

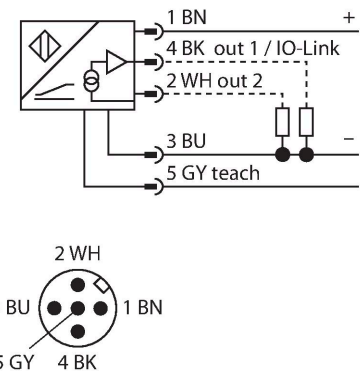
# LI500P0-Q25LM0-ELIUPN8X3-H1151

## Inductive Linear Position Sensor – IO-Link

### Features

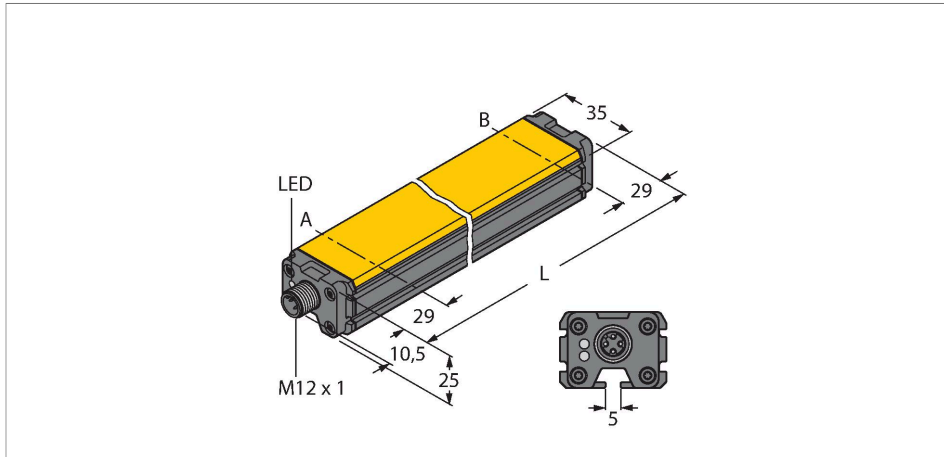
- Rectangular, aluminium / plastic
- Versatile mounting possibilities
- Measuring range indicated via LED
- Immune to electromagnetic interferences
- Extremely short blind zones
- Programmable measuring range
- 16 bit resolution
- 15...30 VDC
- Analog output, factory setting 0...10 V
- All functions programmable via IO-Link / -PACTware
- 4 programmable switching zones
- Programmable current and voltage output functions
- NC / NO programmable functions, available as NPN or PNP version
- Process value 16 bit IO-Link telegram
- M12 x 1 male, 5-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. The innovative technology ensures a high immunity to electromagnetic DC and AC fields.



### Technical data

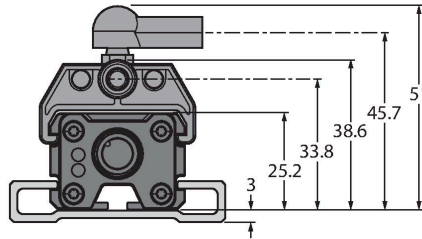
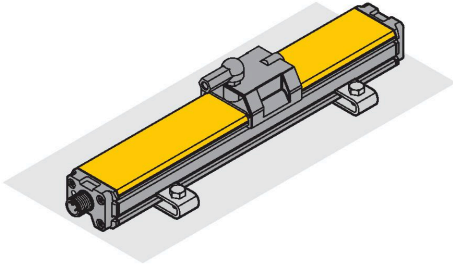
Type	LI500P0-Q25LM0-ELIUPN8X3-H1151
Ident. no.	1590606
Measuring principle	Inductive
Measuring range	500 mm
Resolution	0,008 mm/16 bit
Nominal distance	1.5 mm
Blind zone a	29 mm
Blind zone b	29 mm
Reproducibility	≤ 18 μm
Linearity deviation	≤ 0.05 %f.s.
Temperature drift	≤ ± 0.003 % / K
Hysteresis	not applied
Ambient temperature	-25...+70 °C
Operating voltage	15...30 VDC
Residual ripple	≤ 10 % U <sub>ss</sub>
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage/Reverse polarity protection	yes / Complete
Communication protocol	IO-Link
Output function	5-pin, NO/NC, PNP/NPN, analog output
Output 1	Switching output or IO-Link mode
Output 2	analog or switching output
Voltage output	0...10 V
Current output	4...20 mA

## Technical data

	programmable via IO-Link
Load resistance voltage output	$\geq 4.7 \text{ k}\Omega$
Load resistance, current output	$\leq 0.4 \text{ k}\Omega$
Sample rate	1000 Hz
Current consumption	$< 50 \text{ mA}$
IO-Link specification	IO-Link specified acc. to version 1.0
Programming	FDT / DTM
Process data width	16 bit
Frame type	2.2
Included in the SIDI GSDML	Yes
<b>Design</b>	<b>Profile, Q25L</b>
Dimensions	558 x 35 x 25 mm
Housing material	Aluminum/plastic, PA6-GF30, Anodized
Active area material	Plastic, PA6-GF30
Electrical connection	Connector, M12 x 1
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
<b>Power-on indication</b>	<b>LED, Green</b>
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 indications

##### green

positioning element is in the measuring range

##### yellow

positioning element is in the measuring range, the distance is too large. This is indicated by a weaker signal

##### yellow flashing

positioning element is outside the coverage.

