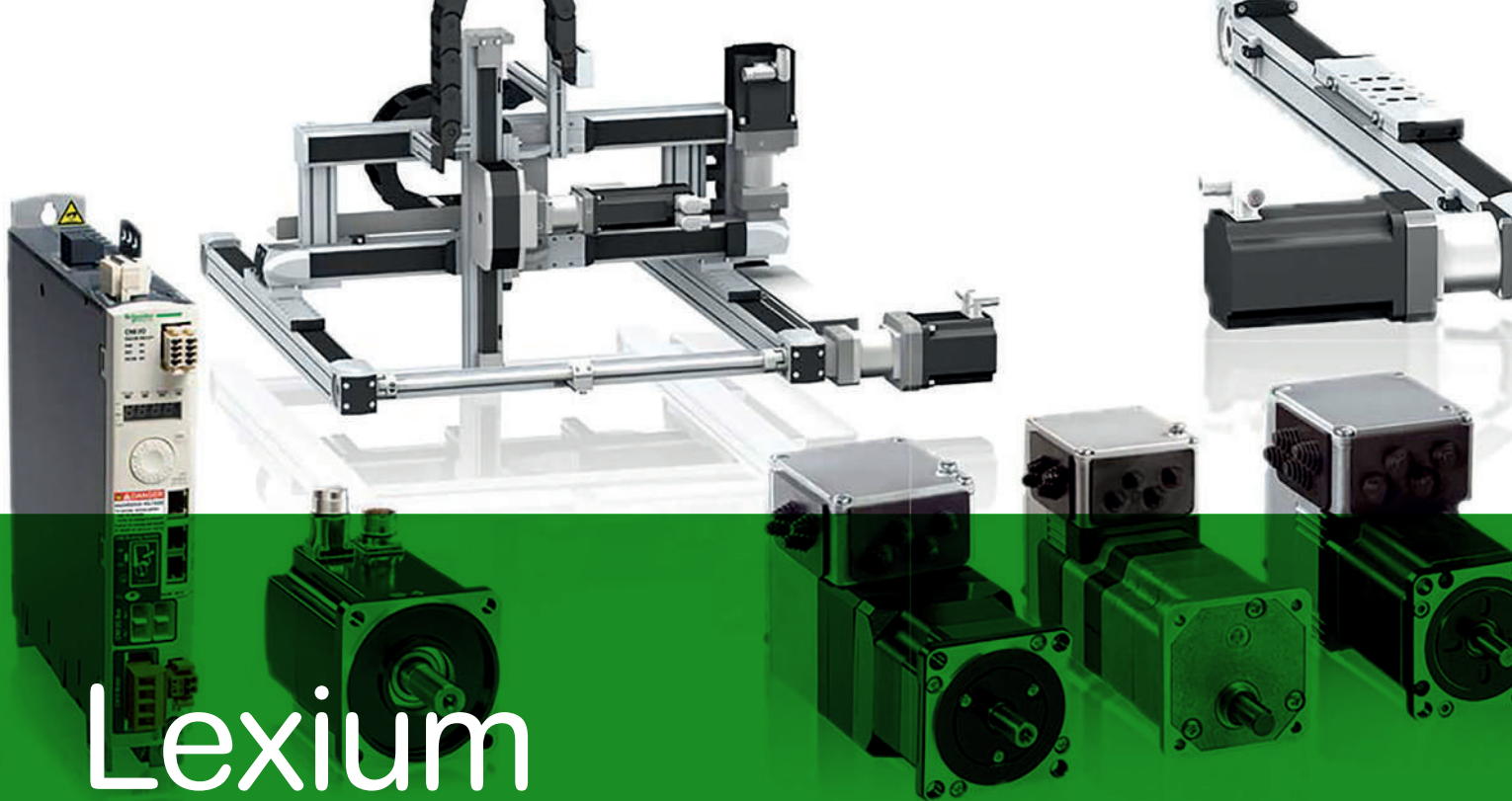




# Lexium 32i

Integrated servo drive for motion control



# Lexium

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## Get technical information about your product

References

Medicon TM3  
I/O expansion modules for Medicon controllers  
Analog I/O modules

Number and type of channels	Input range	Output range	Resolution	Input/Output	Reference	Weight
2 voltage channels	±12 VDC ±10 mA, ±10 mA	0...24 VDC	12 bits	12 bits	TM3AI2H	0,114 kg
4 voltage channels	±12 VDC ±10 mA, ±10 mA	0...24 VDC	12 bits	12 bits	TM3AI2H	0,114 kg
4 voltage channels or temperature inputs	±12 VDC ±10 mA, ±10 mA	0...24 VDC	12 bits	12 bits	TM3AI2H	0,114 kg
4 temperature inputs	Thermocouple (J, K, E, S, T, R, C) RTD (Pt100, Pt500, Ni100, Ni500)	0...24 VDC	12 bits	12 bits	TM3AI2H	0,114 kg
4 digital inputs	0...24 VDC 0...24 VDC	0...24 VDC	12 bits	12 bits	TM3AI2H	0,114 kg
4 digital outputs	0...24 VDC 0...24 VDC	0...24 VDC	12 bits	12 bits	TM3AI2H	0,114 kg

View all Medicon TM3  
TM3AI2H  
Module TM3-2 analog inputs high resolution

Product DataSheet | User guide | Catalogue | CAD Document

Characteristics | Documents and Downloads | Technical FAQs | Additional information | Dimensions Drawings

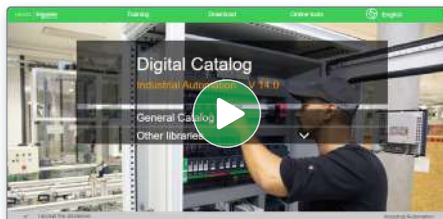
Main

range of product: Medicon TM3  
product or component type: Analog input module  
range compatibility: Medicon M251

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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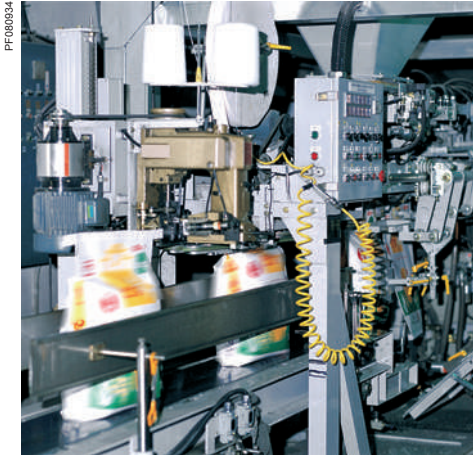
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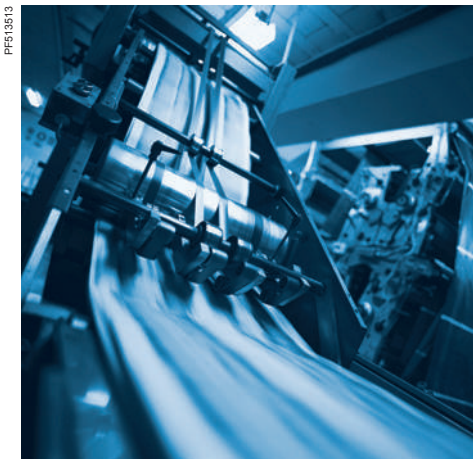
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# Lexium 32i

## Integrated servo drive



Lexium 32i integrated servo drive controlling a packing line



Lexium 32i integrated servo drive controlling a printing line



Lexium 32i integrated servo drive controlling a materials processing machine

### Presentation

The modular range of Lexium 32i integrated servo drives features three control units for controlling Lexium BMI servo motors. These servo motors integrate the power stage that provides a direct power supply from either a single-phase or three-phase AC supply.

