Motion control

Lexium 16D

Lexium 16D servo drives & BCH16 servo motors

Catalog

November 2018

Schneider Electric

Content

Motion control

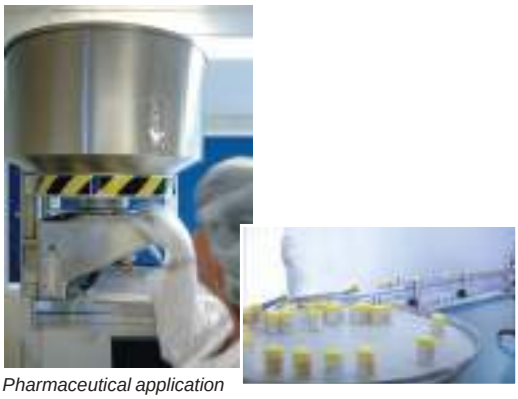
Lexium 16D servo drives & BCH16 servo motors

Motion control
Lexium 16D servo drives & BCH16 servo motors

Textile application

Material handling application

Packaging application



Pharmaceutical application

Specially designed for simple machines

A user-oriented range of products

Lexium 16D servo drive and BCH16 servo motor combinations are specially designed for easy integration & commissioning in your machine. They provide the right level of performance for the majority of simple motion control machines.

Fit for purpose

- Lexium 16D servo drives have 6 digital inputs and 3 digital outputs as standard.
- The servo drives incorporate auto-tuning and position control.

Easy throughout the whole life cycle

- Easy to select and order thanks to the “just enough” number of references
- Easy to mount and wire up
- Easy to set up and commission thanks to SoMove software
- Easy to tune due to easy, comfortable and auto-adaptive tuning function
- Easy to connect to our range of Modicon Easy M200 and Modicon Easy M100 logic controllers

Robustness

- Motor shafts have degree of protection IP 65 as standard
- The motors can operate in temperatures from 0 to 40 °C/ *32 to 104 °F*
- The drive printed circuit boards are coated for enhanced robustness in polluted environments

Widely available everywhere

- Fast delivery through a large distribution network
- Fast access to information and support through the Partner Relationship Management tool and a dedicated network of engineers

Lexium 16D range

The Lexium™ 16D range is defined by AC-servo drives for combination with AC-servo motors according to customer’s application.

- The Lexium 16D range offers predefined combinations to suit the requirements of motion control applications and optimize the installation’s performance.
  - The combinations of servo motors with servo drives are based on the power class: both the servo motor and servo drive have the same power class *(1)*.
  - The combination of each servo drive with its related servo motor is designed to cover a nominal power range from 0.1 kW (*0.3 hp)* up to 1.5 kW (*2.01 hp)* with 200..230 V mains supply voltage *(1)*.
- BCH16 motors provide a nominal torque from 0.16 Nm to 28.6 Nm and a nominal speed from 1,000 to 3,000 rpm, depending on the model. They are suitable for a wide variety of applications due to the different levels of motor inertia offered.
- The Lexium 16D servo drives have degree of protection IP 20.

Applications

Simple machines with Position Control Applications (Low or high speed speed positioning, simple movement, P2P applications)

Segments	Textile	Electronic	Packaging	Pharmaceutical
Typical applications	- Leather cutting - Printing - Sewing	- Robot arm - Conveyor - Pick & Place	- Labeling - Folding - Sealing - Strapping	- Sorting - Warehouse

Configuration software

The drives can be configured using the SoMove setup software via their integrated HMI interface (USB mini-B).
SoMove software is used

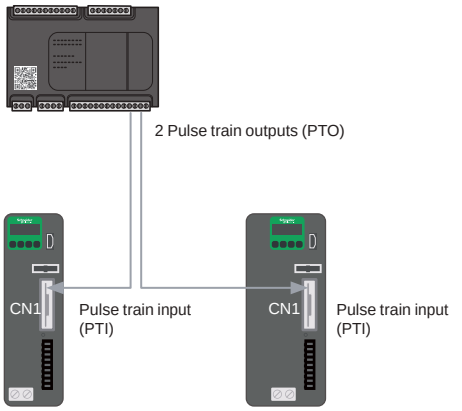
- for commissioning, parameter setting, diagnostics and maintenance
- for fast device replacement in existing machine installations
- for configuring and optimizing control loops in automatic or manual mode using the Oscilloscope function.

Mounting and maintenance

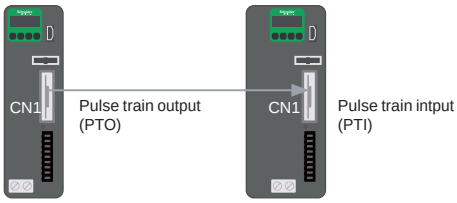
Connecting the servo drives is simplified by identified plug-in connectors, which are easily accessed on the front panel of the drive (see Description).

(1) See table of combinations page 4.

Motion control
Lexium 16D servo drives & BCH16 servo motors



Lexium 16D servo drives controlled by Modicon Easy M200 logic controller



Lexium 16D drive controlling another Lexium 16D drive

Configuration with SoMove setup software, via the CN3 interface

Functions

Lexium 16D servo drives feature numerous functions enabling them to be used in a wide range of motion control applications.

