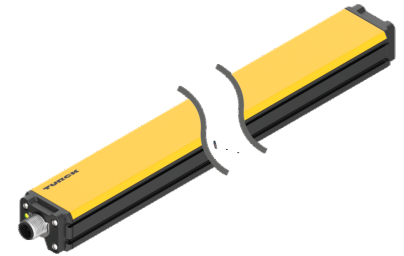
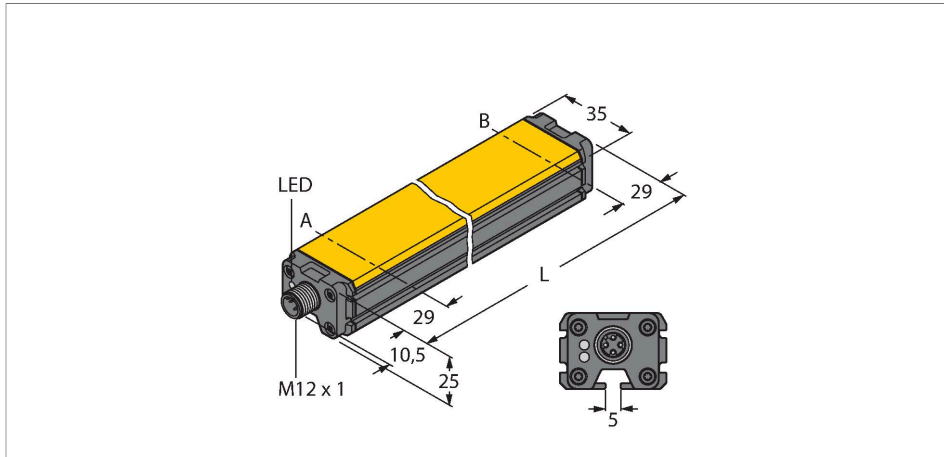


LI500P0-Q25LM0-IOLX3-H1141

Inductive Linear Position Sensor – IO-Link



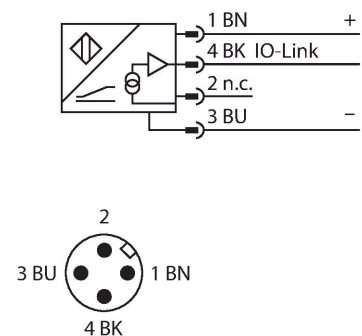
Technical data

Type	LI500P0-Q25LM0-IOLX3-H1141
ID	100012828
Measuring principle	Inductive
General data	
Measuring range	500 mm
Nominal distance	1.5 mm
Blind zone a	29 mm
Blind zone b	29 mm
Repeat accuracy	$\leq 0.02\%$ of full scale
Linearity deviation	$\leq 0.05\%$ f.s. also under the influence of shock and vibration
Temperature drift	$\leq \pm 0.0001\%$ /K
Hysteresis	omitted as a matter of principle
Electrical data	
Operating voltage	15...30 VDC
Residual ripple	$\leq 10\%$ U_{ss}
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage/Reverse polarity protection	yes (voltage supply)
Communication protocol	IO-Link
Diagnostic	Positioning element not within detection range via diagnostic bit
Sample rate	5000 Hz
Current consumption	< 100 mA

Features

- Rectangular, aluminium / plastic
- Versatile mounting possibilities
- Measuring range displayed via LED
- Immune to electromagnetic interference
- Extremely short blind zones
- Process value in 32-bit IO-Link telegram
- 15...30 VDC
- M12 × 1 male connector, 4-pin

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.

LI500P0-Q25LM0-IOLX3-H1141 | 11/07/2023 15-36 | technical changes reserved

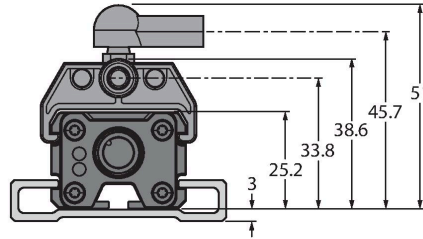
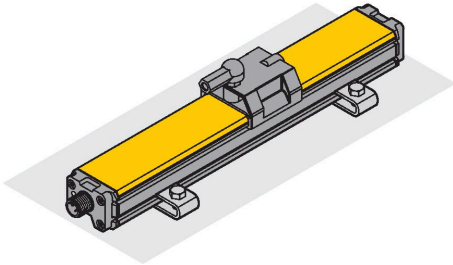
Technical data

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

IO-Link	
IO-Link specification	V 1.1
Programming	FDT/DTM
Communication mode	COM 3 (230.4 kBaud)
Process data width	32 bit
Minimum cycle time	1 ms
Function pin 4	IO-Link
Mechanical data	
Design	Profile, Q25L
Dimensions	558 x 35 x 25 mm
Housing material	Aluminum/plastic, PA6-GF30, Anodized
Active area material	Plastic, PA6-GF30
Electrical connection	Connector, M12 × 1
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance (EN 60068-2-6)	20 g; 1.25 h/axis; 3 axes
Shock resistance (EN 60068-2-27)	200 g; 4 ms ½ sine
Protection class	IP67
MTTF	138 years acc. to SN 29500 (Ed. 99) 20 °C
Power-on indication	LED, Green
Measuring range display	multifunction LED, green, yellow, yellow flashing

Mounting instructions

Mounting instructions/Description



Extensive mounting accessories provide various options for installation. The measuring principle of RLC coupling makes the sensor immune to magnetized metal splinters and other interference fields.

