



### Main

Range of product	Lexium 23 Plus
Product or component type	Motion servo drive
Device short name	LXM23

### Complementary

Format of the drive	Book
Network number of phases	3 phases
[Us] rated supply voltage	220 V 3 phases (tolerance: - 20...15 %)
Supply voltage limits	170...255 V 3 phases
Supply frequency	50/60 Hz - 5...5 %
Network frequency limits	47.5...63 Hz
Continuous output current	19.4 A
Continuous power	3000 W at 220 V
Nominal power	3 kW at 220 V
Maximum leakage current	3.5 mA
Output voltage	<= power supply voltage
Electrical isolation	Between power and control
Type of cable	Twisted shielded pairs cable (single or double) (temperature: 0...55 °C)
Electrical connection	Terminal, clamping capacity: 1.3 mm <sup>2</sup> , AWG 16 (L1-L2) Terminal, clamping capacity: 3.3 mm <sup>2</sup> , AWG 12 (R, S, T) Terminal, clamping capacity: 3.3 mm <sup>2</sup> , AWG 12 (U, V, W) Terminal, clamping capacity: 3.3 mm <sup>2</sup> , AWG 12 (PA/+, PBe)
Tightening torque	PE (ground): 1.4 N.m
Discrete input number	8 programmable discrete input(s)
Discrete input type	Programmable (CN1 terminals)
Discrete input voltage	12...24 V DC for logic
Discrete input logic	Positive or negative (CN1)
Discrete output number	5

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications

Discrete output type	Logic output(s) (CN1)12...24 V DC
Discrete output voltage	12...24 V DC
Discrete output logic	Positive or negative (CN1)
Analogue input number	2
Absolute accuracy error	0.01 %
Analogue input type	V_REF voltage analog input: - 10...10 V, impedance: 10 kOhm T_REF voltage analog input: - 10...10 V, impedance: 10 kOhm
Control signal type	Servo motor encoder feedback
Protection type	Against reverse polarity: inputs signal Against short-circuits: outputs signal Overcurrent: motor Overvoltage: motor Undervoltage: motor Overheating: motor Overload: motor Overspeed: motor Abnormal pulse control command: drive
Communication interface	Modbus, integrated
Connector type	RJ45 (CN3) for Modbus
Method of access	Slave
Physical interface	2-wire RS485 multidrop for Modbus
Transmission rate	Configurable
Status LED	1 LEDcharge LED:
Signalling function	Servo status and fault codes five 7-segment display units
Marking	CE
Type of cooling	Integrated fan
Operating position	Vertical
Width	114 mm
Height	225 mm
Depth	195 mm
Net weight	3.2 kg

