



Lexium 18

Lexium 18P/18E Servo drives
& BCH18 Servo motors



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.

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- [Lexium](#) Integrated Servo Drives
- [Lexium](#) Robotics
- [Lexium](#) Stepper Drives

Life Is On

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Lexium 18P/18E servo drives & BCH18 servo motors

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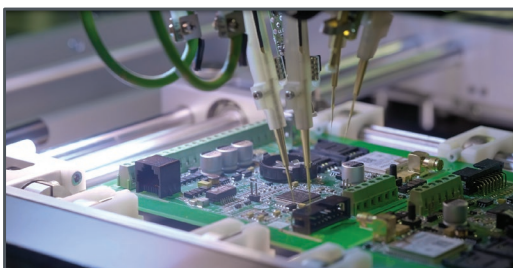
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Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors
Specially designed for simple machines



E&E application



Semicon application



Packaging application



Material Working application



[DIA3ED2140906EN](#)

Specially designed for simple machines

A user-oriented range of products

The Lexium™ 18 range figures the Lexium 18P/18E servo drives, and the associated BCH18 servo motors. Their combinations are specially designed for seamless integration & commissioning in your machine and provide the right level of performance for the majority of various motion control machines.

The Lexium™ 18 range is defined by AC-servo drives for combination with AC-servo motors according to customer's application.

- It 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 do set on:
 - Power class: both motor and drive have the same power class (1).
 - Encoder type that equips the BCH18 motors is 23-bit optic incremental or 23-bit optic multi-turn absolute encoder
- BCH18 motors provide
 - a nominal torque from 0.16 N-m (1.42 lb-in) to 19.1 N-m (169.05 lb-in)
 - a nominal speed of 1500, 2000 or 3000 rpm, depending on the model
 - Low or Medium inertia levels.

Lexium 18 offer throughout the whole life cycle

- Simple to select and order thanks to the "just enough" number of references
- Straightforward to mount and wire up
- Intuitive to set up and commission
- Effortless to tune thanks to the comfortable, auto-adaptive tuning function
- Seamless to connect to our range of controllers:
 - Logic controllers such as Modicon M100 or Modicon M200 to monitor Lexium 18P servo drives on Modbus/RTU network (2)
 - Motion controllers such as Modicon M310, to monitor Lexium 18E servo drives on EtherCAT.

Robustness

- Motor shafts have degree of protection IP67 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
- The Lexium 18 servo drives have a degree of protection IP 20

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

Applications

The Lexium™ 18 range is designed for Simple machines with Position Control Applications (Low or high speed speed positioning, simple movement, P2P applications)

Segments

Electrical and Electronic	Semicon	Packaging	Material Working
Typical applications			
- Die Cutting - Winding - Testing - Glue Dispenser	- Flying Probe Checking - Wafer Testing - Cristal Growing Furnace	- Labeling - Folding - Sealing - Strapping	- Laser Cutting - Bending - Beading - Carving




Mounting and maintenance

Connecting the servo drives is simplified by identified plug-in connectors for Power and Encoder cables, easily accessed on the front panel of the drive. (see [Description page 8](#)).

(1) See table of combinations [page 6](#).

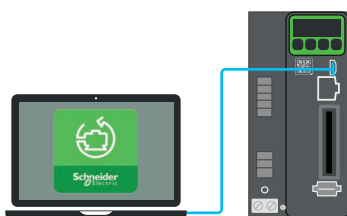
(2) Please consult Modicon M200 - logic controller, catalog ref [DIA3ED2140906EN](#)

Presentation of the range

Type of servo drive		Lexium 18P	Lexium 18E
			
Communication	Integrated	<ul style="list-style-type: none"> ■ Modbus ■ Pulse train 	<ul style="list-style-type: none"> ■ EtherCAT
	Operating modes	<ul style="list-style-type: none"> <input type="checkbox"/> Electronic Gear mode <input type="checkbox"/> Velocity mode <input type="checkbox"/> Torque mode <input type="checkbox"/> Motion Sequence mode <input type="checkbox"/> Scripting mode 	<ul style="list-style-type: none"> <input type="checkbox"/> Homing <input type="checkbox"/> Profile position <input type="checkbox"/> Profile velocity <input type="checkbox"/> Profile torque <input type="checkbox"/> Cyclic synchronous position <input type="checkbox"/> Cyclic synchronous velocity <input type="checkbox"/> Cyclic synchronous torque
24V logic inputs		8, reassignable	4, reassignable
24V capture inputs		2	2
24V logic outputs		6, reassignable	3, reassignable
Analog inputs		2	-
Analog outputs		2	-
Pulse control input		<ul style="list-style-type: none"> <input type="checkbox"/> 5V or 24V open collector <input type="checkbox"/> Line driver, RS422 	-
ESIM PTO output		Line driver, RS422	-
Safety functions		-	Safe Torque Off optional
Control via		PTI, Analog and Modbus/RTU	Modicon M310 Motion controller on EtherCAT
Compatible type of servo motor		BCH18	
			
Encoder type		<ul style="list-style-type: none"> <input type="checkbox"/> 23-bit optic incremental encoder <input type="checkbox"/> 23-bit optic multi-turn absolute encoder (1) 	
Flange size		40, 60, 80, 100, 130, and 180 mm	
Degree of protection		IP67	

(1) The multi-turn encoder without battery can be used as a single-turn absolute encoder.

Configuration software



Configuration of Lexium 18P/18E with SoMove setup software, via CN3 interface (Type-C)

The servo drives can be configured by using the SoMove setup software via their integrated HMI interface (Type-C):

- 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.
 - SoMove setup software is used on Lexium 18 servo drives to configure, adjust, debug, and maintain the drive.
 - A configuration can be transferred from a PC to the Lexium 18 servo drive via the CN3 interface (Type-C).
 - SoMove setup software can be downloaded from Schneider [website](#).

Functions

The Lexium 18P/18E 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
- 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 18P/18E servo drive are controlled with numerous digital or analog signals, accessible via the “CN1 IO” interface

- Lexium 18P
 - 10 digital inputs including 2 digital inputs for high-performance position capture
 - 6 digital outputs
 - 2 analog inputs
 - 2 analog outputs
- Lexium 18E
 - 6 digital inputs including 2 digital inputs for high-performance position capture
 - 3 digital outputs

Control mode

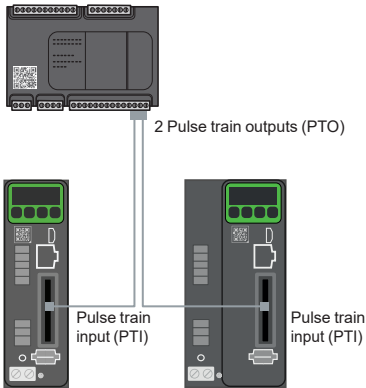
- Control via Modbus RTU/PTI Analog input interface
 - Lexium 18P servo drives can be managed by a Logic controller (Modicon M200 logic controller) with 2 pulse-train-outputs (PTO) interface to the PTI/ Analog interface located on servo drive
 - The Lexium 18P servo drives can communicate with the PLC through a RS485 cable by using the standard Modbus RTU protocol. The interface for RS485 is an RJ45 connector.
- Control via Scripting
 - The Lexium 18P servo drives support Script Programming. User can program their own motion profiles and logics by using integrated keywords, such as Position / Velocity demand, Position / Velocity / Current actual value, DI / DO / timer status / internal variables, other elements and so on.
 - By this powerful control mode Lexium 18P can fulfill complex motion tasks without Motion Controller.
- Control via EtherCAT
 - Lexium 18E servo drives are controlled through “CN5 EC” interface with an EtherCAT control interface. The EtherCAT interface is an RJ45 connector.

Safe Torque Off function

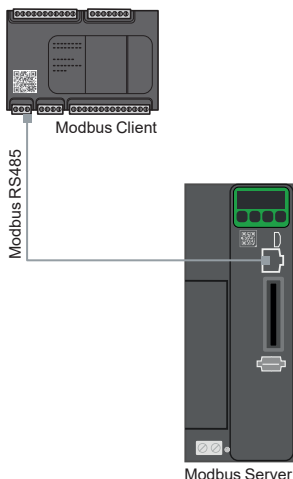
- The STO function ensures that no torque can act upon the motor by blocking electrical signals from the power devices to the motor. STO can reduce torque generating energy immediately and allow the motor to come to a dead stop using natural inertia and friction from the load.
- This function meets the requirements of SIL 2 according IEC 61800-5-2, IEC 62061 and IEC 61508 as well as up to category 3 and PLd according to EN ISO 13849-1.

