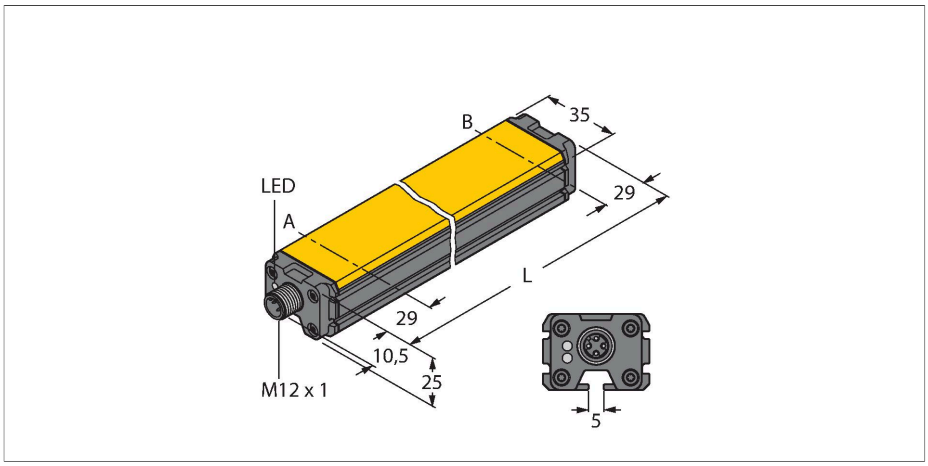
LI500P0-Q25LM0-LIU5X3-H1151
Inductive Linear Position Sensor



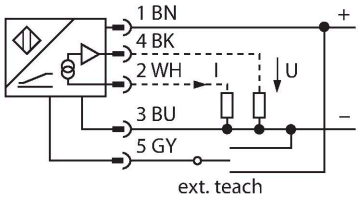
Technical data

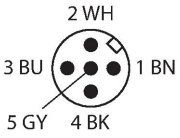
Type	LI500P0-Q25LM0-LIU5X3-H1151
Ident. no.	1590005
Measuring principle	Inductive
Measuring range	500 mm
Resolution	0,122 mm/12 bit
Nominal distance	1.5 mm
Blind zone a	29 mm
Blind zone b	29 mm
Repeat accuracy	≤ 0.026 % of full scale
Linearity deviation	≤ 0.07 %f.s.
Temperature drift	≤ ± 0.003 % / K
Hysteresis	not applied
Ambient temperature	-25…+70 °C
Operating voltage	15…30 VDC
Residual ripple	≤ 10 % U_{ss}
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage/Reverse polarity protection	yes / yes (voltage supply)
Output function	5-pin, Analog output
Voltage output	0…10 V
Current output	4…20 mA
Load resistance voltage output	≥ 4.7 kΩ
Load resistance, current output	≤ 0.4 kΩ
Sample rate	500 Hz
Current consumption	< 50 mA
Design	Profile,Q25L
Dimensions	558 x 35 x 25 mm

Features

- Rectangular, aluminium / plastic
- Versatile mounting possibilities
- LED indicates measuring range
- Immune to electromagnetic interference
- Extremely short blind zones
- Resolution, 12-bit
- 4-wire, 15…30 VDC
- Analog output
- Programmable measuring range
- 0…10 V and 4…20 mA
- M12 × 1 male, 5-pin

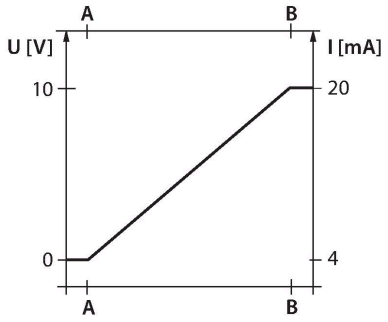
Wiring diagram





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.

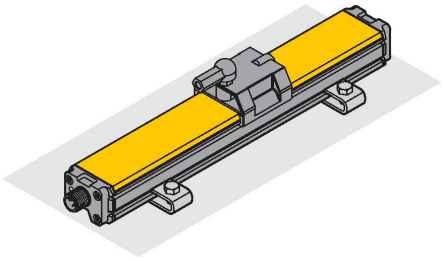


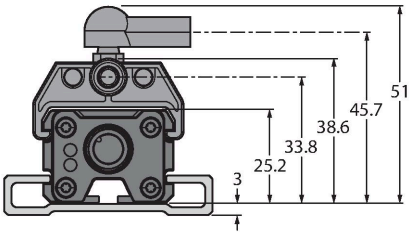
Technical data

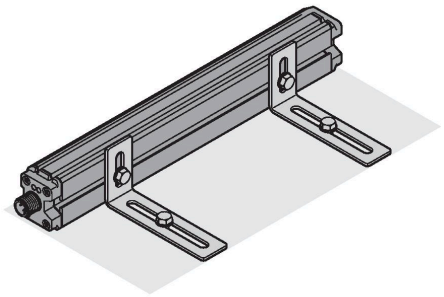
Housing material	Aluminum/plastic, PA6-GF30, Anodized
Active area material	Plastic, PA6-GF30
Electrical connection	Connectors, M12 × 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	138 years acc. to SN 29500 (Ed. 99) 40 °C
Power-on indication	LED,Green
Measuring range display	multifunction LED, green, yellow, yellow flashing

