

# Product datasheet

Specifications



## motion servo drive - Lexium 23 - three phase 170...255 V - 5.5 kW - I/ O

LXM23DU55M3X

⚠ Discontinued on: Jul 23, 2021

⚠ To be discontinued

### 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	40 A
Continuous Power	5500 W at 220 V
Nominal Power	5.5 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 mm², AWG 16 (L1-L2) Terminal, clamping capacity: 3.3 mm², AWG 12 (R, S, T) Terminal, clamping capacity: 3.3 mm², AWG 12 (PA/+, PBe) Terminal, clamping capacity: 13.3 mm², AWG 6 (U, V, W)
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
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

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

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 LED charge LED
Signalling Function	Servo status and fault codes five 7-segment display units
Marking	CE
Type Of Cooling	Integrated fan
Operating Position	Vertical
Width	123 mm
Height	245 mm
Depth	216.5 mm
Net Weight	4.2 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	cULus 508 C-Tick
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 derating
	> 1000...2000 m with continuous power derating of 1 % per 100 m

## Packing Units

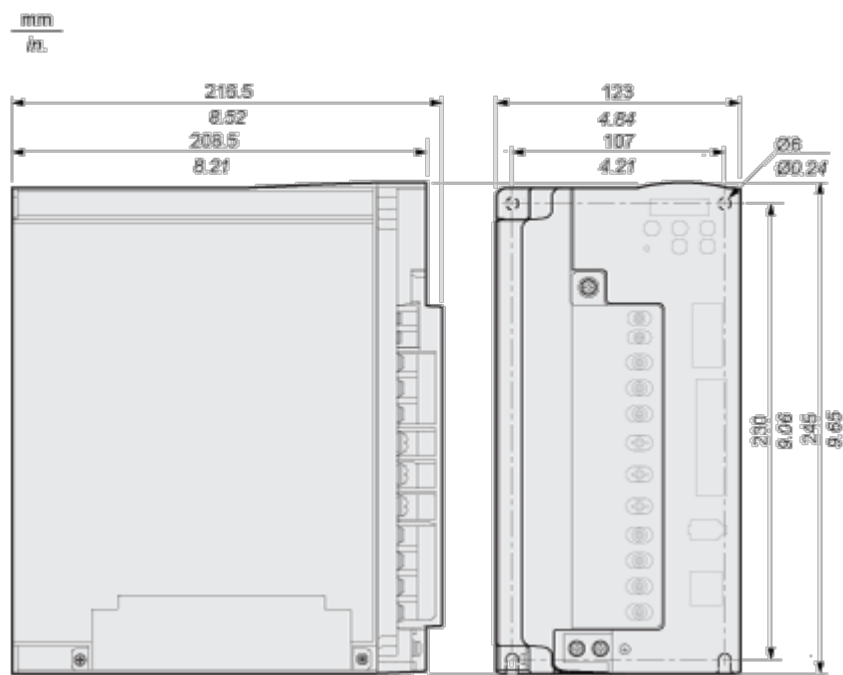
Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Height	19.6 cm
Package 1 Width	27.6 cm
Package 1 Length	35.0 cm
Package 1 Weight	4.2 kg

## Contractual warranty

Warranty	18 months
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Dimensions Drawings