Operating mode

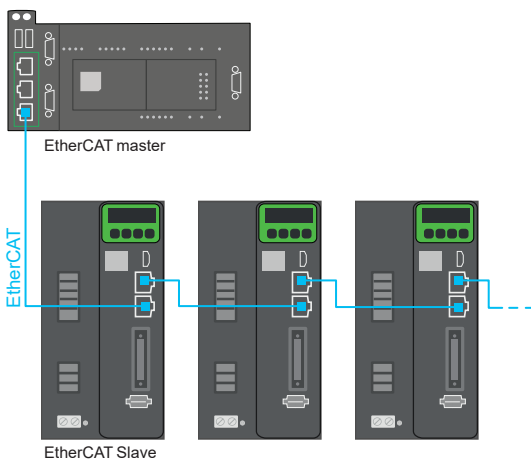
- Lexium 18P
 - Torque mode
 - Velocity mode
 - Electronic Gear mode
 - Motion Sequence mode
 - Scripting mode
- Lexium 18E
 - Profile position
 - Profile velocity
 - Profile torque
 - Homing
 - Cyclic synchronous position
 - Cyclic synchronous velocity
 - Cyclic synchronous torque



Lexium 18P servo drives controlled by Modicon M200 logic controller via the PTI interface



Lexium 18P servo drives controlled by Modicon M200 logic controller using the standard Modbus RTU protocol, via the CN4 interface (RJ45 connector)



Lexium 18E servo drives controlled by a Modicon M310 motion controller using the EtherCAT, via the CN5 interface (RJ45 connector)

Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors

EtherCAT for Lexium 18E servo drives



2x RJ45 connectors
for EtherCAT connection

Lexium 18E

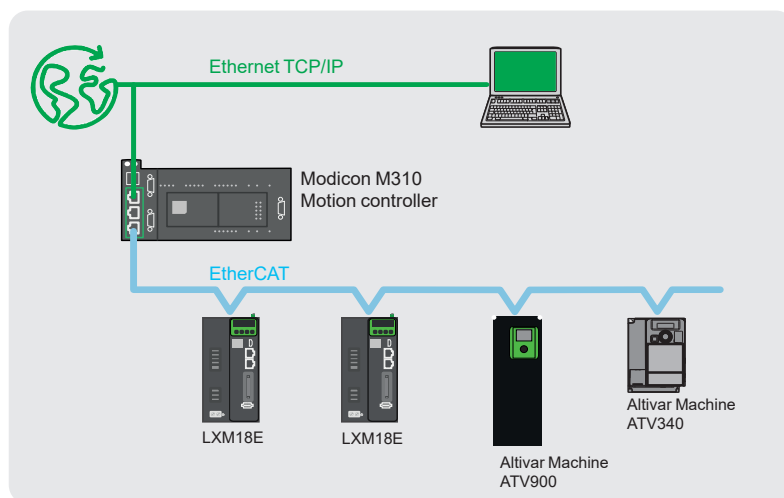
EtherCAT for Lexium 18E servo drives

Presentation

EtherCAT (EtherNet for Control Automation Technology) is an industrial Ethernet-based communication protocol used in automation systems. It is a high-performance and real-time communication standard that enables fast and deterministic communication between devices in a network.

EtherCAT operates on a master-slave principle, where a master device controls and coordinates communication with multiple slave devices. The communication is achieved using a single Ethernet cable, known as EtherCAT, which connects all the devices in a daisy-chain topology.

EtherCAT is intended for applications requiring very short cycle times ($\leq 250 \mu\text{s}$) with low jitter ($\leq 1 \mu\text{s}$) for synchronization purposes.



Lexium 18E servo drives can be directly connected to EtherCAT using the RJ45 connectors. The communication function provides access to the servo drive's configuration, adjustment, control, and monitoring functions..



490NTW000●●
490NTC000●●
490NTW000●●U

Cordsets

Designation	Length m (ft)	Reference	Weight kg/lb
ConneXium cordsets: conforming to EIA/TIA-568, category 5, and IEC1180/EN50173, class D, standards			
Straight shielded twisted pair cordsets Preassembled cordsets with an RJ45 connector at each end	2 (6.56)	490NTW00002	—
	5 (16.40)	490NTW00005	—
	12 (39.37)	490NTW00012	—
	40 (131.23)	490NTW00040	—
	80 (262.467)	490NTW00080	—
Crossed shielded twisted pair cordsets Preassembled cordsets with an RJ45 connector at each end	5 (16.40)	490NTC00005	—
ConneXium cordsets: conforming to UL and CSA 22.1 standards			
Straight shielded twisted pair cordsets Preassembled cordsets with an RJ45 connector at each end	2 (6.56)	490NTW00002U	—
	5 (16.40)	490NTW00005U	—
	15 (49.21)	490NTW00012U	—

Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors

Lexium 18P/18E servo drive and BCH18 servo motor combinations

Lexium 18 servo drive and BCH18 servo motor combinations

Servo drive reference (1)	Servo motor reference (2)	Nominal Power		Flange size		Velocity		Current		Torque		Motor Inertia		Moment of inertia
		kW	hp	mm	in	rpm	rpm	A	A	N-m	N-m	Without holding brake	With holding brake	
Single-phase supply voltage: 220Vac, 200Vac -15%...240Vac +10%														
LXM18●●U01M2X (Size 1)	BCH18LBA533●●5C	0.05	0.06	40	1.57	3000	6000	1.1	3.4	0.16	0.48	0.02	0.027	Low
	BCH18MBA533●●5C	0.05	0.06	40	1.57	3000	6000	1.1	3.9	0.16	0.56	0.04	0.046	Medium
	BCH18LB0133●●5C	0.10	0.13	40	1.57	3000	6000	1.1	3.4	0.32	0.96	0.030	0.036	Low
	BCH18MB0133●●5C	0.10	0.13	40	1.57	3000	6000	1.1	3.9	0.32	1.12	0.07	0.076	Medium
	BCH18MD0133●●5C	0.10	0.13	60	2.36	3000	6000	1.1	3.4	0.32	0.96	0.16	0.22	Medium
LXM18●●U02M2X (Size 1)	BCH18LD0233●●5C	0.20	0.27	60	2.36	3000	6000	1.6	5.1	0.64	1.92	0.15	0.21	Low
	BCH18MD0233●●5C	0.20	0.27	60	2.36	3000	6000	1.6	5.9	0.64	2.24	0.268	0.328	Medium
	BCH18MF0233●●5C	0.20	0.27	80	3.15	3000	6000	1.6	5.1	0.64	1.92	0.55	0.68	Medium
LXM18●●U04M2X (Size 1)	BCH18LD0433●●5C	0.40	0.54	60	2.36	3000	6000	2.8	8.5	1.27	3.81	0.25	0.31	Low
	BCH18MD0433●●5C	0.40	0.54	60	2.36	3000	6000	2.6	9.3	1.27	4.45	0.478	0.54	Medium
	BCH18MF0433●●5C	0.40	0.54	80	3.15	3000	6000	2.6	9.3	1.27	4.45	1.19	1.33	Medium
LXM18●●U07M2X (Size 2)	BCH18LF0733●●5C	0.75	1.01	80	3.15	3000	6000	5.1	15.6	2.39	7.17	0.78	0.93	Low
	BCH18MF0733●●5C	0.75	1.02	80	3.15	3000	6000	4.9	17.3	2.39	8.37	1.79	1.9	Medium
LXM18●●U10M2X (Size 2)	BCH18MM0813●●6C	0.85	1.15	130	5.12	1500	3000	7.3	22	5.39	16.17	14	14.7	Medium
	BCH18MM1023●●6C	1.00	1.34	130	5.12	2000	3000	6	18.3	4.77	14.31	14	14.7	Medium
	BCH18LF1033●●5C	1.00	1.34	80	3.15	3000	6000	6.8	21.5	3.18	9.54	0.994	1.12	Low
	BCH18MF1033●●5C	1.00	1.34	80	3.15	3000	6000	6.5	22.8	3.18	11.1	2.16	2.32	Medium
	BCH18LH1033●●6C	1.00	1.34	100	3.94	3000	6000	7.3	22	3.18	9.54	1.43	1.53	Low
LXM18●●U15M2X (Size 2)	BCH18MM1313●●6C	1.30	1.76	130	5.12	1500	3000	9.6	29.2	8.34	25	20.88	21.54	Medium
	BCH18MM1523●●6C	1.50	2.01	130	5.12	2000	3000	8.24	25	7.16	21.48	20.88	21.54	Medium
	BCH18LH1533●●6C	1.50	2.01	100	3.94	3000	6000	9.2	28.8	4.77	14.3	2.09	2.21	Low
Three-phase supply voltage: 220Vac, 200Vac -15%...240Vac +10%														
LXM18●●U20M3X (Size 3)	BCH18MM1813●●6C	1.80	2.44	130	5.12	1500	3000	14	42	11.5	32.2	27.79	28.45	Medium
	BCH18MM2023●●6C	2.00	2.68	130	5.12	2000	3000	11.7	36	9.55	28.65	27.79	28.45	Medium
	BCH18LH2033●●6C	2.00	2.68	100	3.94	3000	6000	13.2	41	6.37	19.1	2.64	2.74	Low
LXM18●●U30M3X (Size 3)	BCH18MR2413●●6C	2.40	3.26	180	7.09	1500	3000	18.6	56	15.1	45.1	46.32	51.1	Medium
	BCH18MR3013●●6C	3.00	4.02	180	7.09	1500	3000	18.9	54.6	19.1	55.39	46.32	51.1	Medium
	BCH18LM3033●●6C	3.00	4.02	130	5.12	3000	6000	18.6	56	9.8	29.4	7.63	8.3	Low

