6	12.7	1	LXM32CD30M2	2.000/ *4.409*
					LXM32AD30M2	
					LXM32MD30M2	2.100/ *4.630*
					LXM32SD30M2	

(1) Maximum value for 5 seconds
(2) Without line choke (see page 27)
(3) Additional EMC filters available as an option (see page 28)

LXM32M●●●●●

Lexium 32C, 32A, 32M and 32S servo drives (continued)

Output current at 8 kHz		Nominal power at 8 kHz	Line current (2)	Max. prospective line Isc	Reference	Weight
Continuous (rms)	Peak (rms)(1)					
A	A	kW	A	kA		kg/*lb*
Three-phase supply voltage: 208 V ∼ 50/60 Hz, with integrated EMC filter (3)						
1.8	6	0.35	1.8	5	LXM32CU60N4	1.700/ *3.748*
					LXM32AU60N4	
					LXM32MU60N4	1.800/ *3.968*
					LXM32SU60N4	
3.6	12	0.7	3.6	5	LXM32CD12N4	1.800/ *3.968*
					LXM32AD12N4	
					LXM32MD12N4	1.900/ *4.189*
					LXM32SD12N4	
6.2	18	1.2	6.2	5	LXM32CD18N4	2.000/ *4.409*
					LXM32AD18N4	
					LXM32MD18N4	2.100/ *4.630*
					LXM32SD18N4	
9.8	30	2	9.8	5	LXM32CD30N4	2.600/ *5.732*
					LXM32AD30N4	
					LXM32MD30N4	2.700/ *5.952*
					LXM32SD30N4	
21.9	72	5	21.9	5	LXM32CD72N4	4.800/ *10,.582*
					LXM32AD72N4	
					LXM32MD72N4	
					LXM32SD72N4	
Three-phase supply voltage: 480 V ∼ 50/60 Hz, with integrated EMC filter (3)						
1.5	6	0.4	1.2	5	LXM32CU60N4	1.700/ *3.748*
					LXM32AU60N4	
					LXM32MU60N4	1.800/ *3.968*
					LXM32SU60N4	
3	12	0.9	2.4	5	LXM32CD12N4	1.800/ *3.968*
					LXM32AD12N4	
					LXM32MD12N4	1.900/ *4.189*
					LXM32SD12N4	
6	18	1.8	4.5	5	LXM32CD18N4	2.000/ *4.409*
					LXM32AD18N4	
					LXM32MD18N4	2.100/ *4.630*
					LXM32SD18N4	
10	30	3	7	5	LXM32CD30N4	2.600/ *5.732*
					LXM32AD30N4	
					LXM32MD30N4	2.700/ *5.952*
					LXM32SD30N4	
24	72	7	14.6	5	LXM32CD72N4	4.800/ *10.582*
					LXM32AD72N4	
					LXM32MD72N4	
					LXM32SD72N4	
32	85	9	19,9	5	LXM32MD85N4	9.600/ *21.164*
40	100	11	23,3	5	LXM32MC10N4	

LXM32MD85N4
LXM32MC10N4

(1) Maximum value for 5 seconds
(2) Without line choke (see page 27)
(3) Additional EMC filters available as an option (see page 28)

Lexium 32C, 32A, 32M and 32S servo drives (continued)

Dimensions (overall)	**Width x Height x Depth mm/*in***
LXM32CU60N4, CD12N4, CD18N4 LXM32AU60N4, AD12N4, AD18N4	48 x 270 x 237/ *1.89 x 10.63 x 9.33*
LXM32MU60N4, MD12N4, MD18N4, MD30N4 LXM32CD30N4 LXM32AD30N4 LXM32SD60N4, SD12N4, SD18N4, SD30N4	68 x 270 x 237/ *2.68 x 10.63 x 9.33*
LXM32●D72N4	108 x 270 x 237/ *4.25 x 10.63 x 9.33*
LXM32MD85N4, LXM32MC10N4	180 x 385 x 240/ *7.08 x 15.18 x 9.45*

Servo drive name plate

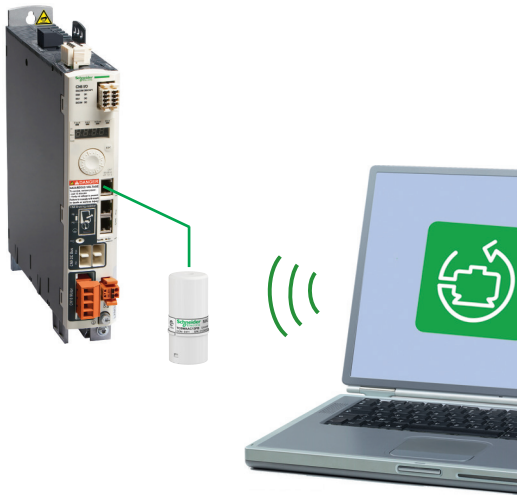
Description	**Use**	**Dimensions mm/*in***	**Unit reference**	**Weight kg/*lb***
Name plate **(sold in multiples of 50)**	This contains information about the servo drive. To be clipped onto the top right-hand part of the servo drive	385 x 130/ *15.16 x 5.12*	VW3M2501	–

Mounting accessories

Description	**Compatibility**	**Reference**	**Weight kg/*lb***
EMC kit , This contains: □ 1 EMC plate top □ 1 EMC plate bottom □ Screws and fixing collars □ 1 user manual	LXM32MD85N4, LXM32MC10N4	VW3M2106	0.300/ *0.661*
Flush mounting kit For mounting the drive power section outside the enclosure This contains: □ 4 fixing accessories □ 1 metal frame □ Screws and Seals □ 1 user manual	LXM32MD85N4, LXM32MC10N4	VW3M2606	2.100/ *4.630*

Documentation

The documentation for the Lexium 32C, 32A, 32M and 32S servo drives and BMH, BSH servo motors is available on our website.



Configuration with the SoMove setup software via Bluetooth®

SoMove setup software

SoMove setup software is used on Lexium 32 servo drives in just the same way as it is on other Schneider Electric drives and starters, to configure, adjust, debug, and maintain the drive.

It communicates via a Bluetooth® wireless link with the servo drive, which is equipped with the Modbus-Bluetooth® adapter (VW3A8114).

It can be downloaded from our website.

For presentation, description, and references, please consult our catalog "SoMove, Setup software for motor control devices".

PF080925

Configuration of a Lexium 32 in its packaging with the VW3A8121 Multi-Loader tool + VW3A8126 cordset

Multi-Loader configuration tool

The Multi-Loader tool enables several configurations to be copied from a PC or a servo drive and loaded onto another servo drive.
The Lexium 32 servo drives do not need to be powered up.

References

Description	Reference	Weight kg/*lb*
Multi-Loader configuration tool 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 adapter ■ 4 AA 1.5 V LR6 round batteries	VW3A8121	–
Cordset for Multi-Loader tool For connecting the Multi-Loader tool to the Lexium 32 servo drive in its packaging. Equipped with: ■ A non-locking RJ45 connector with special mechanical catch on the drive end and ■ An RJ45 connector on the Multi-Loader end	VW3A8126	–

PF080995

Duplication of an application with the VW3M8705 memory card

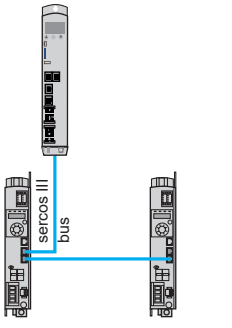
Memory card

Description	Reference	Weight kg/*lb*
Memory card Used to store the parameters of the Lexium 32 servo drive. Another Lexium 32 servo drive can be commissioned immediately in the event of maintenance or duplication.	VW3M8705	–
Pack of 25 memory cards	VW3M8704	–

VW3M2201

VW3M2207

Modicon LMC078 motion controller



Example of architecture on sercos III with control by Modicon LMC078 motion controller

VW3E5001R●●●

Connection accessories

Replacement connectors

Designation	For use with	Description	Reference	Weight kg/*lb*
Set of connectors	Lexium 32C	Comprising: ■ 4 connectors for the line supply ■ 3 connectors for the I/O ■ 2 connectors for the motor power supply ■ 1 connector for the holding brake	VW3M2201	–
	Lexium 32A	Comprising: ■ 4 connectors for the line supply ■ 2 connectors for the I/O ■ 2 connectors for the motor power supply ■ 1 connector for the holding brake	VW3M2202	–
	Lexium 32M	Comprising: ■ 4 connectors for the line supply ■ 2 connectors for the I/O ■ 2 connectors for the motor power supply ■ 1 connector for the holding brake	VW3M2203	–
	Lexium 32 (all types)	Comprising: ■ 10 connectors for creating extension cordsets for the DC bus	VW3M2207	–

Cordsets

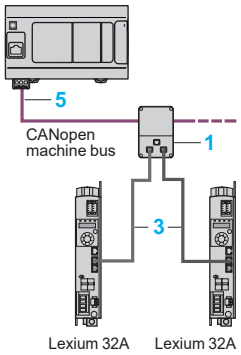
For use with		Description	Length m/*ft*	Unit reference	Weight kg/*lb*
Daisy chain connection of the DC bus	Between 1 Altivar Machine ATV320 drive *(1)* and 1 Lexium 32 servo drive: ATV320●●●●M2B/ LXM32●●●●M2 ATV320●●●●N4B/ LXM32●●●●N4	Equipped with 2 connectors **(sold in lots of 5)**	0.1/ *0.33*	VW3M7101R01	–
Daisy chain connection or pulse control	For Lexium 32C and 32M servo drives *(2)*	Equipped with 2 RJ45 connectors	0.3/ *0.98*	VW3M8502R03	0.025/ *0.055*
			1.5/ *4.92*	VW3M8502R15	0.062/ *0.137*
		Equipped with 1 RJ45 connector and a free end	3/ *9.84*	VW3M8223R30	–
Adapter for motor encoder cable	Replacement of a Lexium 05 servo drive with a Lexium 32 servo drive	Equipped with one 10-way Molex connector and one RJ45 connector (Lexium 32 servo drive end).	1/*3,28*	VW3M8111R10	–
	Replacement of a Lexium 15 servo drive with a Lexium 32 servo drive	Equipped with one 15-way female SUB-D connector and one RJ45 connector (Lexium 32 servo drive end).	1/*3,28*	VW3M8112R10	–

Cable and cordsets

Designation	For use with	Length m/*ft*	Reference	Weight kg/*lb*
Daisy chain DC bus cable Shielded cable for Daisy chain connection of the DC bus	Between 1 Altivar Machine ATV320 drive *(1)* and 1 servo drive Lexium 32 : ATV320●●●●M2B/LXM32●●●●M2 ATV320●●●●N4B/LXM32●●●●N4	15/ *49.21*	VW3M7102R150	–
sercos III cordsets for redundant ring Preassembled cordsets with an RJ 45 connector at each end	Between Modicon LMC078 motion controller and LXM32S●●●M2, LXM32S●●●N4 servo drives	0.5/ *1.64*	VW3E5001R005	–
		1/ *3.28*	VW3E5001R010	–
		1.5/ *4.92*	VW3E5001R015	–
		2/ *6.56*	VW3E5001R020	–
		3/ *9.84*	VW3E5001R030	–
		5/ *16.40*	VW3E5001R050	–
		10/ *32.81*	VW3E5001R100	–
		15/ *49.21*	VW3E5001R150	–
		20/ *65.62*	VW3E5001R200	–
		25/ *82.02*	VW3E5001R250	–
		30/ *98.42*	VW3E5001R300	–
		40/ *131.23*	VW3E5001R400	–
		50/ *164.04*	VW3E5001R500	–

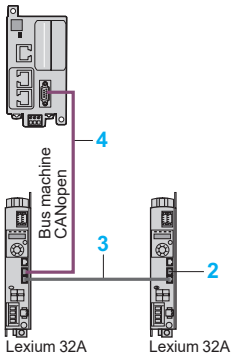
(1) Variable speed offer, consult catalog ref. DIA2ED2160311EN or our website
(2) Except for LXM32MD85N4 and LXM32MC10N4 servo drives

Modicon M241 logic controller



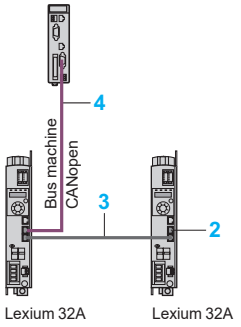
Example of architecture with control by Modicon M241 logic controller

Modicon M251 logic controller



Example of architecture with control Modicon M251 logic controller

Motion controllers
LMC Eco/Pro2



Example of architecture with control by Motion controller LMC Eco/Pro2

CANopen and CANmotion machine bus for Lexium 32A servo drives

Lexium 32A servo drives can be directly connected to the CANopen machine bus using an RJ45 connector. To simplify daisy chain connection, each servo drive is equipped with two connectors of this type (marked CN4 and CN5).
The communication function provides access to the servo drive's configuration, adjustment, control, and monitoring functions.
Used with a Motion controllers LMC Eco/Pro2, the CANmotion bus can be used to control motion for applications with up to 8 Lexium 32A servo drives.

Connection accessories *(1)*

Description	Use	Item no.	Reference	Weight kg/*lb*
IP 20 CANopen tap junction 2 RJ45 ports	Tap-off from trunk cable for RJ45 wiring	1	VW3CANTAP2	0.480/ *1.058*
Line terminator 120 Ω (equipped with one RJ45 connector)	Connection to the RJ45 connector	2	TCSCAR013M120	0.009/ *0.020*

Cordsets and cables *(1)*

Description	Use		Item no.	Length m/*ft*	Reference	Weight kg/*lb*
	From	To				
CANopen cordsets *(1)* equipped with 2 RJ45 connectors	VW3CANTAP2 tap junction LXM32A servo drive (CN4 and CN5 connectors)	LXM32A servo drive (CN4 and CN5 connectors)	3	0.3/ *0.98*	VW3CANCARR03	0.320/ *0.705*
				1/ *3.28*	VW3CANCARR1	0.500/ *1.102*
CANopen cordsets *(1)* equipped with one 9-way female SUB-D connector with integrated line terminator and one RJ45 connector	Modicon M241/M251 logic controllers Motion controllers LMC Eco/Pro2	LXM32A servo drive (CN4 and CN5 connectors)	4	1/ *3.28*	VW3M3805R010	–
				3/ *9.843*	VW3M3805R030	–
CANopen cables *(1)* Standard cables, CE marking Low smoke, zero halogen Flame retardant (IEC 60332-1)	PLC	VW3CANTAP2 tap junction	5	50/ *164.04*	TSXCANCA50	4.930/ *10.869*
				100/ *328.08*	TSXCANCA100	8.800/ *19.401*
				300/ *984.25*	TSXCANCA300	24.560/ *54.145*
CANopen cables *(1)* UL certification, CE marking Flame retardant (IEC 60332-2)	PLC	VW3CANTAP2 tap junction	5	50/ *164.04*	TSXCANCB50	3.580/ *7.893*
				100/ *328.08*	TSXCANCB100	7.840/ *17.284*
				300/ *984.25*	TSXCANCB300	21.870/ *48.215*
CANopen cables *(1)* Cables for harsh environments *(2)* or mobile installation, CE marking Low smoke, zero halogen Flame retardant (IEC 60332-1)	PLC	VW3CANTAP2 tap junction	5	50/ *164.04*	TSXCANCD50	3.510/ *7.738*
				100/ *328.08*	TSXCANCD100	7.770/ *17.130*
				300/ *984.25*	TSXCANCD300	21.700/ *47.840*

(1) For other CANopen machine bus connection accessories, please consult our website
(2)Harsh environment:
- Resistance to hydrocarbons, industrial oils, detergents, solder splashes
- Relative humidity up to 100%
- Saline atmosphere
- Significant temperature variations
- Operating temperature between - 10 °C/+ 14 °F and + 70 °C/+ 158 °F

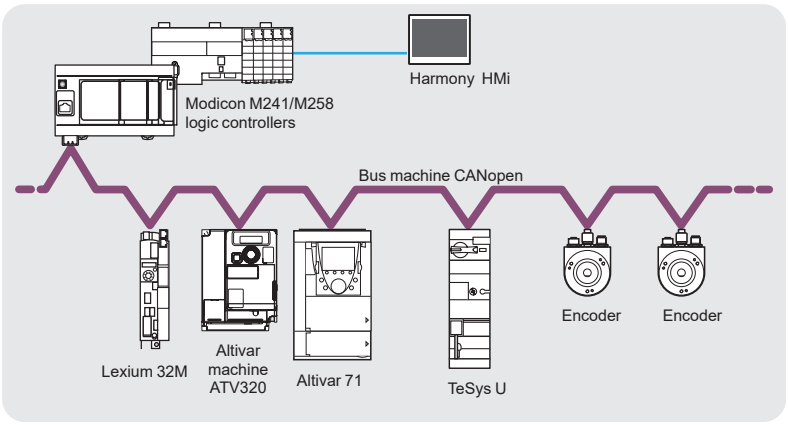
Lexium 32 and Motors
Lexium 32 Servo drives
CANopen/CANmotion machine bus

Lexium 32A servo drives integrate the CANopen communication protocol as standard (see page 15).
If one of the communication cards (available as options) is added, the Lexium 32M servo drive can be connected to the following communication buses and networks:
- CANopen and CANmotion machine bus
- PROFIBUS DP V1 fieldbus
- DeviceNet fieldbus
- EtherNet/IP network
- EtherCAT fieldbus
- PROFINET fieldbus
- Modbus TCP network.