Dimensions



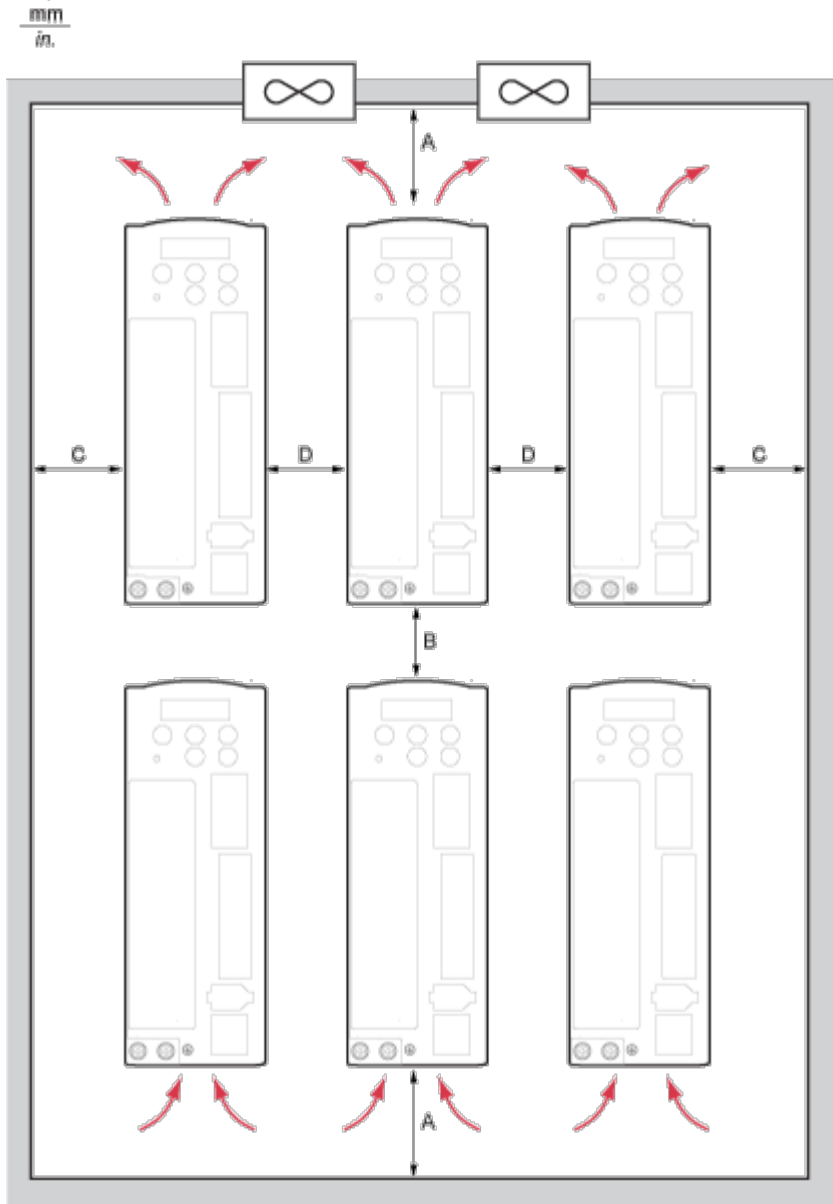
Mounting and Clearance

Mounting Recommendations

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

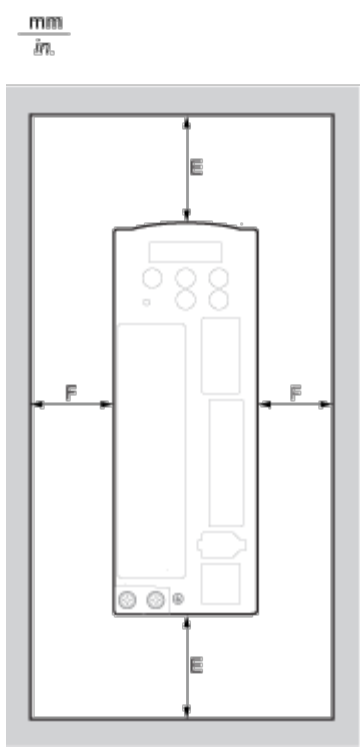
Clearance

Many Devices in a cabinet