(1) ●● Please consult the Servo drive reference table, See [page 7](#).
 (2) ●● Please consult the Motor reference table, See [page 13](#)



Size 1



Size 2



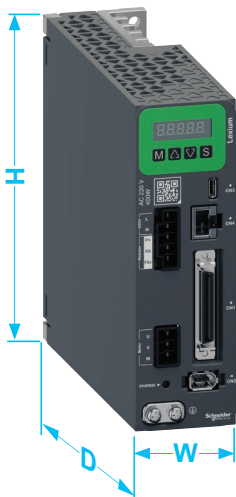
Size 3

Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors

Lexium 18P/18E servo drives

Lexium 18P/18E servo drives							
To order a Lexium 18 servo drive, make up the reference as follows							
Lexium 18 AC servo drive		LXM18	•	•	•••	••	•
Product Line	Pulse train input		P				
	EtherCAT		E				
Communication interface	I/O interface with PTI only			C			
	I/O interface with PTI, analog and Modbus RTU			D			
	EtherCAT with Digital I/O interface			N			
	EtherCAT with Digital I/O interface, and STO function			S			
Power	Size 1	0.1 kW/0.13 hp				U01	
		0.2 kW/0.27 hp				U02	
		0.4 kW/0.54 hp				U04	
	Size 2	0.75 kW/1.01 hp				U07	
		1 kW/1.34 hp				U10	
		1.5 kW/2.01 hp				U15	
Size 3	2.0 kW/2.68 hp				U20		
	3.0 kW/4.02 hp				U30		
Power Supply Voltage	Single phase, 220Vac					M2	
	Three phases, 220Vac					M3	
Special function	No built-in EMC filter						X

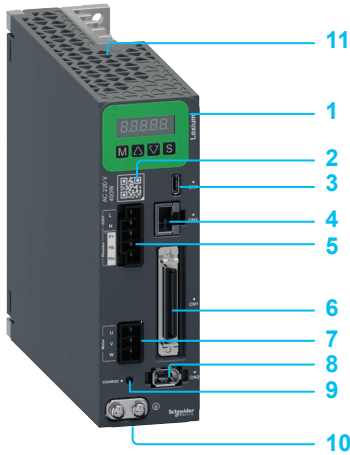


Dimensions, Weight									
Servo drive reference	Housing	Dimensions						Weight	
		H (height)		W (width)		D (depth)		kg	lb
		mm	in	mm	in	mm	in		
LXM18•••U01M2X LXM18•••U02M2X LXM18•••U04M2X	Size 1	155.5	6.12	48	1.89	166.5	6.55	1.19	2.62
LXM18•••U07M2X LXM18•••U10M2X LXM18•••U15M2X	Size 2	155.5	6.12	78	3.07	166.5	6.55	1.79	3.95
LXM18•••U20M3X LXM18•••U30M3X	Size 3	208	8.19	93	3.66	191.8	7.55	2.89	6.37

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Lexium 18P/18E servo drives & BCH18 servo motors

Lexium 18P/18E servo drives



Lexium 18P/18E servo drives

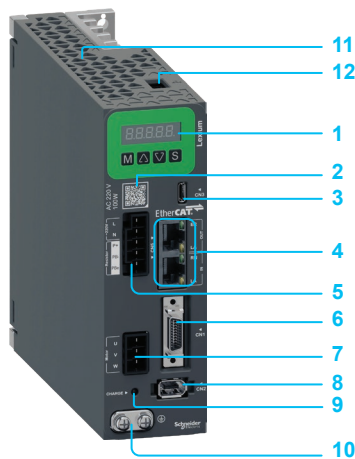
Lexium 18P

On the drive front:

- 1 HMI interface, 7-segment display, 4 buttons (mode, value up, value down, set)
- 2 QR code: link to SE product maintenance page
- 3 Type-C connector for commissioning the servo drives (marked CN3)
- 4 RJ45 connector for Modbus RS485 (marked CN4)
- 5 Connector for power (marked L, N, P+, PBi, PBe)
- 6 I/O interface (PTI/Analog interface, marked CN1)
- 7 Connector for motor power (marked U, V, W)
- 8 Connector for motor encoder (marked CN2)
- 9 Charge indicator LED
- 10 Protected earth ground connector (marked \oplus)

On the drive top

- 11 Heatsink on servo drive Size 1 (shown here)
Heatsink and fan + fan cover on servo drive Size 2 and 3



Lexium 18E

On the drive front:

- 1 HMI interface, 7-segment display, 4 buttons (mode, value up, value down, set)
- 2 QR code: link to SE product maintenance page
- 3 Type-C connector for commissioning the servo drives (marked CN3)
- 4 2x RJ45 connectors for EtherCAT (marked CN5)
- 5 Connector for power (marked L, N, P+, PBi, PBe),
- 6 Digital I/O interface (marked CN1)
- 7 Connector for motor power (marked U, V, W)
- 8 Connector for motor encoder (marked CN2)
- 9 Charge indicator LED
- 10 Protected earth ground connector (marked \oplus)

On the drive top

- 11 Heatsink on servo drive Size 1 (shown here)
Heatsink and fan + fan cover on servo drive Size 2 and 3
- 12 Removable terminal for STO function (marked CN6)

Accessories for Lexium 18P/18E servo drives

Designation	Description	For use with	Reference	Weight kg/ lb
Connector set for power & motor	Servo drive power input and output connector kit	LXM18E LXM18P	VW3M4B01	0.012 0.026
Connector kit for encoder	6-pin encoder connector kit	LXM18E LXM18P	VW3M4B21	0.008 0.018
IO connector	50-pin IO connector kit	LXM18P	VW3M4B11	0.035 0.08
IO connector	20-pin IO connector kit	LXM18E	VW3M4B12	0.017 0.04
STO plug with insertion bridge	STO plug with insertion bridge	LXM18E	VW3M4B31	0.003 0.01



VW3M4B01



VW3M4B21



VW3M4B11



VW3M4B12



VW3M4B31

Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors

Braking resistor, Holding brake

Braking resistor for Lexium 18P/18E servo drives

Internal braking resistor

The built-in braking resistor absorbs 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

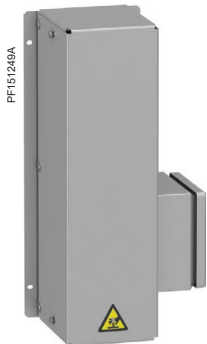
When the servo motor has to be braked frequently, an external braking resistor is required to dissipate the excess braking energy. In this case, the internal braking resistor must be deactivated.

Several external braking resistors can be connected in parallel. The servo drive monitors the power dissipated in the braking resistor.

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



VW3A760R07



VW3A773

Power rating range	Ohmic value (Ω)	Continuous power (W)	Connection	Degree of protection	Reference	Weight kg lb
100 W, 200 W, 400 W	72	400	3 m cable (9.84 ft)	IP65	VW3A7607R30	1.620 kg 3.571 lb
750 W, 1 kW, 1.5 kW	27	400	0.75 m cable (2.46 ft)	IP65	VW3A7603R07	0.930 kg 2.050 lb
2 kW, 3 kW	16	960	M6 terminal	IP20 UL	VW3A7733	4.000 kg 8.818 lb

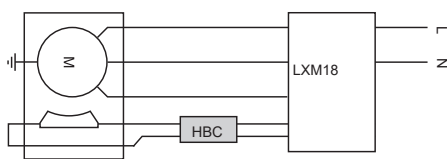
NOTE: The total continuous power dissipated in the external braking resistor(s) must be less than or equal to the nominal power of the Lexium 18P/18E servo drive.