The Lexium 32M servo drive can only take one communication card.

CANopen and CANmotion machine bus

Presentation



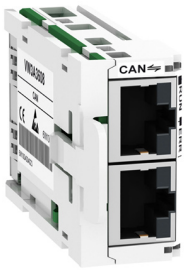
The CANopen machine bus is specifically designed for integration in control system architectures. It provides openness and interoperability for various devices (drives, motor starters, smart sensors, etc.).
A tiered CANopen connectivity solution reduces costs and optimizes the creation of the control system architecture, providing:
- Reduced cabling time
- Greater reliability of the load
- Flexibility should you need to add or remove equipment

It is very easy to set up.
The same communication card provides access to either the CANopen or CANmotion machine bus.
The characteristics of the cards are available on our website

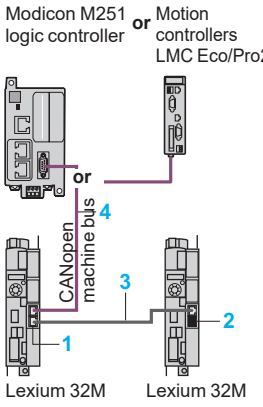
Optimized solution for connection to the CANopen/CANmotion machine bus

To simplify the setup of Lexium 32M servo drives, 3 communication cards are available, each with different connectors:
- CANopen/CANmotion daisy chain card with connection to the bus via 2 RJ45 connectors, providing an optimized solution for daisy chain connection to the CANopen machine bus (see page 15)
- CANopen/CANmotion card with connection to the bus via spring terminals (see page 15)
- CANopen/CANmotion card with connection to the bus via 9-way male SUB-D connector (see page 16)

Installing the CANopen communication card VW3A3608



VW3A3608 CANopen communication card



Daisy chain connection with VW3A3608 CANopen card

CANopen/CANmotion machine bus: connection via RJ45 connector

CANopen/CANmotion daisy chain communication card

Description	Type of port	Item no.	Unit reference	Weight kg/*lb*
CANopen/CANmotion daisy chain card for Lexium 32M servo drives	2 RJ45 connectors	1	VW3A3608	–

Connection accessories for VW3A3608 CANopen daisy chain card

CANopen line terminator *(1)*	With RJ45 connector	2	TCSCAR013M120	0.009/ *0.020*
CANopen IP 20 tap junctions	2 RJ45 connectors	–	VW3CANTAP2	0.250/ *0.551*

Cordsets for VW3A3608 CANopen/CANmotion daisy chain card

Description	Use		Item no.	Length m/*ft*	Reference	Weight kg/*lb*
	From	To				
CANopen cordsets equipped with one RJ45 connector at each end	LXM32A servo drive LXM32M servo drive VW3A3608 card VW3CANTAP2 tap junction	VW3A3608 card LXM32A servo drive LXM32M servo drive	3	0.3/ *0.98*	VW3CANCARR03	0.320/ *0.705*
				1/ *3.28*	VW3CANCARR1	0.500/ *1.102*
CANopen cordsets equipped with one 9-way female SUB-D connector with integrated line terminator and one RJ45 connector	M241 logic controller Motion controllers LMC Eco/Pro2	VW3A3608 card LXM32A servo drive LXM32M servo drive	4	1/ *3.28*	VW3M3805R010	–
				3/ *9.84*	VW3M3805R030	–

CANopen/CANmotion machine bus: connection via spring terminals

CANopen/CANmotion communication card

Description	Type of port	Item no.	Unit reference	Weight kg/*lb*
CANopen/CANmotion card for Lexium 32M servo drives	One 5-way spring terminal block	1	VW3A3628	–

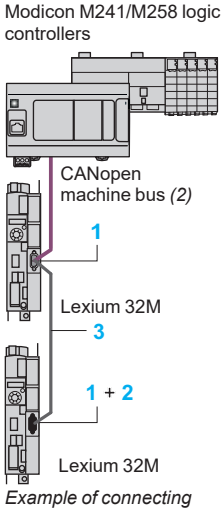
Connection accessory for VW3A3628 CANopen/CANmotion communication card

CANopen line terminator *(1)*	Stripped wires for spring terminal connector	2	TCSCAR01NM120	–

Connection cables for VW3A3628 CANopen/CANmotion communication card

Description	Use		Item no.	Length m/*ft*	Reference	Weight kg/*lb*
	From	To				
CANopen cables Standard cables, CE marking Low smoke zero halogen Flame retardant (IEC 60332-1)	Programmable controller	VW3A3628 card	3	50/ *164.04*	TSXCANCA50	4.930/ *10.869*
				100/ *328.08*	TSXCANCA100	8.800/ *19.401*
				300/ *984.25*	TSXCANCA300	24.560/ *54.145*
CANopen cables UL certification, CE marking Flame retardant (IEC 60332-2)	Programmable controller	VW3A3628 card	3	50/ *164.04*	TSXCANCB50	3.580/ *7.893*
				100/ *328.08*	TSXCANCB100	7.840/ *17.284*
				300/ *984.25*	TSXCANCB300	21.870/ *48.215*
CANopen cables Cable for harsh environment *(3)* or mobile installation, CE marking Low smoke zero halogen Flame retardant (IEC 60332-1)	Programmable controller	VW3A3628 card	3	50/ *164.04*	TSXCANCD50	3.510/ 7.738
				100/ *328.08*	TSXCANCD100	7.770/ *17.130*
				300/ *984.25*	TSXCANCD300	21.700/ *47.840*

VW3A3628 CANopen communication card



Example of connecting Lexium 32M with VW3A3628 card

(1) Sold in lots of 2.
(2) Cable dependent on the type of controller or PLC; please refer to the corresponding catalog.
(3) Harsh environment: - resistance to hydrocarbons, industrial oils, detergents, solder splashes - relative humidity up to 100% - saline atmosphere - significant temperature variations, operating temperature between - 10 °C/+ 14 °F and + 70 °C/+ 158 °F

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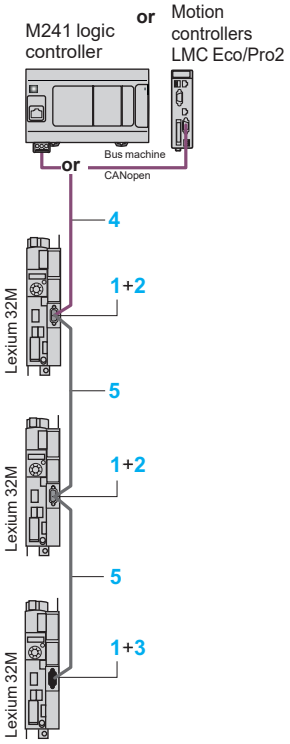
VW3A3618 CANopen communication card



Example of connection to the CANopen machine bus with VW3A3618 card

CANopen/CANmotion machine bus: connection via SUB-D connector

CANopen/CANmotion communication card

Description	Type of port	Item no.	Reference	Weight kg/*lb*
CANopen/CANmotion card for Lexium 32M servo drives	One 9-way male SUB-D connector	1	VW3A3618	–

Connection accessories for VW3A3618 CANopen/CANmotion card

Description	Type of port	Item no.	Unit reference	Weight kg/*lb*
9-way female SUB-D **connector** with screw terminals. Line termination switch that can be deactivated	–	2	VW3M3802	–
CANopen line terminator *(1)*	Stripped wires for spring terminal connector	3	TCSCAR01NM120	–
CANopen IP20 connectors, 9-way female SUB-D Line termination switch that can be deactivated	Straight	–	TSXCANKCDF180T	0.049/ *0.108*
	Right angle elbow	–	TSXCANKCDF90T	0.046/ *0.101*
	Right angle elbow with 9-way SUB-D for connecting PC or diagnostics tool	–	TSXCANKCDF90TP	0.051/ *0.112*

Cordsets for VW3A3618 CANopen/CANmotion card

Description	Use		Item no.	Length m/*ft*	Reference	Weight kg/*lb*
	From	To				
CANopen IP 20 cordsets equipped with one 9-way female SUB-D 9 connector at each end. Standard cables, CE marking Low smoke zero halogen Flame retardant (IEC 60332-1)	Motion controllers LMC Eco/Pro2	VW3A3618 card	4	0.3/ *0.98*	TSXCANCADD03	0.091/ *0.201*
				1/ *3.28*	TSXCANCADD1	0.143/ *0.315*
				3/ *9.84*	TSXCANCADD3	0.295/ *0.650*
				5/ *16.40*	TSXCANCADD5	0.440/ *0.970*
CANopen IP 20 cordsets equipped with one 9-way female SUB-D 9 connector at each end. Standard cables, UL certification, CE marking Flame retardant (IEC 60332-2)	Motion controllers LMC Eco/Pro2	VW3A3618 card	4	0.3/ *0.98*	TSXCANCBDD03	0.086/ *0.190*
				1/ *3.28*	TSXCANCBDD1	0.131/ *0.289*
				3/ *9.84*	TSXCANCBDD3	0.268/ *0.591*
				5/ *16.40*	TSXCANCBDD5	0.400/ *0.882*

CANopen/CANmotion machine bus: other connection accessories

Description	Use		Item no.	Length m/*ft*	Reference	Weight kg/*lb*
	From	To				
CANopen cables Standard cables, CE marking Low smoke zero halogen Flame retardant (IEC 60332-1)	VW3M3802 connector TSXCANKCDF90T connector M241/M238 logic controllers	VW3M3802 connector TSXCANKCDF90T connector M241/M238 logic controllers	5	50/ *164.04*	TSXCANCA50	4.930/ *10.869*
				100/ *328.08*	TSXCANCA100	8.800/ *19.401*
				300/ 984.25	TSXCANCA300	24.560/ *54.145*
CANopen cables UL certification, CE marking Flame retardant (IEC 60332-2)	VW3M3802 connector TSXCANKCDF90T connector M241/M238 logic controllers	VW3M3802 connector TSXCANKCDF90T connector VW3CANTAP2 tap junction	5	50/ *164.04*	TSXCANCB50	3.580/ *7.893*
				100/ *328.08*	TSXCANCB100	7.840/ *17.284*
				300/ 984.25	TSXCANCB300	21.870/ *48.215*
CANopen cables Cable for harsh environment *(2)* or mobile installation, CE marking Low smoke zero halogen Flame retardant (IEC 60332-1)	VW3M3802 connector TSXCANKCDF90T connector M241/M238 logic controllers	VW3M3802 connector TSXCANKCDF90T connector VW3CANTAP2 tap junction	5	50/ *164.04*	TSXCANCD50	3.510/ *7.738*
				100/ *328.08*	TSXCANCD100	7.770/ *17.130*
				300/ 984.25	TSXCANCD300	21.700/ *47.840*

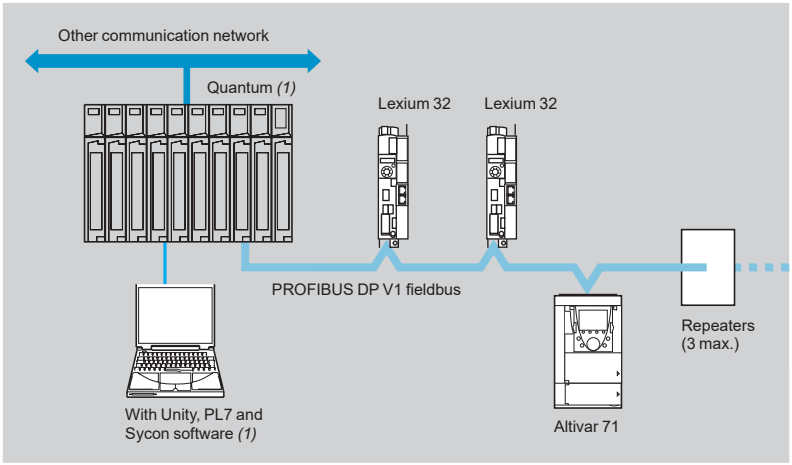
(1) Sold in lots of 2.
(2) Harsh environment: - resistance to hydrocarbons, industrial oils, detergents, solder splashes
- relative humidity up to 100% - saline atmosphere
- significant temperature variations, operating temperature between - 10 °C/+ 14 °F and + 70 °C/+ 158 °F

PROFIBUS DP V1 fieldbus

Presentation

PF080928

VW3A3607 PROFIBUS DP V1 communication card



PROFIBUS DP is a fieldbus for industrial communication.
The Lexium 32M servo drive is connected to the PROFIBUS DP V1 fieldbus via the VW3A3607 communication card.
Other devices can be connected to the PROFIBUS DP V1 bus such as PLCs *(1)*, STB I/O *(2)*, Altivar variable speed drives *(3)*, Osicoder rotary encoders *(4)*, etc.

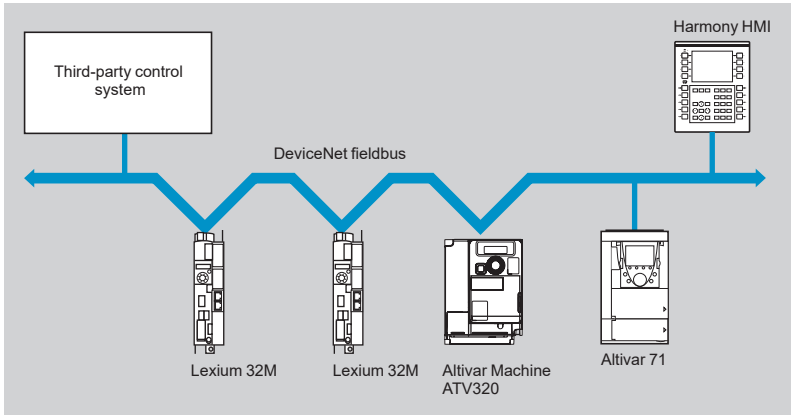
Reference

Description	For use with	Type of port	Reference	Weight kg/*lb*
PROFIBUS DP V1 card	Lexium 32M servo drives	One 9-way female SUB-D connector	VW3A3607	0.140/ *0.309*

DeviceNet fieldbus

Presentation

VW3M3301 DeviceNet communication card



The DeviceNet fieldbus is used in industry to manage a large number of devices remotely.
Connection to the DeviceNet fieldbus allows Lexium 32M servo drives to standardize motion control solutions, while remaining independent of the system controlling the machine.