The Lexium 32i thus offers optimum functionality that can adapt to the specific performance, power, and simplicity of use requirements of motion control applications.

It covers power ratings between 0.4 and 2.1 kW.

The Lexium 32i range of integrated servo drives is designed to simplify the life cycle of machines. SoMove setup software simplifies initial startup. The modular design facilitates installation by reducing assembly time to as little as three minutes and makes maintenance easier. Maintenance is also quicker and cheaper thanks to the new duplication and backup tools, like the memory card.

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 Lexium 32i provides maximum power in minimum space, which helps to reduce the size of the enclosure required by up to 60% and the direct and indirect costs by up to 30%.

Three control units - CANopen/CANmotion, EtherCAT and Ethernet (PROFINET) - allow adaptation to numerous industrial control system architectures.

The integrated Safe Torque Off function reduces system design times and makes it easier to comply with safety standards.

### Applications for industrial machines

The Lexium 32i integrated servo drive incorporates functions that are suitable for the most common applications, including:

- printing - cutting, position-controlled machinery, etc.
- packing and wrapping - cutting to length, rotary knife, bottling, capsuling, labeling, etc.
- textiles - winding, spinning, weaving, embroidery, etc.
- material handling - conveying, palletizing, warehousing, pick-and-place, etc.
- transfer machines - gantries, hoists, etc.
- clamping
- flying shear operations - cutting, printing, marking, etc.
- materials processing, etc.

### The offer

The Lexium 32i range of integrated servo drives covers motor power ratings between 0.4 kW and 2.1 kW with three types of power supply:

- 110...120 V single-phase, from 0.4 kW to 0.75 kW (BMI●●●T●●●)
- 200...240 V single-phase, from 0.7 kW to 1.3 kW (BMI●●●T●●●)
- 208...480 V three-phase, from 0.4 kW to 2.1 kW (BMI●●●P●●●)

### Compliance with international standards and certifications

The entire range conforms to international standards IEC/EN 61800-5-1 and 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 category C2 EMC filters in Lexium 32i servo drives and compliance with EMC simplify installation and make it very inexpensive to bring the device into conformity to obtain the CE mark.

These filters comply with standard IEC/EN 61800-3, environment 1, category C2.

### Accessories and options

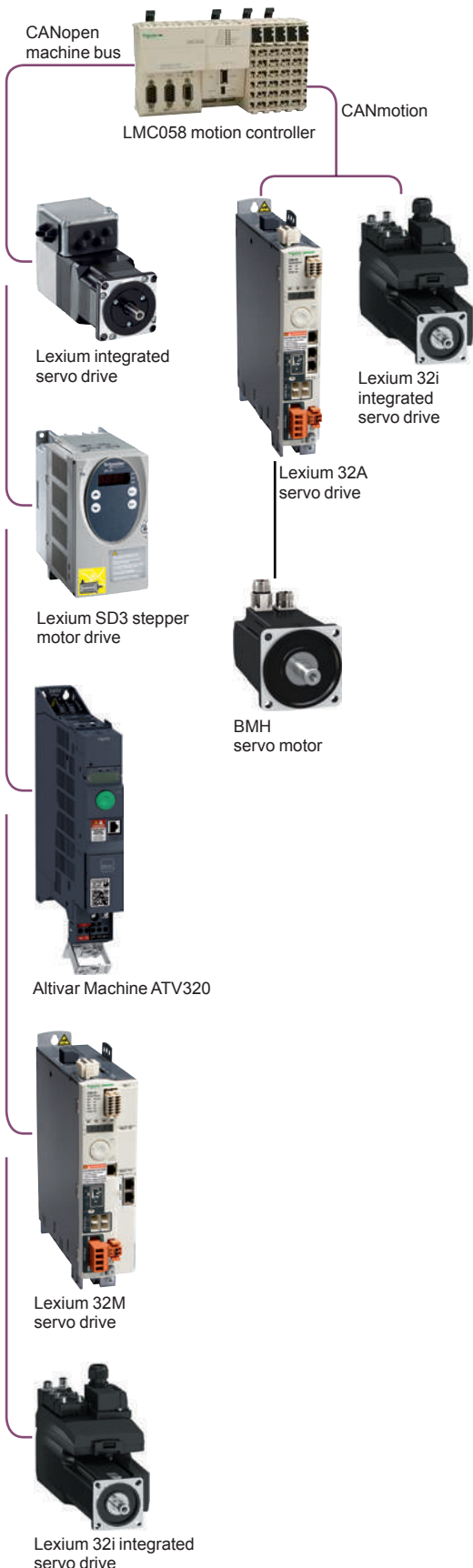
External accessories and options, such as braking resistors and planetary gearboxes, enhance this offer.

### Simplicity, from installation to maintenance



<p><b>SoMove setup software 1</b></p>	<p>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 32i integrated servo drive. See page 14 or consult our catalog n° DIA2ED2140801EN on our web site <a href="http://www.schneider-electric.com">www.schneider-electric.com</a></p>
<p><b>Multi-Loader tool 2</b></p>	<p>The Multi-Loader tool is used to copy configurations from a PC or Lexium 32i servo drive and load them onto another Lexium 32i. See page 14.</p>
<p><b>Memory card 3</b></p>	<p>This stores the control unit parameters. When replacing a Lexium 32i, this function helps to ensure immediate startup by removing the need to program the drive. This optimizes maintenance time and reduces costs. See page 14.</p>
<p><b>Auto-tuning</b></p>	<p>Adapted to each user, the three auto-tuning levels - automatic, semi-automatic, and expert - allow you to achieve a high level of machine performance, whatever the application.</p>
<p><b>Mounting and maintenance</b></p>	<p>The modular design and the memory card for storing configurations help to optimize mounting and maintenance procedures.</p>

# Lexium 32i Integrated servo drive



Example of control system architecture with CANopen and CANmotion machine bus

## High performance

The following Lexium 32i offer features help to increase machine performance:

- **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 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

The versatility of the Lexium 32i range offers excellent flexibility for integration into different control system structures.

Depending on the model, the Lexium 32i has logic inputs and outputs, which can be configured according to application requirements.

