

# Product datasheet

Specifications



## motion servo drive - Lexium 23 - single phase 200...255 V - 750 W - I/ O

LXM23DU07M3X

! Discontinued - Service only

! Discontinued on: Mar 30, 2022

! End-of-service on: Mar 30, 2022

### 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 Single phase
[Us] Rated Supply Voltage	220 V single phase (tolerance: - 10...15 %) 220 V 3 phases (tolerance: - 20...15 %)
Supply Voltage Limits	200...255 V single phase 170...255 V 3 phases
Supply Frequency	50/60 Hz - 5...5 %
Network Frequency Limits	47.5...63 Hz
Continuous Output Current	5.1 A
Continuous Power	750 W at 220 V
Nominal Power	0.75 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: 2.1 mm <sup>2</sup> , AWG 14 (R, S, T) Terminal, clamping capacity: 0.82 mm <sup>2</sup> , AWG 18 (U, V, W) Terminal, clamping capacity: 2.1 mm <sup>2</sup> , AWG 14 (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
Discrete Output Type	Logic output(s) (CN1)12...24 V DC

<b>Discrete Output Voltage</b>	12...24 V DC
<b>Discrete Output Logic</b>	Positive or negative (CN1)
<b>Analogue Input Number</b>	2
<b>Absolute Accuracy Error</b>	0.01 %
<b>Analogue Input Type</b>	V_REF voltage analog input: - 10...10 V, impedance: 10 kOhm T_REF voltage analog input: - 10...10 V, impedance: 10 kOhm
<b>Control Signal Type</b>	Servo motor encoder feedback
<b>Protection Type</b>	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
<b>Communication Interface</b>	Modbus, integrated
<b>Connector Type</b>	RJ45 (CN3) for Modbus
<b>Method Of Access</b>	Slave
<b>Physical Interface</b>	2-wire RS485 multidrop for Modbus
<b>Transmission Rate</b>	Configurable
<b>Status Led</b>	1 LED charge LED
<b>Signalling Function</b>	Servo status and fault codes five 7-segment display units
<b>Marking</b>	CE
<b>Type Of Cooling</b>	Integrated fan
<b>Operating Position</b>	Vertical
<b>Width</b>	85 mm
<b>Height</b>	162 mm
<b>Depth</b>	180 mm
<b>Net Weight</b>	2.2 kg

## Environment

<b>Emc Filter</b>	Without EMC filter
<b>Electromagnetic Compatibility</b>	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
<b>Standards</b>	EN/IEC 61800-5-1
<b>Product Certifications</b>	C-Tick cULus 508
<b>Ip Degree Of Protection</b>	On upper part: IP20 (without protective cover) On upper part: IP41 (with protective cover)
<b>Vibration Resistance</b>	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
<b>Shock Resistance</b>	15 gn for 11 ms conforming to IEC 60068-2-27
<b>Relative Humidity</b>	Class 3K3 (5 to 85 %) without condensation or dripping water conforming to IEC 60721-3-3

<b>Ambient Air Temperature For Operation</b>	0...55 °C conforming to UL
<b>Ambient Air Temperature For Storage</b>	-20...65 °C
<b>Operating Altitude</b>	<= 1000 m without derating > 1000...2000 m with continuous power derating of 1 % per 100 m

## Packing Units

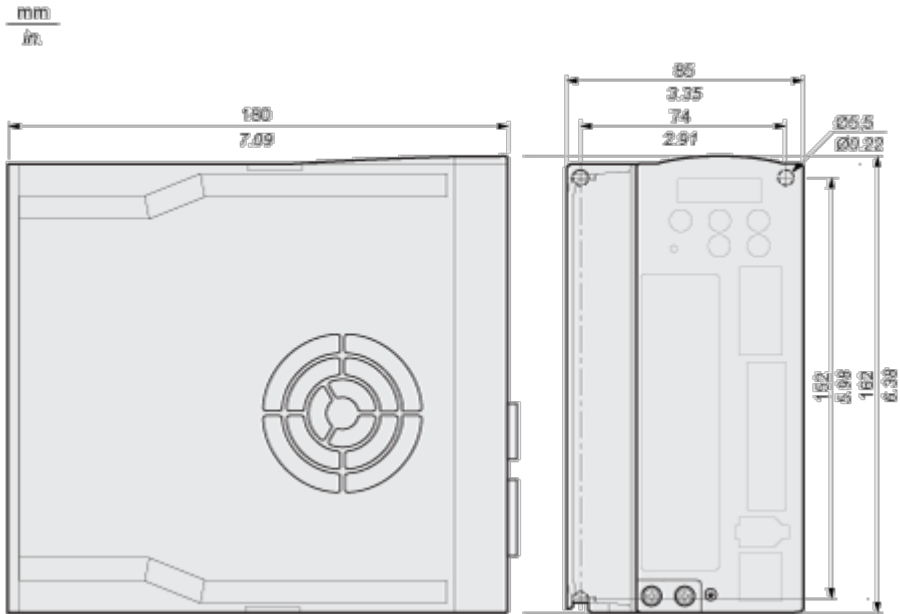
<b>Unit Type Of Package 1</b>	PCE
<b>Number Of Units In Package 1</b>	1
<b>Package 1 Height</b>	14.5 cm
<b>Package 1 Width</b>	21.0 cm
<b>Package 1 Length</b>	23.5 cm
<b>Package 1 Weight</b>	2.106 kg
<b>Unit Type Of Package 2</b>	S06
<b>Number Of Units In Package 2</b>	18
<b>Package 2 Height</b>	73.5 cm
<b>Package 2 Width</b>	60.0 cm
<b>Package 2 Length</b>	80.0 cm
<b>Package 2 Weight</b>	50.908 kg