Holding brake controller (HBC)

BCH18 servo motors can be equipped with an electromagnetic holding brake.

NOTE: 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, 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 18 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.



Servo motor with integrated holding brake



VW3M3103

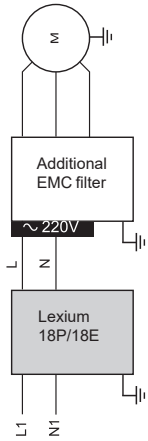
References

Designation	Description	Reference	Weight kg lb
Holding brake controller	24 V $\overline{\text{DC}}$ power supply Max. power 0.05 kW/0.07 hp IP 20 For mounting on 55 mm/2.17 in \perp rail	VW3M3103	0.600 kg 1.323 lb

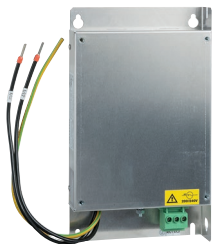
Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors

Additional EMC input filters for Lexium 18P/18E servo drives



Lexium 18P/18E servo drive with additional EMC filter



VW3A442

Additional EMC input filters for Lexium 18P/18E servo drives

Applications

The Lexium 18P/18E 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
- Additional EMC filters can only be used on TN (neutral connection) or TT (neutral to ground) systems.
- The Lexium 18 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.

For servo drive 1x EMC filter and a single Lexium 18P/18E servo drive	Nominal power	Line current	Reference	Weight kg lb
Single phase 220Vac, 200Vac -15%...240Vac +10%				
LXM18●●U01M2X	0.1 to 0.75 kW (0.13 to 1.01 hp)	9 A	VW3A4420	0.600
LXM18●●U02M2X				1.323
LXM18●●U04M2X				
LXM18●●U07M2X				
LXM18●●U10M2X	1 and 1.5 kW (1.34 and 2.01 hp)	16 A	VW3A4421	0.775
LXM18●●U15M2X				1.709
Three-phasesupplyvoltage:220Vac 200Vac-15%...240Vac+10%				
LXM18●●U20M3X	2 and 3 kW (2.68 and 4.02 hp)	25 A	VW3A4423	1.350
LXM18●●U30M3X				2.976

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

Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors

Motor starters

Protection using class J fuses (UL certification)



GV2P●●

+



LC1●●●●●

+

or



LXM18P



LXM18E

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 18P/18E 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)	Reference	Rating (A)	Reference (1) (2)
Circuit-breakers for single drive installation according to IEC 60364-5-52				
Single phase 220Vac, 200Vac -15%...240Vac +10%				
LXM18●●U01M2X	0.1/0.13	GV2P10	6.3	LC1K0610●●
LXM18●●U02M2X	0.2/0.27	GV2P10	6.3	LC1K0610●●
LXM18●●U04M2X	0.4/0.54	GV2P14	10	LC1K09●●
LXM18●●U07M2X	0.75/1.01	GV2P16	14	LC1K09●●
LXM18●●U10M2X	1.0/1.34	GV2P20	18	LC1K09●●
LXM18●●U15M2X	1.5/2.01	GV2P22	25	LC1D18●●
Three-phase supply voltage: 220Vac, 200Vac -15%...240Vac +10%				
LXM18●●U20M3X	2.0/2.68	GV2P22	25	LC1D18●●
LXM18●●U30M3X	3.0/4.02	GV2P32	32	LC1D32●●

(1) Composition of the contactors:

LC1K0610●●: 3 poles + 1 N/O auxiliary contact

LC1K09●●: 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.

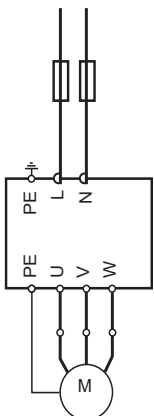
(2) Replace ●● with the control circuit voltage code given in the table below:

		230Vac	240Vac
LC1K0610●●	50/60 Hz	P7	U7
LC1K09●●			
		230Vac	230/240Vac
LC1D18●●	50 Hz	P5	U5
LC1D32●●	60 Hz	–	U6
	50/60 Hz	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)

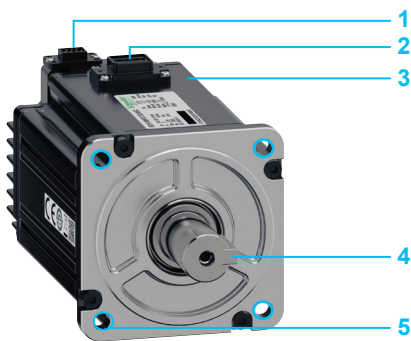
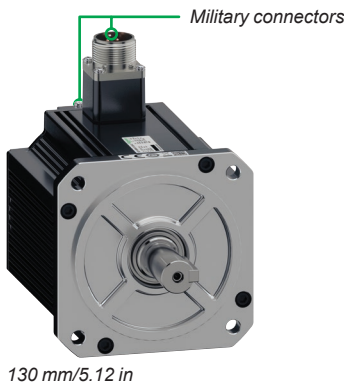
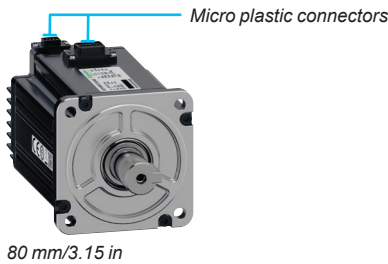
Servo drive		Fuse to be placed upstream
Reference	Nominal power	
Single phase 220Vac, 200Vac -15%...240Vac +10%		
LXM18●●U01M2X	0.1 kW/0.13 hp	6 A
LXM18●●U02M2X	0.2 kW / 0.27 hp	6 A
LXM18●●U04M2X	0.4 kW / 0.54 hp	10 A
LXM18●●U07M2X	0.75 kW / 1.01 hp	15 A
LXM18●●U10M2X	1.0 kW / 1.34 hp	20 A
LXM18●●U15M2X	1.5 kW / 2.01 hp	25 A
Three-phase supply voltage: 220Vac, 200Vac -15%...240Vac +10%		
LXM18●●U20M3X	2.0 kW / 2.68 hp	25 A
LXM18●●U30M3X	3.0 kW / 4.02 hp	35 A



LXM18P/18E servo drive,
BCH18 servo motor with fuse
protection

Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors
BCH18 servo motors



BCH18 servo motors

Presentation

BCH18 motors are synchronous AC servo motors.

- Available in several flange sizes and shaft diameters, some with two shaft diameters:
 - 40 mm (1.57 in) – Shaft diameter 8 mm (0.31 in)
 - 60 mm (2.36 in) – Shaft diameter 8 mm (0.31 in) or 14 mm (0.55 in)
 - 80 mm (3.15 in) – Shaft diameter 14 mm (0.55 in) or 19 mm (0.75 in)
 - 100 mm (3.94 in) – Shaft diameter 22 mm (0.87 in)
 - 130 mm (5.12 in) – Shaft diameter 22 mm (0.87 in), 24 mm (0.94 in) or 28 mm (1.102 in)
 - 180 mm (7.09 in) – Shaft diameter 35 mm (1.38 in)
- with or without holding brake (depending on model)
- with low or Medium motor inertia

Depending on flange size, the BCH18 motors are supplied:

- with micro plastic connectors
- with military connectors

Cables and connectors are to be ordered separately for connection to Lexium 18P/18E servo drives.

- Schneider Electric has taken particular care over the compatibility of BCH18 servo motors and Lexium 18P/18E servo drives.
- This compatibility is only possible when using cables and connectors sold by Schneider Electric (see [pages 14 to 17](#)).

Integrated encoder

BCH18 servo motors are equipped with an incremental or a multi-turn absolute encoder (depending on model) which measures the servo motor speed via associated Lexium 18 servo drive. This information is used by the servo drive's position and speed controller.

NOTE: The 23-bit optic multi-turn absolute encoder systems use a battery for operation, the variant without battery is a single-turn absolute encoder.

Description

BCH18 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 (1)
(flange is mechanically compatible with Asian-style servo motors)

(1) 40 mm flange (1.57 in) motor is 2-point axial mounted.