It also has three control unit types for managing the communication via:

- CANopen/CANmotion machine bus
- EtherCAT machine bus
- Ethernet (PROFINET) network

## Dedicated safety functions

The Lexium 32i range 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. The bus connection module with STO option is required to access this function (see page 10).

## Lexium BMI servo motors - dynamic and powerful

Lexium BMI servo motors are synchronous three-phase motors. They feature a SinCos Hiperface® for automatic transmission of data from the servo motor to the control units and are available with or without a holding brake.

Lexium BMI servo motors provide high power density values to optimize machine compactness. Available with two flange sizes and two different lengths for each flange size, they are suitable for most applications, covering a continuous torque range from 1.7 to 7.2 Nm for speeds up to 4700 rpm. They cover the power range 0.4 to 2.1 kW.

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

Lexium BMI servo motors are UL Recognized  and conform to standard UL 1004 as well as to European directives (CE marking).

They are available with the following variants:

- 2 flange sizes: 70 and 100 mm/2.76 and 3.94 in.
- 2 degrees of protection for the shaft end: IP 54 or IP 65 in accordance with standard IEC/EN 60529 (the degree of protection of the casing is IP 65)
- with or without holding brake
- integrated single-turn or multi-turn SinCos Hiperface® encoder (standard or high resolution)
- smooth or keyed shaft end

# Lexium 32i

## Integrated servo drive

### Lexium BMI servo motor

PF11226A



Lexium BMI servo motor with power stage

#### Lexium BMI servo motors - dynamics and power (continued)

##### Specific features

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

- The ambient operating temperature is  $-0...+50^{\circ}\text{C}/+32...+122^{\circ}\text{F}$ .
- The maximum operating altitude is 1000 m/3281 ft without derating; 2000 m/6562 ft with a maximum ambient temperature of  $45^{\circ}\text{C}/113^{\circ}\text{F}$  and a continuous power reduction of 1% for every 100 m/328 ft above 1000 m/3281 ft; and 3000 m/9842 ft with a maximum ambient temperature of  $40^{\circ}\text{C}/104^{\circ}\text{F}$  and a continuous power reduction of 1% for every 100 m/328 ft above 1000 m/3281 ft. ■
- The servo motor can withstand 5...80% relative humidity (non-condensing).
- The windings are insulation class F in accordance with standard IEC 60034-1 (maximum temperature for windings is  $155^{\circ}\text{C}/311^{\circ}\text{F}$ ).
- Thermal protection is provided and controlled by the Lexium 32i integrated servo drive via the motor temperature control algorithm.
- All mounting positions are permitted:
  - horizontal mounting (IMB5)
  - vertical mounting (IMV1 with shaft end at the top and IMV3 with shaft end at the bottom) in accordance with standard IEC 60034-7

##### Holding brake

Lexium BMI 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

Lexium BMI servo motors are equipped with an absolute encoder.

This encoder performs the following functions:

- It gives the absolute position of the motor so that flows can be synchronized.
- It measures the servo motor speed via the associated Lexium 32i integrated servo drive (this information is used by the drive's speed controller).
- It measures the position information for the Lexium 32i position controller.
- It sends data from the servo motor to the control unit, which provides automatic motor identification when the Lexium 32i starts.

4 encoder models are available:

- High resolution SinCos Hiperface® encoder:
  - single-turn (131,072 points/turn) (1)
  - multi-turn (131,072 points/turn x 4096 turns) (1)

These encoders give an angular shaft position precise to less than  $\pm 1.3$  arc minutes.

- Standard resolution SinCos Hiperface® encoder:
  - single-turn (32,768 points/turn) (1)
  - multi-turn (32,768 points/turn x 4096 turns) (1)

These encoders give an angular shaft position precise to less than  $\pm 4.8$  arc minutes.

(1) Encoder resolution given for a Lexium 32i integrated servo drive.



# Lexium 32i

## Integrated servo drive

### Control units, Servo motor

Main functions			
Control unit type	LXM32ICAN	LXM32IECT	LXM32IETH
Communication bus and network	CANopen	Ethernet	
Integrated communication ports	<ul style="list-style-type: none"> <li>■ Modbus link</li> <li>■ CANopen machine bus</li> <li>■ CANmotion machine bus</li> </ul>	<ul style="list-style-type: none"> <li>■ Modbus link</li> <li>■ EtherNet (EtherCAT) network</li> </ul>	<ul style="list-style-type: none"> <li>■ Modbus link</li> <li>■ EtherNet (PROFINET) network</li> </ul>
Operating mode	<ul style="list-style-type: none"> <li>■ Homing</li> <li>■ Manual mode (JOG)</li> <li>■ Speed control</li> <li>■ Current control</li> <li>■ Position control</li> </ul>		
Functions	Auto-tuning, monitoring, stopping, stop window, conversion, rapid entry of position values		
24 V $\overline{\text{---}}$ logic inputs (1)	4 max., reassignable		
24 V $\overline{\text{---}}$ capture inputs (1) (2)	2, reassignable		
24 V $\overline{\text{---}}$ logic outputs (1)	2, reassignable For use with the following models: VW3M9105, VW3M9110		
Integrated safety function	Safe Torque Off (STO) For use with the following models: VW3M9101, VW3M9103, VW3M9201, VW3M9203, VW3M9105, VW3M9106, VW3M9108, VW3M9206, VW3M9208, VW3M9110, VW3M9116, VW3M9117, VW3M9216, and VW3M9217		
Architecture	Control via: <ul style="list-style-type: none"> <li>■ Schneider Electric or third-party PLCs via communication bus</li> </ul>		
Servo motor	<b>BMI</b>		
Application	Medium and high load With robust adjustment of the movement		
Flange size	70 or 100 mm/2.76 or 3.94 in.		
Continuous torque	1.7 to 7.2 Nm		
Encoder	Single-turn SinCos Hiperface®	<ul style="list-style-type: none"> <li>■ 32,768 points/turn</li> <li>■ 131,072 points/turn</li> </ul>	
	Multi-turn SinCos Hiperface®	<ul style="list-style-type: none"> <li>■ 32,768 points/turn x 4096 turns</li> <li>■ 131,072 points/turn x 4096 turns</li> </ul>	
Degree of protection	Motor without shaft sealing ring	IP 54 (3)	
	Motor with shaft end	IP 65 (3) (4)	

(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) Two standard logic inputs can be used as capture inputs.

(3) In the case of mounting position IM V3 (drive shat vertical, shaft end upward), the motor only has degree of protection IP 50.

The degree of protection only relates to the motor itself, not to mounted components such as, for example, a gearbox.

(4) With shaft end: the maximum speed of rotation is limited to 6000 min<sup>-1</sup>; shaft sealing ring with initial lubrication, if the seals run dry, this increases friction and reduces the service life.

