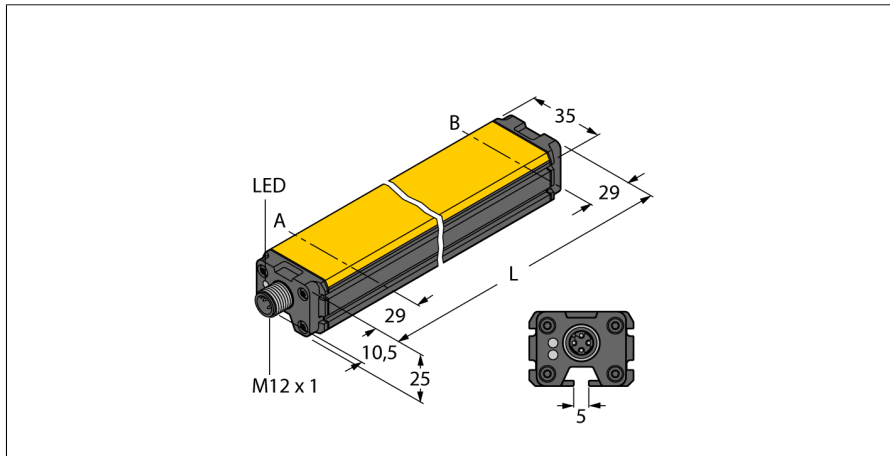


Inductive linear position sensor LI300P1-Q25LM1-LIU5X3-H1151

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- Rectangular, aluminium / plastic
- Versatile mounting possibilities
- Positioning element P1-Li-Q25L, mounting aid M1-Q25L included in delivery
- 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

Type designation	LI300P1-Q25LM1-LIU5X3-H1151
Ident-No.	1590062
Ident-No (TUSA)	M1590062

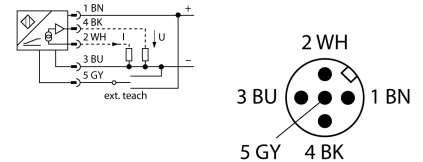
Measuring range [A...B]	300 mm
Resolution	12 bit
Nominal distance	1.5 mm
Blind zone a	29 mm
Blind zone b	29 mm
Repeat accuracy	≤ 0.026 % of full scale
Linearity deviation	≤ 0.07 % f.s.
Temperature drift	≤ ± 0.003 % / K
Hysteresis	not applied
Ambient temperature	-25...+70 °C

Operating voltage	15...30 VDC
Residual ripple	≤ 10 % U _s
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...10V
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	Rectangular, Q25L
Dimensions	358 x 35 x 25 mm
Housing material	Aluminium, Anodized
Active area material	Plastic, PA6-GF30
Electrical connection	Connector, 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
Included in delivery	P1-Li-Q25L, M1-Q25L

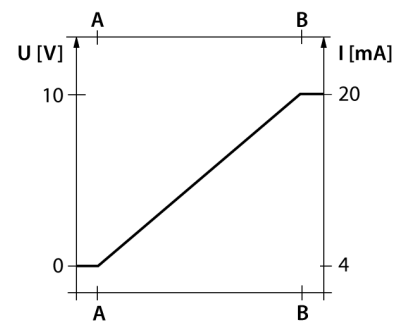
Wiring Diagram



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

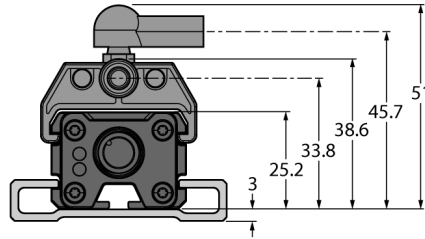
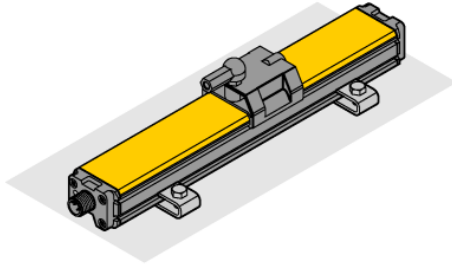


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Mounting instructions/Description



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:

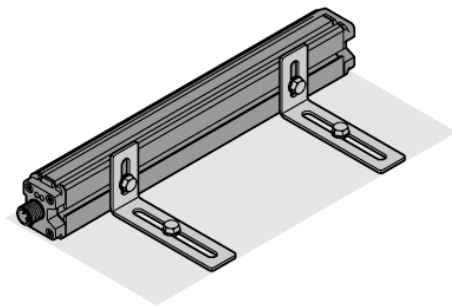
Positioning element is in the measuring range, signal low (e.g. distance too large)

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
LI300P1-Q25LM1-LIU5X3-H1151**

Accessories

Type code	Ident-No.	Description	
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 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
LI300P1-Q25LM1-LIU5X3-H1151**



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Accessories

Type code	Ident-No.	Description	
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
LI300P1-Q25LM1-LIU5X3-H1151**



Accessories

Type code	Ident-No.	Description	
ABVA-M5	6901058	Axial joint for guided positioning element, stainless steel	
RBVA-M5	6901059	Angle joint for guided positioning element, stainless steel	