References, Dimensions, Weights

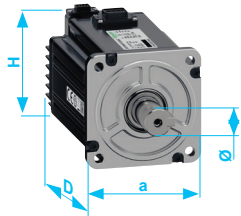
Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors

BCH18 servo motors

To order a BCH18 servo motor, make up the reference as follows:											
BCH18		●	●	●●	●	●	●	●	●	C	
Inertia	Low inertia	L									
	Medium inertia	M									
Flange size	40 mm (1.57 in) – Shaft diameter 8 mm (0.31 in)		B								
	60 mm (2.36 in) – Shaft diameter 8 mm (0.31 in) or 14 mm (0.55 in)		D								
	80 mm (3.15 in) – Shaft diameter 14 mm (0.55 in) or 19 mm (0.75 in)		F								
	100 mm (3.94 in) – Shaft diameter 22 mm (0.87 in)		H								
	130 mm (5.12 in) – Shaft diameter 22 mm (0.87 in), 24 mm (0.94 in) or 28 mm (1.102 in)		M								
Nominal power	180 mm (7.09 in) – Shaft diameter 35 mm (1.38 in)		R								
	50 W (0.06 hp)			A5							
	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							
	1.3 kW (1.74 hp)			13							
	1.5 kW (2.01 hp)			15							
Winding type (Power supply 220Vac)	Optimized in terms of torque (1500 rpm)							1			
	Optimized in terms of torque and speed of rotation (2000 rpm)							2			
	Optimized in terms of speed of rotation (3000 rpm)							3			
Shaft end	Parallel keyed shaft (shaft & housing IP 67)								3		
Encoder	23-bit optic incremental encoder									2	
	23-bit optic multi-turn absolute encoder									C	
Holding brake	Without holding brake										A
	With holding brake										F
Connections	Micro plastic connectors										5
	Military connectors										6
Voltage	220 Vac										C

BCH18 servo motors



Servo motor (1)	Continuous power	Dimensions (overall)										Weight				
		Ø (shaft)		a (flange)		H (height)		D (depth)		Without brake		With brake		Without brake	With brake	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	kg
BCH18LBA533●●5C	50	0.06	8	0.31	40	1.57	50.75	2.00	74.90	2.95	118.90	4.68	0.35	0.77	0.60	1.32
BCH18MBA533●●5C	50	0.06	8	0.31	40	1.57	50.75	2.00	75.20	2.96	118.90	4.68	0.26	0.57	0.52	0.57
BCH18LB0133●●5C	100	0.13	8	0.31	40	1.57	50.75	2.00	83.80	3.30	127.80	5.03	0.41	0.90	0.65	1.43
BCH18MB0133●●5C	100	0.13	8	0.31	40	1.57	50.75	2.00	89.10	3.51	132.80	5.23	0.40	0.88	0.69	1.52
BCH18MD0133●●5C	100	0.13	8	0.31	60	2.36	68.60	2.70	69.20	2.72	108.70	4.28	0.65	1.43	1.05	2.31
BCH18LD0233●●5C	200	0.27	14	0.55	60	2.36	68.60	2.70	76.70	3.02	116.20	4.57	0.85	1.87	1.20	2.65
BCH18MD0233●●5C	200	0.27	14	0.55	60	2.36	68.60	2.70	77.90	3.07	117.40	4.62	0.85	1.87	1.25	2.76
BCH18MF0233●●5C	200	0.27	14	0.55	80	3.15	88.60	3.49	80.20	3.16	119.00	4.69	1.35	2.98	2.10	4.63
BCH18LD0433●●5C	400	0.53	14	0.55	60	2.36	68.60	2.70	92.80	3.65	132.30	5.21	1.15	2.54	1.55	3.42
BCH18MD0433●●5C	400	0.53	14	0.55	60	2.36	68.60	2.70	96.10	3.78	135.60	5.34	1.15	2.54	1.60	3.53
BCH18MF0433●●5C	400	0.53	14	0.55	80	3.15	88.60	3.49	98.00	3.86	136.80	5.39	1.95	4.30	2.70	5.95
BCH18LF0733●●5C	750	1.01	19	0.75	80	3.15	88.60	3.49	105.30	4.15	144.10	5.67	2.30	5.07	3.10	6.83
BCH18MF0733●●5C	750	1.01	19	0.75	80	3.15	88.60	3.49	113.70	4.48	152.50	6.00	2.50	5.51	3.25	7.17
BCH18MM0813●●6C	850	1.13	22	0.87	130	5.12	182.40	7.18	145.50	5.73	188.50	7.42	6.85	5.10	8.35	18.41
BCH18MM1023●●6C	1000	1.34	22	0.87	130	5.12	182.40	7.18	145.90	5.74	188.50	7.42	6.85	5.10	8.35	18.41
BCH18LH1033●●6C	1000	1.34	22	0.87	100	3.94	152.20	5.99	140.00	5.51	180.50	7.11	3.60	7.94	4.50	9.92
BCH18LF1033●●5C	1000	1.34	19	0.75	80	3.15	88.60	3.49	118.50	4.67	157.30	6.19	2.80	6.17	3.55	7.83
BCH18MF1033●●5C	1000	1.34	19	0.75	80	3.15	88.60	3.49	128.70	5.07	167.50	6.59	3.00	6.61	3.75	8.27
BCH18MM1313●●6C	1300	1.74	22	0.87	130	5.12	182.40	7.18	170.90	6.73	213.50	8.41	9.00	19.84	10.60	23.37
BCH18MM1523●●6C	1500	2.01	22	0.87	130	5.12	182.40	7.18	170.90	6.73	213.50	8.41	9.00	19.84	10.60	23.37
BCH18LH1533●●6C	1500	2.01	22	0.87	100	3.94	152.20	5.99	159.00	6.26	199.50	7.85	4.50	9.92	5.40	11.90
BCH18MM1813●●6C	1800	2.41	24	0.94	130	5.12	182.40	7.18	195.90	7.71	238.50	9.39	11.20	24.69	12.70	28.00
BCH18MM2023●●6C	2000	2.68	22	0.87	130	5.12	182.40	7.18	195.90	7.71	238.50	9.39	11.20	24.69	12.70	28.00
BCH18LH2033●●6C	2000	2.68	22	0.87	100	3.94	152.20	5.99	174.00	6.85	214.50	8.44	5.30	11.68	6.20	13.67
BCH18MR2413●●6C	2400	3.22	35	1.38	180	7.09	231.20	9.10	193.00	7.60	245.20	9.65	18.00	39.68	22.45	49.49
BCH18MR3013●●6C	3000	4.02	35	1.38	180	7.09	231.20	9.10	193.00	7.60	245.20	9.65	18.00	39.68	22.45	49.49
BCH18LM3033●●6C	3000	4.02	28	1.10	130	5.12	182.40	7.18	208.90	8.22	251.50	9.90	10.30	22.71	11.80	26.01

(1) ●● Depending on Encoder - replace first ● with 2 or C, and on the Holding brake - replace second ● with A or F, See Type code above.

Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors

Power cables for BCH18 servo motors

Power cables for BCH18 servo motors

Unshielded Power cables

Designation	For use	For cable cross-section	Length		Reference	Weight	
			m	ft		kg	lb

Toward load, Plastic connector, size 0 - 1

Equipped with one plastic connector Size 0 (Motor end)	LXM18E●U01M2X	BCH18LB●●	4G*0.34mm ² (22 AWG)	1.5	4.92	VW3M5B01RA5	0.060	0.132
	LXM18P●U01M2X	BCH18MB●●		3	9.84	VW3M5B01R03	0.117	0.257
				5	16.40	VW3M5B01R05	0.193	0.425
				10	32.81	VW3M5B01R10	0.383	0.844
				15	49.21	VW3M5B01R15	0.573	1.263
				20	65.62	VW3M5B01R20	0.763	1.682

Equipped with one plastic connector size 0 (Motor end), with brake	LXM18E●U01M2X	BCH18LB●●	6G*0.34mm ² (22 AWG)	1.5	4.92	VW3M5B02RA5	0.078	0.171
	LXM18P●U01M2X	BCH18MB●●		3	9.84	VW3M5B02R03	0.152	0.336
				5	16.40	VW3M5B02R05	0.252	0.555
				10	32.81	VW3M5B02R10	0.501	1.104
				15	49.21	VW3M5B02R15	0.750	1.653
				20	65.62	VW3M5B02R20	0.999	2.202