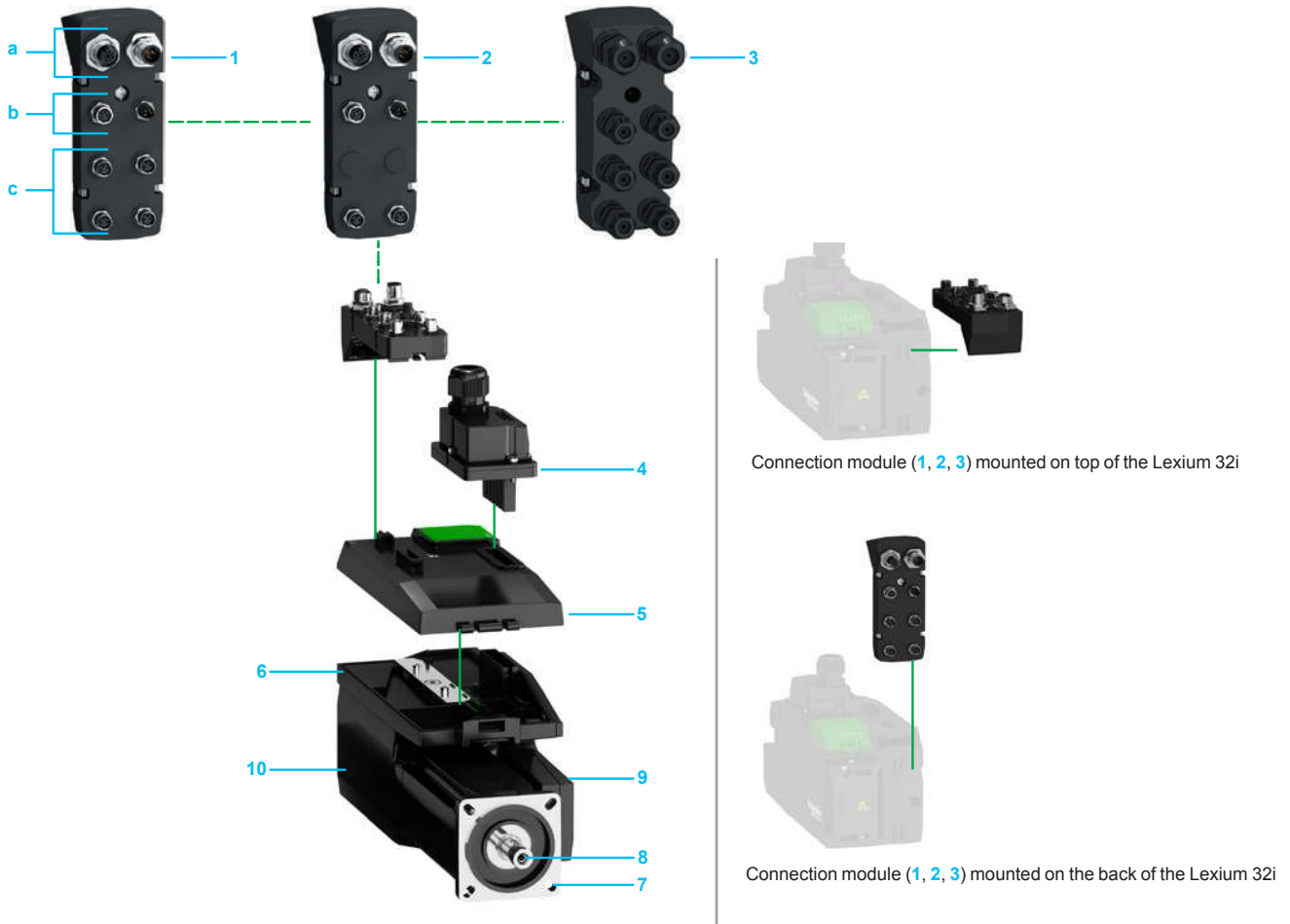
### Description

Lexium 32i integrated servo drives comprise control electronics with an interface for a CANopen DS402/CANmotion, an EtherCAT communication bus, or an EtherNet (PROFINET) network and a Lexium BMI synchronous servo motor.

They can be equipped with a single-turn or multi-turn encoder and an integrated holding brake as required.

2 types of connection are possible:

- industrial connectors (1 and 2)
- internal spring terminals (3)



Connection module (1, 2, 3) mounted on top of the Lexium 32i

Connection module (1, 2, 3) mounted on the back of the Lexium 32i

- Connection module for CANopen or, EtherCAT bus or EtherNet (PROFINET) network (depending on the model) with four logic inputs, 2 logic outputs (only for Ethernet) and STO function
  - a 2 x M12 connectors for CANopen, EtherCAT bus or EtherNet (PROFINET) network
  - b 2 x M8 connectors for STO function
  - c 2 or 4 x M8 connectors for logic inputs, or 2 M8 connectors for logic inputs and 2 M8 connectors for logic inputs/outputs (only for Ethernet)
- 1 Connection module for CANopen, EtherCAT bus or EtherNet (PROFINET) network, and outputs (only for LXM32IETH) (depending on the model) with two logic inputs, M8 connectors, and STO function (connection modules with industrial connectors are also available without the STO function)
- 2 Connection module with internal spring terminals with eight cable glands (6 x M12 and 2 x M16), four logic inputs, and two logic outputs (cable glands to be ordered separately, see page 11)
- 3 Connection for mains supply module available in two versions (for single-phase or three-phase power supply)
- 4 Control unit available in three versions:
  - for CANopen DS402/CANmotion bus
  - for EtherCAT bus
  - for EtherNet (PROFINET) network
- Motor section with power stage comprising:
  - 5 Casing with RAL 9005 opaque black paint protective coating
  - 6 A 4-point axial mounting flange available in the following sizes:
    - 70 mm/2.76 in.
    - 100 mm/3.94 in.
  - 7 A smooth or keyed shaft end (depending on the model)
  - 8 Lexium BMI servo motor comprising a three-phase stator and a 10-pole rotor with Neodymium Iron Boron (NdFeB) magnets
  - 9 Power stage

# Lexium 32i

Integrated servo drive  
Lexium BMI servo motor

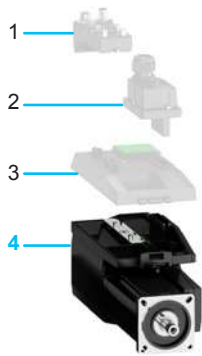
Lexium BMI servo motor according to supply voltage					
Drive	Rotor inertia without brake kgcm <sup>2</sup>	Nominal operating point			Stall torque M0/Mmax (1) Nm/Nm
		Nominal torque Nm	Nominal speed rpm	Nominal power kW	
<b>115 V ~ single-phase supply voltage</b>					
BMI0702T	1.13	2.2	1700	0.4	2.3/6.6
BMI0703T	1.67	2.9	1400	0.4	3/8.6
BMI1002T	6.28	5.4	1400	0.75	5.4/14.5
<b>230 V ~ single-phase supply voltage</b>					
BMI0702T	1.13	1.7	4000	0.7	2.3/6.6
BMI0703T	1.67	2.2	3200	0.7	3/8.6
BMI1002T	6.28	4.4	3000	1.3	5.4/14.5
<b>208 V ~ three-phase supply voltage</b>					
BMI0702P	1.13	2.4	1800	0.4	2.5/6.8
BMI0703P	1.67	2.9	1600	0.45	3/8.6
BMI1002P	6.28	5.4	1900	1	5.4/14
BMI1003P	9.37	7.2	1500	1	7.2/19.2
<b>400 V ~ three-phase supply voltage</b>					
BMI0702P	1.13	2.2	3600	0.8	2.5/6.8
BMI0703P	1.67	2.7	3300	0.9	3/8.6
BMI1002P	6.28	5.1	3800	1.9	5.4/14
BMI1003P	9.37	6.8	3000	2	7.2/19.2
<b>480 V ~ three-phase supply voltage</b>					
BMI0702P	1.13	2	4400	0.9	2.5/6.8
BMI0703P	1.67	2.3	3900	0.9	3/8.6
BMI1002P	6.28	4.1	4700	1.9	5.4/14
BMI1003P	9.37	5.6	3700	2.1	7.2/19.2