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

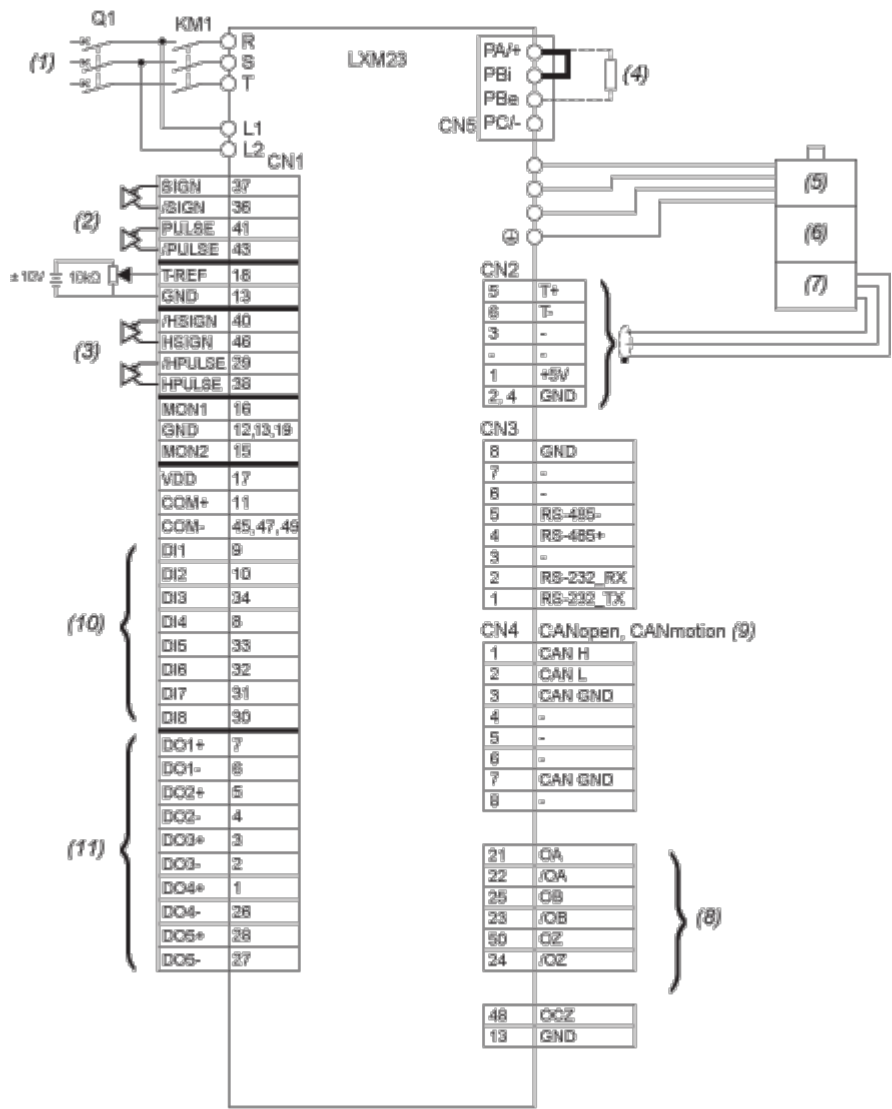
One Device in a cabinet



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

Connections and Schema

Position Control Mode Wiring Diagram (Pulse Control)