## Contractual warranty

<b>Warranty</b>	18 months
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Dimensions

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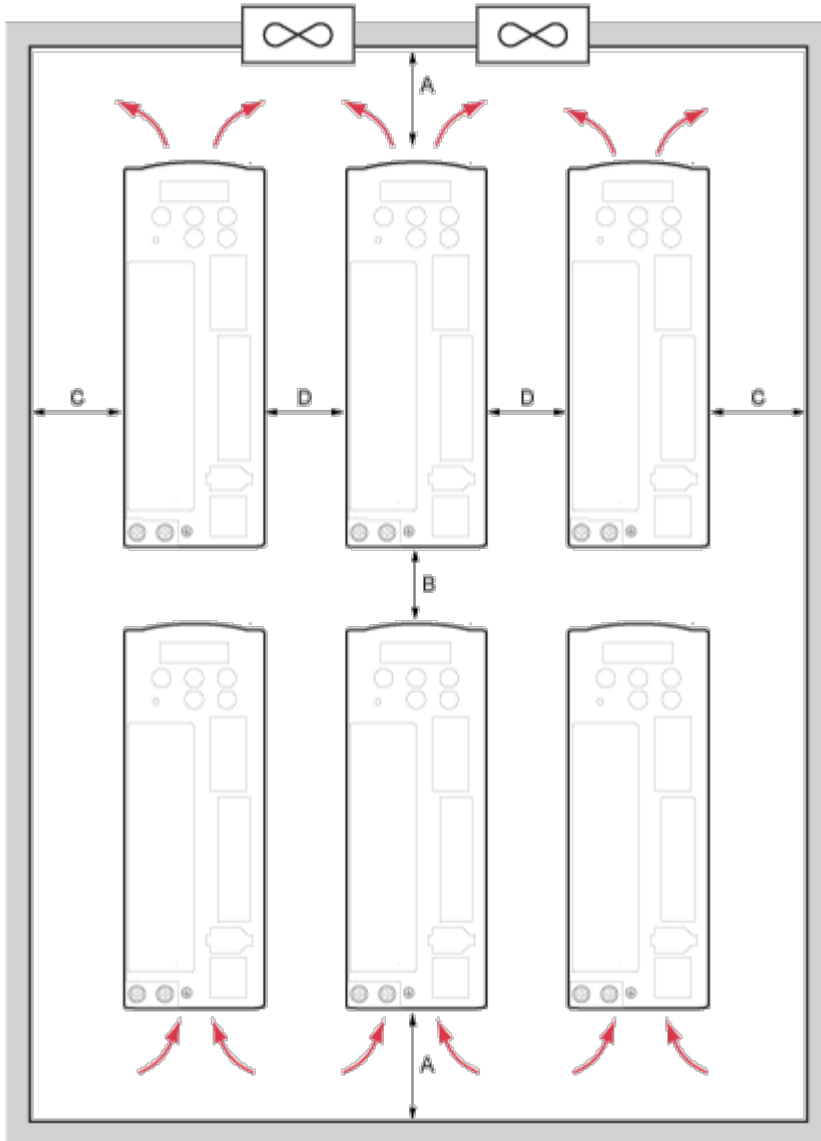
**Mounting Recommendations**

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

**Clearance**

**Many Devices in a cabinet**

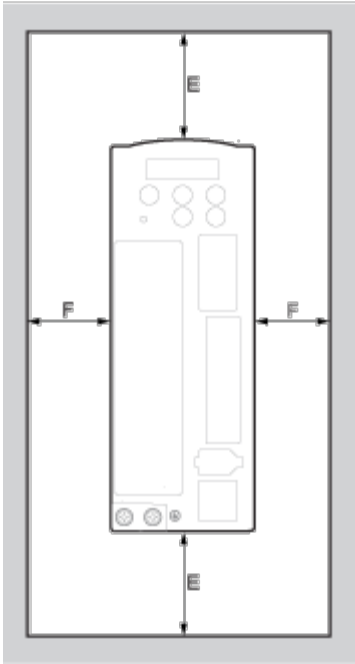
mm  
in.



