



## Main

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

## Complementary

|                           |                                                                                                                                                                                                          |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Format of the drive       | Book                                                                                                                                                                                                     |
| Phase                     | 3 phases<br>Single phase                                                                                                                                                                                 |
| [Us] rated supply voltage | 220 V (- 10...15 %) single phase<br>220 V (- 20...15 %) 3 phases                                                                                                                                         |
| Supply voltage limits     | 200...255 V single phase<br>170...255 V 3 phases                                                                                                                                                         |
| Supply frequency          | 50/60 Hz (- 5...5 %)                                                                                                                                                                                     |
| Network frequency limits  | 47.5...63 Hz                                                                                                                                                                                             |
| Continuous output current | 1.55 A                                                                                                                                                                                                   |
| Continuous power          | 200 Wat 220 V                                                                                                                                                                                            |
| Nominal power             | 0.2 kWat 220 V                                                                                                                                                                                           |
| 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)at 32...131 °F (0...55 °C)                                                                                                                                |
| Electrical connection     | Terminal 1.3 mm <sup>2</sup> / AWG 16 (L1-L2)<br>Terminal 2.1 mm <sup>2</sup> / AWG 14 (R, S, T)<br>Terminal 0.82 mm <sup>2</sup> / AWG 18 (U, V, W)<br>Terminal 2.1 mm <sup>2</sup> / AWG 14 (PA+, PBe) |
| Tightening torque         | 12.39 lbf.in (1.4 N.m) (PE (ground))                                                                                                                                                                     |
| Discrete input number     | 8 programmable                                                                                                                                                                                           |
| Discrete input type       | Programmable (CN1)                                                                                                                                                                                       |
| Discrete input voltage    | 12...24 V DC logic                                                                                                                                                                                       |
| Discrete input logic      | Positive or negative logic (CN1)                                                                                                                                                                         |
| Discrete output number    | 5                                                                                                                                                                                                        |
| Discrete output type      | (CN1) logic output 12...24 V DC                                                                                                                                                                          |
| Discrete output voltage   | 12...24 V DC                                                                                                                                                                                             |
| Analogue input number     | 2                                                                                                                                                                                                        |
| Absolute accuracy error   | 0.01 %                                                                                                                                                                                                   |
| Analogue input type       | Voltage analog input (T_REF) - 10...10 V input impedance: 10 kOhm<br>Voltage analog input (V_REF) - 10...10 V input impedance: 10 kOhm                                                                   |
| Control signal type       | Servo motor encoder feedback                                                                                                                                                                             |
| Protection type           | Against reverse polarity inputs signal<br>Against short-circuits outputs signal<br>Overcurrent motor<br>Overvoltage motor<br>Undervoltage motor<br>Overheating motor<br>Overload motor                   |

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|                         |                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | Overspeed motor<br>Abnormal pulse control command drive                                                                                                                                                                                                                                                                                           |
| Communication interface | Integrated CANopen<br>Integrated CANmotion                                                                                                                                                                                                                                                                                                        |
| Connector type          | RJ45 (CN3) CANopen, CANopen Motionbus                                                                                                                                                                                                                                                                                                             |
| Method of access        | Slave                                                                                                                                                                                                                                                                                                                                             |
| Physical interface      | 2-wire RS485 multidrop Modbus                                                                                                                                                                                                                                                                                                                     |
| Transmission rate       | 125 kbps - for bus length of > 820.21...1640.42 ft (> 250...500 m)for CANopen, CANmotion<br>250 kbps - for bus length of > 328.08...820.21 ft (> 100...250 m)for CANopen, CANmotion<br>500 kbps - for bus length of > 13.12...328.08 ft (> 4...100 m)for CANopen, CANmotion<br>1 Mbps - for bus length of <= 13.12 ft (4 m)for CANopen, CANmotion |
| Number of addresses     | 1...127, addresses for CANopen, CANmotion                                                                                                                                                                                                                                                                                                         |
| Status LED              | 1 LED function: charge LED                                                                                                                                                                                                                                                                                                                        |
| Signalling function     | Servo status and fault codes five 7-segment display units                                                                                                                                                                                                                                                                                         |
| Marking                 | CE                                                                                                                                                                                                                                                                                                                                                |
| Type of cooling         | Natural convection                                                                                                                                                                                                                                                                                                                                |
| Operating position      | Vertical                                                                                                                                                                                                                                                                                                                                          |
| Width                   | 2.36 in (60 mm)                                                                                                                                                                                                                                                                                                                                   |
| Height                  | 6.38 in (162 mm)                                                                                                                                                                                                                                                                                                                                  |
| Depth                   | 5.75 in (146 mm)                                                                                                                                                                                                                                                                                                                                  |
| Product weight          | 3.75 lb(US) (1.7 kg)                                                                                                                                                                                                                                                                                                                              |

