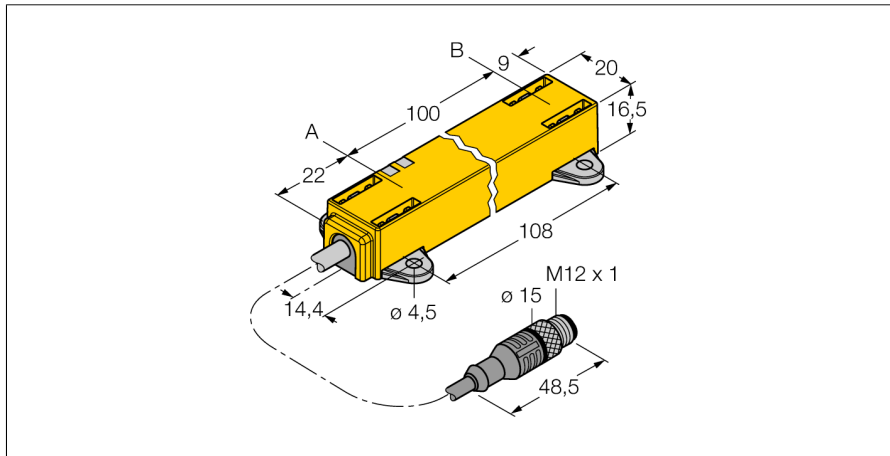


Inductive linear position sensor
Li100P1-Q17LM1-LiU5X2-0,3-RS5



- Rectangular, plastic
- Many mounting possibilities
- Positioning element P1-Li-QR14/Q17L, mounting aids M1.1-Q17L and M1.2-Q17L included in delivery
- LED indicates measuring range
- Immune to electromagnetic interferences
- Extremely short blind zones
- 12 bit resolution
- 4-wire, 15...30 VDC
- Analog output
- Programmable measuring range
- 0...10 V and 4...20 mA
- Cable with male end M12 x 1

| | |
|------------------|-------------------------------|
| Type code | Li100P1-Q17LM1-LiU5X2-0,3-RS5 |
| Ident no. | 1590726 |

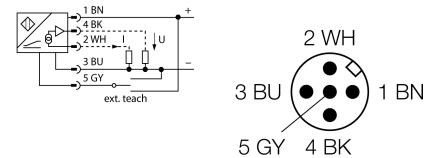
| | |
|--------------------------------|-----------------|
| Measuring range [A...B] | 100mm |
| Resolution | 0,024 mm/12 bit |
| blind zone a | 22 mm |
| blind zone b | 9 mm |
| Linearity deviation | ≤ 0.5 % |
| Temperature drift | ≤ ± 0.01 % / K |
| Ambient temperature | -25...+70 °C |

| | |
|---|---------------------------|
| Operating voltage | 15...30VDC |
| Residual ripple | ≤ 10 % U _{ss} |
| No-load current I ₀ | ≤ 50 mA |
| Rated insulation voltage | ≤ 0.5 kV |
| Short-circuit protection | yes |
| Wire breakage / Reverse polarity protection | yes/ yes (voltage supply) |
| Output function | 4-wire, analog output |
| Voltage output | 0...10V |
| Current output | 4...20mA |
| Load resistance voltage output | ≥ 4.7 kΩ |
| Load resistance current output | ≤ 0.4 kΩ |
| Sample rate | 500 Hz |

| | |
|----------------------|--|
| Design | rectangular, Q17L |
| Dimensions | 131 x 20 x 16.5 mm |
| Housing material | plastic, PC-GF10 |
| Connection | cable with connector, M12 x 1 |
| Cable quality | 5.2 mm, Lif9YH-11YH, PUR, 0.3 m Flame retardant acc. to VDE 0472, part 804B |
| Cable cross section | 5 x 0.34 mm ² |
| Vibration resistance | 55 Hz (1 mm) |
| Shock resistance | 30 g (11 ms) |
| Protection class | IP67 |
| MTTF | 138 years acc. to SN 29500 (Ed. 99) 40 °C |

| | |
|-----------------------------|---|
| Power-on indication | LED green |
| Measuring range display | multifunction LED, green |
| Included in scope of supply | positioning element P1-Li-QR14/Q17L, M1.1-Q17L, M1.2-Q17L |

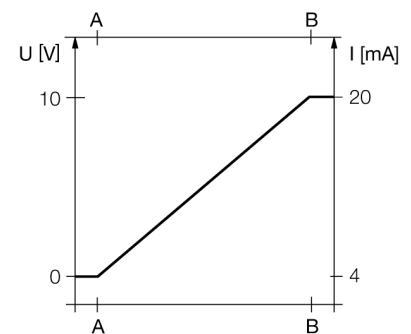
Wiring diagram



Functional principle

The measuring principle of inductive angle sensors is based on oscillation circuit coupling between the positioning element and the sensor. The output signal provided is proportional to the angle of the positioning element. The rugged sensors are wear and maintenance-free, thanks to the contactless operating principle. They convince through their excellent repeatability, resolution and linearity within a broad temperature range. Thanks to the innovative technology, electromagnetic AC and DC fields have no influence on the measured signal.

Characteristic



Inductive linear position sensor Li100P1-Q17LM1-LiU5X2-0,3-RS5

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Mounting instructions / Description



A broad range of accessories allows the device to be mounted in many different ways.

The positioning element can be mounted offset by 90°. This provides highest mounting flexibility. The linear position sensor can also be mounted offset by 90° with the two provided fittings. Based on the functional principle of RLC coupling, the sensor is immune to magnetized metal splinters and other interferences.

LED indications:

green steady:

Positioning element is in the measuring range

green flashing:

Positioning element has reached the end of the measuring range. This is indicated by a weaker signal.

off:

Positioning element is outside the coverage.

TEACH process

The start and end value of the measuring range are set via teach adapter at the touch of a button. Moreover the output curve can be inverted.

Bridge pin 5 and pin 1 for 10 s = factory setting

Bridge pin 5 and pin 3 for 10 s = factory setting inverted

Bridge pin 5 and pin 3 for 2 s = sets start value of measuring range

Bridge pin 5 and pin 1 for 2 s = sets end value of measuring range

**Inductive linear position sensor
Li100P1-Q17LM1-LiU5X2-0,3-RS5**

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Accessories

| Type code | Ident no. | Description | Dimension drawing |
|-----------------|-----------|---|-------------------|
| P1-Li-QR14/Q17L | 1590724 | Floating positioning element; cross and longitudinal mounting | |
| M1.1-Q17L | 1590749 | Mounting bracket for linear position sensor Q17L; aluminium; 3 pcs. per bag | |
| M1.2-Q17L | 1590750 | Mounting foot for linear position sensor Q17L; aluminium; 3 pcs. per bag | |
| RMT-Q17L | 1590755 | Removal tool for mounting elements for linear position sensor Q17L | |
| TX1-Q20L60 | 6967114 | Teach adapter for inductive encoders, linear position, angle and ultrasonic sensors | |