Drive functions

Drive functions activated by the commissioning software or directly by the HMI interface

- Jog mode: Velocity movement
- "Easy tuning" one-button tuning mode: this function is used to optimize application performance.
- "Auto-adaptive tuning" with this function the drive could calculate inertia ratio automatically and adjust system performance with selected stiffness.
- "Comfort tuning" with predefined settings for different mechanical systems such as spindle axes (e.g. portal axes), transportation belts, vertical axes (e.g. cantilever axes)

Control via I/O interface

The Lexium 16D servo drive is controlled with digital signals, accessible via the "CN1 IO" interface:

- 6 digital inputs
- 3 digital outputs

Operating modes via the PTI/PTO interfaces (CN1 connector)

- Without any fieldbus, Lexium 16D servo drives can be managed by a machine controller, Modicon Easy M200 logic controller: 2 pulse-train-outputs (PTO) interface to the CN1 PTI interface on each servo drives

- Without the use of a machine controller, a Lexium 16D servo drive can control another Lexium 16D via the CN1 PTO/PTI interface located on front face of each servo drives. It means the master Lexium 16D gives out pulse train from its PTO (CN1) then connect those pulse train to the slave Lexium 16D via its PTI interface on (CN1).

Configuration tool

SoMove setup software is used on Lexium 16D servo drives in the same way as it is on other Schneider Electric drives and starters, to configure, adjust, debug, and maintain the drive.

- A configuration can be transferred from a PC to the Lexium 16D servo drive via the CN3 interface (USB mini-B).
- SoMove setup software can be downloaded from our website www.schneider-electric.com. *(1)*

(1) Please consult our catalog ref. DIA2ED2140801EN (Click to open the catalog)

LXM16DU01M2X
LXM16DU02M2X
LXM16DU04M2X

LXM16DU07M2X
LXM16DU10M2X
LXM16DU15M2X

Lexium 16D servo drives

Lexium 16D servo drives and BCH16 servo motors combinations

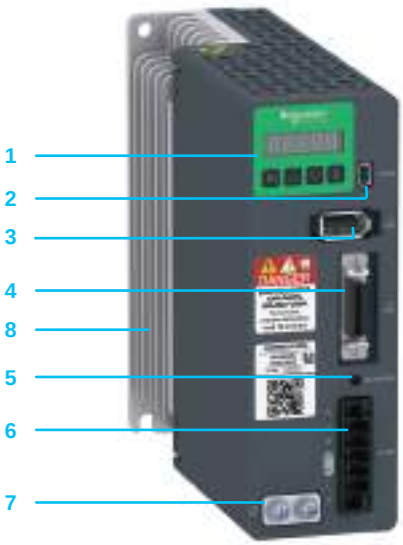
Power output	Nominal speed of rotation	Nominal torque	With holding brake	Servo drive reference	Servo motor reference	Inertia (without holding brake)	Motor inertia type
kW/*hp*	min^{-1}	N.m				$kg.cm^2$	
Single-phase supply voltage: 200/230 VAC							
0.1/*0.13*	3000	0.32	No	**LXM16DU01M2X**	**BCH16LB01330A5C**	0.041	Low
	3000	0.32	Yes	**LXM16DU01M2X**	**BCH16LB01330F5C**	0.047	Low
0.2/*0.27*	3000	0.64	No	**LXM16DU02M2X**	**BCH16HD02330A5C**	0.42	High
	3000	0.64	Yes	**LXM16DU02M2X**	**BCH16HD02330F5C**	0.48	High
0.4/*0.54*	3000	1.27	No	**LXM16DU04M2X**	**BCH16HD04330A5C**	0.67	High
	3000	1.27	Yes	**LXM16DU04M2X**	**BCH16HD04330F5C**	0.73	High
0.75/*1.01*	3000	2.39	No	**LXM16DU07M2X**	**BCH16HF07330A5C**	1.51	High
	3000	2.39	Yes	**LXM16DU07M2X**	**BCH16HF07330F5C**	1.64	High
1/*1.34*	3000	3.18	No	**LXM16DU10M2X**	**BCH16LH10330A6C**	2.65	Low
	3000	3.18	Yes	**LXM16DU10M2X**	**BCH16LH10330F6C**	2.75	Low
	2000	4.77	No	**LXM16DU10M2X**	**BCH16HM10230A6C**	10.88	High
	2000	4.77	Yes	**LXM16DU10M2X**	**BCH16HM10230F6C**	11.58	High
0.85/*1.14*	1500	5.39	No	**LXM16DU15M2X**	**BCH16HM08130A6C**	14.08	High
	1500	5.39	Yes	**LXM16DU15M2X**	**BCH16HM08130F6C**	14.78	High
1.5/*2.01*	2000	7.16	No	**LXM16DU15M2X**	**BCH16HM15230A6C**	14.8	High
	2000	7.16	Yes	**LXM16DU15M2X**	**BCH16HM15230F6C**	15.5	High