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

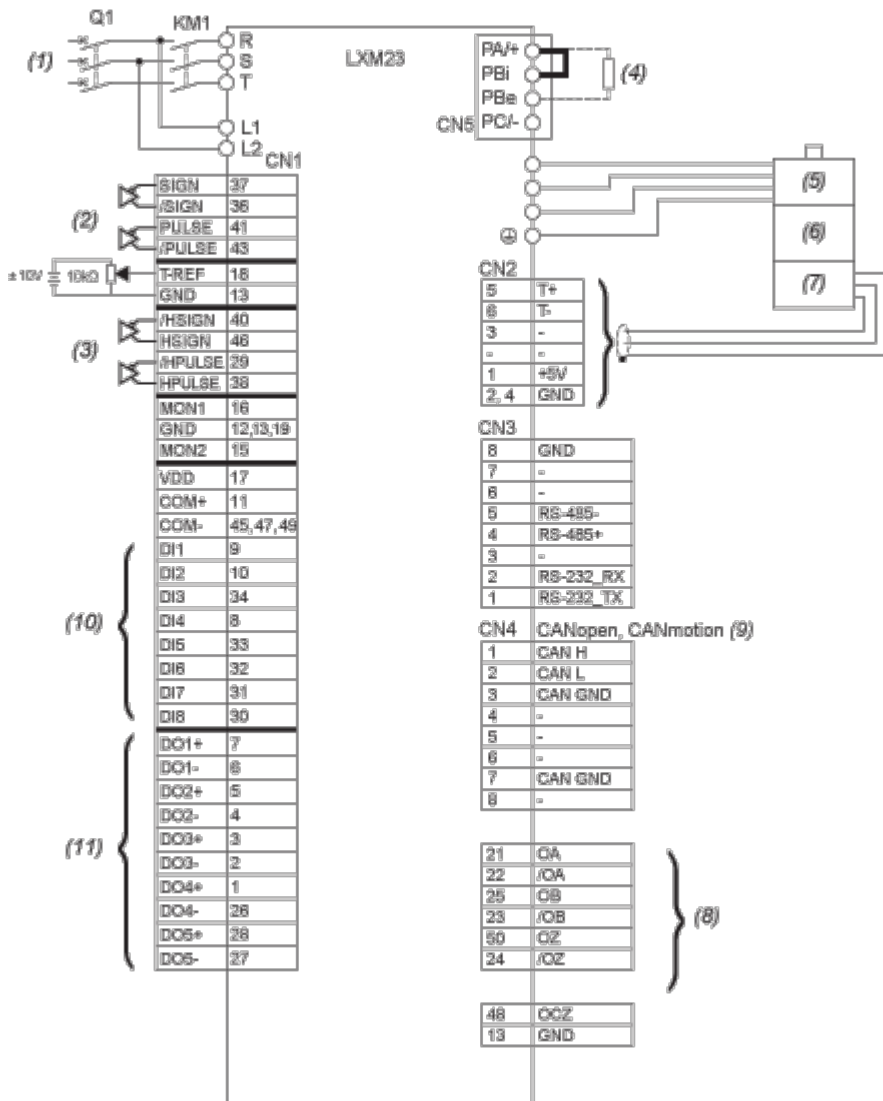
**One Device in a cabinet**

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



$E \geq 50 \text{ mm} (\geq 2 \text{ in.})$	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