Toward back, Plastic connector, Size 0 - 1

Equipped with one plastic connector size 0 (Motor end)	LXM18E●U01M2X	BCH18LB●●	4G*0.34mm ² (22 AWG)	1.5	4.92	VW3M5B03RA5	0.060	0.132
	LXM18P●U01M2X	BCH18MB●●		3	9.84	VW3M5B03R03	0.117	0.257
				5	16.40	VW3M5B03R05	0.193	0.425
				10	32.81	VW3M5B03R10	0.383	0.844
				15	49.21	VW3M5B03R15	0.573	1.263
				20	65.62	VW3M5B03R20	0.763	1.682

Equipped with one plastic connector size 0, with brake (Motor end)	LXM18E●U01M2X	BCH18LB●●	6G*0.34mm ² (22 AWG)	1.5	4.92	VW3M5B04RA5	0.078	0.171
	LXM18P●U01M2X	BCH18MB●●		3	9.84	VW3M5B04R03	0.152	0.336
				5	16.40	VW3M5B04R05	0.252	0.555
				10	32.81	VW3M5B04R10	0.501	1.104
				15	49.21	VW3M5B04R15	0.750	1.653
				20	65.62	VW3M5B04R20	0.999	2.202

Toward load, Plastic connector, Size 1 - 2

Equipped with one plastic connector size 1 (Motor end)	LXM18●●U01M2X	BCH18LD●●	4G*0.75mm ² (18 AWG)	1.5	4.92	VW3M5B11RA5	0.097	0.214
	LXM18●●U02M2X	BCH18LF●●		3	9.84	VW3M5B11R03	0.190	0.418
	LXM18●●U04M2X	BCH18MD●●		5	16.40	VW3M5B11R05	0.313	0.690
	LXM18●●U07M2X	BCH18MF●●		10	32.81	VW3M5B11R10	0.622	1.372
	LXM18●●U10M2X			15	49.21	VW3M5B11R15	0.931	2.053
				20	65.62	VW3M5B11R20	1.240	2.734

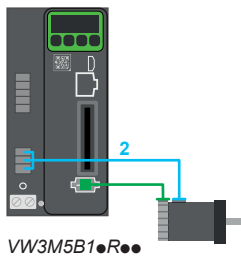
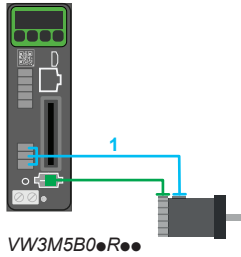
Equipped with one plastic connector size 1 (Motor end), with brake	LXM18●●U01M2X	BCH18LD●●	4G*0.75mm ² (18 AWG)	1.5	4.92	VW3M5B12RA5	0.110	0.242
	LXM18●●U02M2X	BCH18LF●●		3	9.84	VW3M5B12R03	0.216	0.475
	LXM18●●U04M2X	BCH18MD●●		5	16.40	VW3M5B12R05	0.356	0.786
	LXM18●●U07M2X	BCH18MF●●		10	32.81	VW3M5B12R10	0.708	1.562
	LXM18●●U10M2X			15	49.21	VW3M5B12R15	1.060	2.338
				20	65.62	VW3M5B12R20	1.412	3.114

Toward back, Plastic connector, Size 1 - 2

Equipped with one plastic connector size 1 (Motor end)	LXM18●●U01M2X	BCH18LD●●	4G*0.75mm ² (18 AWG)	1.5	4.92	VW3M5B13RA5	0.097	0.214
	LXM18●●U02M2X	BCH18LF●●		3	9.84	VW3M5B13R03	0.190	0.418
	LXM18●●U04M2X	BCH18MD●●		5	16.40	VW3M5B13R05	0.313	0.690
	LXM18●●U07M2X	BCH18MF●●		10	32.81	VW3M5B13R10	0.622	1.372
	LXM18●●U10M2X			15	49.21	VW3M5B13R15	0.931	2.053
				20	65.62	VW3M5B13R20	1.240	2.734

Equipped with one plastic connector size 1 (Motor end), with brake	LXM18●●U01M2X	BCH18LD●●	4G*0.75mm ² (18 AWG)	1.5	4.92	VW3M5B14RA5	0.110	0.242
	LXM18●●U02M2X	BCH18LF●●		3	9.84	VW3M5B14R03	0.216	0.475
	LXM18●●U04M2X	BCH18MD●●		5	16.40	VW3M5B14R05	0.356	0.786
	LXM18●●U07M2X	BCH18MF●●		10	32.81	VW3M5B14R10	0.708	1.562
	LXM18●●U10M2X			15	49.21	VW3M5B14R15	1.060	2.338
				20	65.62	VW3M5B14R20	1.412	3.114

				25	82.02	VW3M5B14R25	1.764	3.890
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Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors

Power cables for BCH18 servo motors, Accessories

Power cables for BCH18 motors

Unshielded Power cables

Designation	For use	For cable cross-section	Length		Reference	Weight	
			m	ft		kg	lb

Military connector, Size 1 - 3

Equipped with one military connector size 1 (Motor end), and free wires (servo drive side)	LXM18●●U10M2X	BCH18LH103●●	4G*1.5mm ² (16 AWG)	1.5	4.92	VW3M5B21RA5	0.291	0.643
	LXM18●●U15M2X	BCH18LH153●●		3	9.84	VW3M5B21R03	0.482	1.062
		BCH18MM081●●		5	16.40	VW3M5B21R05	0.735	1.621
		BCH18MM102●●		10	32.81	VW3M5B21R10	1.369	3.019
		BCH18MM131●●		15	49.21	VW3M5B21R15	2.003	4.416
		BCH18MM152●●		20	65.62	VW3M5B21R20	2.637	5.814

Equipped with one military connector size 1, with brake (Motor end) and free wires (servo drive side)	LXM18●●U10M2X	BCH18LH103●●	4G*1.5mm ² +2*0.5mm ² (20 AWG)	1.5	4.92	VW3M5B22RA5	0.329	0.725
	LXM18●●U15M2X	BCH18LH153●●		3	9.84	VW3M5B22R03	0.556	1.226
		BCH18MM081●●		5	16.40	VW3M5B22R05	0.859	1.895
		BCH18MM102●●		10	32.81	VW3M5B22R10	1.617	3.566
		BCH18MM131●●		15	49.21	VW3M5B22R15	2.375	5.237
		BCH18MM152●●		20	65.62	VW3M5B22R20	3.133	6.908

Military connector, Size 1 - 4

Equipped with one military connector size 2 (Motor end) and free wires (servo drive side)	LXM18●●U20M3X	BCH18LH203●●	4G*2.5mm ² (14 AWG)	1.5	4.92	VW3M5B31RA5	0.395	0.871
	LXM18●●U30M3X	BCH18LM303●●		3	9.84	VW3M5B31R03	0.687	1.514
		BCH18MM181●●		5	16.40	VW3M5B31R05	1.076	2.372
		BCH18MM202●●		10	32.81	VW3M5B31R10	2.049	4.518
				15	49.21	VW3M5B31R15	3.022	6.663
				20	65.62	VW3M5B31R20	3.995	8.808

Equipped with one military connector size 2, with brake (Motor end) and free wires (servo drive side)	LXM18●●U20M3X	BCH18LH203●●	4G*2.5mm ² (14 AWG)	1.5	4.92	VW3M5B32RA5	0.433	0.955
	LXM18●●U30M3X	BCH18LM303●●		3	9.84	VW3M5B32R03	0.763	1.681
		BCH18MM181●●		5	16.40	VW3M5B32R05	1.202	2.651
		BCH18MM202●●		10	32.81	VW3M5B32R10	2.301	5.073
				15	49.21	VW3M5B32R15	3.400	7.496
				20	65.62	VW3M5B32R20	4.499	9.919

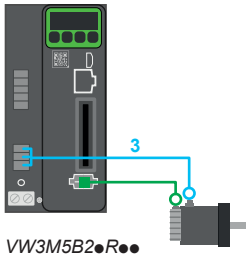
Military connector, Size 2- 4

Equipped with one military connector size 3 (Motor end) and free wires (servo drive side)	LXM18●●U30M3X	BCH18MR241●●	4G*2.5mm ² (14 AWG)	1.5	4.92	VW3M5B41RA5	0.443	0.977
		BCH18MR301●●		3	9.84	VW3M5B41R03	0.735	1.620
				5	16.40	VW3M5B41R05	1.124	2.478
				10	32.81	VW3M5B41R10	2.097	4.623
				15	49.21	VW3M5B41R15	3.070	6.768
				20	65.62	VW3M5B41R20	4.043	8.913