Reference

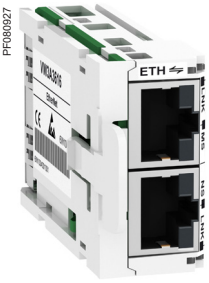
Description	For use with	Type of port	Profiles supported	Reference	Weight kg/*lb*
DeviceNet card (supported by firmware version ≤ V1.20)	Lexium 32M servo drive	One removable spring connector, 5 contacts with 5.08 pitch	CIP motion profile Profile compatible with PLCopen libraries	VW3M3301	–

(1) Please refer to "Automation platform Modicon Quantum" catalog Ref.MKTED2120701EN
(2) Please refer to "IP 20 distributed inputs/outputs Modicon STB" catalog Ref MKTED2130401EN
(3) Please refer to "Altivar Machine ATV320 variable speed drives" catalog Ref DIA2ED2160311EN
(4) Please refer to Sensors catalogs on the website www.tesensors.com.

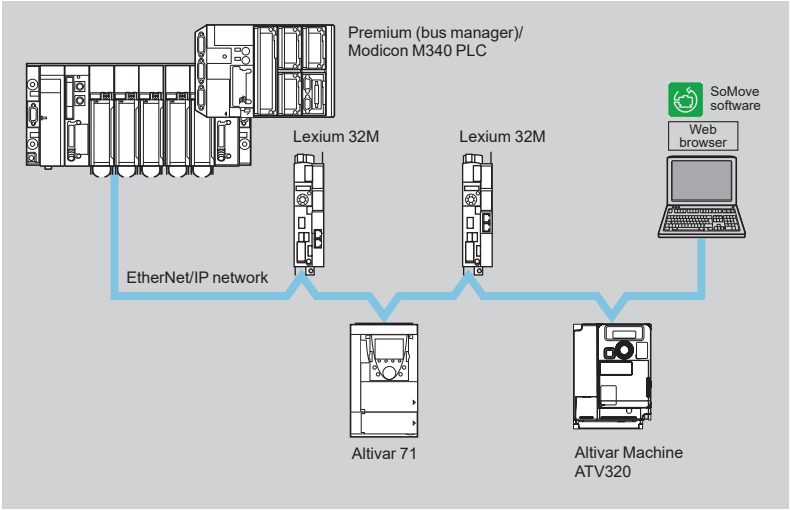
EtherNet/IP network

Presentation

PF080927



VW3A3616 EtherNet/IP communication card



The EtherNet/IP network is a protocol specially designed for industrial environments. It uses the widely implemented Ethernet protocols TCP (Transmission Control Protocol) and IP (Internet Protocol), thus offering an integrated transparent connection system to the company network.
Thanks to its high speed, the network no longer restricts the application's performance. It is the pre-eminent open protocol and supports the following types of communication:

- Web pages
- File transfers
- Messaging

Reference

Description	For use with	Type of port	Reference	Weight kg/*lb*
EtherNet/IP card ■ 10/100 Mbps, half and full duplex ■ Embedded Web server	Lexium 32M servo drives	2 RJ45 connectors	VW3A3616	0.300/ *0.661*

EtherNet/IP network connection accessories

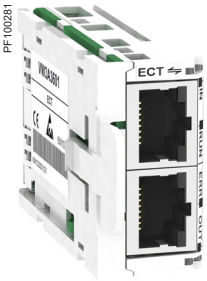
Description	Type of port	Length m/*ft* *(1)*	Reference	Weight kg/*lb*
Connexium cordsets (conforming to EIA/TIA-568, category 5 and IEC1180/EN50173, class D, standards)				
Straight shielded twisted pair cordsets	2 RJ45 connectors	2/ *6.56*	490NTW00002	–
		5/ *16.40*	490NTW00005	–
		12/ *39.37*	490NTW00012	–
Crossed shielded twisted pair cordsets	2 RJ45 connectors	5/ *16.40*	490NTC00005	–
		15/ *49.21*	490NTC00015	–
Connexium cordsets (conforming to UL and CSA 22.1 standards)				
Straight shielded twisted pair cordsets	2 RJ45 connectors	2/ *6.56*	490NTW00002U	–
		5/ *16.40*	490NTW00005U	–
		15/ *49.21*	490NTW00012U	–
Crossed shielded twisted pair cordsets	2 RJ45 connectors	5/ *16.40*	490NTC00005U	–

(1) Also available in 40 and 80 m/131 and 262 ft lengths. To order other Connexium connection components, please refer to our website

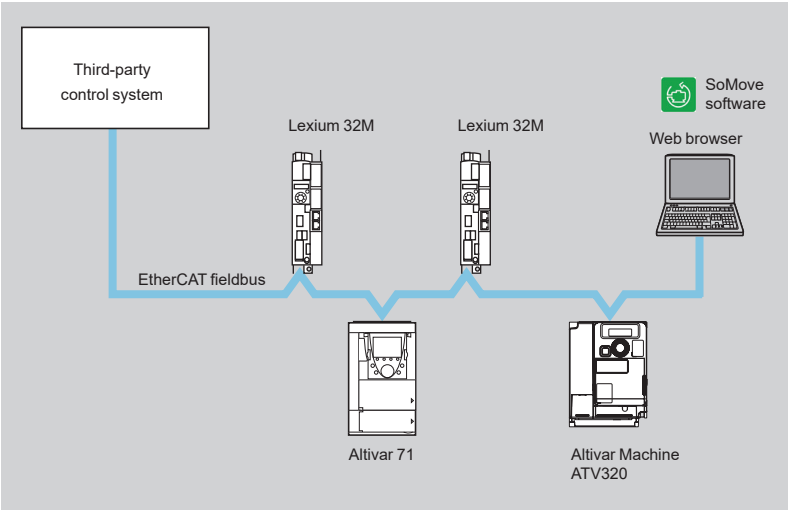
EtherCAT fieldbus

Presentation

PF100281



VW3A3601 EtherCAT communication card



EtherCAT (EtherNet for Control Automation Technology) is an EtherNet-based open fieldbus system. This means that EtherNet technologies, such as embedded Web server, e-mail, and FTP transfer, can be used in the EtherCAT environment.
The EtherCAT fieldbus is intended for applications requiring very short cycle times (≤ 250 µs) with low jitter (≤1 µs) for synchronization purposes.
These characteristics enable the EtherCAT network to achieve very high performance levels in the control systems field, with low equipment costs.

Reference

Description	For use with	Type of port	Reference	Weight kg/*lb*
EtherCAT card	Lexium 32M servo drives	2 RJ45 connectors	VW3A3601	0.300/ *0.661*

EtherCAT fieldbus connection accessories

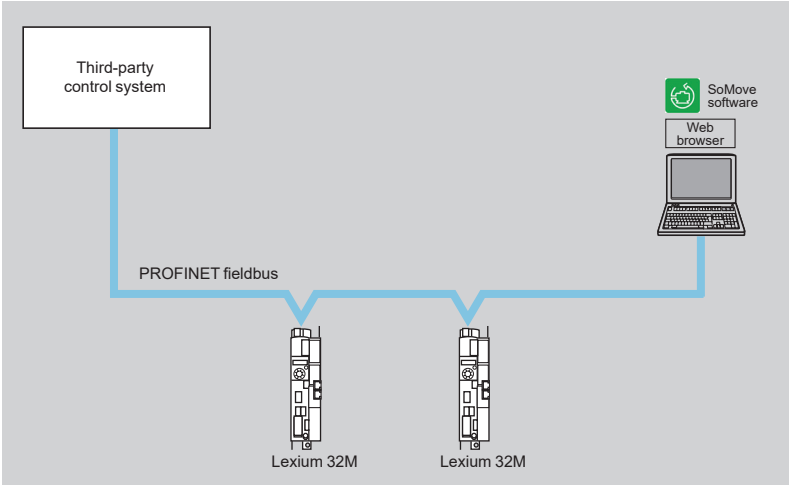
Description	Type of port	Length m/*ft* *(1)*	Reference	Weight kg/*lb*
Connexium cordsets (conforming to EIA/TIA-568, category 5, and IEC1180/EN50173, class D, standards)				
Straight shielded twisted pair cordsets	2 RJ45 connectors	2/ *6.56*	490NTW00002	–
		5/ *16.40*	490NTW00005	–
		12/ *39.37*	490NTW00012	–
Crossed shielded twisted pair cordsets	2 RJ45 connectors	5/ *16.40*	490NTC00005	–
		15/ *49.21*	490NTC00015	–
Connexium cordsets (conforming to UL and CSA 22.1 standards)				
Straight shielded twisted pair cordsets	2 RJ45 connectors	2/ *6.56*	490NTW00002U	–
		5/ *16.40*	490NTW00005U	–
		15/ *49.21*	490NTW00012U	–
Crossed shielded twisted pair cordsets	2 RJ45 connectors	5/ *16.40*	490NTC00005U	–

(1) Also available in 40 and 80 m/131 and 262 ft lengths.To order other Connexium connection components, please refer to our website

PROFINET fieldbus

Presentation

VW3M3308 PROFINET communication card



PROFINET is an Ethernet-based fieldbus that allows you to network products from different manufacturers without the need for special interface adaptation.
The following functions can be performed via the fieldbus:
- Reading and writing parameters
- Reading and writing inputs and outputs
- Diagnostics and monitoring functions

Networking the product:
- The product is networked via an RJ45 interface and operates as an I/O device on the PROFINET network. Data is exchanged according to the producer-consumer model.

Reference

Description	For use with	Type of port	Reference	Weight kg/*lb*
PROFINET card	Lexium 32M servo drives	2 RJ45 connectors	VW3M3308	0.300/ *0.661*

PROFINET fieldbus connection accessories

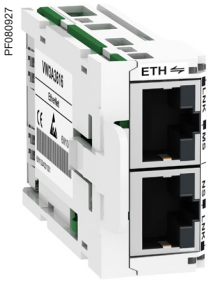
Description	Type of port	Length m/*ft* *(1)*	Reference	Weight kg/*lb*
Connexium cordsets (conforming to EIA/TIA-568, category 5 and IEC1180/EN50173, class D standards)				
Straight shielded twisted pair cordsets	2 RJ45 connectors	2/ *6.56*	490NTW00002	–
		5/ *16.40*	490NTW00005	–
		12/ *39.37*	490NTW00012	–
Crossed shielded twisted pair cordsets	2 RJ45 connectors	5/ *16.40*	490NTC00005	–
		15/ *49.21*	490NTC00015	–
Connexium cordsets (conforming to UL and CSA 22.1 standards)				
Straight shielded twisted pair cordsets	2 RJ45 connectors	2/ *6.56*	490NTW00002U	–
		5/ *16.40*	490NTW00005U	–
		15/ *49.21*	490NTW00012U	–
Crossed shielded twisted pair cordsets	2 RJ45 connectors	5/ *16.40*	490NTC00005U	–

(1) Also available in 40 and 80 m/131 and 262 ft lengths. To order other Connexium connection components, please refer to our website

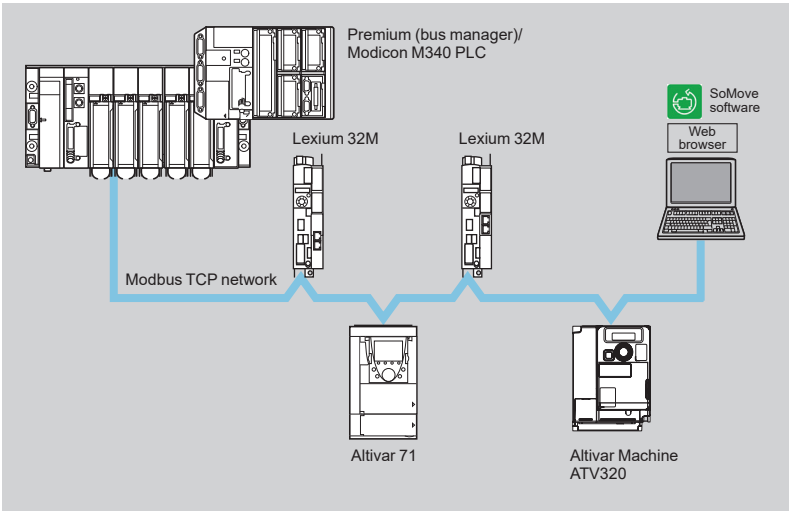
Modbus TCP network

Presentation

PF080927



VW3A3616 Modbus TCP communication card



Different products with a Modbus TCP interface can be operated in the same fieldbus.
Modbus TCP provides a common basis for interchanging commands and data between the network devices.
The product supports the following functions via Modbus TCP:

- Automatic IP address assignment via BOOTP or DHCP
- Automatically obtaining configuration data via the FDR (Fast Device Replacement) service
- Commissioning via commissioning software
- Diagnostics and configuration via integrated Web server
- Reading and writing parameters
- Controlling the drive
- Monitoring inputs and outputs
- Diagnostics and monitoring functions

Reference

Description	For use with	Type of port	Reference	Weight kg/*lb*
Modbus TCP card ■ 10/100 Mbps, half and full duplex ■ Embedded Web server	Lexium 32M servo drives	2 RJ45 connectors	VW3A3616	0.300/ *0.661*

Modbus TCP network connection accessories

Description	Type of port	Length m/*ft* *(1)*	Reference	Weight kg/*lb*
Connexium cordsets (conforming to EIA/TIA-568, category 5 and IEC1180/EN50173, class D standards)				
Straight shielded twisted pair cordsets	2 RJ45 connectors	2/ *6.56*	490NTW00002	–
		5/ *16.40*	490NTW00005	–
		12/ *39.37*	490NTW00012	–
Crossed shielded twisted pair cordsets	2 RJ45 connectors	5/ *16.40*	490NTC00005	–
		15/ *49.21*	490NTC00015	–
Connexium cordsets (conforming to UL and CSA 22.1 standards)				
Straight shielded twisted pair cordsets	2 RJ45 connectors	2/ *6.56*	490NTW00002U	–
		5/ *16.40*	490NTW00005U	–
		15/ *49.21*	490NTW00012U	–
Crossed shielded twisted pair cordsets	2 RJ45 connectors	5/ *16.40*	490NTC00005U	–

(1) Also available in 40 and 80 m/131 and 262 ft lengths.To order other Connexium connection components, please refer to our website

PF080920

VW3M3401 resolver card

PF080944

VW3M3402 encoder interface card (digital output)

PF080945

VW3M3403 encoder interface card (analog output)

Presentation

The Lexium 32M servo drive can take an encoder interface card. This has an input available for an additional encoder, thus offering the following advantages:

- The ability to connect to third-party motors, which increases the installation's flexibility
- The ability to improve positioning accuracy by reducing the effect of mechanical backlash thanks to position measurement directly on the machine, and to meet the requirements of simple applications or complex systems that need a very quick response or very accurate path following

3 cards are available depending on the encoder technology:

- Resolver encoder
- Encoder with digital output
- Encoder with analog output

References

Description	Technology type	Power supply	Encoder type		Reference	Weight
			Machine encoder	Motor encoder		
		V ⎓				kg/*lb*
Resolver card				■	VW3M3401	–
Encoder interface card with digital output	A/B/I	5	■		VW3M3402	–
	SSI	12	■			
	BISS	5	■			
	EnDat 2.2	5	■			
Encoder interface card with analog output	1 Vpp	5		■	VW3M3403	–
	1 Vpp/Hall	5		■		
	Hiperface	12	■	■		