(1) - M0: Continuous stall torque.  
- Mmax: Peak stall torque.

# Lexium 32i

## Integrated servo drive

### Lexium BMI servo motor



Lexium 32i:  
 1: Connection module  
 2: Connection module for mains supply  
 3: Control unit  
 4: BMI drive

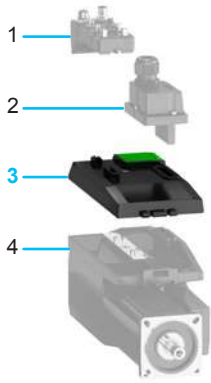
References		BMI				● ● ● ● ● ● ● ●			
To order a BMI drive (Lexium BMI servo motor + power stage) replace the “●” with the values given in the table below									
Flange size	70 mm/2.76 in.	0	7	0					
	100 mm/3.94 in.	1	0	0					
Number of stages	2 stages							2	
	3 stages							3	
Power supply	Single-phase (1) (2)								T
	Three-phase (3)								P
Motor shaft and degree of protection	IP54 for shaft (4) and IP65 for casing	Smooth							0
		Keyed							1
		Smooth							2
	IP65 for the unit	Keyed							3
Encoder type	Single-turn SinCos Hiperface® 131,072 points/turn 128 sine/cosine periods per turn								1
	Multi-turn SinCos Hiperface® 131,072 points/turn x 4096 turns 128 sine/cosine periods per turn								2
	Single-turn SinCos Hiperface® 32,768 points/turn 16 sine/cosine periods per turn								6
	Multi-turn SinCos Hiperface® 32,768 points/turn x 4096 turns 16 sine/cosine periods per turn								7
Brake	With brake								F
	Without brake								A

(1) Requires a single-phase power supply module for Lexium 32i, reference VW3M9001.  
 (2) Lexium BMI1003●●●● servo motors are only available with a three-phase power supply.  
 (3) Requires a three-phase power supply module for Lexium 32i, reference VW3M9002.  
 (4) Requires horizontal mounting (IMB5) or vertical mounting with shaft end at the top (IMV1).

# Lexium 32i

## Integrated servo drive

Control units, connection modules, power supply, and accessories



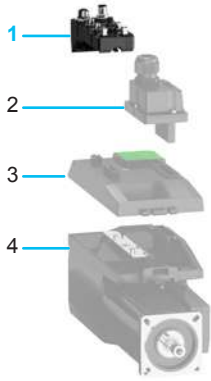
Lexium 32i:  
1: Connection module  
2: Connection module for mains supply  
3: Control unit  
4: BMI drive

### Control unit and connection modules for CANopen DS402/CANmotion machine bus (1)

Description	Bus type	Reference	Weight kg/lb
Control unit	CANopen DS402, CANmotion	LXM32ICAN	0.636 1.402

Description	Bus connector	Number of I/O	STO function	Reference	Weight kg/lb
Connection module for connection via industrial connectors Positive logic inputs (Source)	2 x M12 connectors	4 logic inputs with M8 connectors	Yes (2)	VW3M9101	0.220/0.485
			–	VW3M9102	0.214/0.472
	2 logic inputs with M8 connectors	Yes (2)	VW3M9103	0.222/0.489	
		–	VW3M9104	0.211/0.465	
Connection module for connection via industrial connectors Negative logic inputs (Sink)	2 x M12 connectors	4 logic inputs with M8 connectors	Yes (2)	VW3M9201	0.226/0.498
			–	VW3M9202	0.218/0.481
	2 logic inputs with M8 connectors	Yes (2)	VW3M9203	0.218/0.481	
		–	VW3M9204	0.206/0.454	
Connection via internal spring terminals Top section with 8 cut-outs for cable glands (3): 6 x M12 and 2 x M16	–	4 logic inputs 2 logic outputs	Yes	VW3M9105	0.236/0.520



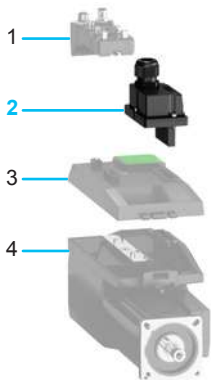
Lexium 32i:  
1: Connection module  
2: Connection module for mains supply  
3: Control unit  
4: BMI drive

### Control units and connection modules for EtherCAT bus and EtherNet (PROFINET) network (1)

Description	Bus type	Reference	Weight kg/lb
Control units	EtherCAT bus	LXM32IECT	0.637/ 1.404
	EtherNet (PROFINET) network	LXM32IETH	0.630/ 1.388

Description	Bus connector	Number of I/O	STO function	Reference	Weight kg/lb
Connection modules for connection via industrial connectors Positive logic inputs (Source)	2 x M12 connectors	4 logic inputs with M8 connectors	Yes (2)	VW3M9106	0.220/0.485
			–	VW3M9107	0.212/0.472
	2 logic inputs with M8 connectors	Yes (2)	VW3M9108	0.212/0.467	
		–	VW3M9109	0.204/0.450	
	2 logic inputs with M8 connectors and 2 logic inputs/outputs with M8 connectors	Yes (2)	VW3M9116	0.220/0.485	
		–	VW3M9117	0.220/0.485	
Connection modules for connection via industrial connectors Negative logic inputs (Sink)	2 x M12 connectors	4 logic inputs with M8 connectors	Yes (2)	VW3M9206	0.220/0.481
			–	VW3M9207	0.216/0.476
	2 logic inputs with M8 connectors	Yes (2)	VW3M9208	0.230/0.507	
		–	VW3M9209	0.204/0.450	
	2 logic inputs with M8 connectors and 2 logic inputs/outputs with M8 connectors	Yes (2)	VW3M9216	0.220/0.485	
		–	VW3M9217	0.220/0.485	
Connection modules via internal spring terminals Top section with 8 cut-outs for cable glands (3): 6 x M12 and 2 x M16	–	4 logic inputs 2 logic outputs	Yes	VW3M9110	0.238/0.525



Lexium 32i:  
1: Connection module  
2: Connection module for mains supply  
3: Control unit  
4: BMI drive

### Connection modules for mains supply for Lexium 32i

Description	Reference	Weight kg/lb
Single-phase connection module for mains supply	VW3M9001	0.500/1.102
Three-phase connection module for mains supply	VW3M9002	0.500/1.102

### Accessories

Description	Reference	Weight kg/lb
Lot of 5 green covers for LXM32ICAN control unit	LXM32ICANGC	0.170/0.374
Lot of 5 green covers for LXM32IECT control unit	LXM32IECTGC	0.171/0.376

(1) Connector sets, see page 11.  
(2) Requires a cordset for the STO function for more information, see page 11.  
(3) To be ordered separately, see page 11.