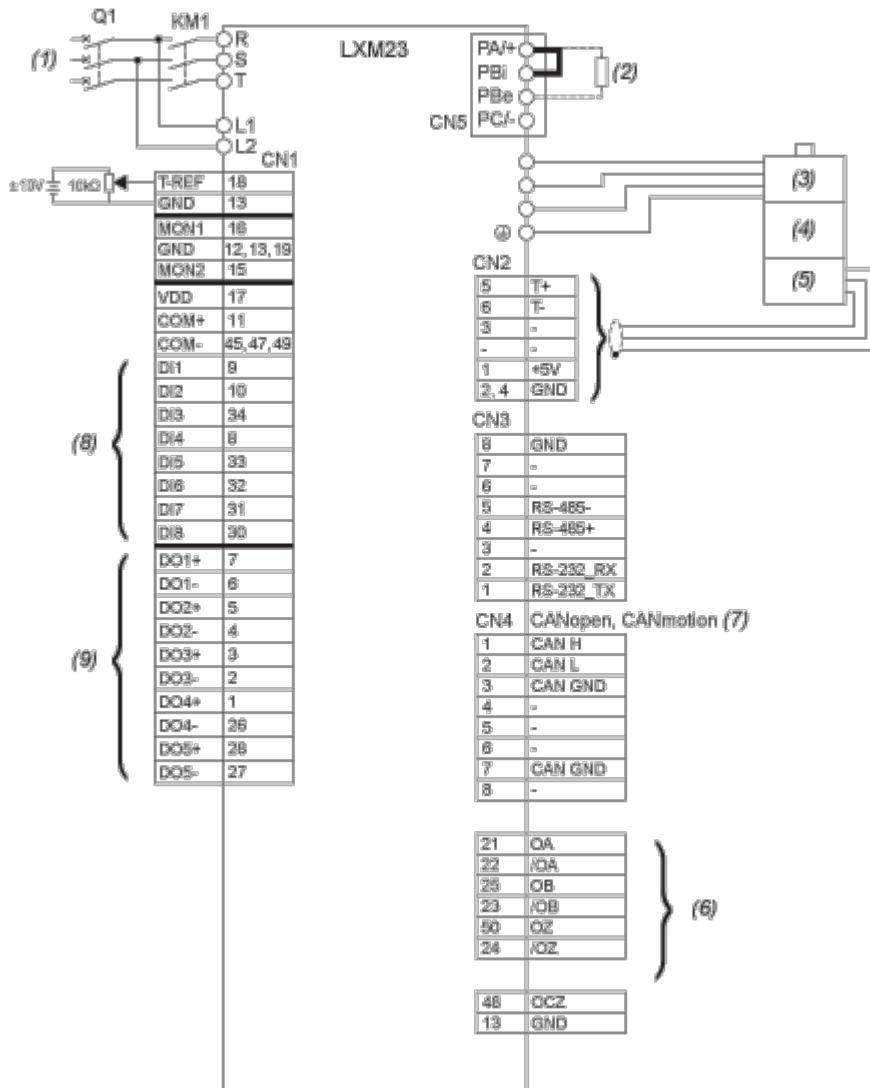
(8) Encoder Pulse Output

(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

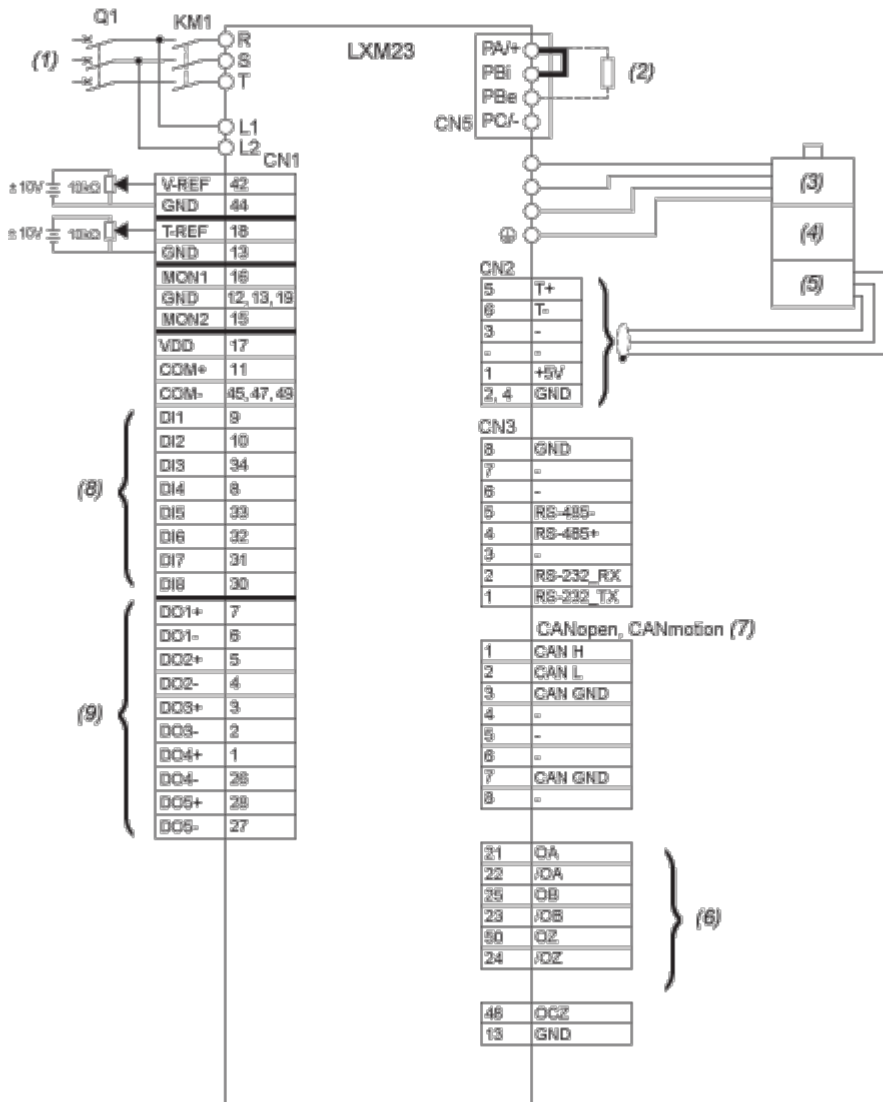
(7) Only LXM23A models

