### Type designation
LI100P0-Q25LM0-LIU5X3-H1151

### Ident no.
1590001

### Measuring principle
- **Inductive**

### Measuring range
100 mm

### Resolution
0.024 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
≤ 0.12 % f.s.

### Temperature drift
≤ ± 0.003 % / K

### Hysteresis
Not applied

### Ambient temperature
-25...+70 °C

### Operating voltage
- 15...30 VDC
- ≤ 10 % U,
- ≤ 0.5 kV

### Residual ripple
- ≤ 0.1 % U

### Isolation test voltage
- 0.5 kV

### 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
- **Profile, Q25L**

### Dimensions
158 x 35 x 25 mm

### 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

### Packaging unit
- 1

### Power-on indication
- **LED, Green**

### Measuring range display
- Multifunction LED, green, yellow, yellow flashing

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**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 proportionally 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**

![Characteristic Diagram]
Inductive Linear Position Sensor
LI100P0-Q25LM0-LIU5X3-H1151

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
### Accessories

<table>
<thead>
<tr>
<th>Type code</th>
<th>Ident no.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2-LI-Q25L</td>
<td>6901042</td>
<td>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.</td>
</tr>
<tr>
<td>P3-LI-Q25L</td>
<td>6901044</td>
<td>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.</td>
</tr>
<tr>
<td>P6-LI-Q25L</td>
<td>6901069</td>
<td>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.</td>
</tr>
<tr>
<td>P7-LI-Q25L</td>
<td>6901087</td>
<td>Guided positioning element for Li-Q25L without ball joint</td>
</tr>
</tbody>
</table>
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<tr>
<td>M1-Q25L</td>
<td>6901045</td>
<td>Mounting foot for linear position sensor Q25L; aluminium; 2 pcs. per bag</td>
</tr>
<tr>
<td>M2-Q25L</td>
<td>6901046</td>
<td>Mounting foot for linear position sensor Q25L; aluminium; 2 pcs. per bag</td>
</tr>
<tr>
<td>M4-Q25L</td>
<td>6901048</td>
<td>Mounting bracket for linear position sensor Q25L; material Stainless steel; 2 pcs. per bag</td>
</tr>
<tr>
<td>MN-M4-Q25</td>
<td>6901025</td>
<td>Sliding block with M4 thread for the backside profile of the Q25L; material: galvanized steel; 10 pcs. per bag</td>
</tr>
<tr>
<td>AB-M5</td>
<td>6901057</td>
<td>Axial joint for Li-Q25SL specific guided positioning elements</td>
</tr>
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<td>ABVA-M5</td>
<td>6901058</td>
<td>Axial joint for guided positioning element, stainless steel</td>
</tr>
<tr>
<td>RBVA-M5</td>
<td>6901059</td>
<td>Angle joint for guided positioning element, stainless steel</td>
</tr>
<tr>
<td>TX1-Q20L60</td>
<td>6967114</td>
<td>Teach adapter for inductive encoders, linear position, angle, ultrasonic and capacitive sensors</td>
</tr>
</tbody>
</table>