Connection accessories

Description	Composition	Length m/*ft*	Reference	Weight kg/*lb*
Cordset				
Cordset equipped with 1 x 15-way high density male SUB-D connector For card with digital or analog output	–	1/ *3.28*	VW3M4701	–
Connecting cable				
Cable for creating cordsets for encoder interface cards	[5 x (2 x 0.25 mm²/ *AWG 24*) + (2 x 0.5 mm²/ *AWG 20*)]	100/ *328.08*	VW3M8221R1000	21.000/ *46.297*

incremental encoder

Absolute encoder

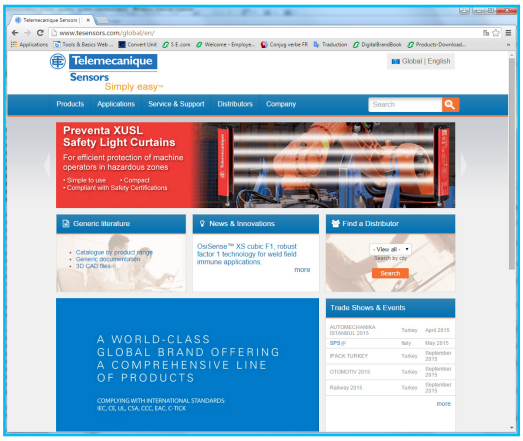
Machine encoders for VW3M3402 encoder card

Presentation

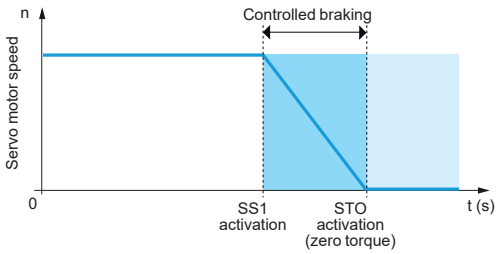
To meet requirements for machine encoders, Schneider Electric recommends the XCC range of Opto-electronic rotary encoders, made by Telemecanique Sensors. The rotary encoders are connected to the VW3M3402 encoder interface card with digital output

The XCC offer consists of incremental encoders and absolute encoders:

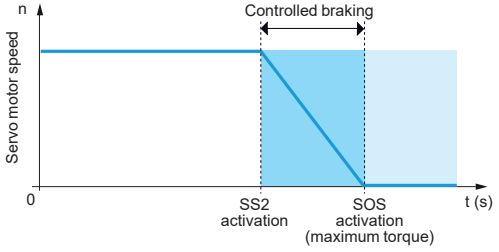
- The incremental encoder, with configurable resolution and A/B/I output signal
- The absolute encoders with SSI interface.



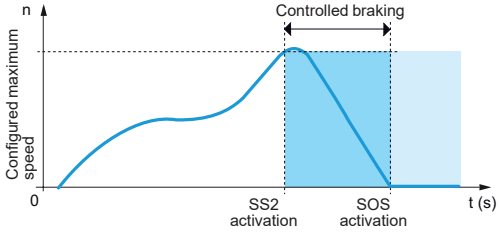
More information on XCC offer, Please consult www.tesensors.com web-site.



Activation of the Safe Stop 1 (SS1) function

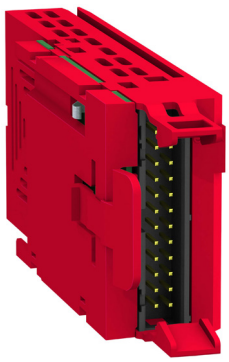


Activation of the Safe Stop 2 (SS2) function



Activation of the Safe Limited Speed (SLS) function

PF080921



VW3M3501 safety card

Presentation

The eSM safety card allows Lexium 32 servo drives to access additional safety functions as well as the Safety Torque Off (STO) function. This offers a complex safety device that helps to provide installation monitoring.

The eSM card optimizes the overall cost of the installation by avoiding the need for additional external devices, while conforming to international safety standards. As a result, wiring is cheaper and quicker.

It also improves performance during maintenance by reducing machine or installation downtime and increases the safety of any work carried out.

The eSM card complies with the machinery standard ISO 13849-1, performance level “e” (PL e), functional safety standard IEC/EN 61508, SIL 3 capability, and functional safety standard IEC/EN 62061, SIL 3 capability.

It includes safety functions compliant with standard IEC/EN 61800-5-2.
These functions, required in the majority of applications, are as follows:

- Safe Torque Off (STO)
- Safe Stop 1 (SS1)
- Safe Stop 2 (SS2)
- Safe Limited Speed (SLS)
- Safe Operating Stop (SOS)

Safety functions

Safe Stop 1 (SS1) function

The SS1 function is used to achieve a category 1 safe stop. After activation of the function, the servo motor is braked in a controlled manner, maintaining the power on the actuators. The power is then removed when the actuators stop after the machine has come to a halt.

Safe Stop 2 (SS2) function

The SS2 function is used to achieve a category 2 safe stop. After activation of the function, the servo motor is braked in a controlled manner, maintaining the power on the actuators. Once the motor has come to a halt, it is kept at a standstill with the Safe Operating Stop (SOS) function.

Safe Limited Speed (SLS) function

The SLS function is used to monitor the configured maximum speed. If this speed is exceeded, the servo motor will be stopped in accordance with SS2.

Safe Operating Stop (SOS) function

The SOS function is used to monitor any deviation from the standstill position once the servo motor has come to a halt.

References

Description	Power supply	Cable length	Unit reference	Weight
	V	m/*ft*		kg/*lb*
eSM safety card for Lexium 32M servo drives	24 ⎓ (min. 19, max. 30)	–	VW3M3501	–
Cordset preassembled with a 24-way female connector (safety card end) and a free end	–	3/ *9.84*	VW3M8801R30	–
Cordsets preassembled with 2 x 24-way female connectors	–	1.5/ *4.92*	VW3M8802R15	–
		3/ *9.84*	VW3M8802R30	–
eSM distribution unit equipped with 5 connectors	–	–	VW3M8810	–
Removable connector for connecting an additional eSM distribution unit **Sold in lots of 4**	–	–	VW3M8820	–

Lexium 32 and Motors

Lexium 32 Servo drives

Option: I/O expansion card for Lexium 32M servo drives

PF110930

VW3M3302 I/O expansion card

Presentation

Lexium 32M *(1)* servo drives can be adapted for more complex or more extensive applications by installing an I/O expansion card.

It has the same functions as the Lexium 32M servo drive I/O.

The I/O expansion card is inserted into a dedicated slot (port no. 1).
It is compatible with servo drives supporting version V01.06 minimum.

The card has logic and analog I/O:
- 4 x 24 V ⎓ positive logic (Source) or negative logic (Sink) inputs
- 2 positive logic (Source) or negative logic (Sink) open collector outputs
- 2 software-configurable voltage (0...10 V ⎓) analog inputs, 14-bit resolution
- 2 software-configurable voltage (0...10 V ⎓) or current (0...20 mA) analog outputs, 12-bit resolution

Reference

Description	Type of I/O				Type of connection	Reference	Weight kg/*lb*
	Logic I/O		Analog I/O				
I/O expansion card for Lexium 32M *(1)* servo drives	4 inputs	2 outputs	2 inputs	2 outputs	Spring terminals	VW3M3302	0.400/ *0.882*

(1) Except with LXM32M servo drives with Sercos.

Presentation

Internal braking resistor

A braking resistor is built into the servo drive to absorb the braking energy. If the DC bus voltage in the servo drive exceeds a specified value, this braking resistor is activated. The restored energy is converted into heat by the braking resistor.
It enables maximum transient braking torque.

External braking resistor

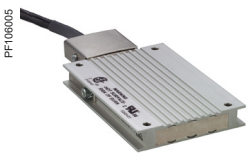
- When the servo motor has to be braked frequently, an external braking resistor is required to dissipate the excess braking energy. In this case, the internal braking resistor must be deactivated.
- Several external braking resistors can be connected in parallel. The servo drive monitors the power dissipated in the braking resistor.
- The degree of protection of the casing is IP 65 for VW3A7602R●● to VW3A7607R●● braking resistors, and IP 20 for **VW3A773●** braking resistors. The operating temperature around the unit can be between 0 and + 50 °C/*+ 32 and + 122 °F*.
- To optimize the size of the braking resistor, the DC buses on Lexium 32 servo drives in the same installation can be connected in parallel

Applications

Machines with high inertia, driving loads, and machines with fast cycles.

VW3A7734

VW3A7733



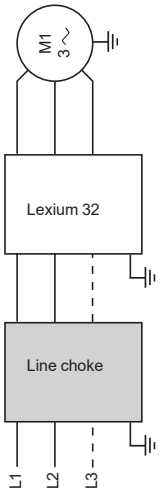
PF106005

VW3A760●R●●

References

Ohmic value	Continuous power PPr	Peak energy EPk				Length of connection cable	Reference	Weight
		115 V	230 V	400 V	480 V			
Ω	W	Ws	Ws	Ws	Ws	m/*ft*		kg/*lb*
10	1100	–	–	–	–	–	VW3A7734	5.500/ *12.125*
16	1100	–	–	–	–	–	VW3A7733	4.000/ *8.818*
27	100	4,200	3,800	1,900	1,900	0.75/*2.46*	VW3A7602R07	0.630/ *1.389*
						2/*6.56*	VW3A7602R20	0.780/ *1.720*
	200	9,700	7,400	4,900	4,300	0.75/*2.46*	VW3A7603R07	0.930/ *2.050*
						2/*6.56*	VW3A7603R20	1.080/ *2.381*
						3/*9.84*	VW3A7603R30	1.200/ *2.646*
	400	25,500	18,100	11,400	10,500	0.75/*2.46*	VW3A7604R07	1.420/ *3.131*
						2/*6.56*	VW3A7604R20	1.470/ *3.241*
						3/*9.84*	VW3A7604R30	1.620/ *3.571*
72	100	5,500	3,700	2,500	2,300	0.75/*2.46*	VW3A7605R07	0.620/ *3.571*
						2/*6.56*	VW3A7605R20	0.750/ *1.653*
						3/*9.84*	VW3A7605R30	0.850/ *1.874*
	200	14,600	9,600	6,600	6,000	0.75/*2.46*	VW3A7606R07	0.930/ *2.050*
						2/*6.56*	VW3A7606R20	1.080/ *2.381*
						3/*9.84*	VW3A7606R30	1.200/ *2.646*
	400	36,600	24,700	16,200	15,500	0.75/*2.46*	VW3A7607R07	1.420/ *3.131*
						2/*6.56*	VW3A7607R20	1.470/ *3.241*
						3/*9.84*	VW3A7607R30	1.620/ *3.571*

***Note**: The total continuous power dissipated in the external braking resistor(s) must be less than or equal to the nominal power of the Lexium 32 servo drive (see pages 8 and 9).*



Presentation

A line choke can be used to provide improved protection against overvoltages on the line supply and to reduce harmonic distortion of the current produced by the servo drive.

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

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

These chokes must be installed upstream of the servo drive.
One line choke can be connected to a number of servo drives. In such cases, the current consumption of all the servo drives at nominal voltage must not exceed the nominal current of the line choke.
The use of line chokes is recommended in particular under the following circumstances:

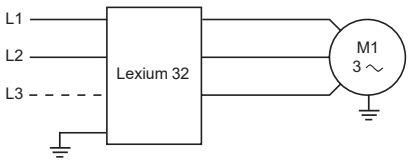
- Close connection of several servo drives in parallel
- Line supply with significant disturbance from other equipment (interference, overvoltages)
- Line supply with voltage unbalance between phases that is more than 1.8% of the nominal voltage
- Servo drive supplied by a line with very low impedance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

References

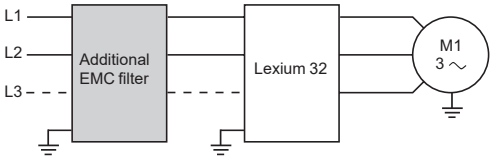
For servo drive	Inductance value	Losses	Line current and THD				Reference	Weight
			Without choke		With choke			
	mH	W	A	%	A	%		kg/*lb*
Single-phase supply voltage: 115 V ∼ 50/60 Hz								
LXM32●U45M2	5	20	2.9	173	2.6	85	VZ1L007UM50	0.880/ *1.940*
LXM32●U90M2	2	30	5.4	159	5.2	90	VZ1L018UM20	1.990/ *4.387*
LXM32●D18M2	2	30	8.5	147	9.9	74		
LXM32●D30M2	2	30	12.9	135	9.9	72		
Single-phase supply voltage: 230 V ∼ 50/60 Hz								
LXM32●U45M2	5	20	2.9	181	3.4	100	VZ1L007UM50	0.880/ *1.940*
LXM32●U90M2	2	30	4.5	166	6.3	107	VZ1L018UM20	1.990/ *4.387*
LXM32●D18M2	2	30	8.4	148	10.6	93		
LXM32●D30M2	2	30	12.7	135	14.1	86		
Three-phase supply voltage: 380 V ∼ 50/60 Hz								
LXM32●U60N4	2	75	1.4	187	1.9	106	VW3A4553	3.500/ *7.716*
LXM32●D12N4	2	75	3	174	3.5	88		
LXM32●D18N4	1	90	5.5	159	7.2	88	VW3A4554	6.000/ *13.228*
LXM32●D30N4	1	90	8.7	146	11.6	74		
LXM32●D72N4	1	90	18.1	124	23.5	43		
LXM32MD85N4	1	90	23.3	139	25	45		
LXM32MC10N4	0.5	94	27.8	133	38.1	70	VW3A4555	11.000/ *24.251*
Three-phase supply voltage: 480 V ∼ 50/60 Hz								
LXM32●U60N4	2	75	1.2	201	1.6	116	VW3A4553	3.500/ *7.716*
LXM32●D12N4	2	75	2.4	182	2.9	98		
LXM32●D18N4	1	90	4.5	165	6	98	VW3A4554	6.000/ *13.228*
LXM32●D30N4	1	90	7	152	9.6	85		
LXM32●D72N4	1	90	14.6	129	19.5	55		
LXM32MD85N4	1	90	19.9	145	21	45		
LXM32MC10N4	0.5	94	23.7	140	32	54	VW3A4555	11.000/ *24.251*

Lexium 32 and Motors

Lexium 32 Servo drives
Integrated EMC filters
Additional EMC input filters



Lexium 32 servo drive
with integrated EMC filter



Lexium 32 servo drive
with additional EMC filter

PF080930

Additional EMC filter mounted on a Lexium 32M servo drive

Integrated EMC filter

Function

Lexium 32 servo drives have integrated radio interference input filters to comply with the EMC standard for variable speed electrical power drive “products” IEC/EN 61800-3, edition 2, category C3 in environment 2, and to comply with the European directive on EMC (electromagnetic compatibility).

For servo drive	Maximum servo motor cable length conforming to EN 55011, class A, Gr2 IEC/EN 61800-3, category C3 in environment 2 *(1)* Switching frequency: 8 kHz m/*ft*
Single-phase supply voltage: 115 V ~ 50/60 Hz	
LXM32●●●●M2	20/*65.62* (10 m/*32.81 ft* in category C2, environment 1)
Single-phase supply voltage: 230 V ~ 50/60 Hz	
LXM32●●●●M2	20/*65.62* (10 m/*32.81 ft* in category C2, environment 1)
Three-phase supply voltage: 380 V ~ 50/60 Hz	
LXM32●●●●N4	20/*65.62*
Three-phase supply voltage: 480 V ~ 50/60 Hz	
LXM32●●●●N4	20/*65.62*

Additional EMC input filters

Applications

Used with Lexium 32 servo drives, additional EMC input filters can be used to meet more stringent requirements and are designed to reduce conducted emissions on the line supply below the limits of standard IEC/EN 61800-3 edition 2, category C2 or C3 (see page 29).