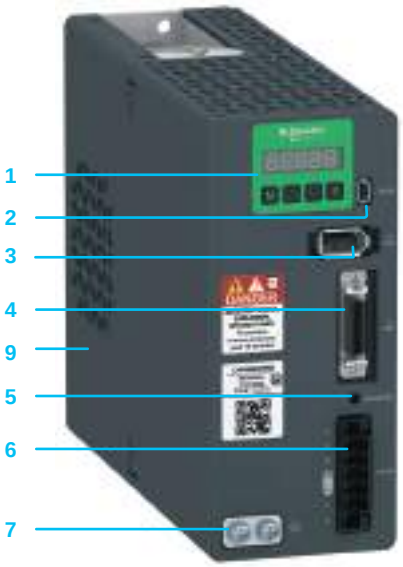
To order a Lexium 16D servo drive, make up the reference as follows

Lexium 16D servo drive		L	X	M	1	6	DU	•	•	M2X
Power	0.1 kW/*0.13 hp*							**0**	**1**	
	0.2 kW/*0.27 hp*							**0**	**2**	
	0.4 kW/*0.54 hp*							**0**	**4**	
	0.75 kW/*1.01 hp*							**0**	**7**	
	1 kW/*1.34 hp*							**1**	**0**	
	1.5 kW/*2.01 hp*							**1**	**5**	
Supply voltage	200…230 V ∿									**M2X**

Dimensions, weight

Servo drive reference	Housing	Dimensions						Weight	
		a (width)		**b** (heigth)		**c** (depth)		kg	*lb*
		mm	*in.*	mm	*in.*	mm	*in.*		
LXM16DU01M2X **LXM16DU02M2X** **LXM16DU04M2X**	Size 1	52	*2.05*	150	*5.9*	155.2	*6.11*	1.000	*2.20*
LXM16DU07M2X **LXM16DU10M2X** **LXM16DU15M2X**	Size 2	65	*2.56*	150	*5.9*	185.2	*7.29*	1.500	*3.31*





Lexium 16D servo drives

Description

On the drive front:

1 HMI interface, 7-segment display, 4 buttons (mode, value up, value down, set)
2 USB mini-B connector for commissioning the servo drives (marked CN3)
3 Connector for motor encoder (marked CN2)
4 IO interface (PTI/PTO interface) (marked CN1)
5 Charge indicator LED
6 Connector for power (marked CNP) *(1)*
7 Protected earth connector (marked ⏚)

On the drive side

8 Heatsink on servo drive size 1
9 Heatsink and fan + fan cover on servo drive size 2

(1) Removable spring terminals are supplied with each Lexium 16D servo drive.

Motion control

Lexium 16D servo drives & BCH16 servo motors

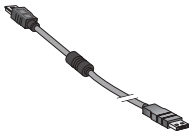
Connection accessories

VW3M4A11

VW3M4A21

VW3M4A31

VW3M4A12
VW3M4A15



TCSXCNAMUM3P

Connection accessories

Connectors

Designation	Description	For use with	Reference	Weight kg/ *lb*
SCSI-26 connector for creating control cordsets (CN1)	1 x SCSI-26 connector 1 x shielded chassis 1 x connector housing 2 x screw for fix to connection port 2x screw for connector housing	LXM16DU01M2X LXM16DU02M2X LXM16DU04M2X LXM16DU07M2X LXM16DU10M2X LXM16DU15M2X	**VW3M4A11**	0.100/ *0.220*
Connector for connection of power supply, external braking resistor and motor power ouput (CNP)	1 x connector	LXM16DU01M2X LXM16DU02M2X LXM16DU04M2X LXM16DU07M2X LXM16DU10M2X LXM16DU15M2X	**VW3M4A21**	0.100/ *0.220*
10-pin connector for creating encoder cordsets (CN2) For cable cross-section : 2*0.5 mm² + 3x2x0.2 mm²	1 x IEEE1394 10-pin connector 1 x shielded chassis 1 x connector housing 2 x spring clamp for fix to connection port	LXM16DU01M2X LXM16DU02M2X LXM16DU04M2X LXM16DU07M2X LXM16DU10M2X LXM16DU15M2X	**VW3M4A31**	0.100/ *0.220*

Control cordsets

Designation	Description	For use with	Reference	Weight kg/ *lb*
Pre-assembled control cordsets dedicated to 24VDC pulse train with interface module (CN1)	1 x pre-assembled control cordsets (Length: 1 m/*3.28 ft.*) 1 x interface module	LXM16DU01M2X LXM16DU02M2X LXM16DU04M2X LXM16DU07M2X LXM16DU10M2X LXM16DU15M2X	**VW3M4A12**	0.350/ *0.77*
Pre-assembled control cordsets dedicated to 3.3 VDC pulse train with interface module (CN1)	1 x pre-assembled control cordsets (Length: 1 m/*3.28 ft.*) 1 x interface module	LXM16DU01M2X LXM16DU02M2X LXM16DU04M2X LXM16DU07M2X LXM16DU10M2X LXM16DU15M2X	**VW3M4A15**	0.350/ *0.77*

Power cordset kit

Designation	Description	For use with	Reference	Weight kg/ *lb*
Power cordset shield connection plate	1 x grounding chassis 1 x spring clamp conector	LXM16DU01M2X LXM16DU02M2X LXM16DU04M2X LXM16DU07M2X LXM16DU10M2X LXM16DU15M2X	**VW3M2A31**	0.200/ *0.44*

Programming cables

Designation	Use for	Length m/ *ft*	Reference	Weight kg/ *lb*
Programming cables	Transfering a configuration from a PC to the Lexium 16D servo drive via the CN3 interface (USB mini-B) on Lexium 16D servo drives	3/ *9.84*	**TCSXCNAMUM3P** *(1)*	0.065/ *0.143*
		1.8/ *5.90*	**BMXXCAUSBH018**	0.065/ *0.143*

(1) Unshielded, non-grounded cable. Only for use on temporary connections. For permanent connections, use cable reference BMXXCAUSBH018.