##### off

positioning element is outside the programmed area (only with teachable versions)

#### Teaching

In addition to the setting via IO-link or PACTware, the start and end point of the measuring range can be set by pressing the button at the teachadapter. Moreover there is the possibility to invert the course of the output curve.

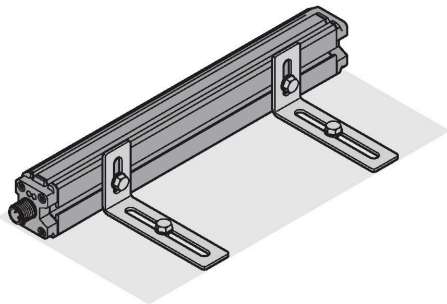
Bridge pin 5 and pin 1 for 10 s = factory setting

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

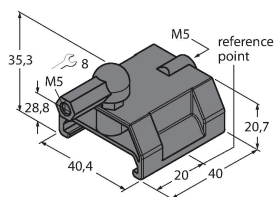
Bridge pin 5 and pin 1 for 2 s = sets end value of measuring range



## Accessories

### P1-LI-Q25L

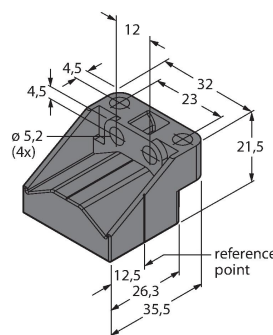
6901041



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

### P2-LI-Q25L

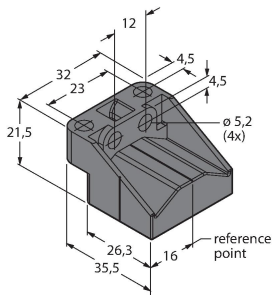
6901042



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**

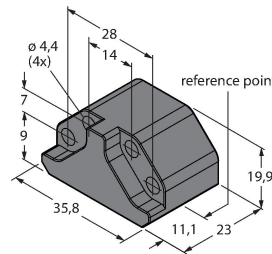
**6901044**



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**

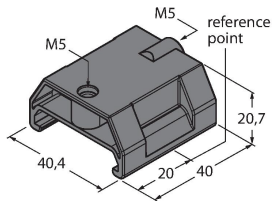
**6901069**



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**

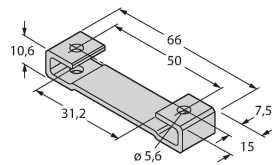
**6901087**



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

**M1-Q25L**

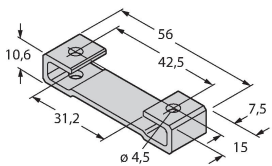
**6901045**



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

**M2-Q25L**

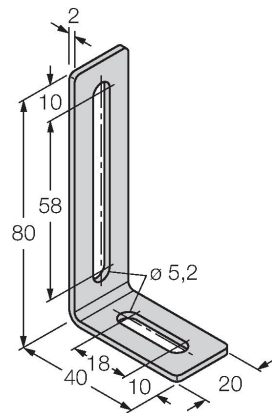
**6901046**



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

**M4-Q25L**

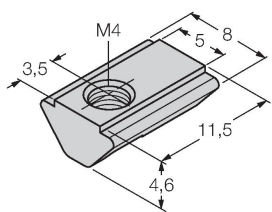
**6901048**



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

**MN-M4-Q25**

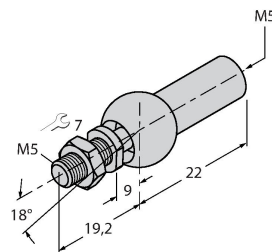
**6901025**



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

**AB-M5**

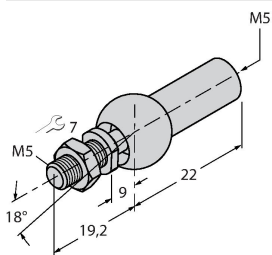
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Axial Joint for Guided Positioning Elements

**ABVA-M5**

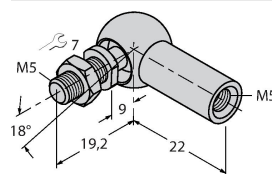
**6901058**



Axial joint for guided positioning element, stainless steel

**RBVA-M5**

**6901059**



Angle joint for guided positioning element, stainless steel