## Environment

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EMC filter                            | Without EMC filter                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| electromagnetic compatibility         | EMC immunity with additional EMC filter conforming to EN/IEC 61800-3 environments 1 and 2<br>EMC immunity (level 3) conforming to EN/IEC 61000-4-2<br>EMC immunity (level 3) conforming to EN/IEC 61000-4-3<br>EMC immunity (level 3) conforming to EN/IEC 61000-4-5<br>EMC immunity (level 4) conforming to EN/IEC 61000-4-4<br>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<br>CULus 508                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| IP degree of protection               | IP20 on upper part without protective cover<br>IP41 on upper part with protective cover                                                                                                                                                                                                                                                                                                                                                                        |
| vibration resistance                  | 0.075 mm peak to peak (f = 10...57 Hz) conforming to IEC 60068-2-6<br>1 gn (f = 57...150 Hz) conforming to IEC 60068-2-6                                                                                                                                                                                                                                                                                                                                       |
| shock resistance                      | 15 gn 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 | 32...131 °F (0...55 °C) conforming to UL                                                                                                                                                                                                                                                                                                                                                                                                                       |
| ambient air temperature for storage   | -4...149 °F (-20...65 °C)                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| operating altitude                    | <= 3280.84 ft (1000 m) without derating<br>> 3280.84...6561.68 ft (> 1000...2000 m) with continuous power derating of 1 % per 100 m                                                                                                                                                                                                                                                                                                                            |

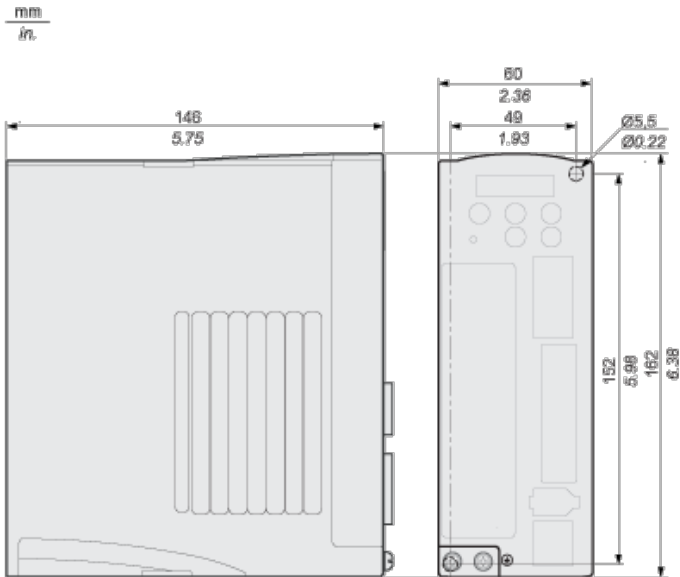
## Offer Sustainability

|                                                                       |                                                                       |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------|
| Green Premium product                                                 | Green Premium product                                                 |
| Compliant - since 0943 - Schneider Electric declaration of conformity | Compliant - since 0943 - Schneider Electric declaration of conformity |
| Reference not containing SVHC above the threshold                     | Reference not containing SVHC above the threshold                     |
| Available                                                             | Available                                                             |

## Contractual warranty

|                 |           |
|-----------------|-----------|
| Warranty period | 18 months |
|-----------------|-----------|