PF106005

VW3A760●R●●

External braking resistor

Applications

> Machines with high inertia, driving loads, and machines with fast cycles.
> When the servo motor has to be braked frequently, an external braking resistor is required to dissipate the excess braking energy.
> 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 VW3A7608R●● braking resistors.
> The operating temperature around the unit can be between 0 and + 50°C/*+ 32 and + 122 °F*.

References

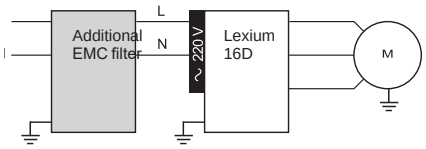
For use with Servo drives	Ohmic value	Continuous power PPr	Peak energy EPk				Length of connection cable	Reference	Weight
			115 V	230 V	400 V	480 V			
	Ω	W	Ws	Ws	Ws	Ws	m/ *ft*		kg/ *lb*
LXM16DU07M2X, LXM16DU10M2X, LXM16DU15M2X	**27**	100	4,200	3,800	1,900	1,900	0.75/ *2.46*	**VW3A7602R07**	0.630/ *1.389*
							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*
LXM16DU01M2X, LXM16DU02M2X, LXM16DU04M2X, LXM16DU07M2X, LXM16DU10M2X, LXM16DU15M2X	**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*
	100	100	4,400	4,400	2,900	2,900	0.75/ *2.46*	**VW3A7608R07**	0.410/ *0.904*
							2/ *6.56*	**VW3A7608R20**	0.560/ *1.235*
							3/ *9.84*	**VW3A7608R30**	0.760/ *1.676*

***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 16 servo drive.*

Motion control

Lexium 16D servo drives & BCH16 servo motors

Additional EMC input filters



Lexium 16D servo drive with additional EMC filter

VW3A4420
VW3A4421

Additional EMC input filters

Applications

> Lexium 16D servo drives require external 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).

> Additional EMC filters are mounted next to the device. They have tapped holes for mounting in an enclosure.

> The maximum servo motor cable length conforming to IEC/EN 61800-3 category C3 *(1)* in environment 2 is 25 m/*82.02 ft*.

> 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 16D 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 recreate a TT system on the secondary side.

References

For servo drive	Maximum servo motor shielded cable length conforming to EN 55011 class A Gr2 IEC/EN 61800-3 category C3 (1) in environment 2 Switching frequency 8 kHz m/*ft*	Reference	Weight kg/*lb*
Single-phase supply voltage			
LXM16DU01M2X, LXM16DU02M2X, LXM16DU04M2X	25/*82*	**VW3A4420**	0.600/*1.323*
LXM16DU07M2X, LXM16DU10M2X, LXM16DU15M2X	25/*82*	**VW3A4421**	0.775/*1.709*

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

Motion control

Lexium 16D servo drives & BCH16 servo motors

Motor starters, Protection using class J fuses (UL certification)

GV2P●●

+

LC1●●●

+

LXM16DU●●M2X

Motor starters

Applications

The combinations listed below can be used to create a complete motor starter unit comprising a circuit-breaker, a contactor and a Lexium 16D servo drive.

■ The circuit-breaker provides protection against accidental short-circuits, disconnection and, if necessary, isolation.

■ The contactor activates 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 protects the motor cable against overloads. Overload protection is provided by the servo drive's motor thermal protection.

Combinations

Servo drive			Circuit-breaker		Contactor
Reference	**Nominal power (kW/*hp*)**	**Mains number of phases**	**Reference**	**Rating (A)**	**Reference** *(1) (2)*
Circuit-breakers for single drive installation according to IEC 60364-5-52					
Mains supply voltage: 200…230 V ∿ 50/60Hz					
LXM16DU01M2X	0.1/*0.13*	1 phase	GV2P14	10A	LC1K0610●●
LXM16DU02M2X	0.2/*0.27*	1 phase	GV2P14	10A	LC1K0610●●
LXM16DU04M2X	0.4/*0.54*	1 phase	GV2P14	10A	LC1K09●●
LXM16DU07M2X	0.75/*1.01*	1 phase	GV2P14	10A	LC1K09●●
LXM16DU10M2X	1/*1.34*	1 phase	GV2P14	10A	LC1K12●●
LXM16DU15M2X	1.5/*2.01*	1 phase	GV2P16	14A	LC1D18●●

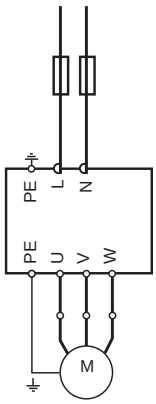
(1) Composition of the contactors:
LC1K0610●●: 3 poles + 1 N/O auxiliary contact
LC1K09●●, LC1K12●●: 4 poles
LC1D18●●: 3 poles + 1 N/O auxiliary contact + 1 N/C auxiliary contact
Please refer to CONTACTORS AND PROTECTION RELAYS page on our web site.
(2) Replace ●● with the control circuit voltage code given in the table below:

	Volts ∿	**220**	**230**	**240**
LC1K	50/60 Hz	**M7**	**P7**	**U7**
	Volts ∿	**220/230**	**230**	**230/240**
LC1D	50 Hz	**M5**	**P5**	**U5**
	60 Hz	**M6**	**–**	**U6**
	50/60 Hz	**M7**	**P7**	**U7**

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

Protection using class J fuses (UL certification)

Servo drive		Fuse to be placed upstream (A)
Reference	**Nominal power (kW/*hp*)**	
Mains supply voltage: 200…230 V ∿ 50/60Hz		
LXM16DU01M2X	0.1/*0.13*	5
LXM16DU02M2X	0.2/*0.27*	5
LXM16DU04M2X	0.4/*0.54*	20
LXM16DU07M2X	0.75/*1.01*	20
LXM16DU10M2X	1/*1.34*	25
LXM16DU15M2X	1.5/*2.01*	40



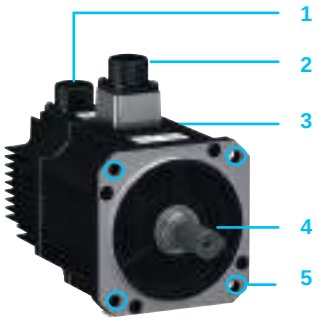
LXM16D servo drive, BCH16 servo motor with fuse protection

40 mm/1.57 in.

60 mm/2.36 in.

80 mm/3.15 in.

100 mm/3.94 in.



130 mm/5.12 in.

BCH16 servo motors

Presentation

BCH16 motors are synchronous AC servo motors,

- equipped as standard with a 2500 ppr incremental encoder
- available in five flange sizes: 40 mm/*1.57 in.*, 60 mm/*2.36 in.*, 80 mm/*3.15 in.*, 100 mm/*3.94 in.*, and 130 mm/*5.12 in.*
- available with or without holding brake (depending on model)
- available with low or high motor inertia

Depending on flange size, the BCH16 motors are supplied:

- with flying leads and terminal connectors
- with MIL connectors

Description

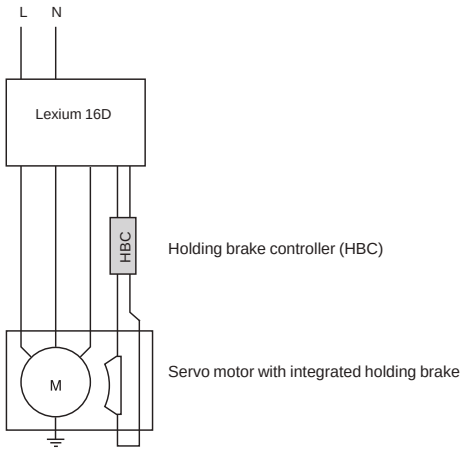
BCH16 servo motors, with a 3-phase stator and a rotor with rare earth permanent magnets, consist of:

1 Encoder connector (depending on model)
2 Power connector (depending on model)
3 Casing with RAL 9005 opaque black paint coating
4 A keyed shaft end with oil seal
5 4-point axial mounting flange (flange is mechanically compatible with Asian style servo motors)

Cables and connectors to be ordered separately, for connection to Lexium 16D servo drives. Schneider Electric has taken particular care over the compatibility of BCH16 servo motors and Lexium 16D servo drives. This compatibility is only possible when using cables and connectors sold by Schneider Electric (see page 12 and 13).

Holding brake controller

BCH16 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.*
If a servo motor has a holding brake, it is necessary to provide an appropriate control logic (HBC, Holding Brake Controller), which releases the brake when power is supplied to the servo motor and immobilizes the servo motor shaft when it is stationary.
The holding brake controller amplifies the braking control signal **(**Digital output**)** transmitted by the Lexium 16D servo drive, so that the brake is deactivated quickly. It then reduces this control signal so as to decrease the power dissipated by the holding brake.



References

Designation	Description	Reference	Weight kg/ *lb*
Holding brake controller	24 V ⎓ power supply Max. power 0.05 kW/*0.07 hp* IP 20, For mounting on 55 mm/*2.17 in.* ⊥ rail	**VW3M3103**	0.600/ *1.323*

VW3M3103

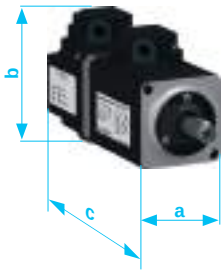
Integrated encoder

BCH16 servo motors are equipped with a 2500 ppr encoder which measures the servo motor speed via associated Lexium 16D servo drive. This information is used by the servo drive's position and speed controller.

