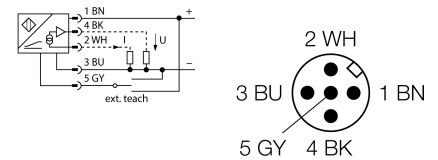


**Inductive linear position sensor**  
**LI1000P0-Q25LM0-LIU5X3-H1151**



- 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
- Cable with male end M12 x 1

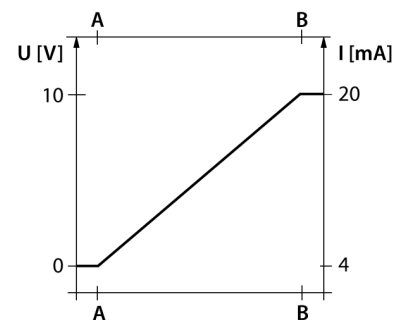
**Wiring diagram**



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

**Characteristic**



<b>Type code</b>	LI1000P0-Q25LM0-LIU5X3-H1151
<b>Ident no.</b>	1590008
<b>Measuring range [A...B]</b>	1000mm
Resolution	0.244 mm/12 bit
Nominal distance	1,5 mm
Blind zone a	29 mm
Blind zone b	29 mm
Repeatability	≤ 0.026 % of full scale
Linearity deviation	≤ 0.056 % f.s.
Temperature drift	≤ ± 0.003 % / K
Hysteresis	not applied
Ambient temperature	-25...+70 °C
<b>Operating voltage</b>	15...30VDC
Residual ripple	≤ 10 % U <sub>s</sub>
Rated insulation 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...10VDC
Current output	4...20mA
Load resistance voltage output	≥ 4.7 kΩ
Load resistance, current output	≤ 0.4 kΩ
Sample rate	500 Hz
Current consumption	< 50 mA
<b>Construction</b>	rectangular, Q25L
Dimensions	1058 x 35 x 25 mm
Housing material	aluminium, anodized
Material active area	plastic, PA
Connection	male, M12 x 1
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
IP Rating	IP67
MTTF	138 years acc. to SN 29500 (Ed. 99) 40 °C
<b>Power-on indication</b>	LED green
Measuring range display	multifunction LED, green, yellow, yellow flashing

# Inductive linear position sensor LI1000P0-Q25LM0-LIU5X3-H1151

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## 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 status:

**Green:**  
Sensor is supplied correctly

### LED indicates measuring range

**Green:**  
Positioning element is in the measuring range

**Yellow:**  
Positioning element is in the measuring range, signal low (e.g. distance too large)

**Yellow flashing:**  
Positioning element is outside the coverage

**LED OFF:**  
Positioning element is outside the programmed range (only with teachable versions)

### Teaching

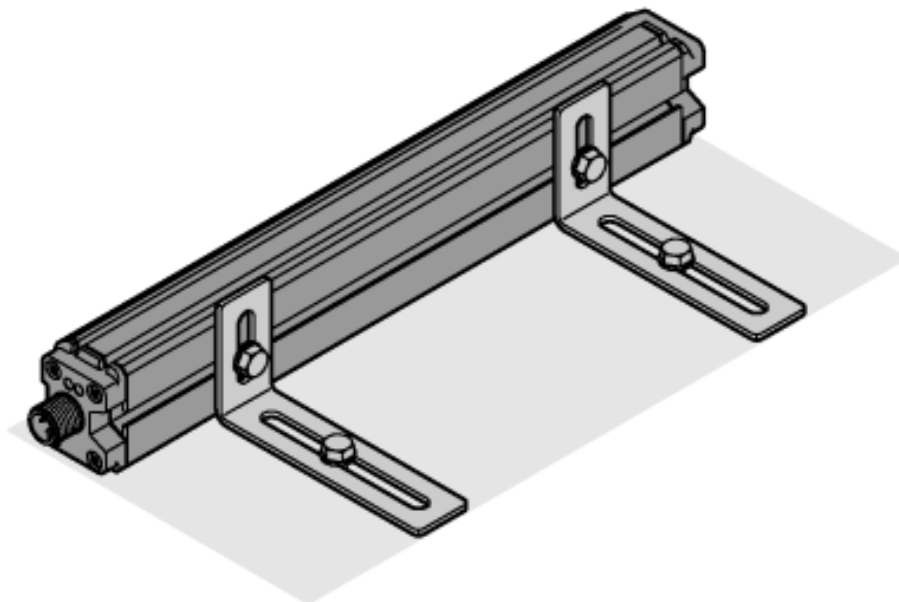
The start and end point of the measuring range are set by pressing the button at the teach adapter. Moreover there is the possibility to invert the course of the output curve.

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



**Inductive linear position sensor  
LI1000P0-Q25LM0-LIU5X3-H1151**

**Accessories**

Type code	Ident no.	Description	Design
P1-Li-Q25L	6901041	Guided positioning element for Li-Q25L, inserted in the sensor guide.	
P2-Li-Q25L	6901042	Floating positioning element for 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 a misalignment tolerance of up to 4 mm.	
P3-Li-Q25L	6901044	Floating positioning element for Li-Q25L; Operational at an offset of 90°; Nominal distance to sensor 1.5mm; 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 Li-Q25L; The nominal distance to the sensor is 1.5mm; Pairing with the linear position sensor at a distance of up to 5 mm; Misalignment tolerance of up to 4 mm.	
P7-Li-Q25L	6901087	Guided positioning element for Li-Q25L without ball joint	

**Inductive linear position sensor  
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**Accessories**

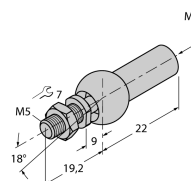
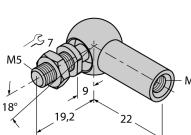
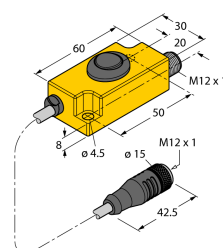
Type code	Ident no.	Description	Design
M1-Q25L	6901045	Mounting foot for linear position sensor Q25L; aluminium; 2 pcs. per bag	
M2-Q25L	6901046	Mounting foot for linear position sensor Q25L; aluminium; 2 pcs. per bag	
M4-Q25L	6901048	Mounting bracket for linear position sensor Q25L; material Stainless steel; 2 pcs. per bag	
MN-M4-Q25	6901025	Sliding block with M4 thread for the backside profile of the Q25L; material: galvanized steel; 10 pcs. per bag	
AB-M5	6901057	Axial joint for Li-Q25L specific guided positioning elements	

**Inductive linear position sensor**  
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**Accessories**

Type code	Ident no.	Description	Design
ABVA-M5	6901058	Axial joint for guided positioning element, stainless steel	
RBVA-M5	6901059	Angle joint for guided positioning element, stainless steel	
TX1-Q20L60	6967114	Teach adapter for inductive encoders, linear position, angle and ultrasonic sensors	
RKS4.5T-2/TXL	6626373	Connection cable, female M12, straight, 5-pin shielded, cable length: 2 m, sheath material: PUR, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>	