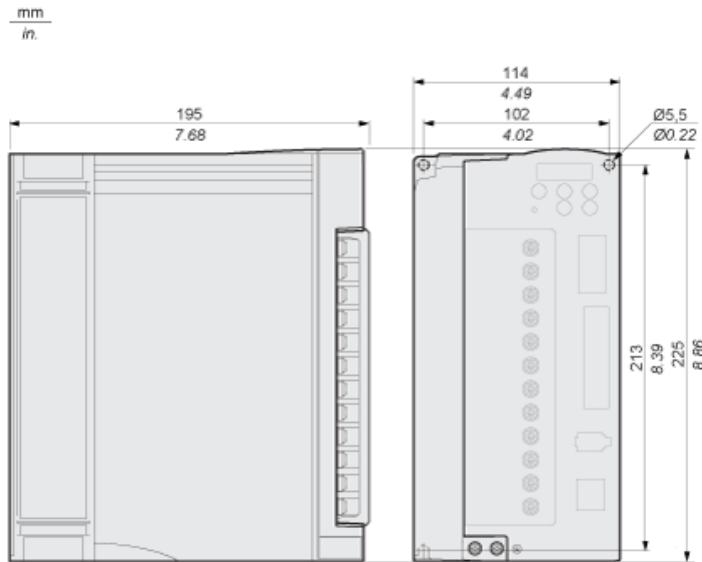
## Environment

EMC filter	Without EMC filter
Electromagnetic compatibility	EMC immunity level 3 conforming to EN/IEC 61000-4-2 EMC immunity level 3 conforming to EN/IEC 61000-4-3 EMC immunity level 3 conforming to EN/IEC 61000-4-5 EMC immunity level 4 conforming to EN/IEC 61000-4-4 EMC immunity with additional EMC filter conforming to EN/IEC 61800-3 environments 1 and 2 Conducted and radiated emissions with additional EMC filter conforming to EN/IEC 61800-3 environments 1 and 2 category C2, C3
Standards	EN/IEC 61800-5-1
Product certifications	C-Tick CULus 508
IP degree of protection	On upper part: IP20 (without protective cover) On upper part: IP41 (with protective cover)
Vibration resistance	0.075 mm peak to peak (f= 10...57 Hz) conforming to IEC 60068-2-6 1 gn (f= 57...150 Hz) conforming to IEC 60068-2-6
Shock resistance	15 gn for 11 ms conforming to IEC 60068-2-27
Relative humidity	Class 3K3 (5 to 85 %) without condensation or dripping water conforming to IEC 60721-3-3
Ambient air temperature for operation	0...55 °C conforming to UL
Ambient air temperature for storage	-20...65 °C
Operating altitude	<= 1000 m without > 1000...2000 m with continuous power derating of 1 % per 100 m

## Contractual warranty

Warranty	18 months
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## Dimensions



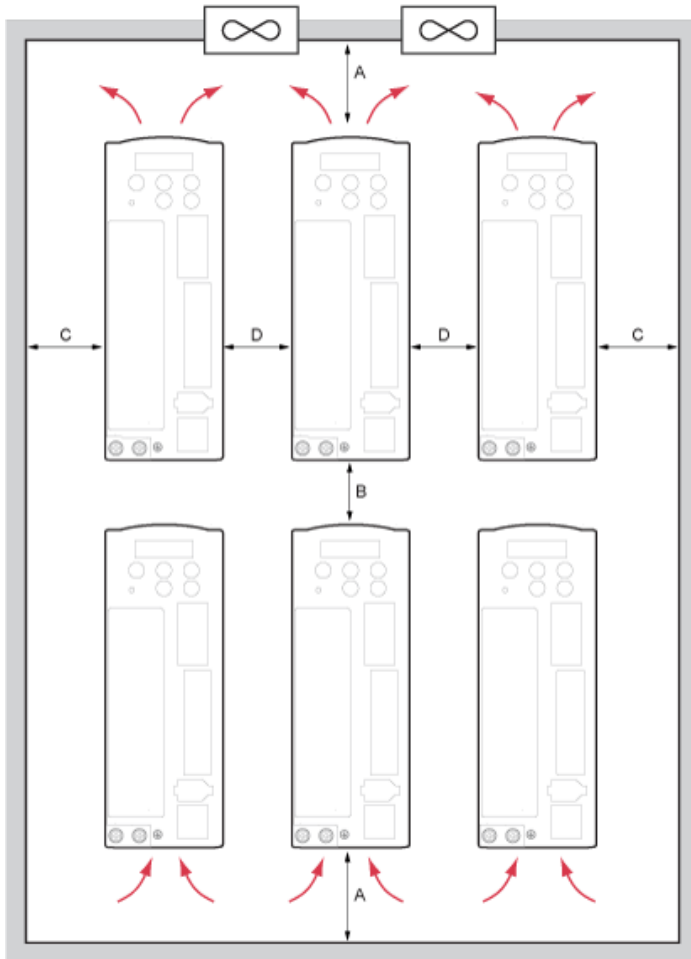
Mounting Recommendations

Mount the device in a vertical position ( $\pm 10^\circ$ ). This is required for cooling the device.