## Dimensions

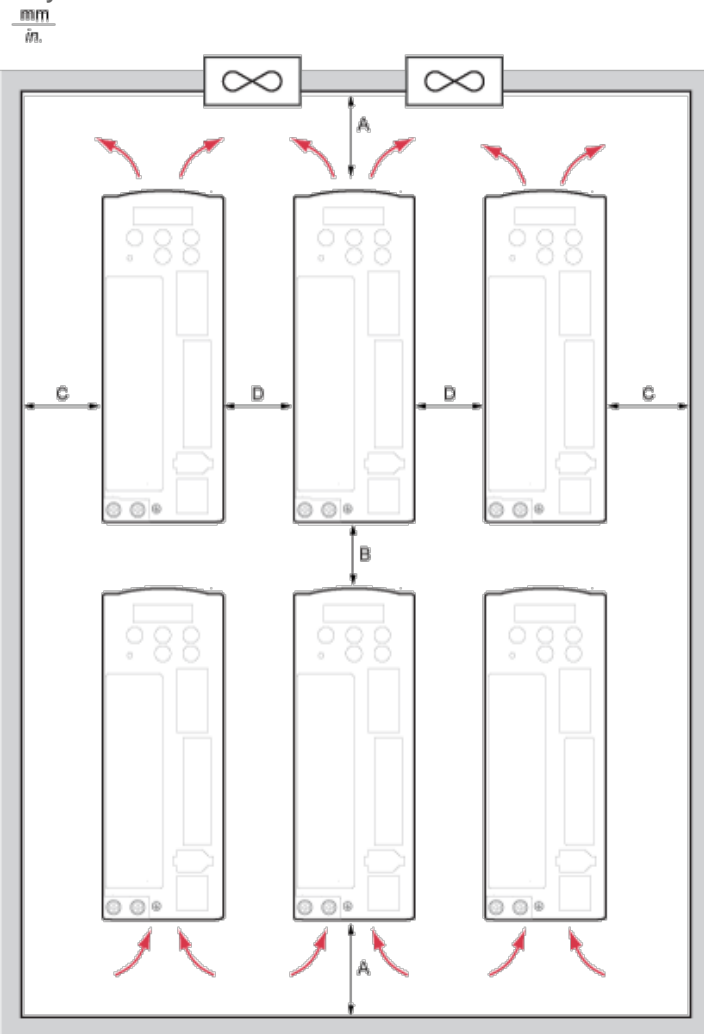


## Mounting Recommendations

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

### Clearance

Many Devices in a cabinet

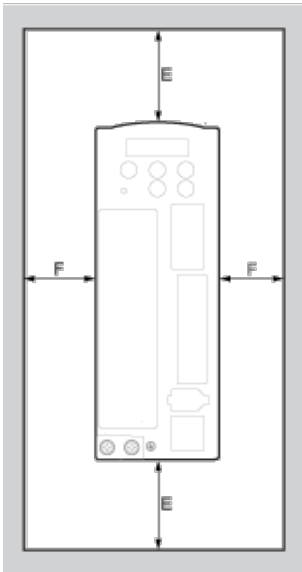


|                                                   |                                |
|---------------------------------------------------|--------------------------------|
| $A \geq 100 \text{ mm}$ ( $\geq 4 \text{ in.}$ )  | Free space above/below devices |
| $B \geq 80 \text{ mm}$ ( $\geq 3.2 \text{ in.}$ ) | 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             |