BCH16 servo motors

To order a BCH16 servo motor, make up the reference as follows:

Brushless servo motor		**B**	**C**	**H**	**16**	**●**	**●**	**●●**	**●**	**●**	**●**	**●**	**●**	**C**
Inertia	Low inertia					**L**								
	High inertia					**H**								
Flange size	40 mm (*1.58 in.*)						**B**							
	60 mm (*2.36 in.*)						**D**							
	80 mm (*3.15 in.*)						**F**							
	100 mm (*3.94 in.*)						**H**							
	130 mm (*5.12 in.*)						**M**							
Rated output	100 W *(0.13 hp)*							**01**						
	200 W *(0.16 hp)*							**02**						
	400 W *(0.53 hp)*							**04**						
	750 W *(1.00 hp)*							**07**						
	850 W *(1.13 hp)*							**08**						
	1 kW *(1.34 hp)*							**10**						
	1.5 kW *(2.01 hp)*							**15**						
Power supply ∿ 220 V Winding type	1000/1500 rpm								**1**					
	2000 rpm								**2**					
	3000 rpm								**3**					
Shaft end	Keyed shaft (shaft & housing IP 65)									**3**				
Encoder	2500 ppr incremental encoder										**0**			
Holding brake	Without brake											**A**		
	With brake (option)											**F**		
Connections	Free leads with connectors (BCH16●B, BCH16●D, BCH16●F motors only)												**5**	
	MIL connectors (BCH16●H, BCH16●M, BCH16●R motors only)												**6**	
Mechanical motor design	Motor compatible with Asian style mounting standards													**C**

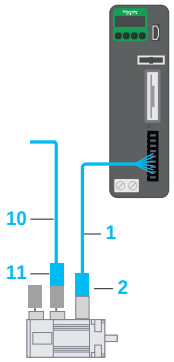


References			**Dimensions (overall)**						**Weight**	
Servo motor	**Power output**	**Equipment**	**a** (flange)		**b** (heigth)		**c** (depth)			
	W		mm	*in.*	mm	*in.*	mm	*in.*	kg	*lb*
BCH16LB01330A5C	100	without brake	40	*1.57*	55	*2.16*	98.2	*3.86*	0.480	*1.06*
BCH16LB01330F5C	100	with brake	40	*1.57*	55	*2.16*	131.3	*5.17*	0.700	*1.54*
BCH16HD02330A5C	200	without brake	60	*2.36*	73	*2.87*	106.5	*4.19*	1.100	*2.42*
BCH16HD02330F5C	200	with brake	60	*2.36*	73	*2.87*	145	*5.70*	1.500	*3.31*
BCH16HD04330A5C	400	without brake	60	*2.36*	73	*2.87*	128.5	*5.05*	1.530	*3.37*
BCH16HD04330F5C	400	with brake	60	*2.36*	73	*2.87*	167	*6.57*	2.030	*4.47*
BCH16HF07330A5C	750	without brake	80	*3.15*	93	*3.66*	137	*5.39*	2.700	*5.95*
BCH16HF07330F5C	750	with brake	80	*3.15*	93	*3.66*	175.3	*6.90*	4.100	*9.04*
BCH16LH10330A6C	1000	without brake	100	*3.94*	153.4	*6.04*	139	*5.47*	3.800	*8.38*
BCH16LH10330F6C	1000	with brake	100	*3.94*	153.4	*6.04*	179.5	*7.06*	4.700	*10.36*
BCH16HM10230A6C	1000	without brake	130	*5.12*	144.5	*5.69*	144.3	*5.68*	5.700	*12.56*
BCH16HM10230F6C	1000	with brake	130	*5.12*	144.5	*5.69*	186.9	*7.36*	7.300	*16.09*
BCH16HM08130A6C	850	without brake	130	*5.12*	144.5	*5.69*	154.3	*6.07*	6.500	*14.33*
BCH16HM08130F6C	850	with brake	130	*5.12*	144.5	*5.69*	196.9	*7.75*	8.100	*17.86*
BCH16HM15230A6C	1500	without brake	130	*5.12*	144.5	*5.69*	159.3	*6.27*	7.300	*16.09*
BCH16HM15230F6C	1500	with brake	130	*5.12*	144.5	*5.69*	201.9	*7.95*	8.900	*19.62*