Additional EMC filters are mounted on the side of the device. They have tapped holes for mounting in an enclosure.

Use according to the type of line supply

Integrated or additional EMC filters can only be used on TN (neutral connection) or TT (neutral to ground) systems.
Lexium 32 servo drives cannot be used on IT (impedance grounded or isolated neutral) systems. Standard IEC/EN 61800-3, appendix D2.1, states that on IT systems, filters can cause permanent insulation monitors to operate in a random manner.

If a machine has to be installed on an IT system, an isolation transformer must be inserted in order to re-create a TT system on the secondary side.

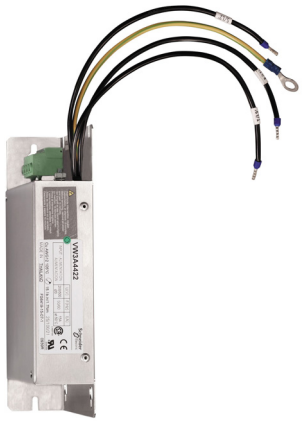
(1) Standard IEC/EN 61800-3: EMC immunity and conducted and radiated EMC emissions:
- Category C3 in environment 2: industrial premises.

Lexium 32 and Motors

Lexium 32 Servo drives

Additional EMC input filters

PF095115



VW3A4422

PF095117

VW3A4424

References

For servo drive	Maximum servo motor shielded cable length conforming to			Reference	Weight
	EN 55011 class A Gr1	EN 55011 class A Gr2			
	IEC/EN 61800-3 category C2 *(1)* in environment 1	IEC/EN 61800-3 category C3 *(1)* in environment 2			
	Switching frequency	Switching frequency			
	8 kHz	4 kHz	8 kHz		
	m/*ft*	m/*ft*	m/*ft*		kg/*lb*
Single-phase supply voltage					
LXM32●U45M2 LXM32●U90M2	50/ *164*	–	100/ *330*	VW3A4420	0.600/ *1.323*
LXM32●D18M2 LXM32●D30M2	50/ *164*	–	100/ *330*	VW3A4421	0.775/ *1.709*
Three-phase supply voltage					
LXM32●U60N4 LXM32●D12N4 LXM32●D18N4 LXM32●D30N4	50/ *164*	–	100/ *330*	VW3A4422	0.900/ *1.984*
LXM32●D72N4	50/ *164*	–	100/ *330*	VW3A4423	1.350/ *2.976*
LXM32MD85N4, LXM32MC10N4	50/ *164*	100/ *330*	–	VW3A4424	3.150/ *6.945*

(1) Standard IEC/EN 61800-3: EMC immunity and conducted and radiated EMC emissions:
- Category C2 in environment 1: restricted distribution, for domestic use, sale conditional on the competence of the user and the distributor in terms of reduction of current harmonics
- Category C3 in environment 2: industrial premises.

Lexium 32 and Motors
Lexium 32 Servo drives
Motor starters

+

LC1D18●●
+
LXM32MD30M2

+

LC1D25●●
+
LXM32MD85N4

Applications

The combinations listed below can be used to create a complete motor starter unit comprising a contactor and a Lexium 32 servo drive.

The contactor turns on and manages any safety functions, as well as isolating the servo motor on stopping.
The servo drive controls the servo motor, provides protection against short-circuits between the servo drive and the servo motor, and helps to protect the motor cable against overloads. The overload protection is provided by the motor thermal protection of the servo drive.

Motor starters for Lexium 32 servo drives

Servo drive		Max. prospective line Isc	Contactor
Reference	Nominal power		Reference *(1) (2)*
	kW	kA	
Single-phase supply voltage: ∿ 100…120 V 50/60 Hz			
LXM32●U45M2	0.15	1	**LC1D09●●**
LXM32●U90M2	0.3	1	**LC1D09●●**
LXM32●D18M2	0.5	1	**LC1D12●●**
LXM32●D30M2	0.8	1	**LC1D18●●**
Single-phase supply voltage: ∿ 200…240 V 50/60 Hz			
LXM32●U45M2	0.3	1	**LC1D09●●**
LXM32●U90M2	0.5	1	**LC1D09●●**
LXM32●D18M2	1	1	**LC1D12●●**
LXM32●D30M2	1.6	1	**LC1D18●●**
Three-phase supply voltage: ∿ 400 V 50/60 Hz			
LXM32●U60N4	0.4	5	**LC1D09●●**
LXM32●D12N4	0.9	5	**LC1D09●●**
LXM32●D18N4	1.8	5	**LC1D09●●**
LXM32●D30N4	3	5	**LC1D12●●**
LXM32●D72N4	7	5	**LC1D25●●**
LXM32MD85N4	9	22	**LC1D25●●**
LXM32MC10N4	11	22	**LC1D25●●**
Three-phase supply voltage: ∿ 480 V 50/60 Hz			
LXM32●U60N4	0.4	5	**LC1D09●●**
LXM32●D12N4	0.9	5	**LC1D09●●**
LXM32●D18N4	1.8	5	**LC1D09●●**
LXM32●D30N4	3	5	**LC1D12●●**
LXM32●D72N4	7	5	**LC1D25●●**
LXM32MD85N4	9	22	**LC1D25●●**
LXM32MC10N4	11	22	**LC1D25●●**

(1) Composition of contactors :
LC1D●●: 3 poles + 1 NO auxiliary contact and 1 NC auxiliary contact.
In certain solutons, it is possible to use an LC1K contactor with 1 NC auxiliary contact.
Please refer to the "Control and protection components" catalog.
(2) Replace ●● with the control circuit voltage reference given in the table below:

	Volts ∿	24	48	110	220/230	230	230/240
LC1D●●	50 Hz	**B5**	**E5**	**F5**	**M5**	**P5**	**U5**
	50 Hz	**B6**	**E6**	**F6**	**M6**	**–**	**U6**
	50/60 Hz	**B7**	**E7**	**F7**	**M7**	**P7**	**U7**

For other available voltages between 24 and 660 V, or for a DC control circuit, please consult our Tesys K offer on our website.

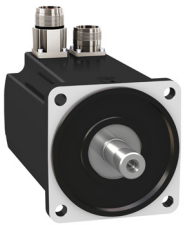
Protection using class J fuses (UL certification)

Servo drive		Fuse to be placed upstream	
Reference	Nominal power	min.	max.
	kW	A	A
Single-phase supply voltage: ∿ 100…120 V 50/60 Hz			
LXM32●U45M2	0.15	4	25
LXM32●U90M2	0.3	6	25
LXM32●D18M2	0.5	10	25
LXM32●D30M2	0.8	15	25
Single-phase supply voltage: ∿ 200…240 V 50/60 Hz			
LXM32●U45M2	0.3	4	25
LXM32●U90M2	0.5	6	25
LXM32●D18M2	1	10	25
LXM32●D30M2	1.6	15	25
Three-phase supply voltage: ∿ 400 V 50/60 Hz			
LXM32●U60N4	0.4	2	30/32 *(1)*
LXM32●D12N4	0.9	4	30/32 *(1)*
LXM32●D18N4	1.8	8	30/32 *(1)*
LXM32●D30N4	3	10	30/32 *(1)*
LXM32●D72N4	7	20	30/32 *(1)*
LXM32MD85N4	9	30	60/63 *(2)*
LXM32MC10N4	11	40	60/63 *(2)*
Three-phase supply voltage: ∿ 480 V 50/60 Hz			
LXM32●U60N4	0.4	2	30/32 *(1)*
LXM32●D12N4	0.9	3	30/32 *(1)*
LXM32●D18N4	1.8	8	30/32 *(1)*
LXM32●D30N4	3	10	30/32 *(1)*
LXM32●D72N4	7	20	30/32 *(1)*
LXM32MD85N4	9	30	60/63 *(2)*
LXM32MC10N4	11	40	60/63 *(2)*

(1) Europe: 30 A fuse; US: 32 A fuse.
(2) Europe: 60 A fuse; US: 63 A fuse.

Lexium 32 and Motors
BMH servo motors

568427



BMH servo motor with straight connectors

568429

BMH servo motor with rotatable elbow connectors

Presentation

BMH servo motors provide excellent power density values to meet the requirements of compact machines. With four flange sizes and three different lengths for each flange size, they are suitable for many applications, covering a continuous stall range from 1.2 to 84 Nm for speeds up to 8,000 rpm.

The new BMH servo motors have a medium inertia motor, which means they are particularly suitable for high-load applications. They help to simplify installation and adjustment through a more robust adjustment of the movement.

BMH servo motors are UL Recognized and conform to standard UL1004 as well as to European directives (CE marking).

They are available with the following variants:
- 5 flange sizes: 70, 100, 140 and 190 mm/*2.76, 3.94, 5.51 and 7.48 in*
- 2 degrees of protection for the shaft end: IP 50 or IP 65 (IP 67 with the conformity kit, which is available as an option) in accordance with standard IEC/EN 60529. The degree of protection of the casing is IP 65 (IP 67 with the conformity kit, which is available as an option).
- With or without holding brake
- Straight or elbow connectors for power and encoder connection
- Integrated single-turn or multi-turn SinCos Hiperface® encoder (medium or high resolution)
- Smooth or keyed shaft end

Special features

BMH servo motors have been developed to comply with the following main specifications:

- The ambient operating temperature is - 20...+ 40 °C /*- 4...+ 104 °F* without derating, in accordance with standard IEC 60721-3-3, category 3K3, and up to 55 °C/*131 °F* with derating of 1% of the nominal output power per additional °C above 40 °C/*104 °F*.

- The maximum operating altitude is 1,000 m/3,280 ft without derating, 2,000 m/6,561 ft with k = 0.86, and 3,000 m/*9,842 ft* with k = 0.8 *(1)*.
The relative humidity that the servo motor can withstand is in line with standard IEC 60721-3-3, categories 3K3, 3Z12, and 3Z2.

- The windings are insulation class F (maximum temperature for windings 155 °C/*311 °F*) in accordance with standard IEC 60034-1.

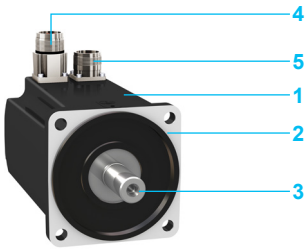
- Thermal protection is provided and controlled by the Lexium 32 servo drive via the motor temperature control algorithm.

- All mounting positions are permitted (horizontal mounting (IMB5) or vertical mounting (IMV1 with shaft end at the top and IMV3 with shaft end at the bottom) in accordance with standard IEC 60034-7.

Sizing

The Lexium Sizer tool is available on our website to help you size your servo motor.

(1) k: derating factor



Presentation (continued)

Holding brake

BMH servo motors can be equipped with an electromagnetic holding brake.

⚠ **Do not use the holding brake as a dynamic brake for deceleration, as this will quickly damage the brake.**

Integrated encoder

BMH servo motors are equipped as standard with an absolute encoder.

This encoder performs the following functions:
- Gives the absolute position of the motor so that flows can be synchronized
- Measures the servo motor speed via the associated Lexium 32 servo drive (this information is used by the servo drive's speed controller)
- Measures the position information for the servo drive's position controller
- Sends data from the servo motor to the servo drive, which provides automatic identification of the motor when the servo drive starts

Four types of encoder are available:
- High resolution SinCos Hiperface® encoder:
  - Single-turn (131,072 points/turn) *(1)*
  - Multi-turn (131,072 points/turn x 4,096 turns) *(1)*

These encoders give an angular shaft position precise to less than ± 1.3 arc minutes.
- Medium resolution SinCos Hiperface® encoder:
  - Single-turn (32,768 points/turn) *(1)*
  - Multi-turn (32,768 points/turn x 4,096 turns) *(1)*

These encoders give an angular shaft position precise to less than ± 4.8 arc minutes.

Description

BMH servo motors, with a 3-phase stator and a 10-pole rotor with Neodymium Iron Boron (NdFeB) magnets, consist of:
1. Casing with RAL 9005 opaque black paint protective coating
2. A 4-point axial mounting flange
3. A smooth or keyed shaft end (depending on the model)
4. A threaded sealed male straight connector for the power cable *(2)*
5. A threaded sealed male straight connector for the control cable (encoder) *(2)*

Cables and connectors to be ordered separately, for connection to Lexium 32 servo drives (see page 36).

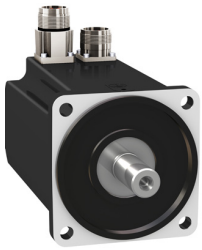
Schneider Electric has taken particular care over the compatibility of BMH servo motors and Lexium 32 servo drives.
This compatibility is only possible when using cables and connectors sold by Schneider Electric (see page 36).

(1) Encoder resolution given for use with a Lexium 32 servo drive.
(2) For other model with rotatable elbow connector, see page 34.

569430

Front of the BMH070●●●●●1A

569431



Front of the BMH100●●●●●1A

569432

Front of the BMH1401P●●●1A

110929

Rear view of the BMH1901P●●●2A

BMH servo motors

The BMH servo motors shown below are supplied without a gearbox.
For gearboxes, please consult "GBX and GBY planetary gearboxes"catalog or on our website.

Continuous stall torque	Peak stall torque	Nominal servo motor output power	Nominal speed	Maximum mechanical speed	Associated LXM32 servo drive	Reference *(1)*	Weight *(2)*
Nm	Nm	W	rpm	rpm			kg/*lb*
1.2	4.2	350	3,000	8,000	●U60N4	**BMH0701P●●●●A**	1.600/ *3.527*
1.4	4	450	4,000	8,000	●U90M2	**BMH0701T●●●●A**	1.600/ *3.527*
	4.2	350	2,500	8,000	●D18M2	**BMH0701T●●●●A**	1.600/ *3.527*
		700	5,000	8,000	●D12N4	**BMH0701P●●●●A**	1.600/ *3.527*
2.5	6.4	600	2,500	8,000	●D30M2	**BMH0702T●●●●A**	1.800/ *3.968*
	7.4	900	4,000	8,000	●D18M2		
		700	3,000	8,000	●D12N4	**BMH0702P●●●●A**	1.800/ *3.968*
3.4	8.7	650	2,000	8,000	●D30M2	**BMH0703T●●●●A**	2.000/ *4.409*
	10.2	900	3,000	8,000	●D18M2	**BMH0703T●●●●A**	2.000/ *4.409*
		1,300	5,000	8,000	●D18N4	**BMH0703P●●●●A**	2.000/ *4.409*
3.3	10.8	800	4,000	6,000	●D12N4	**BMH1001P●●●●A**	3.340/ *7.363*
3.4	8.9	700	2,000	6,000	●D30M2	**BMH1001T●●●●A**	3.340/ *7.363*
	10.8	900	3,000	6,000	●D18M2		
		1,300	4,000	6,000	●D18N4	**BMH1001P●●●●A**	3.340/ *7.363*
6	10.3	750	2,000	6,000	●D30M2	**BMH1002T●●●●A**	4.920/ *10.847*
	18.4	1,450	3,000	6,000	●D30M2		
5.9	18.4	1,600	4,000	6,000	●D18N4	**BMH1002P●●●●A**	4.920/ *10.847*
8	23.5	1,450	2,500	5,000	●D30M2	**BMH1003T●●●●A**	6.500/ *14.330*
8.4	25.1	2,600	4,000	5,000	●D30N4	**BMH1003P●●●●A**	6.500/ *14.330*
10.3	30.8	1,450	1,500	4,000	●D30M2	**BMH1401P●●●●A**	8.000/ *17.637*
		2,400	3,000	4,000	●D30N4		
16.8	50.3	3,800	3,000	4,000	●D72N4	**BMH1402P●●●●A**	12.000/ *26.455*
24	71.8	4,500	3,000	4,000	●D72N4	**BMH1403P●●●●A**	16.000/ *35.274*
30	77.7	4,800	2,500	4,000	●D72N4	**BMH1901P●●●●A**	19.000/ *41.888*
	86.6	5,180	3,000	4,000	MD85N4		
	89.7	5,180	3,000	4,000	MC10N4		
37.4	101	5,900	2,500	4,000	●D72N4	**BMH1902P●●●●A**	31.000/ *68.343*
48	115.5	6,070	2,000	4,000	MD85N4		
	130.7	6,070	2,000	4,000	MC10N4		
43.2	123	5,700	1,500	3,500	●D72N4	**BMH1903P●●●●A**	43.000/ *94.799*
57.6	141.3	7,330	2,000	3,500	MD85N4		
65	162.7	7,750	2,000	3,500	MC10N4		
100	230	9800	2000	3000	MC10N4	**BMH1904P●●●●A**	67.000/ *147.71*

(1) To complete each reference see the table on page 35.
(2) Weight of servo motor without brake, no packaging. To obtain the weight of the servo motor with holding brake, please visit our website.