# Lexium 32i

## Integrated servo drive

Connection components, industrial connectors, separate parts

LXM32L\_61276\_CPWFES17001



VW3M9601

VW3L5F000



VW3L5F000

PF151575



VW3L50200

VW3L50300-62330



VW3L50300

DF538045



VW3M94●●

PF110444



VW3M94CR●●

PF112231A



VW3M9508

LXM32L\_61276\_CPWFES17002



VW3M9530

### Connection component for EtherNet (PROFINET) network

Description	Length m/ft	Sold in lots of	Reference	Weight kg/lb
Y cordset for connection modules Equipped with 2x5-way M8 connectors, 1 male and 1 female, and at the other end: 1x5-way male M8 connector	0.37/ 1.21	2	VW3M9601	0.850/1.874

For use with the following models:  
VW3M9116, VW3M9117, VW3M9216, and VW3M9217

### Industrial connectors for communication bus and logic I/O

Description	Components	Reference	Weight kg/lb
Set of industrial connectors for CANopen bus	1 round A-coded male M12 connector 1 round A-coded female M12 connector 1 M12 blanking plug	VW3L5F000	0.100/0.220
Set of industrial connectors for EtherCAT bus and EtherNet network	2 round D-coded 4-way male M12 connectors 1 M12 blanking plug	VW3L5E000	0.101/0.222
Set of industrial connectors for logic I/O	2 round 3-way M8 connectors	VW3L50200	0.028/0.061
	3 round 3-way M8 connectors	VW3L50300	0.041/0.090

### Connection components for STO function

Description	Length m/ft	Reference	Weight kg/lb
Cordsets for Lexium 32i with STO function Equipped with one 4-way female M8 industrial connector at one end and flying leads at the other	3/ 9.84	VW3M9403	0.119/0.262
	5/ 16.4	VW3M9405	0.184/0.405
	10/ 32.81	VW3M9410	0.351/0.773
	15/ 49.21	VW3M9415	0.510/1.124
	20/ 65.62	VW3M9420	0.684/1.507
Cordsets for Lexium 32i with STO function Equipped with one 4-way male M8 industrial connector and one 4-way female M8 industrial connector	3/ 9.84	VW3M94CR03	0.144/0.317
	5/ 16.4	VW3M94CR05	0.226/0.498
	10/ 32.81	VW3M94CR10	0.436/0.961
	15/ 49.21	VW3M94CR15	0.646/1.424
	20/ 65.62	VW3M94CR20	0.855/1.884
Round 4-way male M8 connector for cordsets for STO signals	–	VW3L50010	0.018/0.039

### Separate parts

Description	Sold in lots of	Reference	Weight kg/lb
M12 cable gland for Lexium 32i for I/O and STO function	12	VW3M9508	0.042/0.092
M16 cable gland for Lexium 32i for fieldbus	10	VW3M9512	0.068/0.149
Lot of sealing caps for M8 and M12 connectors	–	VW3M9530	0.004/0.008

# Lexium 32i

## Integrated servo drive

### Connection components

#### Connection components for CANopen machine bus

##### Connection accessories

Description	Reference	Weight kg/lb
<b>Line terminator</b> with 5-way male M12 connector	<b>TM7ACTLA</b>	0.023/0.050
<b>CANopen connector</b> 9-way female SUB-D connector with line termination switch	<b>VW3M3802</b>	0.175/0.385



TM7ACTLA



VW3M3802

##### Cordsets

Description	Length m/ft	Reference	Weight kg/lb
<b>CANopen cordsets with</b> 1 female M12 connector and 1 male M12 connector (straight, A-coded)	0.3/0.98	<b>TCSCCN1M1F03</b>	0.090/0.198
	1/3.28	<b>TCSCCN1M1F1</b>	0.127/0.280
	2/6.56	<b>TCSCCN1M1F2</b>	0.179/0.395
	5/16.4	<b>TCSCCN1M1F5</b>	0.337/0.743
	10/32.81	<b>TCSCCN1M1F10</b>	0.600/1.323
<b>CANopen cordsets with</b> 1 female M12 connector and 1 male M12 connector (elbow, A-coded)	15/49.21	<b>TCSCCN1M1F15</b>	0.863/1.906
	0.3/0.98	<b>TCSCCN2M2F03</b>	0.090/0.198
	1/3.28	<b>TCSCCN2M2F1</b>	0.127/0.280
	2/6.56	<b>TCSCCN2M2F2</b>	0.179/0.395
	5/16.4	<b>TCSCCN2M2F5</b>	0.337/0.743
<b>CANopen cordsets with</b> 1 straight A-coded female M12 connector at one end and flying leads at the other	10/32.81	<b>TCSCCN2M2F10</b>	0.600/1.323
	15/49.21	<b>TCSCCN2M2F15</b>	0.863/1.906
	1/3.28	<b>TCSCCN1FNX1SA</b>	0.089/0.196
	3/9.84	<b>TCSCCN1FNX3SA</b>	0.195/0.429
	10/32.81	<b>TCSCCN1FNX10SA</b>	0.563/1.241
<b>CANopen cordsets with</b> 1 elbow A-coded female M12 connector at one end and flying leads at the other	25/82.02	<b>TCSCCN1FNX25SA</b>	1.352/2.980
	1/3.28	<b>TCSCCN2FNX1SA</b>	0.089/0.196
	3/9.84	<b>TCSCCN2FNX3SA</b>	0.195/0.429
	10/32.81	<b>TCSCCN2FNX10SA</b>	0.563/1.241
	25/82.02	<b>TCSCCN2FNX25SA</b>	1.352/2.980
<b>CANopen cordsets with</b> 1 straight A-coded female M12 connector and 1 male RJ45 connector	3/9.84	<b>VW3M94CAN45R03</b>	0.205/0.451
	5/16.4	<b>VW3M94CAN45R05</b>	0.306/0.674
	10/32.81	<b>VW3M94CAN45R10</b>	0.593/1.307
	15/49.21	<b>VW3M94CAN45R15</b>	0.861/1.898
	20/65.62	<b>VW3M94CAN45R20</b>	1.135/2.502
<b>CANopen cordsets with</b> 1 straight A-coded female M12 connector and 1 x 9-way female SUB-D connector	3/9.843	<b>VW3M94CANS9R03</b>	0.222/0.489
	5/16.404	<b>VW3M94CANS9R05</b>	0.326/0.718
	10/32.808	<b>VW3M94CANS9R10</b>	0.606/1.336
	15/49.213	<b>VW3M94CANS9R15</b>	0.882/1.944
	20/65.617	<b>VW3M94CANS9R20</b>	1.182/2.605