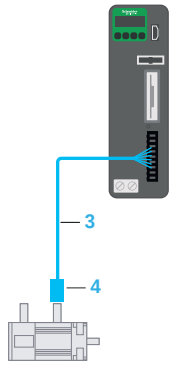
Motion control

Lexium 16D servo drives & BCH16 servo motors

Connection components: cordsets and connectors



VW3M5A11R●●
VW3M5A11R●●S
VW3M5A12R●●



VW3M5A21R●●
VW3M5A21R●●S
VW3M5A22R●●
VW3M5A22R●●S

Connection components for BCH16 servo motors

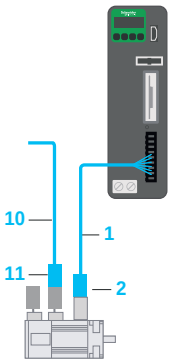
Designation Description	For use		For cable cross-section	Length		Reference	Weight	
	From servo drive	To servo motor		m	ft		kg/	lb
Unshielded power cordsets								
Equipped with one plastic connector (servo motor side), and a free lead (servo drive side) (item 1)	LXM16DU01M2X, LXM16DU02M2X, LXM16DU04M2X, LXM16DU07M2X	BCH16LB01330●5C, BCH16HD02330●5C, BCH16HD04330●5C, BCH16HF07330●5C	4G0.75 mm²	1.5	4.92	**VW3M5A11RA5**	0.200/	0.44
				3	9.84	**VW3M5A11R03**	0.300/	0.66
				5	16.40	**VW3M5A11R05**	0.450/	0.99
				10	32.81	**VW3M5A11R10**	0.900/	1.98
				15	49.21	**VW3M5A11R15**	1.400/	3.08
				20	65.62	**VW3M5A11R20**	1.700	3.74
				25	82.02	**VW3M5A11R25**	2.100/	4.62
Equipped with one MIL connector (servo motor side), and a free lead (servo drive side) (item 3)	LXM16DU10M2X, LXM16DU15M2X	BCH16HM08130A6C, BCH16LH10330A6C, BCH16HM10230A6C, BCH16HM15230A6C	4G2 mm²	1.5	4.92	**VW3M5A21RA5**	0.200/	0.44
				3	9.84	**VW3M5A21R03**	0.350/	0.77
				5	16.40	**VW3M5A21R05**	0.800/	1.76
				10	32.81	**VW3M5A21R10**	1.450/	3.19
				15	49.21	**VW3M5A21R15**	2.150/	4.73
				20	65.62	**VW3M5A21R20**	2.700/	5.95
				25	82.02	**VW3M5A21R25**	3.300/	7.27
Equipped with one MIL connector (servo motor side), and a free lead (servo drive side) Integrating brake control (item 3)	LXM16DU10M2X, LXM16DU15M2X	BCH16HM08130F6C, BCH16LH10330F6C, BCH16HM10230F6C, BCH16HM15230F6C	6G2 mm²	1.5	4.92	**VW3M5A22RA5**	0.300/	0.66
				3	9.84	**VW3M5A22R03**	0.500/	1.10
				5	16.40	**VW3M5A22R05**	0.900/	1.98
				10	32.81	**VW3M5A22R10**	1.750/	3.85
				15	49.21	**VW3M5A22R15**	2.550/	5.62
				20	65.62	**VW3M5A22R20**	3.300/	7.27
				25	82.02	**VW3M5A22R25**	4.000/	8.81
Shielded power cordsets								
Equipped with one plastic connector (servo motor side), and a free lead (servo drive side) (item 1)	LXM16DU01M2X, LXM16DU02M2X, LXM16DU04M2X, LXM16DU07M2X	BCH16LB01330●5C, BCH16HD02330●5C, BCH16HD04330●5C, BCH16HF07330●5C	4G0.75 mm²	1.5	4.92	**VW3M5A11RA5S**	0.300/	0.66
				3	9.84	**VW3M5A11R03S**	0.480/	1.05
				5	16.40	**VW3M5A11R05S**	0.700/	1.54
				10	32.81	**VW3M5A11R10S**	1.500/	3.30
				15	49.21	**VW3M5A11R15S**	2.200/	4.85
				20	65.62	**VW3M5A11R20S**	2.700/	5.95
				25	82.02	**VW3M5A11R25S**	3.300/	7.27
Equipped with one MIL connector (servo motor side), and a free lead (servo drive side) (item 3)	LXM16DU10M2X, LXM16DU15M2X	BCH16HM08130A6C, BCH16LH10330A6C, BCH16HM10230A6C, BCH16HM15230A6C	4G2 mm²	1.5	4.92	**VW3M5A21RA5S**	0.400/	0.88
				3	9.84	**VW3M5A21R03S**	0.650/	1.43
				5	16.40	**VW3M5A21R05S**	1.150/	2.53
				10	32.81	**VW3M5A21R10S**	2.200/	4.85
				15	49.21	**VW3M5A21R15S**	3.300/	7.27
				20	65.62	**VW3M5A21R20S**	4.300/	9.47
				25	82.02	**VW3M5A21R25S**	5.200/	11.46
Equipped with one MIL connector (servo motor side), and a free lead (servo drive side) Integrating brake control (item 3)	LXM16DU10M2X, LXM16DU15M2X	BCH16HM08130F6C, BCH16LH10330F6C, BCH16HM10230F6C, BCH16HM15230F6C	6G2 mm²	1.5	4.92	**VW3M5A22RA5S**	0.450/	0.99
				3	9.84	**VW3M5A22R03S**	0.850/	1.87
				5	16.40	**VW3M5A22R05S**	1.450/	3.19
				10	32.81	**VW3M5A22R10S**	2.800/	6.17
				15	49.21	**VW3M5A22R15S**	4.100/	9.03
				20	65.62	**VW3M5A22R20S**	5.300/	11.68
				25	82.02	**VW3M5A22R25S**	6.300/	13.88

Motor power connectors					
Designation	**Use for**	**For use with**	For cable cross-section	**Reference**	**Weight** kg / lb
Plastic connector (item 2)	for creating power cordsets	BCH16LB01330●5C, BCH16HD02330●5C, BCH16HD04330●5C, BCH16HF07330●5C	4G0.75 mm²	**VW3M5A11**	0.150/ 0.33
Mil connector (item 4)	for creating power cordsets	BCH16HM08130A6C, BCH16LH10330A6C, BCH16HM10230A6C, BCH16HM15230A6C	4G2.0 mm²	**VW3M5A21**	0.300/ 0.66

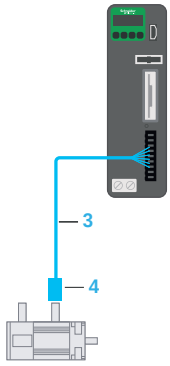
Motion control

Lexium 16D servo drives & BCH16 servo motors

Connection components: cordsets and connectors



VW3M5A11
VW3M5A12



VW3M5A21
VW3M5A22

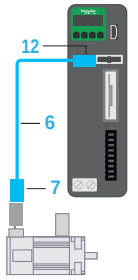
Connection components for BCH16 servo motors

