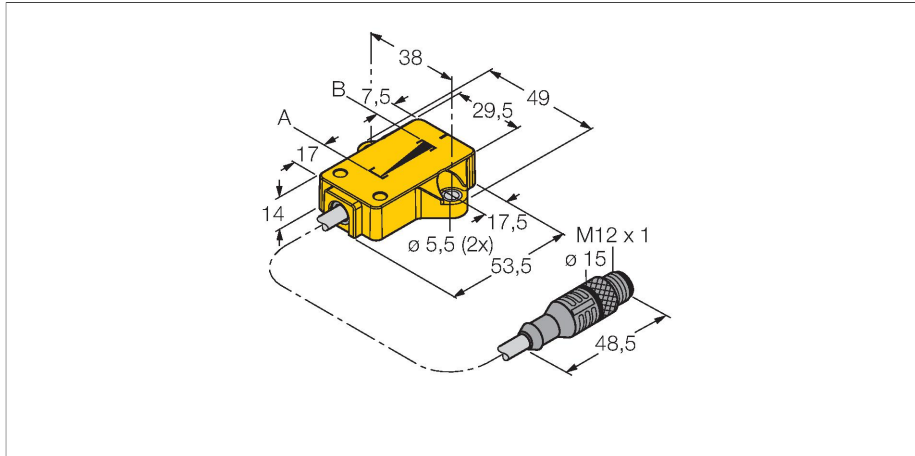


LI25P1-QR14-LU4X2-0,3-RS4/S97

Inductive Linear Position Sensor



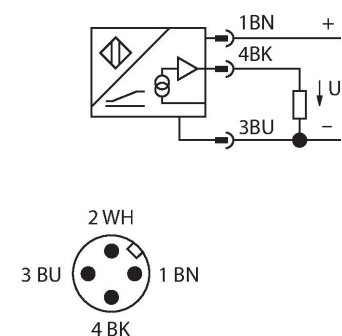
Technical data

Type	LI25P1-QR14-LU4X2-0,3-RS4/S97
ID	1590754
Measuring principle	Inductive
General data	
Measuring range	25 mm
Resolution	0.006 mm/12 bit
Nominal distance	1.5 mm
Blind zone a	17 mm
Blind zone b	7.5 mm
Linearity deviation	≤ 1 % f.s.
Temperature drift	≤ ± 0.01 %/K
Hysteresis	not applied
Electrical data	
Operating voltage U_B	8...30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
Isolation test voltage	0.5 kV
Short-circuit protection	yes
Wire break/reverse polarity protection	yes/yes (voltage supply)
Output function	4-pin, Analog output
Voltage output	0.5...4.5 V
Load resistance voltage output	≥ 4.7 kΩ
Sample rate	700 Hz
Current consumption	< 50 mA
Mechanical data	
Design	Profile, QR14
Dimensions	53.5 x 49 x 14 mm
Housing material	Plastic, PBT-GF30-V0

Features

- Rectangular, plastic
- Many mounting possibilities
- P1-Li-QR14/Q17L included in delivery
- LED indicates measuring range
- Immune to electromagnetic interference
- Extremely short blind zones
- Resolution, 12-bit
- 8...30 VDC
- Analog output
- 0.5 ... 4.5 V
- Cable with male end M12 x 1

Wiring diagram



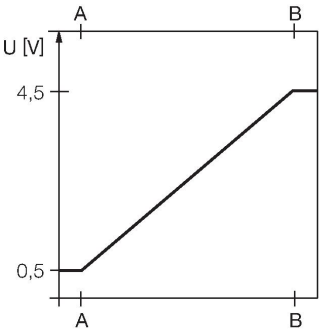
Functional principle

The measuring principle of linear position sensors is based on RLC coupling between the positioning element and the sensor, whereby an output signal is provided proportional to the position of the positioning element. The rugged sensors are wear and tear-free, thanks to the contactless operating principle. They convince through their excellent repeatability, resolution and linearity within a broad temperature range.

Technical data

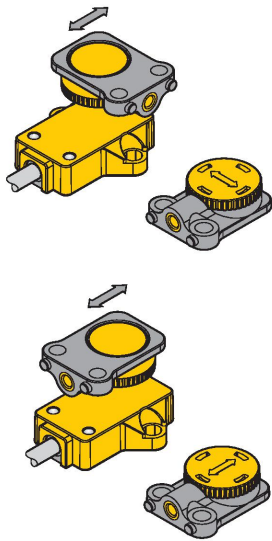
Electrical connection	Cable with connector, M12 × 1
Cable quality	Ø 5.2 mm, Lif32Y32Y, TPE, 0.3 m
Core cross-section	3 x 0.5 mm ²
Environmental conditions	
Ambient temperature	-40...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP68 IP69K
MTTF	138 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED, Green
Measuring range display	multifunction LED, green
Included in delivery	positioning element P1-Li-QR14/Q17L

The innovative technology ensures a high immunity to electromagnetic DC and AC fields.



Mounting instructions

Mounting instructions/Description



The positioning element can be mounted offset by 90°. This provides highest mounting flexibility.

The measuring principle of RLC coupling makes the sensor immune to magnetized metal splinters and other interference fields.

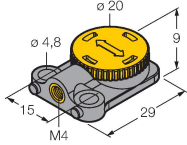
LED indications

- green
- Positioning element is in the measuring range
- green flashing
- Positioning element is in the measuring range, signal low (e.g. distance too large)
- off
- Positioning element is outside the coverage.

Accessories

P1-LI-QR14/Q17L

1590724



Floating positioning element for linear position sensors LI-QR14 and LI-Q17L; transverse and longitudinal mounting possible; the nominal distance to the sensor is 1.5 mm; pairing with the linear position sensor at a distance of up to 3 mm or a misalignment tolerance of up to 3 mm