Clearance

Many Devices in a cabinet

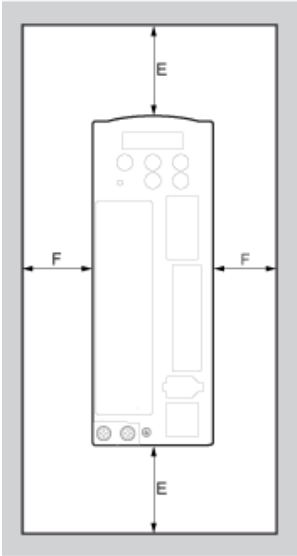
$\frac{\text{mm}}{\text{in.}}$



A $\geq 100$ mm ( $\geq 4$ in.)	Free space above/below devices
B $\geq 80$ mm ( $\geq 3.2$ in.)	Free space between devices
C $\geq 40$ mm ( $\geq 1.6$ in.)	Free space between devices and cabinet
D $\geq 10$ mm ( $\geq 0.4$ in.)	Free space between devices

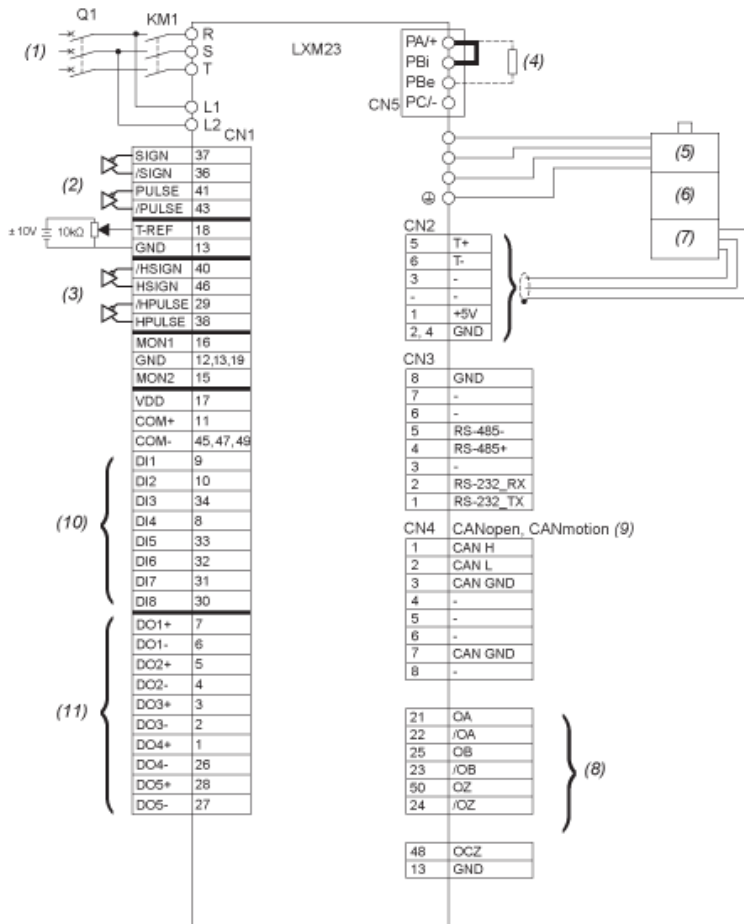
One Device in a cabinet

mm  
in.