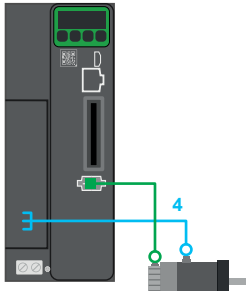
Equipped with one military connector size 3, with brake (Motor end) and free wires (servo drive side)	LXM18●●U30M3X	BCH18MR241●●	4G*2.5mm ² (14 AWG)	1.5	4.92	VW3M5B42RA5	0.481	1.060
		BCH18MR301●●		3	9.84	VW3M5B42R03	0.811	1.787
				5	16.40	VW3M5B42R05	1.250	2.756
				10	32.81	VW3M5B42R10	2.349	5.179
				15	49.21	VW3M5B42R15	3.448	7.602
				20	65.62	VW3M5B42R20	4.547	10.025

Accessories

Designation	Description	Reference	Weight	
			kg	lb
Motor power connector kits	Motor power connector kit, plastic size 0	VW3M5B10	0.005	0.011
	Motor power connector kit, toward load, plastic size 1	VW3M5B11	0.007	0.015
	Motor power connector kit, toward back, plastic size 1	VW3M5B12	0.007	0.015
	Motor power connector kit, military size 1	VW3M5B21	0.100	0.220
	Motor power connector kit, military size 2	VW3M5B22	0.155	0.342



VW3M5B2●R●●



VW3M5B3●R●●
VW3M5B4●R●●



VW3M5B10

VW3M5B11



VW3M5B12



VW3M5B21

VW3M5B22

Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors

Encoder cables for BCH18 servo motors

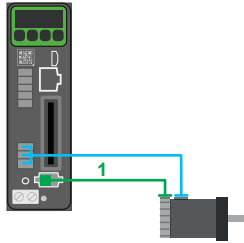
Encoder cables for BCH18 servo motors

Designation	For use		For cable cross-section	Length		Reference	Weight	
	From servo drive	To servo motor		m	ft		kg	lb

Shielded Encoder cables for incremental and singleturn absolute encoders

Toward load, Plastic connector - 1

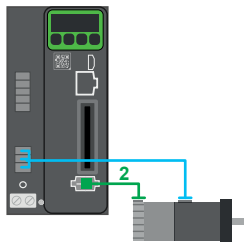
Equipped with one plastic connector (Motor end) and Sunchu 6-pin connector (servo drive side)	LXM18●●U01M2X	40/60/80 mm	2*0.5mm ²	1.5	4.92	VW3M8B11RA5	0.105	0.232
	LXM18●●U02M2X	flange	(20 AWG) +	3	9.84	VW3M8B11R03	0.200	0.440
	LXM18●●U04M2X	(1.57/ 2.36/	2*0.25 mm ²	5	16.40	VW3M8B11R05	0.325	0.717
	LXM18●●U07M2X	3.15 in flange)	(24 AWG)	10	32.81	VW3M8B11R10	0.639	1.409
	LXM18●●U10M2X			15	49.21	VW3M8B11R15	0.953	2.101
				20	65.62	VW3M8B11R20	1.267	2.794
				25	82.02	VW3M8B11R25	1.581	3.486



VW3M8B11R●●

Toward back, Plastic connector - 2

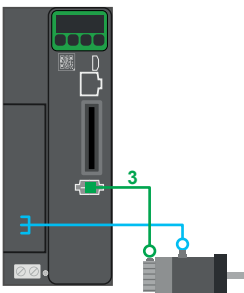
Equipped with one plastic connector (Motor end) and Sunchu 6-pin connector (servo drive side)	LXM18●●U01M2X	40/60/80 mm	2*0.5mm ²	1.5	4.92	VW3M8B13RA5	0.105	0.232
	LXM18●●U02M2X	flange	(20 AWG)	3	9.84	VW3M8B13R03	0.200	0.440
	LXM18●●U04M2X	(1.57/ 2.36/	+ 2*0.25 mm ²	5	16.40	VW3M8B13R05	0.325	0.717
	LXM18●●U07M2X	3.15 in flange)	(24 AWG)	10	32.81	VW3M8B13R10	0.639	1.409
	LXM18●●U10M2X			15	49.21	VW3M8B13R15	0.953	2.101
				20	65.62	VW3M8B13R20	1.267	2.794
				25	82.02	VW3M8B13R25	1.581	3.486



VW3M8B13R●●

Military connector - 3

Equipped with one military connector (Motor end) and Sunchu 6-pin connector (servo drive side)	LXM18●●U10M2X	100/130/180 mm	2*0.5mm ²	1.5	4.92	VW3M8B21RA5	0.139	0.306
	LXM18●●U15M2X	flange	(20 AWG)	3	9.84	VW3M8B21R03	0.233	0.514
	LXM18●●U20M3X	(3.94/ 5.12/	+ 2*0.25 mm ²	5	16.40	VW3M8B21R05	0.359	0.790
	LXM18●●U30M3X	7.09 in flange)	(24 AWG)	10	32.81	VW3M8B21R10	0.673	1.483
				15	49.21	VW3M8B21R15	0.987	2.175
				20	65.62	VW3M8B21R20	1.301	2.867
				25	82.02	VW3M8B21R25	1.615	3.559

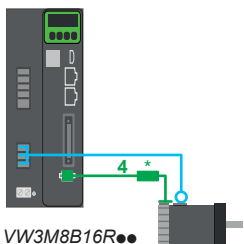


VW3M8B21R●●

Shielded encoder cables for multi-turn absolute encoder, with battery

Toward load, MICRO plastic connector, with Battery* - 4

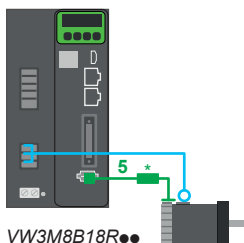
Equipped with one MICRO plastic connector (Motor end) and a battery (servo drive side)	LXM18●●U01M2X	40/60/80 mm	2*0.5mm ²	1.5	4.92	VW3M8B16RA5	0.148	0.326
	LXM18●●U02M2X	flange	(20 AWG)	3	9.84	VW3M8B16R03	0.249	0.549
	LXM18●●U04M2X	(1.57/2.36/3.15 in	+2*(2*0.25) mm ²	5	16.40	VW3M8B16R05	0.384	0.847
	LXM18●●U07M2X	flange)	(24 AWG)	10	32.81	VW3M8B16R10	0.721	1.590
	LXM18●●U10M2X			15	49.21	VW3M8B16R15	1.058	2.332
				20	65.62	VW3M8B16R20	1.395	3.075
				25	82.02	VW3M8B16R25	1.732	3.818



VW3M8B16R●●

Toward back, MICRO plastic connector, with Battery* - 5

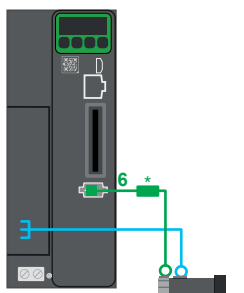
Equipped with one MICRO plastic connector (Motor end) and a battery (servo drive side)	LXM18●●U01M2X	40/60/80 mm	2*0.5mm ²	1.5	4.92	VW3M8B18RA5	0.148	0.326
	LXM18●●U02M2X	flange	(20 AWG)	3	9.84	VW3M8B18R03	0.249	0.549
	LXM18●●U04M2X	(1.57/2.36/3.15 in	+2*(2*0.25) mm ²	5	16.40	VW3M8B18R05	0.384	0.847
	LXM18●●U07M2X	flange)	(24 AWG)	10	32.81	VW3M8B18R10	0.721	1.590
	LXM18●●U10M2X			15	49.21	VW3M8B18R15	1.058	2.332
				20	65.62	VW3M8B18R20	1.395	3.075
				25	82.02	VW3M8B18R25	1.732	3.818



VW3M8B18R●●

Military connector with battery* - 6

Equipped with one Military connector (Motor end) and a battery (servo drive side)	LXM18●●U10M2X	100/130/180 mm	2*0.5mm ²	1.5	4.92	VW3M8B24RA5	0.183	0.403
	LXM18●●U15M2X	flange	(20 AWG)	3	9.84	VW3M8B24R03	0.284	0.626
	LXM18●●U20M3X	(3.94/5.12/7.09 in	+2*(2*0.25) mm ²	5	16.40	VW3M8B24R05	0.419	0.924
	LXM18●●U30M3X	flange)	(24 AWG)	10	32.81	VW3M8B24R10	0.756	1.667
				15	49.21	VW3M8B24R15	1.093	2.410
				20	65.62	VW3M8B24R20	1.430	3.153
				25	82.02	VW3M8B24R25	1.767	3.896