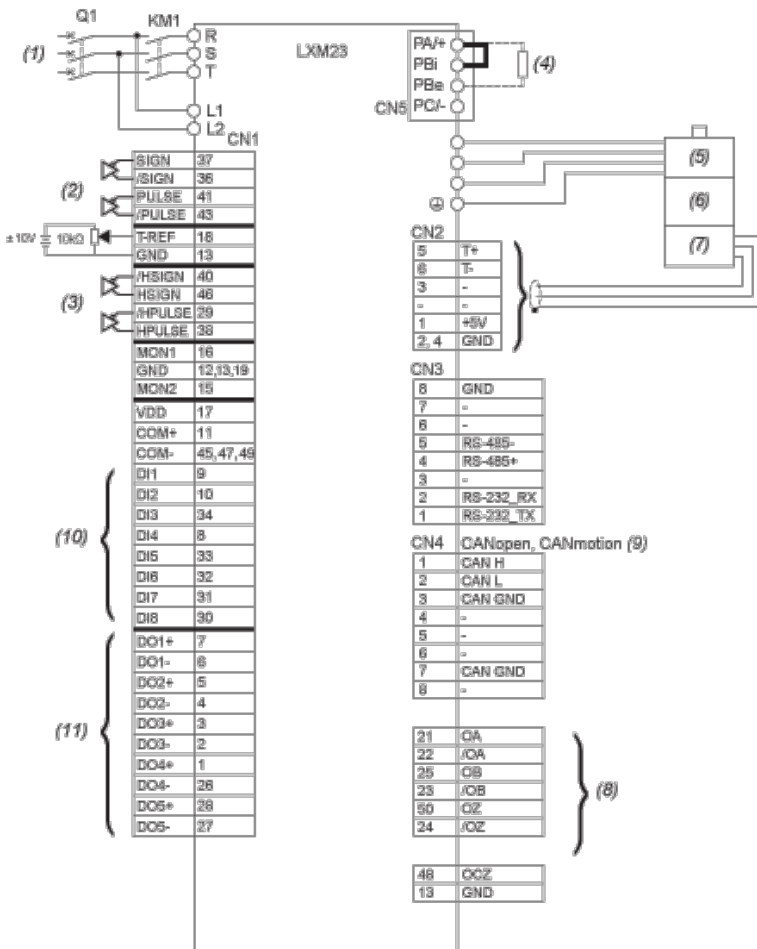
### One Device in a cabinet

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



|                       |                                       |
|-----------------------|---------------------------------------|
| E ≥ 50 mm (≥ 2 in.)   | Free space above/below the device     |
| F ≥ 20 mm (≥ 0.8 in.) | Free space between device and cabinet |