Unshielded brake control cordsets

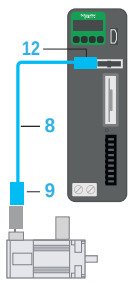
Designation Description	For use		For cable cross-section	Length		Reference	Weight	
	From servo drive	To servo motor		m	*ft*		kg	*lb*
Equipped with one plastic connector (servo motor side), and a free lead (servo drive side) (item 10)	LXM16DU01M2X, LXM16DU02M2X, LXM16DU04M2X, LXM16DU07M2X	BCH16LB01330F5C, BCH16HD02330F5C, BCH16HD04330F5C, BCH16HF07330F5C	2x 0.5 mm²	1.5	*4.92*	**VW3M5A12RA5**	0.100/	*0.22*
				3	*9.84*	**VW3M5A12R03**	0.200/	*0.44*
				5	*16.40*	**VW3M5A12R05**	0.300/	*0.66*
				10	*32.81*	**VW3M5A12R10**	0.400/	*0.88*
				15	*49.21*	**VW3M5A12R15**	0.650/	*1.43*
				20	*65.62*	**VW3M5A12R20**	0.750/	*1.65*
				25	*82.02*	**VW3M5A12R25**	0.850/	*1.87*

Brake connectors

Designation	Use for	For use with	For cable cross-section	Reference	Weight	
					kg	*lb*
Plastic connector (item 11)	for creating brake control cordsets	BCH16LB01330F5C, BCH16HD02330F5C, BCH16HD04330F5C, BCH16HF07330F5C	2x 0.5 mm²	**VW3M5A12**	0.150/	*0.33*
Mil connector (item 4)	for creating power & brake control cordsets	BCH16HM08130F6C, BCH16LH10330F6C, BCH16HM10230F6C, BCH16HM15230F6C	6G2.0 mm²	**VW3M5A22**	0.300/	*0.66*



VW3M8A11
VW3M8A11R●●



VW3M8A21R●●

Shielded encoder cordsets

Designation Description	For use		For cable cross-section	Length		Reference	Weight	
	From servo drive	To servo motor		m	*ft*		kg	*lb*
Equipped with one plastic connector (item 6) **(servo motor side), and VW3M4A31 connector** (item 12) **(servo drive side)**	LXM16DU01M2X, LXM16DU02M2X, LXM16DU04M2X, LXM16DU07M2X	BCH16LB01330●5C, BCH16HD02330●5C, BCH16HD04330●5C, BCH16HF07330●5C	2x 0.5 mm² + 3x2x 0.2 mm²	1,5	*4.92*	**VW3M8A11RA5**	0.150/	*0.33*
				3	*9.84*	**VW3M8A11R03**	0.200/	*0.44*
				5	*16.40*	**VW3M8A11R05**	0.320/	*0.71*
				10	*32.81*	**VW3M8A11R10**	0.760/	*1.67*
				15	*49.21*	**VW3M8A11R15**	1.100/	*2.42*
				20	*65.62*	**VW3M8A11R20**	1.450/	*3.19*
				25	*82.02*	**VW3M8A11R25**	1.800/	*3.96*
Equipped with one MIL connector (servo motor side) (item 8)**, and VW3M4A31 connector** (item 12) **(servo drive side)**	LXM16DU10M2X, LXM16DU15M2X	BCH16HM08130F6C, BCH16LH10330F6C, BCH16HM10230F6C, BCH16HM15230F6C	2x 0.5 mm² + 3x2x 0.2 mm²	1,5	*4.92*	**VW3M8A21RA5**	0.180/	*0.39*
				3	*9.84*	**VW3M8A21R03**	0.250/	*0.55*
				5	*16.40*	**VW3M8A21R05**	0.380/	*0.83*
				10	*32.81*	**VW3M8A21R10**	0.850/	*1.87*
				15	*49.21*	**VW3M8A21R15**	1.300/	*2.86*
				20	*65.62*	**VW3M8A21R20**	1.750/	*3.85*
				25	*82.02*	**VW3M8A21R25**	2.200/	*4.85*

Motor encoder connectors

Designation	Use for	For use with	For cable cross-section	Reference	Weight	
					kg	*lb*
Plastic connector (item 7)	for creating encoder cordsets	BCH16LB01330●5C, BCH16HD02330●5C, BCH16HD04330●5C, BCH16HF07330●5C	2x 0.5 mm² + 3x2x0.2 mm²	**VW3M8A11**	0.150/	*0.33*
Mil connector (item 9)	for creating encoder cordsets	BCH16HM08130●6C, BCH16LH10330●6C, BCH16HM10230●6C, BCH16HM15230●6C	2x 0.5 mm² + 3x2x 0.2 mm²	**VW3M8A21**	0.300/	*0.66*

Motion control

Lexium 16D servo drives & BCH16 motors

Product reference index

Schneider Electric Industries SAS

Head Office
35, rue Joseph Monier
F-92500 Rueil-Malmaison
France

www.schneider-electric.com

Design: Schneider Electric
Photos: Schneider Electric

November 2018 - V1.1

DIA3ED2180401EN