Mounting instructions

Mounting instructions/Description







Extensive mounting accessories provide various options for installation. Due to the measuring principle, which is based on the functional principle of an RLC coupling, the linear position sensor is immune to magnetized metal splinters and other interferences.
Status display via LED
Green:
Sensor is supplied properly
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
Off:
Positioning element is outside the programmed range (only with teachable versions)
Teaching
The start and end point of the measuring range are set by pressing the button on the teach adapter. Moreover there is the possibility of inverting 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

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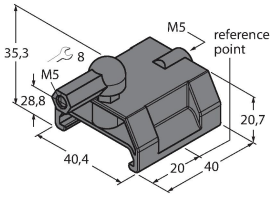
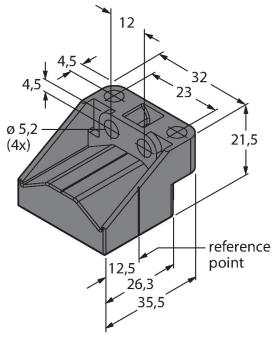
Accessories

P1-LI-Q25L **6901041**



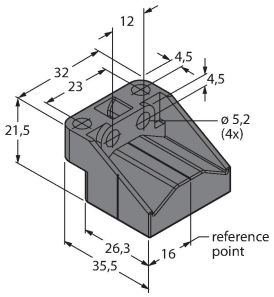
Guided positioning element for linear position sensors LI-Q25L, inserted in the groove of the sensor

P2-LI-Q25L **6901042**



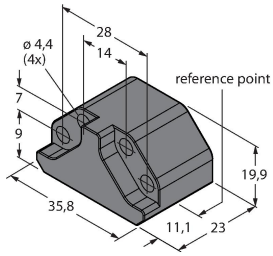
Floating positioning element for linear position sensors LI-Q25L; the nominal distance to the sensor is 1.5 mm; pairing with the linear position sensor at a distance of up to 5 mm or misalignment tolerance of up to 4 mm.

P3-LI-Q25L **6901044**



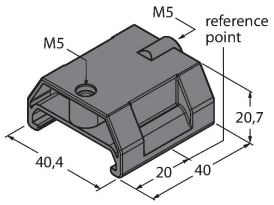
Floating positioning element for Li-Q25L linear position sensors; operational at an offset of 90 ; nominal distance to sensor 1.5 mm; pairing with linear position sensor at a distance of up to 5 mm; misalignment tolerance of up to 4 mm

P6-LI-Q25L **6901069**



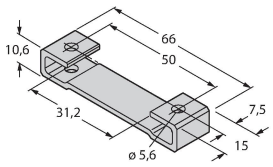
Floating positioning element for linear position sensors LI-Q25L; the nominal distance to the sensor is 1.5 mm; pairing with the linear position sensor at a distance of up to 5 mm or misalignment tolerance of up to 4 mm.

P7-LI-Q25L **6901087**



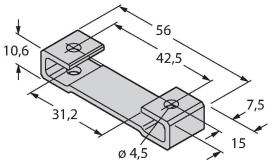
Guided positioning element for linear position sensors LI-Q25L, without ball joint

M1-Q25L **6901045**



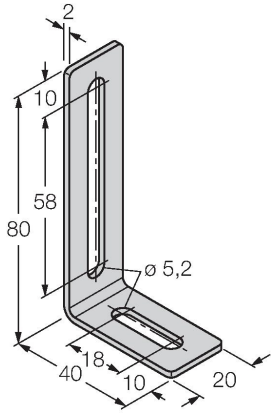
Mounting foot for linear position sensors LI-Q25L; material: aluminum; 2 pcs. per bag

M2-Q25L **6901046**



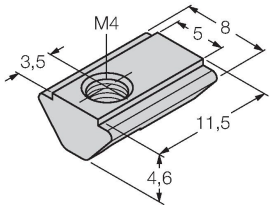
Mounting foot for linear position sensors LI-Q25L; material: aluminum; 2 pcs. per bag

M4-Q25L **6901048**



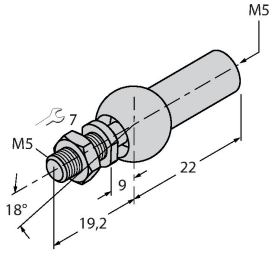
Mounting bracket and sliding block for linear position sensors LI-Q25L; material: Stainless steel; 2 pcs. per bag

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 **6901057**



Axial Joint for Guided Positioning Elements

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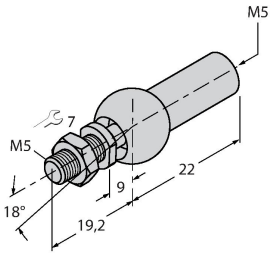
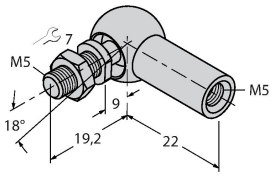
ABVA-M5	6901058



Axial joint for guided positioning element, stainless steel

RBVA-M5	6901059



Angle joint for guided positioning element, stainless steel

Accessories

Dimension drawing	Type	Ident. no.	
	TX1-Q20L60	6967114	Teach adapter for inductive encoders, linear position, angle, ultrasonic and capacitive sensors