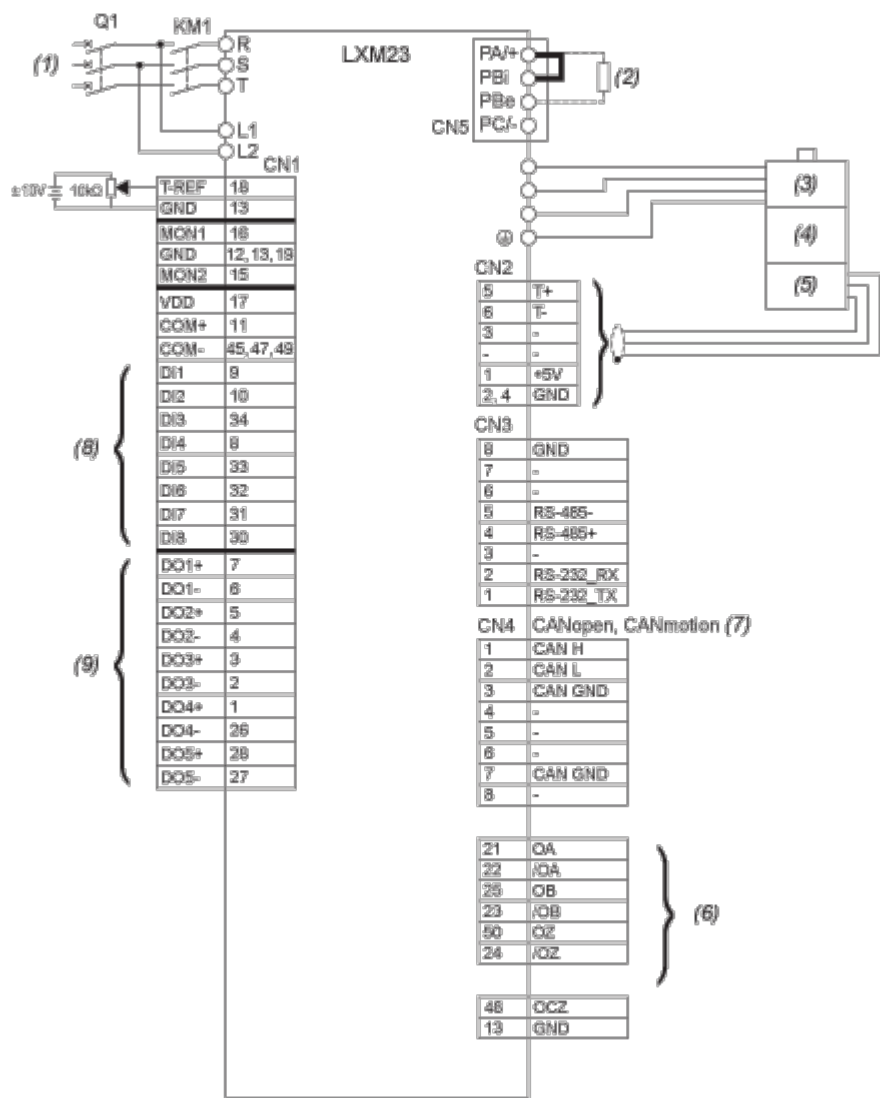


- KM1 Line Contactor
- Q1 Circuit breaker
- (1) AC 220 / 230 V Single Phase or Three Phase 50 / 60 Hz
- (2) Pulse Input (Line Driver)
- (3) High-Speed Pulse Input (Line Receiver)
- (4) External Braking Resistor
- (5) Power Supply
- (6) Holding Brake
- (7) Encoder
- (8) Encoder Pulse Output
- (9) Only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