BMH servo motors (continued)

To order a BMH servo motor, complete each reference with:

			BMH●●●●●	●	●	●	●	●
Shaft end	IP 54	Smooth *(1)*		**0**				
		Keyed *(1)*		**1**				
	IP 65/IP 67 *(2)*	Smooth		**2**				
		Keyed		**3**				
Integrated sensor High resolution, optical	Single-turn, SinCos Hiperface® 131,072 points/turn *(3)* 128 sine/cosine periods per turn				**1**			
	Multi-turn, SinCos Hiperface® 131,072 points/turn x 4,096 turns *(3)* 128 sine/cosine periods per turn				**2**			
Integrated sensor Medium resolution, capacitive	Single-turn, SinCos Hiperface® 32,768 points/turn *(3)* 16 sine/cosine periods per turn				**6** *(1)*			
	Multi-turn, SinCos Hiperface® 32,768 points/turn x 4,096 turns *(3)* 16 sine/cosine periods per turn				**7** *(1)*			
Holding brake	Without					**A**		
	With					**F**		
Connections	Straight connectors *(1)*						**1**	
	Rotatable right angle elbow connectors						**2**	
Flange	International standard							**A**
Motor with fan option	Available for BMH1904 only							**B**

Dimensions (overall)

Servo motors	Flange	Width x Height x Depth *(4)*	
		Without holding brake	With holding brake
	mm/*in*	mm/*in*	mm/*in*
BMH0701●	70 x 70/ *2.76 x 2.76*	70 x 109.5 x 122/ *2.76 x 4.31 x 4.80*	70 x 109.5 x 161/ *2.76 x 4.31 x 6.34*
BMH0702●	70 x 70/ *2.76 x 2.76*	70 x 109.5 x 154/ *2.76 x 4.31 x 6.06*	70 x 109.5 x 193/ *2.76 x 4.31 x 7.60*
BMH0703●	70 x 70/ *2.76 x 2.76*	70 x 109.5 x 186/ *2.76 x 4.31 x 7.32*	70 x 109.5 x 225/ *2.76 x 4.31 x 8.86*
BMH1001●	100 x 100/ *3.94 x 3.94*	100 x 139.5 x 128/ *3.94 x 5.49 x 5.04*	100 x 139.5 x 170/ *3.94 x 5.49 x 6.69*
BMH1002●	100 x 100/ *3.94 x 3.94*	100 x 139.5 x 160/ *3.94 x 5.49 x 6.30*	100 x 139.5 x 202/ *3.94 x 5.49 x 7.95*
BMH1003●	100 x 100/ *3.94 x 3.94*	100 x 139.5 x 192/ *3.94 x 5.49 x 7.60*	100 x 139.5 x 234/ *3.94 x 5.49 x 9.21*
BMH1401P	140 x 140/ *5.51 x 5.51*	140 x 179.5 x 152/ *5.51 x 7.07 x 5.98*	140 x 179.5 x 187/ *5.51 x 7.07 x 7.36*
BMH1402P	140 x 140/ *5.51 x 5.51*	140 x 179.5 x 192/ *5.51 x 7.07 x 7.60*	140 x 179.5 x 227/ *5.51 x 7.07 x 8.94*
BMH1403P	140 x 140/ *5.51 x 5.51*	140 x 179.5 x 232/ *5.51 x 7.07 x 9.13*	140 x 179.5 x 267/ *5.51 x 7.07 x 10.51*
BMH1901P	190 x 190/ *7.48 x 7.48*	190 x 257 x 190/ *7.48 x 10.12 x 7.48*	190 x 257 x 248/ *7.48 x 10.12 x 9.76*
BMH1902P	190 x 190/ *7.48 x 7.48*	190 x 257 x 250/ *7.48 x 10.12 x 9.84*	190 x 257 x 308/ *7.48 x 10.12 x 12.13*
BMH1903P	190 x 190/ *7.48 x 7.48*	190 x 257 x 310/ *7.48 x 10.12 x 12.21*	190 x 257 x 368/ *7.48 x 10.12 x 14.49*
BMH1904P	190 x 190/ *7.48 x 7.48*	190 x 257 x 383/ *7.48 x 10.12 x 15.07*	190 x 257 x 456/ *7.48 x 10.12 x 17.95*

Note: *The example above is for a **BMH0701P** servo motor. For other servo motors, replace **BMH0701P** with the relevant reference.*

(1) Not available for BMH190 servo motors.
(2) IP 67 with the VW3M230● IP 67 conformity kit supplied as an option (see page 36).
(3) Sensor resolution given for use with a Lexium 32 servo drive.
(4) D: motor length (excluding shaft end).
(5) Height of the servo motor equipped with straight connectors. The height is 265 mm/10.43 in when the servo motor is equipped with rotatable elbow connectors.

Lexium 32 and Motors
BMH servo motors
IP 67 conformity kits
Connection components

PF080922

VW3M230●

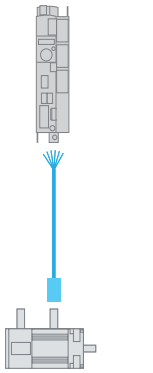
IP 67 conformity kits

This kit can be used to provide IP 67 degree of protection. It is mounted in place of the motor backplate.

Description	For use with	Reference	Weight kg/*lb*
IP 67 conformity kits (supplied as an option)	BMH070●●	VW3M2301	0.100/ *0.220*
	BMH100●●	VW3M2302	0.150/ *0.331*
	BMH140●●	VW3M2303	0.300/ *0.661*
	BMH190●●	*(1)*	0.003/ *0.007*

Connection components

Power cordsets



VW3M510●R●●●

Description	From servo motor	To servo drive	Composition	Length m/*ft*	Reference	Weight kg/*lb*
Cordsets equipped with one M23 industrial connector (servo motor end)	BMH070●● BMH100●● BMH1401P	LXM32●●●●●●. See combinations on page 6	[(4 x 1.5 mm²/ *AWG 16*) + (2 x 1 mm²/ *AWG 17*)]	1.5/ *3.28*	VW3M5101R15	0.600/ *1.323*
				3/ *9.84*	VW3M5101R30	0.810/ *1.786*
				5/ *16.40*	VW3M5101R50	1.210/ *2.668*
				10/ *32.81*	VW3M5101R100	2.290/ *5.049*
				15/ *49.21*	VW3M5101R150	3.400/ *7.496*
				20/ *65.62*	VW3M5101R200	4.510/ *9.943*
				25/ *82.02*	VW3M5101R250	6.200/ *13.669*
				50/ *164.04*	VW3M5101R500	12.325/ *26.974*
				75/ *246.06*	VW3M5101R750	18.450/ *40.675*
	BMH1402P BMH1403P	LXM32●D72N4	[(4 x 2.5 mm²/ *AWG 14*) + (2 x 1 mm²/ *AWG 17*)]	3/ *9.84*	VW3M5102R30	1.070/ *2.359*
				5/ *16.40*	VW3M5102R50	1.670/ *3.682*
				10/ *32.81*	VW3M5102R100	3.210/ *7.077*
				15/ *49.21*	VW3M5102R150	4.760/ *10.494*
				20/ *65.62*	VW3M5102R200	6.300/ *13.889*
				25/ *82.02*	VW3M5102R250	7.945/ *17.516*
				50/ *164.04*	VW3M5102R500	16.170/ *35.649*
				75/ *246.06*	VW3M5102R750	24.095/ *53.120*

(1) IP 67 conformity kit sold by Festo AG under reference QSML-B-M3-4-20.

Connection components (continued)

Power cordsets

Description	From servo motor	To servo drive	Composition	Length	Reference	Weight
				m/*ft*		kg/*lb*
Cordsets equipped with one M40 industrial connector (servo motor end)	E type mounting with open cable ducts, conforming to standard EN 60204-1					
	BMH1901P	LXM32●D72N4, LXM32MD85N4, LXM32MC10N4	[(4 x 4 mm²/ *AWG 12*) + (2 x 1 mm²/ *AWG 17*)]	3/ *9.84*	VW3M5103R30	2.000/ *4.409*
				5/ *16.40*	VW3M5103R50	3.400/ *7.496*
				10/ *32.81*	VW3M5103R100	6.500/ *14.330*
				15/ *49.21*	VW3M5103R150	9.500/ *20.944*
				20/ *65.62*	VW3M5103R200	12.100/ *26.676*
				25/ *82.02*	VW3M5103R250	15.500/ *34.172*
				50/ *164.04*	VW3M5103R500	30.300/ *66.800*
				75/ *246.06*	VW3M5103R750	45.000/ *99.208*
	BMH1902P BMH1903P	LXM32●D72N4, LXM32MD85N4, LXM32MC10N4	[(4 x 6 mm²/ *AWG 10*) + (2 x 1 mm²/ *AWG 17*)]	3/ *9.84*	VW3M5105R30	2.000/ *4.409*
				5/ *16.40*	VW3M5105R50	3.400/ *7.496*
				10/ *32.81*	VW3M5105R100	6.500/ *14.330*
				15/ *49.21*	VW3M5105R150	9.500/ *20.944*
				20/ *65.62*	VW3M5105R200	12.100/ *26.676*
				25/ *82.02*	VW3M5105R250	15.500/ *34.172*
				50/ *164.04*	VW3M5105R500	30.300/ *66.800*
				75/ *246.06*	VW3M5105R750	45.000/ *99.208*
	B2 type mounting, in conduits or distribution trunking, conforming to standard EN 60204-1					
	BMH1901P	LXM32●D72N4, LXM32MD85N4, LXM32MC10N4	[(4 x 6 mm²/ *AWG 10*) + (2 x 1 mm²/ *AWG 17*)]	3/ *9.84*	VW3M5105R30	2.000/ *4.409*
				5/ *16.40*	VW3M5105R50	3.400/ *7.496*
				10/ *32.81*	VW3M5105R100	6.500/ *14.330*
				15/ *49.21*	VW3M5105R150	9.500/ *20.944*
				20/ *65.62*	VW3M5105R200	12.100/ *26.676*
				25/ *82.02*	VW3M5105R250	15.500/ *34.172*
				50/ *164.04*	VW3M5105R500	30.300/ *66.800*
				75/ *246.06*	VW3M5105R750	45.000/ *99.208*
	BMH1902P BMH1903P	LXM32●D72N4, LXM32MD85N4, LXM32MC10N4	[(4 x 10 mm²/ *AWG 8*) + (2 x 1 mm²/ *AWG 17*)]	3/ *9.84*	VW3M5104R30	3.600/ *7.937*
				5/ *16.40*	VW3M5104R50	5.600/ *12.346*
				10/ *32.81*	VW3M5104R100	10.500/ *23.149*
				15/ *49.21*	VW3M5104R150	15.500/ *34.172*
				20/ *65.62*	VW3M5104R200	20.300/ *44.754*
				25/ *82.02*	VW3M5104R250	24.500/ *54.013*
				50/ *164.04*	VW3M5104R500	49.700/ *109.570*
				75/ *246.06*	VW3M5104R750	74.200/ *163.583*

VW3M8102R●●●

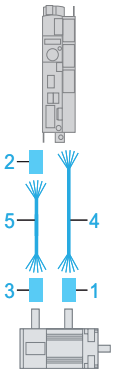
Connection components (continued)

Control cordsets

Description	For use with	To servo drive	Composition	Length m/ft	Reference	Weight kg/lb
SinCos Hiperface® encoder cordsets equipped with an M23 industrial connector (servo motor end) **and an RJ45 connector** with 8 + 2 contacts (servo drive end)	BMH●●●●●	LXM32●●●●●●. See references on pages 8 and 9	[3 x (2 x 0.14 mm²/ *AWG 26*) + (2 x 0.34 mm²/ *AWG 22*)]	1.5/ *4.92*	VW3M8102R15	0.400/ *0.882*
				3/ *9.84*	VW3M8102R30	0.500/ *1.102*
				5/*16.40*	VW3M8102R50	0.600/ *1.323*
				10/*32.81*	VW3M8102R100	0.900/ *1.984*
				15/*49.21*	VW3M8102R150	1.100/ *2.425*
				20/*65.62*	VW3M8102R200	1.400/ *3.086*
				25/*82.02*	VW3M8102R250	1.700/ *3.748*
				50/*164.04*	VW3M8102R500	3.100/ *6.834*
				75/*246.06*	VW3M8102R750	4.500/ *9.921*

Connectors for creating power and control cordsets

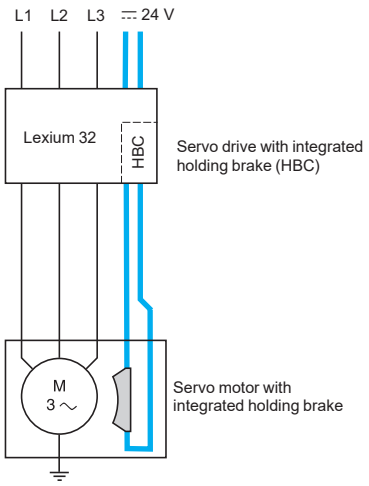
Description	For use with	Sold in lots of	Item no.	For cable cross-section mm² /*AWG*	Unit reference	Weight kg/lb
M23 industrial connector for creating power cordsets	BMH070●●, BMH100●●, and BMH140●P servo motors	5	1	1.5 or 2.5/ *16 or 14*	VW3M8215	0.350/ *0.772*
M40 industrial connector for creating power cordsets	BMH1901P *(1)* servo motors	5	1	4/*12*	VW3M8217	0.850/ *1.874*
	BMH1901P *(2)*, BMH1902P *(1) (2)*, BMH1903P *(1) (2)*, and BMH1904P *(2)* servo motors	5	1	6 or 10/ *10 or 8*	VW3M8218	0.850/ *1.874*
RJ45 connector with 8 + 2 contacts for creating control cordsets	LXM32●●●●●● servo drives (CN3 connector)	5	2	–	VW3M2208	0.200/ *0.441*
M23 industrial connector for creating control cordsets	BMH●●●●● servo motors	5	3	–	VW3M8214	0.350/ *0.772*