LED indicates measuring range

Green:

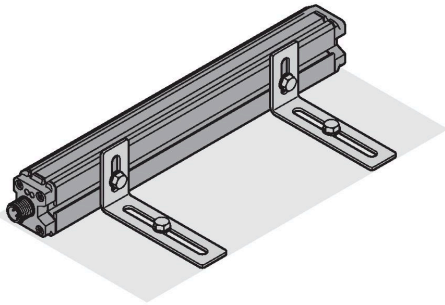
Positioning element is within the measuring range

Yellow:

Positioning element is within the measuring range, low signal intensity (e.g. distance too large)

Yellow flashing:

Positioning element is outside the detection range

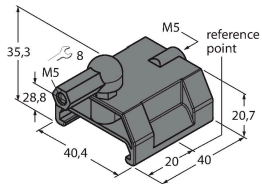


Accessories

P1-LI-Q25L

6901041

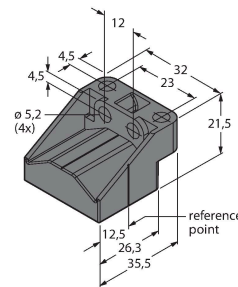
Guided positioning element for linear position sensors LI-Q25L, inserted in the groove of the sensor



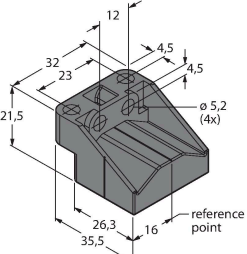
P2-LI-Q25L

6901042

Floating positioning element for linear position sensors LI-Q25L; the nominal distance to the sensor is 1.5 mm; pairing with the linear position sensor at a distance of up to 5 mm or misalignment tolerance of up to 4 mm.

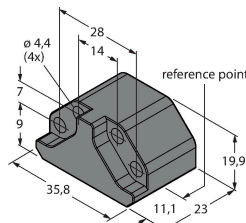


P3-LI-Q25L 6901044



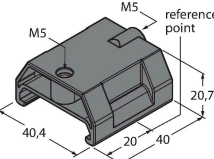
Floating positioning element for LI-Q25L linear position sensors; operational at an offset of 90°; nominal distance to sensor 1.5 mm; pairing with linear position sensor at a distance of up to 5 mm; misalignment tolerance of up to 4 mm

P6-LI-Q25L 6901069



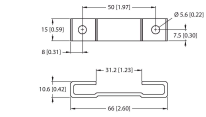
Floating positioning element for linear position sensors LI-Q25L; the nominal distance to the sensor is 1.5 mm; pairing with the linear position sensor at a distance of up to 5 mm or misalignment tolerance of up to 4 mm.

P7-LI-Q25L 6901087



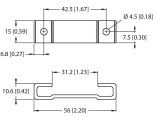
Guided positioning element for linear position sensors LI-Q25L, without ball joint

M1-Q25L (2 PCS) 6901045



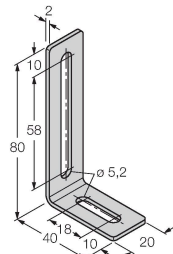
Mounting foot for linear position sensors LI-Q25L; material: aluminum; 2 pcs. per bag

M2-Q25L 6901046



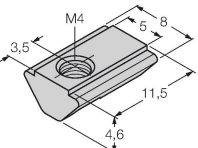
Mounting foot for linear position sensors LI-Q25L; material: aluminum; 2 pcs. per bag

M4-Q25L 6901048



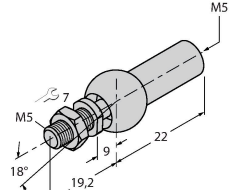
Mounting bracket and sliding block for linear position sensors LI-Q25L; material: Stainless steel; 2 pcs. per bag

MN-M4-Q25 6901025



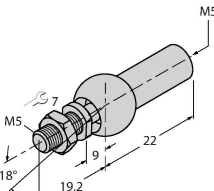
Sliding block with M4 thread for the backside profile of the LI-Q25L; material: galvanized steel; 10 pcs. per bag

AB-M5 6901057



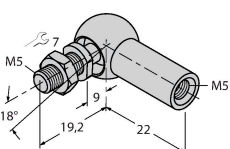
Axial Joint for Guided Positioning Elements

ABVA-M5 6901058



Axial joint for guided positioning element, stainless steel

RBVA-M5 6901059



Angle joint for guided positioning element, stainless steel

Wiring accessories

Dimension drawing	Type	ID	
	RKC4T-2-RSC4T/TXL	6625604	Extension cable, M12 female connector, straight, 3-pin to M12 male connector, straight, 3-pin; cable length: 2 m, jacket material: PUR, black; cULus approval
	RKC4T-2/TXL	6625500	Connection cable, M12 female connector, straight, 3-pin, cable length: 2 m, jacket material: PUR, black; cULus approval