### Position Control Mode Wiring Diagram (Pulse Control)



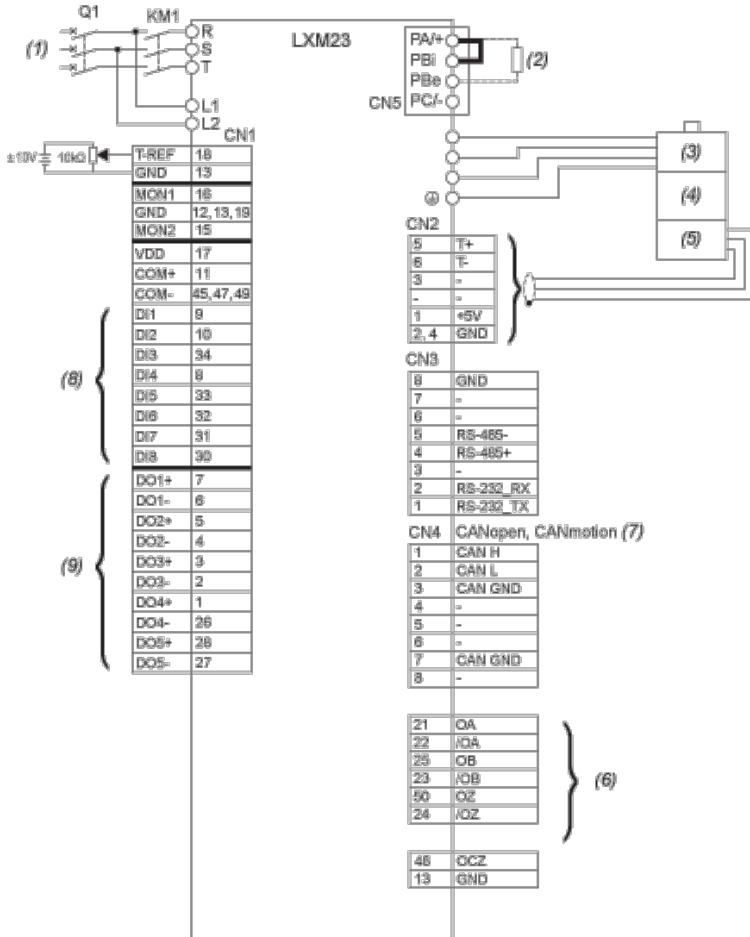
KM1 Line Contactor

Q1 Circuit breaker

(1) AC 220 / 230 V Single Phase or Three Phase 50 / 60 Hz

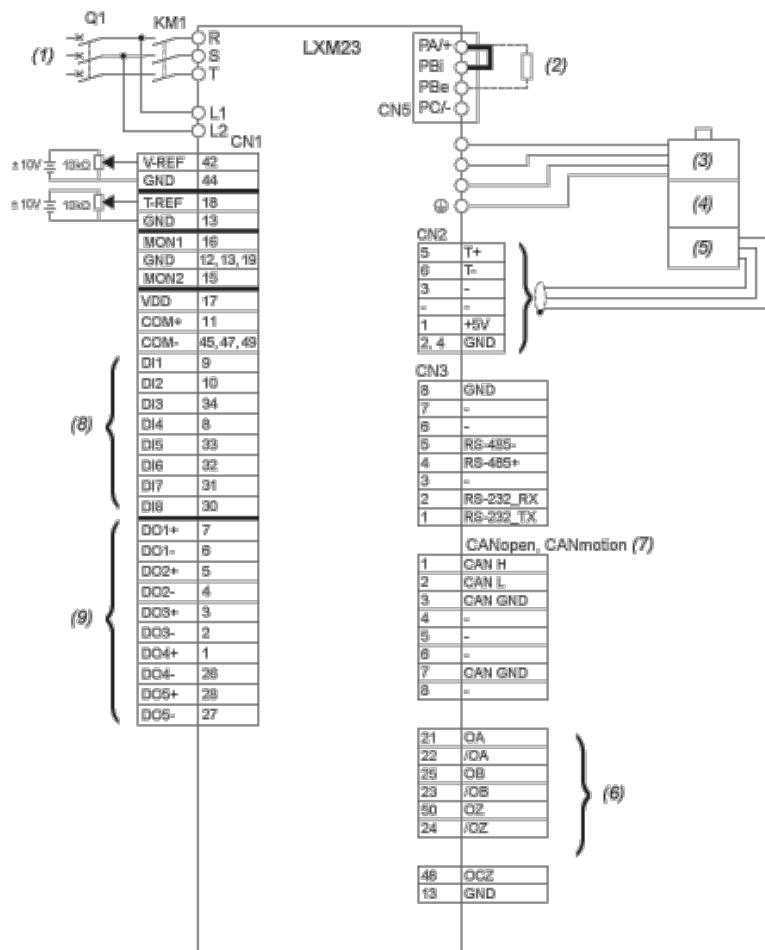
- (2) Pulse Input (Line Driver)
- (3) High-Speed Pulse Input (Line Receiver)
- (4) External Braking Resistor
- (5) Power Supply
- (6) Holding Brake
- (7) Encoder
- (8) Encoder Pulse Output
- (9) Only LXM23A models
- (10) Digital inputs
- (11) Digital outputs