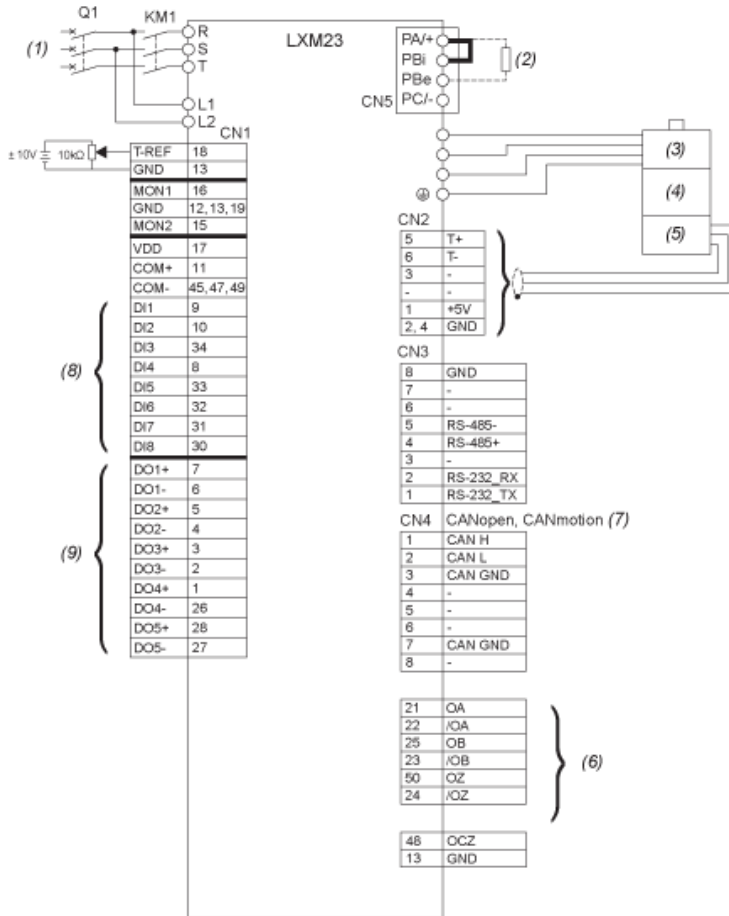
$E \geq 50 \text{ mm} (\geq 2 \text{ in.})$	Free space above/below the device
$F \geq 20 \text{ mm} (\geq 0.8 \text{ in.})$	Free space between device and cabinet

## Position Control Mode Wiring Diagram (Pulse Control)



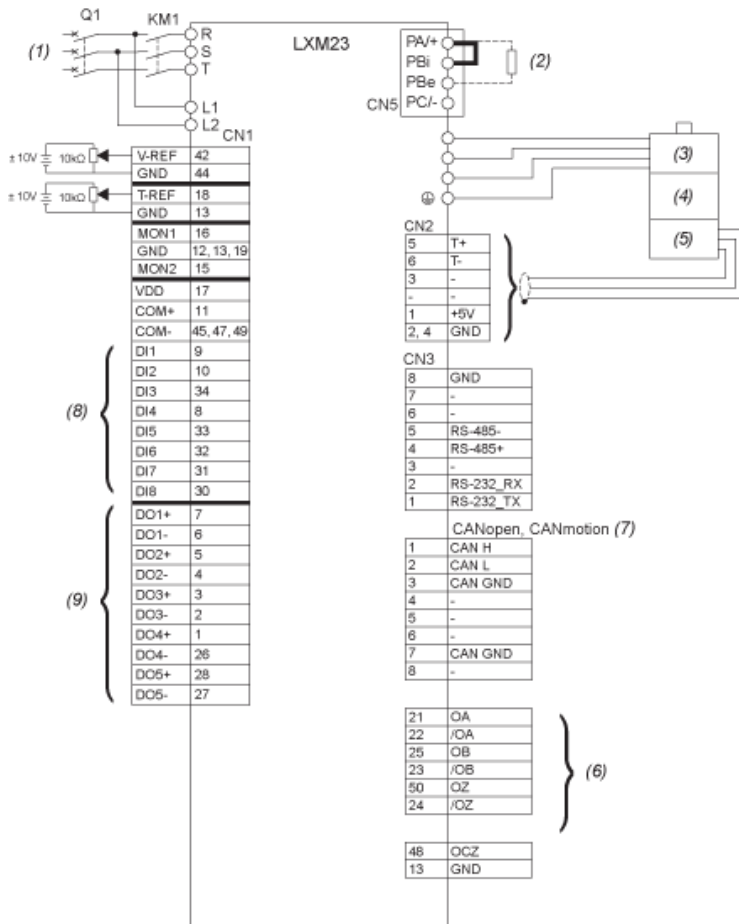
- KM1 Line Contactor
- Q1 Circuit breaker
- (1) AC 220 / 230 V Single Phase or Three Phase 50 / 60 Hz
- (2) Pulse Input (Line Driver)
- (3) High-Speed Pulse Input (Line Receiver)
- (4) External Braking Resistor
- (5) Power Supply
- (6) Holding Brake
- (7) Encoder
- (8) Encoder Pulse Output
- (9) Only LXM23A models
- (10) Digital inputs
- (11) Digital outputs

