Lexium 15 motion control
Lexium PAC solution
Lexium Controller motion controllers

LMC 10, LMC 20 and LMC 20A130● Lexium Controllers

Presentation

The Lexium Controller offer delivers optimized solutions for axis control and positioning, including automation functions. It meets the needs of a wide range of applications in all sectors of industry.

With Lexium Controllers, Lexium 05 and Lexium 15 servo drives and BSH and BDH servo motors, Schneider Electric offers a complete, high-performance and economical solution, namely Lexium PAC.

The Lexium PAC solution can be adapted and integrated into most Schneider Electric or third-party automation platforms.

The software solution provided by Lexium Controllers offers very quick and easy start-up of the machine, thanks to the application model and function block library.

Lexium Controllers are particularly suited to small machines, thanks to:
■ Their compact dimensions
■ The limited number of models and the integration of function blocks
■ Their ease of installation
■ The fact that the application can be put into operation immediately thanks to the application model and remote graphic display terminal
■ Reduced installation and start-up costs

Furthermore, they satisfy the performance requirements of specialized and modular machines thanks to:
■ Their expansion capability (I/O, etc.)
■ Their modular software functions
■ Their ease of integration into standard automation systems thanks to the possibility of connection to the buses and networks available on the market, such as CANopen, Modbus, PROFIBUS DP, DeviceNet and Modbus TCP.

Applications

The Lexium Controller performs axis coordination and synchronization, via a fieldbus, for applications requiring control of up to 8 synchronized axes.

It includes the following standard motion control functions:
■ Speed and torque control
■ Relative or absolute positioning
■ Cam profiles for slave axes and programmable cam switch control
■ Virtual axes
■ Electronic gearing function for speed and position
■ Linear and circular interpolations (2½D)
■ Master axis via external encoder
■ Distance measurement and position capture on high-speed (30µs) discrete input
■ Optimized movement sequencing (blending)

It is dedicated to the following types of application:
■ Handling equipment (conveyors, palletizers, storage and retrieval systems, etc.) and transfer machines (gantry cranes, etc.)
■ Assembly machines (shrink fitting, clamping, etc.)
■ Inspection and quality control machines
■ Machines for working "on the fly" (flying shear, printing, marking etc.).

Schneider Electric

version: 1.0

61021-EN.indd

References

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LMC 20
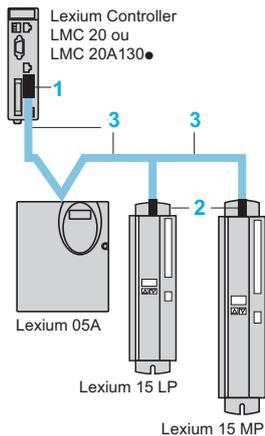
*Connection of servo drives
to Lexium Controller*

Lexium Controllers (1)

Power supply	Number of I/O	Max. number of synchronized axes (via CANopen Motionbus) (2)	CANopen machine bus (3)	Modbus serial link	Ethernet network	Third-party bus	Reference	Weight
V								kg
24 ---	8/8 24 V ---	8	–	Yes	–	–	**LMC 10**	0.666
			Yes	Yes	Yes	–	**LMC 20**	0.697
			Yes	Yes	Yes	PROFIBUS DP	**LMC 20A1307**	1.076
			Yes	Yes	Yes	DeviceNet	**LMC 20A1309**	1.079

Software and documentation pack

Description	Composition	Reference	
Software and documentation pack	The pack comprises: ■ Easy Motion software ■ Motion Pro software ■ Application function block library ■ Technical documentation for setting up the hardware and software	**VW3 M8 702**	–

Connection accessories

Description	Description	Item no.	Length m	Reference	Weight kg
For Lexium 05A or Lexium 15 servo drives					
CANopen IP 20 connector for connection to Lexium Controller	One 9-way female SUB-D straight connector Switch for line terminator	**1**	–	**TSX CAN KCDF 180T**	0.049
Connector for connection to Lexium 05A or Lexium 15 servo drive	One 9-way female SUB-D straight connector with screw terminals Integrated line termination	**2**	–	**VW3 M3 802**	–
IP 20 CANopen cables (4) for connecting Lexium 05A or Lexium 15 servo drive					
Standard cables, C€ marking Low smoke emission, halogen-free Flame retardant (IEC 60332-1)		**3**	50	**TSX CAN CA 50**	4.930
			100	**TSX CAN CA 100**	8.800
			300	**TSX CAN CA 300**	24.560
UL certification, C€ marking Flame retardant (IEC 60332-2)			50	**TSX CAN CB 50**	3.580
			100	**TSX CAN CB 100**	7.840
			300	**TSX CAN CB 300**	21.870
Cable for harsh environments (2) or mobile installations, C€ marking Low smoke emission, halogen-free Flame retardant (IEC 60332-1)			50	**TSX CAN CD 50**	3.510
			100	**TSX CAN CD 100**	7.770
			300	**TSX CAN CD 300**	21.700
For SSI serial absolute encoders or incremental encoders (5)					
Cable for master encoder input	1 high-density 9-way male SUB-D connector 1 stripped end	**–**	3	**VW3 M4 701**	–
For Magelis display units and graphic terminals (6)					
Cable for Magelis display unit or graphic terminal input	One 25-way male SUB-D connector 1 RJ45 connector	**–**	3	**XBT Z938**	–
For PC serial port					
Cable for PC serial port via serial link	1 RJ45 connector One 9-way female SUB-D connector	**–**	3	**VW3 M8 701 R030**	–
Crossed shielded twisted pair cables	2 RJ45 connectors	**–**	3	**490 NTC 00003**	–
			5	**490 NTC 00005**	–

(1) Lexium Controllers are supplied as standard with a female HE 10 connector for connecting the I/O and with two female 3-pin connectors for the power supply for the Lexium Controller and the encoder. Transparent Ready class: C20.
(2) Cycle time: 2 ms for 4 synchronized axes and 4 ms for 8 synchronized axes
(3) CANopen machine bus for expanding the number of I/O, servo drives, etc., or connecting third-party products
(4) Please consult our "Machines and installations with CANopen" specialist catalogue.
(5) SSI serial absolute encoders or incremental encoders: Please consult our "Osicoder" specialist catalogue or visit "www.schneider-electric.com".
(6) Magelis display units and graphic terminals: Please consult our "Human-Machine interfaces" specialist catalogue or visit "www.schneider-electric.com".