TCSCCN1M1F●●●

XC\_1471\_CP0DA2016003

PF121380



TSXCANCA●●●●●●●●

#### Connection components for CANopen machine bus

##### Connection cables

Description	Length m/ft	Reference	Weight kg/lb
<b>CANopen cables</b> Standard cables, CÉ marking Low smoke zero halogen Flame-retardant (IEC 60332-1)	50/ 164.04	<b>TSXCANCA50</b>	4.930/10.869
	100/ 328.08	<b>TSXCANCA100</b>	8.800/19.401
	300/ 984.25	<b>TSXCANCA300</b>	24.560/54.145
<b>CANopen cables</b> UL certification, CÉ marking Flame-retardant (IEC 60332-2)	50/ 164.04	<b>TSXCANCB50</b>	3.580/7.893
	100/ 328.08	<b>TSXCANCB100</b>	7.840/17.284
	300/ 984.25	<b>TSXCANCB300</b>	21.870/48.215
<b>CANopen cables</b> Cables for harsh environment (1) or mobile installation, CÉ marking Low smoke zero halogen Flame-retardant (IEC 60332-1)	50/ 164.04	<b>TSXCANCD50</b>	3.510/7.738
	100/ 328.08	<b>TSXCANCD100</b>	7.770/17.10
	300/ 984.25	<b>TSXCANCD300</b>	21.700/47.840

105924



TCSECL1M●●●●

#### Connection components for EtherCAT fieldbus

##### Cordsets

Description	Length m/ft	Reference	Weight kg/lb
<b>EtherCAT cordsets with</b> 2 straight D-coded male M12 connectors	1/ 3.28	<b>TCSECL1M1M1S2</b>	0.080/0.176
	10/ 32.81	<b>TCSECL1M1M10S2</b>	0.520/1.146
<b>EtherCAT cordsets with</b> 1 straight D-coded male M12 connector and 1 male RJ45 connector	1/ 3.28	<b>TCSECL1M3M1S2</b>	0.075/0.165
	3/ 9.84	<b>TCSECL1M3M3S2</b>	0.110/0.243
	10/ 32.81	<b>TCSECL1M3M10S2</b>	0.515/1.135
	25/ 82.02	<b>TCSECL1M3M25S2</b>	1.035/2.281
	40/ 131.23	<b>TCSECL1M3M40S2</b>	2.000/4.409

Note: Pre-wired connectors and M8 connectors are available under the Telemecanique Sensors brand.

For more information, refer to the website [www.tesensors.com](http://www.tesensors.com).

(1) 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 32i

## Integrated servo drive

Documentation, configuration tools, memory card

PF095122



VW3A8121

PF112335A



Duplicating an application using the VW3M8705 memory card

### Documentation

Description	Reference
Lexium 32i Simplified User Manual	Downloadable from our website <a href="http://www.schneider-electric.com">www.schneider-electric.com</a>

### SoMove setup software (1)

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

Description	Reference
SoMove setup software	Downloadable from our website <a href="http://www.schneider-electric.com">www.schneider-electric.com</a>

### Multi-Loader configuration tool

The Multi-Loader tool enables several configurations to be copied from a PC or a Lexium 32i integrated servo drive and loaded onto another integrated servo drive.

Description	Reference	Weight kg/lb
<b>Multi-Loader configuration tool</b> Includes: <ul style="list-style-type: none"> <li>■ 1 cordset with 2 RJ45 connectors</li> <li>■ 1 cordset with 1 type A USB connector and 1 mini B USB connector</li> <li>■ 1 x 2 GB SD memory card</li> <li>■ 1 female/female RJ45 adapter</li> <li>■ 4 AA 1.5 V LFR6 round batteries</li> </ul>	<b>VW3A8121</b>	0.907 / 1.999

### Memory card

Description	Reference	Weight kg/lb
<b>Memory card</b> This 128 KB SIM card is used to store the Lexium 32i integrated servo drive parameters. This means that another Lexium 32i integrated servo drive can be set up immediately in the event of maintenance or if the application needs to be duplicated. Refer to the User Manual for information on how to use the memory card.	<b>VW3M8705</b>	0.119/ 0.262
<b>Pack of 25 memory cards</b> 128 KB SIM cards	<b>VW3M8704</b>	0.005/ 0.011

(1) Please consult our catalog n° DIA2ED2140801EN on our web site [www.schneider-electric.com](http://www.schneider-electric.com)

PF112244B



Connection module for external braking resistor mounted on the Lexium 32i

### Braking resistors

#### Presentation

##### Internal braking resistor

A braking resistor is built into the Lexium 32i to absorb the braking energy. If the internal DC bus voltage exceeds a specified value, this braking resistor is activated; the restored energy is converted into heat by the braking resistor. It enables maximum braking torque.

##### External braking resistor

When the Lexium BMI 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 Lexium 32i monitors the power dissipated in the braking resistor.

The degree of protection of the casing is IP 65 for VW3A7602R●● to VW3A7608R●● braking resistors.

The operating temperature around the unit can be between 0 and +50°C (+32 and +122°F).

A connection module VW3M9010 is required to use an external braking resistor with a Lexium 32i.

#### Applications

- High-inertia machines
- Driving loads
- Machines with fast operating cycles

#### References

##### Braking resistors

Ohmic value	Continuous power PPr	Peak energy EPk				Length of connection cable	Reference (1)	Weight	
		115 V	230 V	380 V	480 V				
Ω	W	Ws	Ws	Ws	Ws	m/ft	kg/lb		
27	100	4200	3800	1900	1700	0.75/2.46	VW3A7602R07	0.630/1.389	
						2/6.56	VW3A7602R20	0.780/1.720	
						3/9.84	VW3A7602R30	0.900/1.984	
	200	9700	7400	4900	4300	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	5500	3700	2500	2300	0.75/2.46	VW3A7605R07	0.620/1.367
							2/6.56	VW3A7605R20	0.750/1.653
							3/9.84	VW3A7605R30	0.850/1.874
200		14,600	9600	6600	6000	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	
100		100	4400	4400	2900	2900	0.75/2.46	VW3A7608R07	0.410/0.065
							2/6.56	VW3A7608R20	0.560/1.235
							3/9.84	VW3A7608R30	0.760/1.676

PF106005



VW3A760●R●●

PF112233A



VW3M9010

PF080036



GBX planetary gearbox

PF080037



GBY angular planetary gearbox

#### Accessories

##### Description

Description	Reference	Weightkg/lb
Connection module for external braking resistor (1)	VW3M9010	0.500/1.102

(1) An external braking resistor connection module VW3M9010 is required to connect an external braking resistor to a Lexium 32i.  
**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 32i integrated servo drive (see page 8).