Position Control Mode Wiring Diagram (Build-In Motion Sequence)



- KM1 Line Contactor
- Q1 Circuit breaker
- (1) AC 220 / 230 V Single Phase or Three Phase 50 / 60 Hz
- (2) External Braking Resistor
- (3) Power Supply
- (4) Holding Brake
- (5) Encoder
- (6) Encoder Pulse Output
- (7) Only LXM23A models
- (8) Digital inputs
- (9) Digital outputs

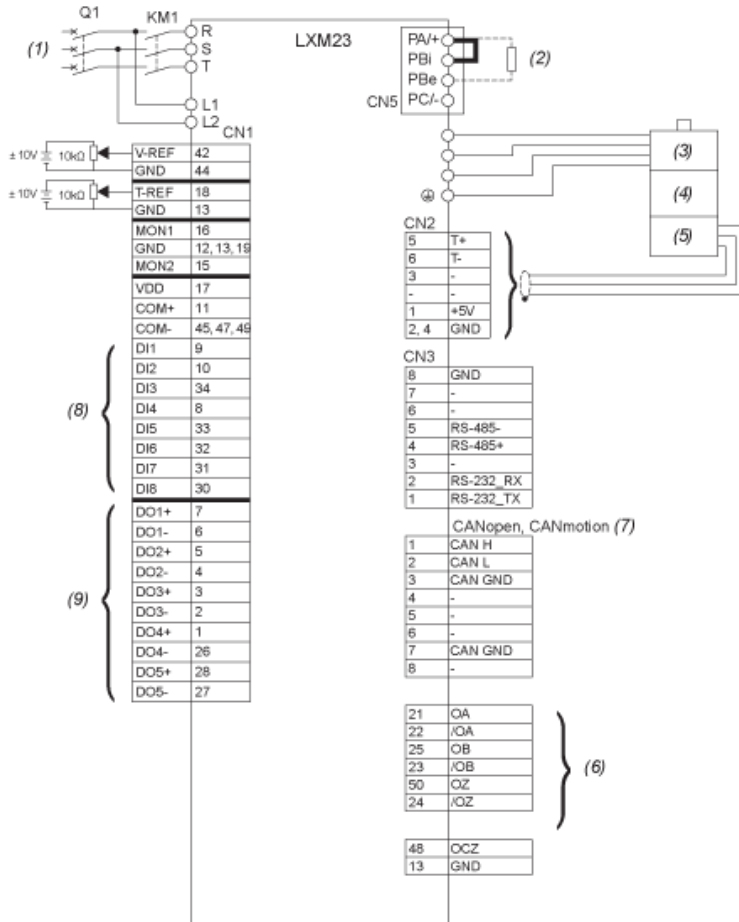
## Speed Control Mode Wiring Diagram



- KM1 Line Contactor
- Q1 Circuit breaker
- (1) AC 220 / 230 V Single Phase or Three Phase 50 / 60 Hz
- (2) External Braking Resistor
- (3) Power Supply
- (4) Holding Brake
- (5) Encoder
- (6) Encoder Pulse Output
- (7) Only LXM23A models
- (8) Digital inputs
- (9) Digital outputs



Torque Control Mode Wiring Diagram



- KM1 Line Contactor
- Q1 Circuit breaker
- (1) AC 220 / 230 V Single Phase or Three Phase 50 / 60 Hz
- (2) External Braking Resistor
- (3) Power Supply
- (4) Holding Brake
- (5) Encoder
- (6) Encoder Pulse Output
- (7) Only LXM23A models
- (8) Digital inputs
- (9) Digital outputs