VW3M8B24R●●

Lexium 18

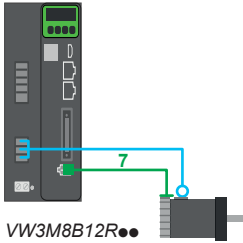
Lexium 18P/18E servo drives & BCH18 servo motors

Encoder cables for BCH18 servo motors, Accessories

Encoder cables for BCH18 servo motors

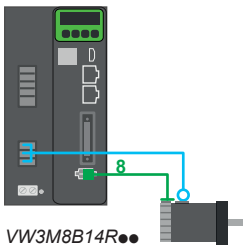
Shielded encoder cables for multi-turn absolute encoder, without battery

Designation	For use		For cable cross-section	Length		Reference	Weight	
	with servo drive	To servo motor		m	ft		kg	lb
Toward load, MICRO plastic connector without battery - 7								
Equipped with one	LXM18●●U01M2X	40/60/80 mm	2*0.5mm ²	1.5	4.92	VW3M8B12RA5	0.112	0.247
MICRO plastic	LXM18●●U02M2X	flange	(20 AWG)	3	9.84	VW3M8B12R03	0.213	0.470
connector (Motor end)	LXM18●●U04M2X	(1.57/2.36/3.15 in	+2*(2*0.25) mm ²	5	16.40	VW3M8B12R05	0.348	0.767
	LXM18●●U07M2X	flange)	(24 AWG)	10	32.81	VW3M8B12R10	0.685	1.510
	LXM18●●U10M2X			15	49.21	VW3M8B12R15	1.022	2.253
				20	65.62	VW3M8B12R20	1.359	2.996
				25	82.02	VW3M8B12R25	1.696	3.739



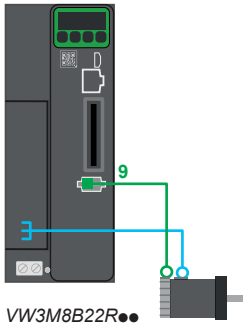
Toward back, MICRO plastic connector without battery - 8

Equipped with one	LXM18●●U01M2X	40/60/80 mm	2*0.5mm ²	1.5	4.92	VW3M8B14RA5	0.112	0.247
MICRO plastic	LXM18●●U02M2X	flange	(20 AWG)	3	9.84	VW3M8B14R03	0.213	0.470
connector (Motor end)	LXM18●●U04M2X	(1.57/2.36/3.15 in	+2*(2*0.25) mm ²	5	16.40	VW3M8B14R05	0.348	0.767
	LXM18●●U07M2X	flange)	(24 AWG)	10	32.81	VW3M8B14R10	0.685	1.510
	LXM18●●U10M2X			15	49.21	VW3M8B14R15	1.022	2.253
				20	65.62	VW3M8B14R20	1.359	2.996
				25	82.02	VW3M8B14R25	1.696	3.739



Military connector without battery - 9

Equipped with one	LXM18●●U10M2X	100/130/180 mm	2*0.5mm ²	1.5	4.92	VW3M8B22RA5	0.147	0.324
Military connector	LXM18●●U15M2X	flange	(20 AWG)	3	9.84	VW3M8B22R03	0.248	0.547
(Motor end)	LXM18●●U20M3X	(3.94/5.12/7.09 in	+2*(2*0.25) mm ²	5	16.40	VW3M8B22R05	0.383	0.844
	LXM18●●U30M3X	flange)	(24 AWG)	10	32.81	VW3M8B22R10	0.720	1.587
				15	49.21	VW3M8B22R15	1.057	2.330
				20	65.62	VW3M8B22R20	1.394	3.073
				25	82.02	VW3M8B22R25	1.731	3.816



Accessories

Designation	Description	Reference	Weight	
			kg	lb
Motor encoder connector kits	Plastic	VW3M8B11	0.005	0.011
	Military	VW3M8B21	0.035	0.077
Battery	Battery case including battery, 3.6V, 2700 mAh To use with LXM18P/18E servo drives	VW3M8BAT1	0.055	0.121



Lexium 18

Lexium 18P/18E servo drives & BCH18 servo motors
Product reference index

#	BCH18LH1533CA6C	13	BCH18MF0733CF5C	13	LXM18ENU07M2X	7	VW3M4B21	8	
490NTC00005	5	BCH18LH1533CF6C	13	BCH18MF10332A5C	13	LXM18ENU10M2X	7	VW3M4B31	8
490NTW00002	5	BCH18LH20332A6C	13	BCH18MF10332F5C	13	LXM18ENU15M2X	7	VW3M5B01R03	14
490NTW00002U	5	BCH18LH20332F6C	13	BCH18MF1033CA5C	13	LXM18ENU20M3X	7	VW3M5B01R05	14
490NTW00005	5	BCH18LH2033CA6C	13	BCH18MF1033CF5C	13	LXM18ENU30M3X	7	VW3M5B01R10	14
490NTW00005U	5	BCH18LH2033CF6C	13	BCH18MM08132A6C	13	LXM18ESU01M2X	7	VW3M5B01R15	14
490NTW00012	5	BCH18LM30332A6C	13	BCH18MM08132F6C	13	LXM18ESU02M2X	7	VW3M5B01R20	14
490NTW00012U	5	BCH18LM30332F6C	13	BCH18MM0813CA6C	13	LXM18ESU04M2X	7	VW3M5B01R25	14
490NTW00040	5	BCH18LM3033CA6C	13	BCH18MM0813CF6C	13	LXM18ESU07M2X	7	VW3M5B01RA5	14
490NTW00080	5	BCH18LM3033CF6C	13	BCH18MM10232A6C	13	LXM18ESU10M2X	7	VW3M5B02R03	14
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BCH18LB01332A5C	13	BCH18MB01332F5C	13	BCH18MM1023CA6C	13	LXM18ESU20M3X	7	VW3M5B02R10	14
BCH18LB01332F5C	13	BCH18MB0133CA5C	13	BCH18MM1023CF6C	13	LXM18ESU30M3X	7	VW3M5B02R15	14
BCH18LB0133CA5C	13	BCH18MB0133CF5C	13	BCH18MM13132A6C	13	LXM18P		VW3M5B02R20	14
BCH18LB0133CF5C	13	BCH18MBA5332A5C	13	BCH18MM13132F6C	13	LXM18PCU01M2X	7	VW3M5B02R25	14
BCH18LBA5332A5C	13	BCH18MBA5332F5C	13	BCH18MM1313CA6C	13	LXM18PCU02M2X	7	VW3M5B02RA5	14
BCH18LBA5332F5C	13	BCH18MBA533CA5C	13	BCH18MM1313CF6C	13	LXM18PCU04M2X	7	VW3M5B03R03	14
BCH18LBA533CA5C	13	BCH18MBA533CF5C	13	BCH18MM15232A6C	13	LXM18PCU07M2X	7	VW3M5B03R05	14
BCH18LBA533CF5C	13	BCH18MD01332A5C	13	BCH18MM15232F6C	13	LXM18PCU10M2X	7	VW3M5B03R10	14
BCH18LD02332A5C	13	BCH18MD01332F5C	13	BCH18MM1523CA6C	13	LXM18PCU15M2X	7	VW3M5B03R15	14
BCH18LD02332F5C	13	BCH18MD0133CA5C	13	BCH18MM1523CF6C	13	LXM18PCU20M3X	7	VW3M5B03R20	14
BCH18LD0233CA5C	13	BCH18MD0133CF5C	13	BCH18MM18132A6C	13	LXM18PCU30M3X	7	VW3M5B03R25	14
BCH18LD0233CF5C	13	BCH18MD02332A5C	13	BCH18MM18132F6C	13	LXM18PDU01M2X	7	VW3M5B03RA5	14
BCH18LD04332A5C	13	BCH18MD02332F5C	13	BCH18MM1813CA6C	13	LXM18PDU02M2X	7	VW3M5B04R03	14
BCH18LD04332F5C	13	BCH18MD0233CA5C	13	BCH18MM1813CF6C	13	LXM18PDU04M2X	7	VW3M5B04R05	14
BCH18LD0433CA5C	13	BCH18MD0233CF5C	13	BCH18MM20232A6C	13	LXM18PDU07M2X	7	VW3M5B04R10	14
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BCH18LF07332A5C	13	BCH18MD04332F5C	13	BCH18MM2023CA6C	13	LXM18PDU15M2X	7	VW3M5B04R20	14
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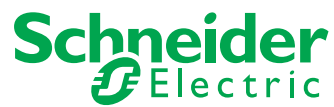
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