(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

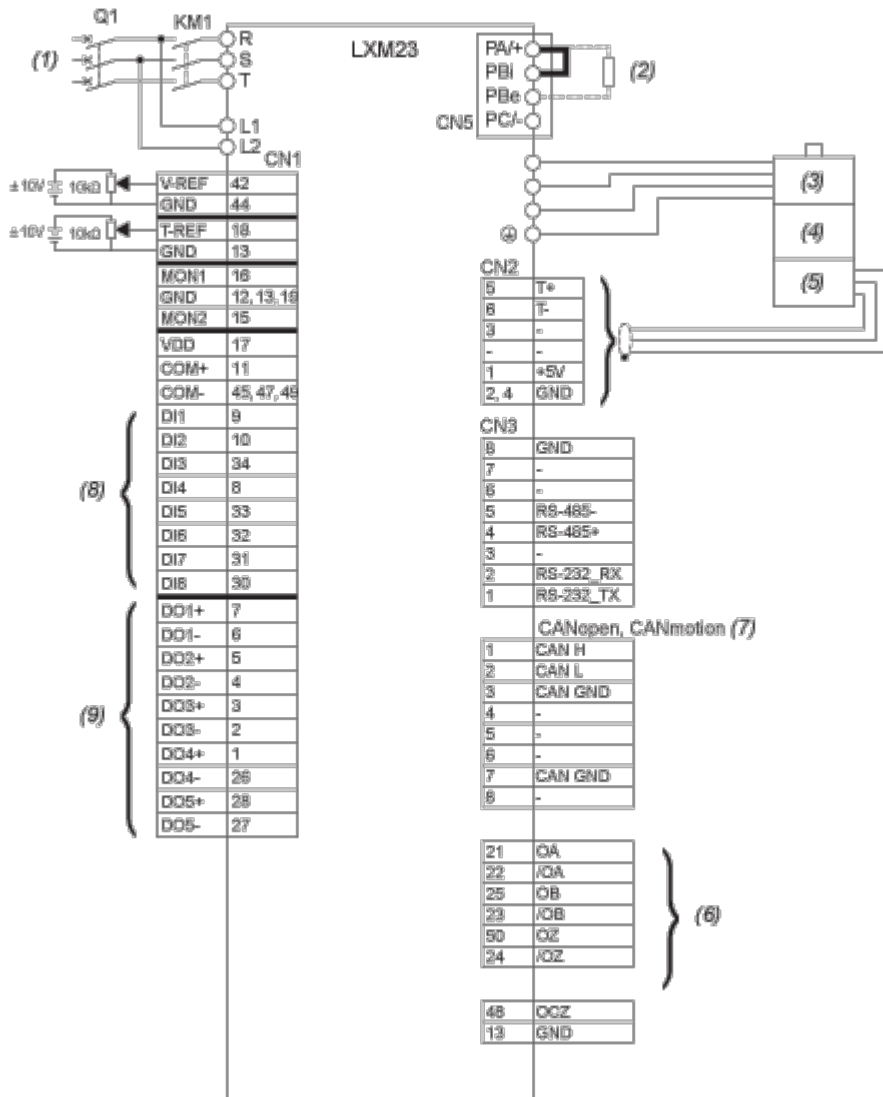
(6) Encoder Pulse Output

(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