Connectors and cables for connecting the servo motor

Description	From servo motor	To servo drive	Composition	Item no.	Length m/ft	Reference	Weight kg/lb
Cables for creating power cordsets	BMH070●● BMH100●● BMH1401P	LXM32●●●●●●. See combinations on page 6	[(4 x 1.5 mm²/ *AWG 16*) + (2 x 1 mm²/ *AWG 17*)]	4	25/*82.02*	VW3M5301R250	5.550/ *328.08*
					50/*164.04*	VW3M5301R500	11.100/ *24.471*
					100/*328.08*	VW3M5301R1000	22.200/ *48.943*
	BMH1402P BMH1403P	LXM32●D72N4	[(4 x 2.5 mm²/ *AWG 14*) + (2 x 1 mm²/ *AWG 17*)]	4	25/*82.02*	VW3M5302R250	7.725/ 17.031
					50/*164.04*	VW3M5302R500	15.450/ *34.061*
					100/*328.08*	VW3M5302R1000	30.900/ *68.123*
	BMH1901P *(1)*	LXM32●D72N4, LXM32MD85N4, LXM32MC10N4	[(4 x 4 mm²/ *AWG 12*) + (2 x 1 mm²/ *AWG 17*)]	4	25/*82.02*	VW3M5303R250	9.900/ *21.826*
					50/*164.04*	VW3M5303R500	19.800/ *43.651*
					100/*328.08*	VW3M5303R1000	39.600/ *87.303*
	BMH1901P *(2)* BMH1902P *(1)* BMH1903P *(1)* BMH1904P *(2)*	LXM32●D72N4, LXM32MD85N4, LXM32MC10N4	[(4 x 6 mm²/ *AWG 10*) + (2 x 1 mm²/ *AWG 17*)]	4	25/*82.02*	VW3M5305R250	14.750/ *32.518*
					50/*164.04*	VW3M5305R500	29.500/ *65.036*
					100/*328.08*	VW3M5305R1000	59.000/ *130.073*
	BMH1902P *(2)* BMH1903P *(2)* BMH1904P *(2)*	LXM32●↘72N4, LXM32MD85N4, LXM32MC10N4	[(4 x 10 mm²/ *AWG 8*) + (2 x 1 mm²/ *AWG 17*)]	4	25/*82.02*	VW3M5304R250	24.500/ *54.013*
					50/*164.04*	VW3M5304R500	49.000/ *108.026*
					100/*328.08*	VW3M5304R1000	98.000/ *216.053*
Cables for creating control cordsets for SinCos Hiperface® encoders	BMH●●●●●	LXM32●●●●●●. See references on pages 8 and 9	[(3 x (2 x 0.14 mm²/ *AWG 26*) + (2 x 0.34 mm²/ *AWG 22*)]	5	25/*82.02*	VW3M8222R250	1.400/ *3.086*
					50/*164.04*	VW3M8222R500	2.800/ *6.173*
					100/*328.08*	VW3M8222R1000	5.600/ *12.346*

(1) E type mounting with open cable ducts, conforming to standard EN 60204-1.
(2) B2 type mounting in conduits or distribution trunking, conforming to standard EN 60204-1.



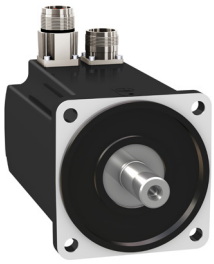
Holding brake

Presentation

The holding brake integrated in the BMH servo motor is an electromagnetic pressure spring brake that blocks the servo motor axis once the output current has been turned off.

In the event of an emergency, such as a power outage or an emergency stop, the drive is immobilized.
Blocking the servo motor axis is also necessary in cases of torque overload, such as in the event of vertical axis movement.

As standard, the Lexium 32 servo drive has a holding brake controller to amplify the braking control signal and help ensure the brake is deactivated quickly. The controller then reduces the control signal so as to decrease the power dissipated by the holding brake.

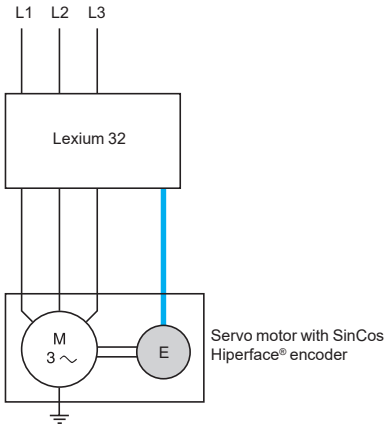


BMH servo motor

References

To select a BMH servo motor with or without holding brake, see the references on page 34.

For any additional information about holding brake characteristics, visit our website.



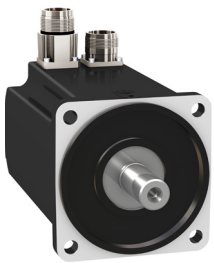
Integrated encoder in BMH servo motors

Presentation

The standard measurement device is the SinCos Hiperface® single-turn or multi-turn encoder integrated in BMH servo motors. This measurement device is particularly suited to the Lexium 32 range of servo drives.

Depending on the model, single-turn and multi-turn SinCos encoders are available with medium resolution and capacitive sensing, or high resolution and optical sensing.

Use of this interface enables:
- Automatic identification of BMH servo motor data by the servo drive
- Automatic initialization of the servo drive control loops, thus simplifying installation of the motion control device



BMH servo motor

References

To select the type of SinCos Hiperface® encoder integrated in the BMH servo motor (single-turn or multi-turn), see the references on page 34.

For any additional information about integrated encoder characteristics, visit our website.

Lexium 32 and Motors
BSH servo motors

BSH servo motor with rotatable angled connectors

BSH servo motor with straight connectors

BSH servo motor with rotatable angled connectors

Presentation

BSH servo motors offer an excellent solution to the need for high dynamic performance. With five flange sizes and a variety of lengths, there is a suitable solution for many applications, covering a continuous stall torque range from 0.5 to 33.4 Nm for speeds up to 9,000 rpm.
Thanks to their new winding technology based on salient poles, BSH servo motors are far more compact and offer a higher power density than conventional servo motors.
BSH servo motors are UL Recognized and conform to standard UL1004 as well as to European directives (CE marking).
They are available with the following variants:

- 5 flange sizes: 40, 55, 70, 100, and 140 mm/*1.57, 2.28, 2.76, 3.94, and 5.51 in*
- 2 degrees of protection for the shaft end: IP 50 or IP 65 in accordance with standard IEC/EN 60529. The degree of protection of the casing is IP 65 (IP 67 with the conformity kit, which is available as an option).
- With or without holding brake
- Straight or elbow connectors for power and encoder connection
- Integrated single-turn or multi-turn SinCos Hiperface® encoder (medium or high resolution)
- Smooth or keyed shaft end

Special features

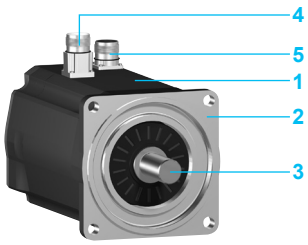
BSH servo motors have been developed to comply with the following main specifications:

- Ambient operating temperature: - 20...+ 40 °C /*- 4...+ 104 °F* without derating, in accordance with standard IEC 60721-3-3, category 3K3, and up to 55 °C/*131 °F* with derating of 1% of the nominal output power per additional °C above 40 °C/*104 °F*.
- Maximum operating altitude: 1,000 m/*3,280 ft* without derating, 2,000 m/ *6,561 ft* with k = 0.86, and 3,000 m/*9,842 ft* with k = 0.8 *(1)*.
- The relative humidity that the servo motor can withstand is in line with standard IEC 60721-3-3, categories 3K3, 3Z12, and 3Z2.
- The windings are insulation class F (maximum temperature for windings 155 °C/ *311 °F*) in accordance with standard IEC 60034-1.
- Mounting positions permitted: horizontal mounting (IMB5) or vertical mounting (IMV1 with shaft end at the top and IMV3 with shaft end at the bottom) in accordance with standard IEC 60034-7.

Sizing

The Lexium Sizer tool is available on our website to help you size your servo motor.

(1) k: derating factor



Presentation (continued)

Holding brake

BSH servo motors can be equipped with an electromagnetic holding brake.

⚠ Do not use the holding brake as a dynamic brake for deceleration, as this will quickly damage the brake.

Integrated encoder

BSH servo motors are equipped with a single-turn (131,072 points/turn) *(1)* or multi-turn (131,072 points/turn x 4,096 turns) *(1)* SinCos Hiperface® high-resolution absolute encoder giving an angular shaft position precise to less than ± 1.3 arc minutes.
This encoder performs the following functions:

- Gives the absolute position of the motor so that flows can be synchronized
- Measures the servo motor speed via the associated Lexium 32 servo drive (this information is used by the servo drive's speed controller)
- Measures the position information for the servo drive's position controller
- Sends data from the servo motor to the servo drive, which provides automatic identification of the motor when the servo drive starts

Description

BSH servo motors, with a 3-phase stator and a 6 to 10-pole rotor (depending on model) with Neodymium Iron Borium (NdFeB) magnets, consist of:

1 Casing with RAL 9005 opaque black paint protective coating
2 A 4-point axial mounting flange
3 A smooth or keyed shaft end (depending on the model)
4 A threaded sealed male straight connector for the power cable *(2)*
5 A threaded sealed male straight connector for the control cable (encoder) *(2)*

Cables and connectors to be ordered separately, for connection to Lexium 32 servo drives (see page 44).
Schneider Electric has taken particular care over the compatibility of BSH servo motors and Lexium 32 servo drives. This compatibility is only possible when using cables and connectors sold by Schneider Electric (see page 44).

(1) Encoder resolution given for use with a Lexium 32 servo drive.
(2) For other model with rotatable elbow connector, see page 43.

Lexium 32 and Motors
BSH servo motors

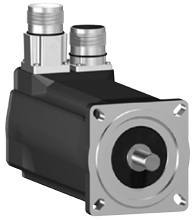
F19_MOT_CPFJR16001A

BSH040●●●●●2A

105990

BSH055●●●●●1A

105991



BSH070●●●●●1A

105992

BSH100●●●●●1A

105993

BSH1401P●●●1A

BSH servo motors

The BSH servo motors shown below are supplied without a gearbox.
For gearboxes, please consult "GBX and GBY planetary gearboxes"catalog or on our website .

Continuous stall torque	Peak stall torque	Nominal servo motor output power	Nominal speed	Maximum mechanical speed	Associated LXM32 servo drive	Reference *(1)*	Weight *(2)*
Nm	Nm	W	rpm	rpm			kg/*lb*
0.21	0.8	77	4,000	10,000	●U45M2	**BSH0401P●●●●A**	0.400/ *0.881*
		166	9,000	10,000	●U60N4	**BSH0401P●●●●A**	0.400/ *0.881*
0.38	1.37	152	4,000	10,000	●U45M2	**BSH0402P●●●●A**	0.600/ *1.322*
		275	9,000	10,000	●U60N4	**BSH0402P●●●●A**	0.600/ *1.322*
0.5	1.4	300	6,000	9,000	●U45M2	**BSH0551T●●●●A**	1.160/ *2.557*
	1.5	150	3,000	9,000	●U90M2	**BSH0551T●●●●A**	1.160/ *2.557*
		300	6,000	9,000	●U60N4	**BSH0551P●●●●A**	1.160/ *2.557*
0.8	1.9	250	3,000	9,000	●U45M2	**BSH0552T●●●●A**	1.470/ *3.241*
	2.5	450	6,000	9,000	●U90M2	**BSH0552T●●●●A**	1.470/ *3.241*
		400	6,000	9,000	●U60N4	**BSH0552P●●●●A**	1.470/ *3.241*
1.05	3.5	400	6,000	9,000	●U60N4	**BSH0553P●●●●A**	1.760/ *3.880*
1.2	3	550	6,000	9,000	●U90M2	**BSH0553T●●●●A**	1.760/ *3.880*
	3.3	350	3,000	9,000	●D18M2		
1.3	3.5	500	5,000	8,000	●U90M2	**BSH0701T●●●●A**	2.200/ *4.850*
1.4	3.5	350	2,500	8,000	●D18M2	**BSH0701T●●●●A**	2.200/ *4.850*
		700	5,000	8,000	●D12N4	**BSH0701P●●●●A**	2.200/ *4.850*
2.2	6.1	550	2,500	8,000	●D30M2	**BSH0702T●●●●A**	2.890/ *6.371*
	7.2	950	5,000	8,000	●D18M2		
	7.6	850	5,000	8,000	●D12N4	**BSH0702P●●●●A**	2.890/ *6.371*
2.6	7.4	900	4,000	8,000	●D18M2	**BSH0703T●●●●A**	3.620/ *7.981*
2.7	7.5	900	4,000	6,000	●D18M2	**BSH1001T●●●●A**	4.200/ *9.259*
3.1	11.3	1,300	5,000	8,000	●D18N4	**BSH0703P●●●●A**	3.620/ *7.981*
3.3	6.3	700	2,500	6,000	●D30M2	**BSH1001T●●●●A**	4.200/ *9.259*
	9.6	1,100	4,000	6,000	●D18N4	**BSH1001P●●●●A**	4.200/ *9.259*
5.8	16.4	1,500	4,000	6,000	●D30M2	**BSH1002T●●●●A**	5.900/ *13.007*
	18.3	1,700	4,000	6000	●D18N4	**BSH1002P●●●●A**	5.900/ *13.007*
8	28.3	2,000	3,000	6,000	●D30N4	**BSH1003P●●●●A**	7.400/ *16.314*
		2,600	4,000	6,000	●D30N4	**BSH1003P●●●●A**	7.400/ *16.314*
10	37.9	2,100	2,500	6,000	●D30N4	**BSH1004P●●●●A**	9.500/ *20.944*
		2,600	3,000	6,000	●D30N4	**BSH1004P●●●●A**	9.500/ *20.944*
11.1	27	2,500	2,500	4,000	●D30N4	**BSH1401P●●●●A**	11.200/ *24.692*
		3,000	3,000	4,000	●D30N4	**BSH1401P●●●●A**	11.200/ *24.692*
19.5	59.3	3,900	3,000	4,000	●D72N4	**BSH1402T●●●●P**	16.000/ *35.274*
27.8	90.2	4,100	3,000	4,000	●D72N4	**BSH1403T●●●●P**	21.200/ *48.738*
33.4	103.6	5,000	2,500	4,000	●D72N4	**BSH1404P●●●●P**	26.500/ *58.422*

(1) To complete each reference see the table on page 43.
(2) Weight of servo motor without brake, no packaging. To obtain the weight of the servo motor with holding brake, please consult our website

BSH servo motors (continued)

To order a BSH servo motor, complete each reference with:

			eg: BSH0401P	●	●	●	●	●
Shaft end	IP 50	Smooth		**0**				
		Keyed		**1**				
	IP 65/IP 67 *(1)*	Smooth		**2**				
		Keyed		**3**				
Integrated sensor	High resolution, optical	Single-turn, SinCos Hiperface® 131,072 points/turn, 128 Sin/Cos periods per revolution			**1**			
		Multi-turn, SinCos Hiperface® 131,072 points/turn x 4,096 turns, 128 Sin/Cos periods per revolution			**2**			
	Medium resolution, capacitive	Single-turn, SinCos Hiperface® 32768 points/turn, 16 Sin/Cos periods per revolution *(2)*			**6**			
		Multi-turn, SinCos Hiperface® 32768 points/turn x 4,096 turns, 16 Sin/Cos periods per revolution *(2)*			**7**			
Holding brake	Without					**A**		
	With					**F**		
Connections	Straight connectors						**1**	
	Rotatable right angle elbow connectors						**2**	
Flange	International standard							**A** or **P** *(3)*

***Note**: The example above is for a **BSH0401P** servo motor. For other servo motors, replace **BSH0401P** with the relevant reference.*