### 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

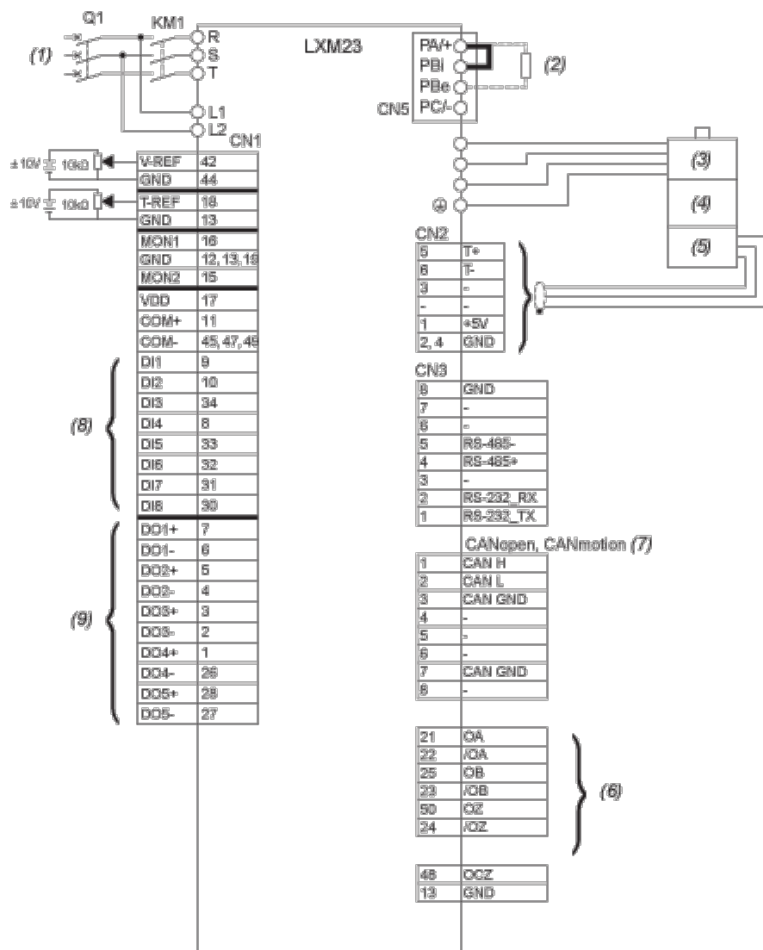
(6) Encoder Pulse Output

(7) Only LXM23A models

(8) Digital inputs

(9) Digital outputs

## Torque Control Mode Wiring Diagram

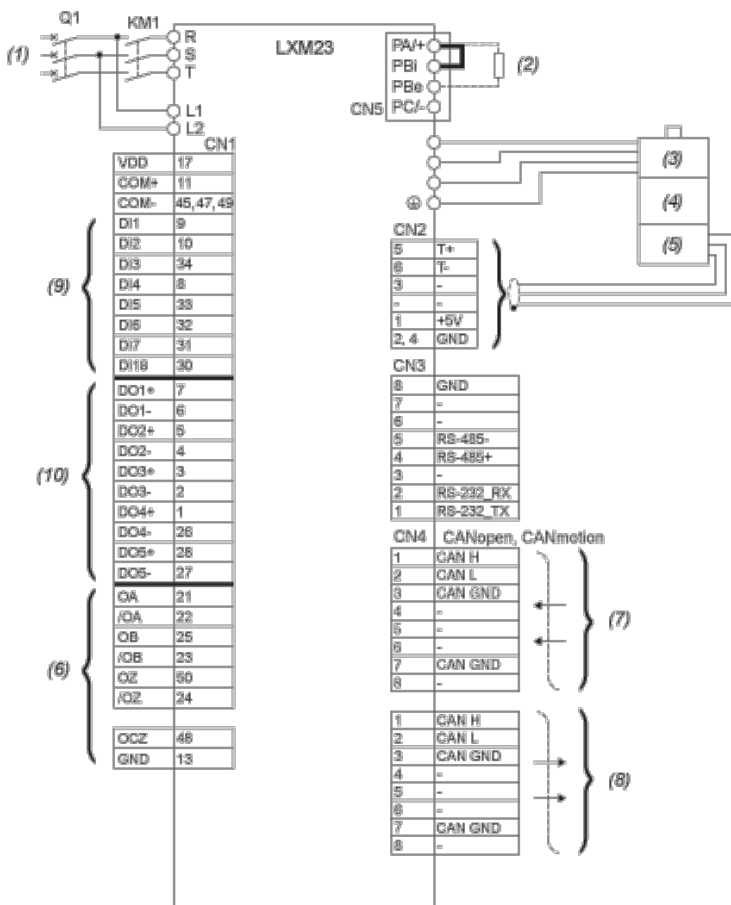


KM1 Line Contactor

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

## CANopen 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) Data Input

(8) Data Output

(9) Digital inputs

(10) Digital outputs