### Planetary gearboxes

#### Presentation

GBX and GBY optional for Lexium BMI servo motors: Please refer to our catalog "GBX and GBY Planetary gearboxes (n° DIA3ED2160313EN)" on [www.schneider-electric.com](http://www.schneider-electric.com)

# Lexium 32i

## Integrated servo drive

### Motor starters



+



LC1D18●●  
+  
BMI1002T●●●

### Applications

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

The contactor turns on and manages any protection functions, as well as isolating the servo motor on stopping.

The Lexium 32i provides protection against short-circuits and overloads. Overload protection is provided by the integrated drive's motor thermal protection function.

### Motor starters for Lexium 32i integrated servo drives

Lexium BMI servo motor		Max. prospective line I <sub>sc</sub>	Contactor
Reference	Nominal power		
	kW	kA	Reference (1) (2)
<b>Single-phase supply voltage: 100...120 V ~ 50/60 Hz</b>			
BMI0702T	0.4	1	LC1D09●●
BMI0703T	0.4	1	LC1D09●●
BMI1002T	0.75	1	LC1D18●●
<b>Single-phase supply voltage: 200...240 V ~ 50/60 Hz</b>			
BMI0702T	0.7	1	LC1D09●●
BMI0703T	0.7	1	LC1D09●●
BMI1002T	1.3	1	LC1D18●●
<b>Three-phase supply voltage: 400 V ~ 50/60 Hz</b>			
BMI0702P	0.8	1	LC1D09●●
BMI0703P	0.9	1	LC1D09●●
BMI1002P	1.9	1	LC1D09●●
BMI1003P	2	1	LC1D09●●
<b>Three-phase supply voltage: 480 V ~ 50/60 Hz</b>			
BMI0702P	0.9	1	LC1D09●●
BMI0703P	0.9	1	LC1D09●●
BMI1002P	1.9	1	LC1D09●●
BMI1003P	2.1	1	LC1D09●●

(1) Composition of contactors:

LC1D●●: 3 poles + 1 NO auxiliary contact and 1 NC auxiliary contact.

In certain situations, it is possible to use an LC1K contactor with 1 NO auxiliary contact.

(2) Replace ●● with the control circuit voltage reference given in the table below:

	Volts ~	110	115	220	230	240
LC1D09...D150	50/60 Hz	F7	FE7	M7	P7	U7

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

# Lexium 32i

Integrated servo drive  
Protection using fuses

Protection using class J fuses (UL certification)		
Lexium BMI servo motor		Fuse to be placed upstream
Reference	Nominal power	
	kW	A
<b>Single-phase supply voltage: 100...120 V ~ 50/60 Hz</b>		
BMI0702T	0.4	8
BMI0703T	0.4	8
BMI1002T	0.75	15
<b>Single-phase supply voltage: 200...240 V ~ 50/60 Hz</b>		
BMI0702T	0.7	8
BMI0703T	0.7	8
BMI1002T	1.3	15
<b>Three-phase supply voltage: 400 V ~ 50/60 Hz</b>		
BMI0702P	0.8	4
BMI0703P	0.9	4
BMI1002P	1.9	8
BMI1003P	2	8
<b>Three-phase supply voltage: 480 V ~ 50/60 Hz</b>		
BMI0702P	0.9	4
BMI0703P	0.9	4
BMI1002P	1.9	8
BMI1003P	2.1	8

<b>L</b>			
LXM32ICAN	10	VW3A7607R07	15
LXM32ICANGC	10	VW3A7607R20	15
LXM32IECT	10	VW3A7607R30	15
LXM32IECTGC	10	VW3A7608R07	15
LXM32IETH	10	VW3A7608R20	15
		VW3A7608R30	15
<b>T</b>		VW3A8121	14
TCSCCN1FNX1SA	12	VW3L5E000	11
TCSCCN1FNX3SA	12	VW3L5F000	11
TCSCCN1FNX10SA	12	VW3L50010	11
TCSCCN1FNX25SA	12	VW3L50200	11
TCSCCN1M1F1	12	VW3L50300	11
TCSCCN1M1F2	12	VW3M94CAN45R03	12
TCSCCN1M1F03	12	VW3M94CAN45R05	12
TCSCCN1M1F5	12	VW3M94CAN45R10	12
TCSCCN1M1F10	12	VW3M94CAN45R15	12
TCSCCN1M1F15	12	VW3M94CAN45R20	12
TCSCCN2FNX1SA	12	VW3M94CANS9R03	12
TCSCCN2FNX3SA	12	VW3M94CANS9R05	12
TCSCCN2FNX10SA	12	VW3M94CANS9R10	12
TCSCCN2FNX25SA	12	VW3M94CANS9R15	12
TCSCCN2M2F1	12	VW3M94CANS9R20	12
TCSCCN2M2F2	12	VW3M94CR03	11
TCSCCN2M2F03	12	VW3M94CR05	11
TCSCCN2M2F5	12	VW3M94CR10	11
TCSCCN2M2F10	12	VW3M94CR15	11
TCSCCN2M2F15	12	VW3M94CR20	11
TCSECL1M1M1S2	13	VW3M3802	12
TCSECL1M1M10S2	13	VW3M8704	14
TCSECL1M3M1S2	13	VW3M8705	14
TCSECL1M3M3S2	13	VW3M9001	10
TCSECL1M3M10S2	13	VW3M9002	10
TCSECL1M3M25S2	13	VW3M9010	15
TCSECL1M3M40S2	13	VW3M9101	10
TM7ACTLA	12	VW3M9102	10
TSXCANCA50	13	VW3M9103	10
TSXCANCA100	13	VW3M9104	10
TSXCANCA300	13	VW3M9105	10
TSXCANCB50	13	VW3M9106	10
TSXCANCB100	13	VW3M9107	10
TSXCANCB300	13	VW3M9108	10
TSXCANCD50	13	VW3M9109	10
TSXCANCD100	13	VW3M9110	10
TSXCANCD300	13	VW3M9116	10
		VW3M9117	10
<b>V</b>		VW3M9201	10
VW3A7602R07	15	VW3M9202	10
VW3A7602R20	15	VW3M9203	10
VW3A7602R30	15	VW3M9204	10
VW3A7603R07	15	VW3M9206	10
VW3A7603R20	15	VW3M9207	10
VW3A7603R30	15	VW3M9208	10
VW3A7604R07	15	VW3M9209	10
VW3A7604R20	15	VW3M9216	10
VW3A7604R30	15	VW3M9217	10
VW3A7605R07	15	VW3M9403	11
VW3A7605R20	15	VW3M9405	11
VW3A7605R30	15	VW3M9410	11
VW3A7606R07	15	VW3M9415	11
VW3A7606R20	15	VW3M9420	11
VW3A7606R30	15		
		VW3M9508	11
		VW3M9512	11
		VW3M9530	11
		VW3M9601	11

Life Is On



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