Dimensions (overall)

Servo motors	Flange	W x H x D *(4)*	
		Without holding brake	With holding brake
	mm/*in*	mm/*in*	mm/*in*
BSH0401P●	40 x 40/ *1.57 x 1.57*	40 x 73.4 x 98.4 *1.57 x 2.88 x 3.87*	40 x 99.4 x 124.4 *1.57 x 3.91 x 4.89*
BSH0402P●	40 x 40/ *1.57 x 1.57*	40 x 93.4 x 118.4/ *1.57 x 3.67 x 4.66*	40 x 119.4 x 144.4/ *1.57 x 4.70 x 5.68*
BSH0551●	55 x 55/ *2.16 x 2.16*	55 x 94.5 x 132.5/ *2.16 x 3.72 x 5.22*	55 x 94.5 x 159/ *2.16 x 3.72 x 6.26*
BSH0552●	55 x 55/ *2.16 x 2.16*	55 x 94.5 x 154.5/ *2.16 x 3.72 x 6.08*	55 x 94.5 x 181/ *2.16 x 3.72 x 7.13*
BSH0553●	55 x 55/ *2.16 x 2.16*	55 x 94.5 x 176.5/ *2.16 x 3.72 x 6.95*	55 x 94.5 x 203/ *2.16 x 3.72 x 7.99*
BSH0701●	70 x 70/ *2.76 x 2.76*	70 x 111.5 x 154/ *2.76 x 4.39 x 6.06*	70 x 111.5 x 180/ *2.76 x 4.39 x 7.09*
BSH0702●	70 x 70/ *2.76 x 2.76*	70 x 111.5 x 187/ *2.76 x 4.39 x 7.36*	70 x 111.5 x 213/ *2.76 x 4.39 x 8.39*
BSH0703●	70 x 70/ *2.76 x 2.76*	70 x 111.5 x 220/ *2.76 x 4.39 x 8.66*	70 x 111.5 x 254/ *2.76 x 4.39 x 10.00*
BSH1001●	100 x 100/ *3.94 x 3.94*	100 x 138.5 x 169/ *3.94 x 5.45 x 6.65*	100 x 138.5 x 200/ *3.94 x 5.45 x 7.87*
BSH1002●	100 x 100/ *3.94 x 3.94*	100 x 138.5 x 205/ *3.94 x 5.45 x 8.07*	100 x 138.5 x 236/ *3.94 x 5.45 x 9.29*
BSH1003●	100 x 100/ *3.94 x 3.94*	100 x 138.5 x 241/ *3.94 x 5.45 x 9.49*	100 x 138.5 x 272/ *3.94 x 5.45 x 10.71*
BSH1004●	100 x 100/ *3.94 x 3.94*	100 x 138.5 x 277/ *3.94 x 5.45 x 10.91*	100 x 138.5 x 308/ *3.94 x 5.45 x 12.13*
BSH1401●	140 x 140/ *5.51 x 5.51*	140 x 178 x 218/ *5.51 x 7.01 x 8.58*	140 x 178 x 256/ *5.51 x 7.01 x 10.08*
BSH1402●	140 x 140/ *5.51 x 5.51*	140 x 192.5*(5)* x 273/ *5.51 x 7.58 (5) x 10.75*	140 x 192.5 *(5)* x 311/ *5.51 x 7.58 (5) x 12.24*
BSH1403●	140 x 140/ *5.51 x 5.51*	140 x 192.5 *(5)* x 328/ *5.51 x 7.58 (5) x 12.91*	140 x 192.5 *(5)* x 366/ *5.51 x 7.58 (5) x 14.41*
BSH1404●	140 x 140/ *5.51 x 5.51*	140 x 192.5 *(5)* x 383/ *5.51 x 7.58 (5) x 15.08*	140 x 192.5 *(5)* x 421/ *5.51 x 7.58 (5) x 16.58*

(1) IP 67 with the VW3M230● IP 67 conformity kit supplied as an option (see page 44).
(2) Only available for BSH040●●●.
(3) "A" or "P" depending on the model (see table of references on page 42).
(4) D = motor length (excluding shaft end).
(5) 192.5 mm/7.58 in with straight connector, 198.5 mm/7.82 in with rotatable elbow connector.

Lexium 32 and Motors
BSH servo motors
IP 67 conformity kits
Connection components

PF080922

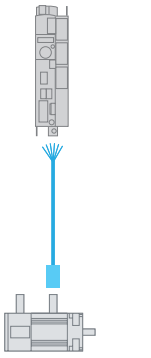
VW3M230●

BSH servo motors (continued)

IP 67 conformity kits

This kit can be used to provide IP 67 degree of protection. It is mounted in place of the motor backplate.

Description	For use with	Reference	Weight kg/*lb*
IP 67 conformity kits (supplied as an option)	BSH055●●	VW3M2305 *(1)*	0.050/ *0.110*
		VW3M2300 *(2)*	0.050/ *0.110*
	BSH070●●	VW3M2306 *(1)*	0.100/ *0.220*
		VW3M2301 *(2)*	0.100/ *0.220*
	BSH100●●	VW3M2307 *(1)*	0.150/ *0.331*
		VW3M2302 *(2)*	0.150/ *0.331*
	BSH140●●	VW3M2308 *(1)*	0.300/ *0.661*
		VW3M2303 *(2)*	0.300/ *0.661*



VW3M510●R●●●

Connection components

Power cordsets

Description	From servo motor	To servo drive	Composition	Length m/*ft*	Reference	Weight kg/*lb*
Cordsets equipped with one ytec industrial connector (servo motor end)	BSH040●P●●	LXM32●●●●●● See combinations page 6	[(4 x 1 mm²/ *AWG 17*) + (2 x 0.75 mm²/ *AWG 18*)]	3/ *9.84*	VW3M5100R30	0.810/ *1.786*
				5/ *16.40*	VW3M5100R50	1.210/ *2.668*
				10/ *32.81*	VW3M5100R100	2.290/ *5.049*
				15/ *49.21*	VW3M5100R150	3.400/ *7.496*
				25/82.02	VW3M5100R250	6.200/ *13.669*
Cordsets equipped with one M23 industrial connector (servo motor end)	BSH055●● BSH070●● BSH100●● BSH1401P	LXM32●●●●●●. See combinations page 6	[(4 x 1.5 mm²/ *AWG 16*) + (2 x 1 mm²/ *AWG 17*)]	1.5/ *4.92*	VW3M5101R15	0.600/ *1.323*
				3/ *9.84*	VW3M5101R30	0.810/ *1.786*
				5/ *16.40*	VW3M5101R50	1.210/ *2.668*
				10/ *32.81*	VW3M5101R100	2.290/ *5.049*
				15/ *49.21*	VW3M5101R150	3.400/ *7.496*
				20/ *65.62*	VW3M5101R200	4.510/ *9.943*
				25/ *82.02*	VW3M5101R250	6.200/ *13.669*
				50/ *164.04*	VW3M5101R500	12.325/ *27.172*
				75/ *246.06*	VW3M5101R750	18.450/ *40.675*
Cordsets equipped with one M40 industrial connector (servo motor end)	BSH1402T BSH1403T BSH1404P	LXM32●D72N4	[(4 x 4 mm²/ *AWG 12*) + (2 x 1 mm²/ *AWG 17*)]	3/ *9.84*	VW3M5103R30	1.330/ *2.932*
				5/ *16.40*	VW3M5103R50	2.130/ *4.696*
				10/ *32.81*	VW3M5103R100	4.130/ *9.105*
				15/ *49.21*	VW3M5103R150	6.120/ *13.492*
				20/ *65.62*	VW3M5103R200	8.090/ *17.835*
				25/ *82.02*	VW3M5103R250	11.625/ *25.629*
				50/ *164.04*	VW3M5103R500	23.175/ *51.092*
				75/ *246.06*	VW3M5103R750	34.725/ *76.555*

(1) For a RS01 hardware version BSH motor. The version number is visible on the motor nameplate. For further information, please contact our Customer Care Centre.
(2) For a RS02 hardware version BSH motor. The version number is visible on the motor nameplate. For further information, please contact our Customer Care Centre.

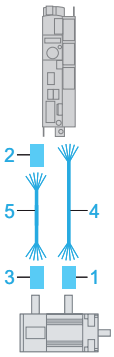
VW3M8102R●●●

Connection components (continued)

Control cordsets

Description	From servo motor	To servo drive	Composition	Length	Reference	Weight
				m/*ft*		kg/*lb*
SinCos Hiperface® encoder cordsets equipped with an M23 industrial connector (servo motor end) **and an RJ45 connector** with 8+2 contacts (servo drive end)	BSH●●●●●	LXM32●●●●●● See references pages 8 and 9	[3 x (2 x 0.14 mm²/ *AWG 26*) + (2 x 0.34 mm²/ *AWG 22*)]	1.5/ *4.92*	VW3M8102R15	0.400/ *0.882*
				3/ *9.84*	VW3M8102R30	0.500/ *1.102*
				5/ *16.40*	VW3M8102R50	0.600/ *1.323*
				10/ *32.81*	VW3M8102R100	0.900/ *1.984*
				15/ *49.21*	VW3M8102R150	1.100/ *2.425*
				20/ *65.62*	VW3M8102R200	1.400/ *3.086*
				25/ *82.02*	VW3M8102R250	1.700/ *3.748*
				50/ *164.04*	VW3M8102R500	3.100/ *6.834*
				75/ *246.06*	VW3M8102R750	4.500/ *9.921*
SinCos Hiperface® encoder cordsets equipped with an ytec industrial connector (servo motor end) **and an RJ45 connector** with 8+2 contacts (servo drive end)	BSH040●P●●	LXM32●●●●●● See references pages 8 and 9	[3 x (2 x 0.14 mm²/ *AWG 26*) + (2 x 0.34 mm²/ *AWG 22*)]	3/9.84	VW3M8100R30	0.500/ *1.102*
				5/16.40	VW3M8100R50	0.600/ *1.323*
				10/32.81	VW3M8100R100	0.900/ *1.984*
				15/49.21	VW3M8100R150	1.100/ *2.425*
				25/82.02	VW3M8100R250	1.700/ *3.748*

Lexium 32 and Motors
BSH servo motors
Connection components

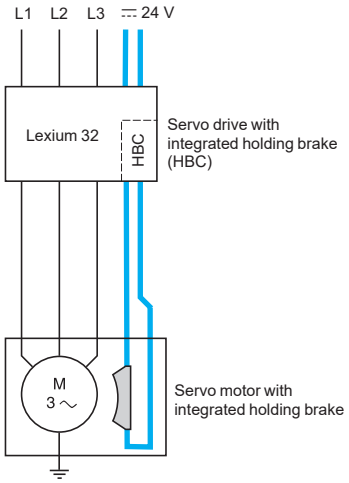


Connectors for creating power and control cordsets

Description	For use with	For cable cross-section	Item no.	Unit reference	Weight
		mm²/AWG			kg/*lb*
M23 industrial connector for creating power cordsets **(sold in multiples of 5)**	BSH055●●, BSH070●●, BSH100●●, and BSH1401P servo motors	1.5/ *16*	1	VW3M8215	0.350/ *0.772*
M40 industrial connector for creating power cordsets **(sold in multiples of 5)**	BSH1402T, BSH1403T, and BSH1404P servo motors	4/ *12*	1	VW3M8217	0.850/ *0.772*
ytec industrial connector for creating power cordsets **(sold in multiples of 5)**	BSH040●P●●	1/17	1	VW3M8219	0.350/ 0.772
RJ45 connector with 8+2 contacts for creating control cordsets **(sold in multiples of 5)**	LXM32●●●●●● servo drives (CN3 connector)	–	2	VW3M2208	0.200/ *0.441*
M23 industrial connector for creating control cordsets **(sold in multiples of 5)**	BSH●●●●● servo motors	–	3	VW3M8214	0.350/ *0.772*
ytec industrial connector for creating control cordsets **(sold in multiples of 5)**	BSH040●P●●	–	3	VW3M8220	0.350/ 0.772

Cables for creating power and control cordsets

Description	From servo motor	To servo drive	Composition	Item no.	Length	Reference	Weight
					m/*ft*		kg/*lb*
Cables for creating power cordsets	BSH055●● BSH070●● BSH100●● BSH1401P	LXM32●●●●●● See combinations page 6	[(4 x 1.5 mm²/ *AWG 16*) + (2 x 1 mm²/ *AWG 17*)]	4	25/ *82.02*	VW3M5301R250	5.550/ *12.125*
					50/ *164.04*	VW3M5301R500	11.100/ *24.471*
					100/ *328.08*	VW3M5301R1000	22.200/ *48.943*
	BSH1402T BSH1403T BSH1404P	LXM32●D72N4	[(4 x 4 mm²/ *AWG 12*) + (2 x 1 mm²/ *AWG 17*)]	4	25/ *82.02*	VW3M5303R250	9.900/ *21.826*
					50/ *164.04*	VW3M5303R500	19.800/ *43.651*
					100/ *328.08*	VW3M5303R1000	39.600/ *87.303*
	BSH040●P●●	LXM32●●●●●● See combinations page 6	[(4 x 1 mm²/ *AWG 17*) + (2 x 0.75 mm²/ *AWG 18*)]	4	100/ *328.08*	VW3M5300R1000	22.200/ *48.943*
Cables for creating control cordsets for SinCos Hiperface® encoders	BSH●●●●●	LXM32●●●●●● See references pages 8 and 9	[3 x (2 x 0.14 mm²/ *AWG 26*) + (2 x 0.34 mm²/ *AWG 22*)]	5	25/ *82.02*	VW3M8222R250	1.400/ *3.086*
					50/ *164.04*	VW3M8222R500	2.800/ *6.173*
					100/ *328.08*	VW3M8222R1000	5.600/ *12.346*



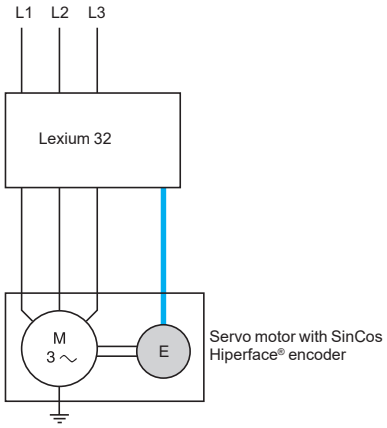
Holding brake

Presentation

The holding brake integrated in the BSH servo motor is an electromagnetic pressure spring brake that blocks the servo motor axis once the output current has been turned off.
In the event of an emergency, such as a power outage or an emergency stop, the drive is immobilized.
Blocking the servo motor axis is also necessary in cases of torque overload, such as in the event of vertical axis movement.
As standard, the Lexium 32 servo drive has a holding brake controller to amplify the braking control signal and help ensure the brake is deactivated quickly. The controller then reduces the control signal so as to decrease the power dissipated by the holding brake.

References

To select a BSH servo motor with or without holding brake, see the references on page 43.
For any additional information about holding brake characteristics, visit our website.



Integrated encoder in BSH servo motors

Presentation

The standard measurement device is the SinCos Hiperface® single-turn or multi-turn encoder integrated in BSH servo motors. This measurement device is particularly suited to the Lexium 32 range of servo drives.
Use of this interface enables:

- Automatic identification of BSH servo motor data by the servo drive
- Automatic initialization of the servo drive control loops, thus simplifying installation of the motion control device

References

To select the type of SinCos Hiperface® encoder integrated in the BSH servo motor (single-turn or multi-turn), see the references on page 43.
For any additional information about integrated encoder characteristics, visit our website.

Lexium 32 and Motors
Product reference index

L

T

V

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DIA7ED2140501EN
October 2021 - V5.0