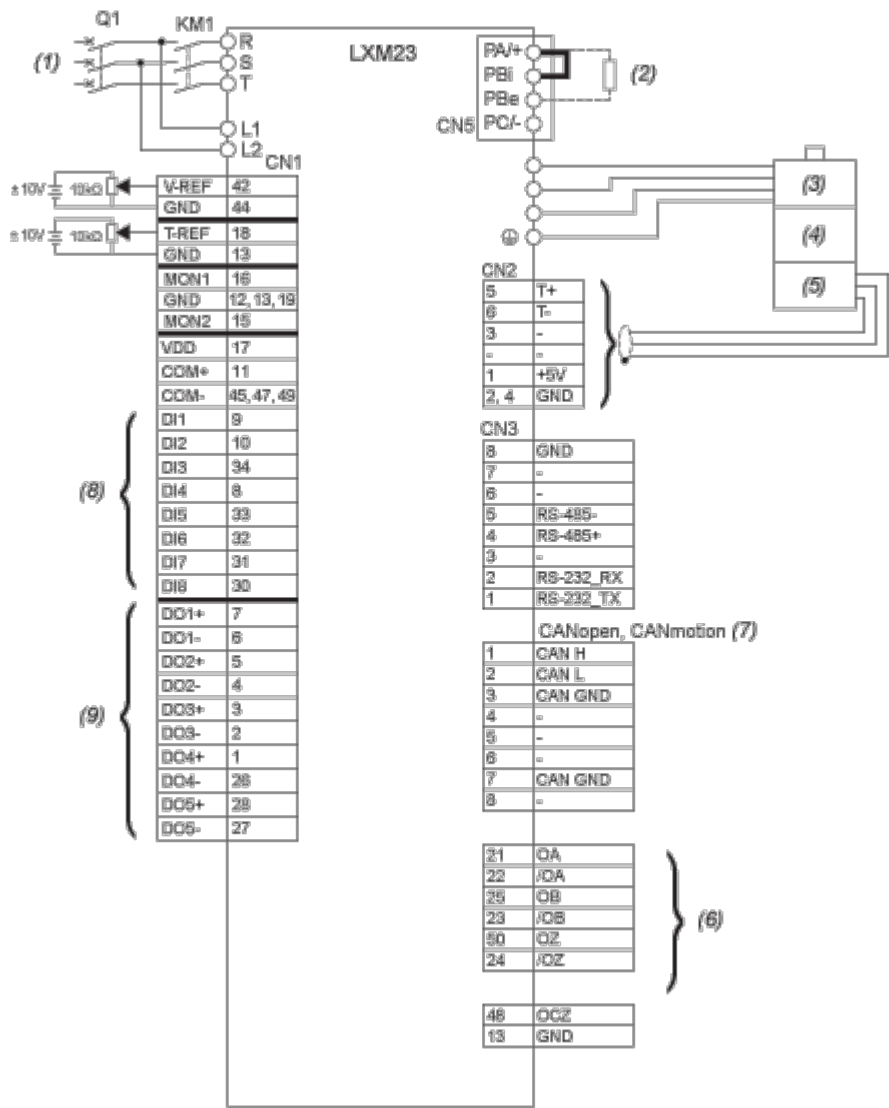


Position Control Mode Wiring Diagram (Build-In Motion Sequence)



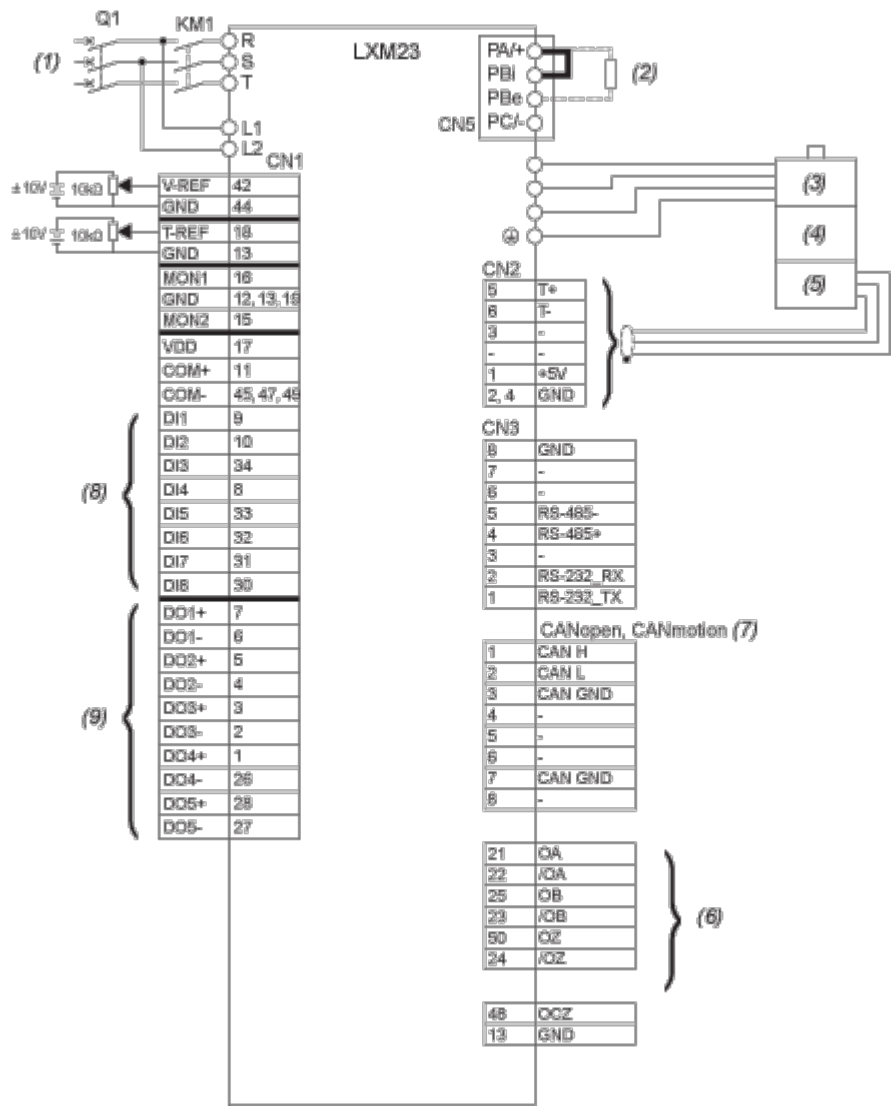
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- (5) Encoder
- (6) Encoder Pulse Output
- (7) Only LXM23A models
- (8) Digital inputs
- (9) Digital outputs

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