

Your Global Automation Partner

# TURCK

## Li-Q25L Linear Position Sensors



### Shock resistant sensors with IO-Link

The contactless linear position sensors with IP67 protection not only withstand harsh environmental conditions such as moisture and dirt - the devices also reliably output a position signal during vibrations and shocks of up to 200 g. The sampling rate of 5 kHz reduces tracking errors to a minimum, and control loops can be optimally designed. Precision has also been increased again with a 16-bit D/A converter.

In general, the magnetic field insensitive Li-sensors show their advantages in metalworking; thanks to their high shock resistance, paths in presses and punches of all kinds can be detected at any time without any problems, as well as in woodworking or plastic injection molding machines.

The new sensors with IO-Link output combine the advantages of both worlds, the inductive measurement technology and the IO-Link protocol, such as simple wiring, fast exchange and easy parameterization. The devices with analog interface enable redundant, interference-free operation by simultaneously transmitting a 4...20 mA current and 0...10 V voltage signal. Turck offers the linear position sensors in measuring lengths from 100...2000 mm.

### Your benefits

- Shock resistant up to 200 g
- Better control loop quality due to 5 kHz sampling rate
- Up to two meters measuring length
- Insensitive to magnetic interference fields
- High-precision measurement results due to 16-bit resolution
- IO-Link or 0...10 VDC/4...20 mA interface



Products are linked with further information.



# Li-sensors – shock resistant up to 200 g

- Excellent linearity properties even under extreme shock and vibration loads**  
 Due to the contactless coupling between the positioning element and the linear position sensor, the latter is extremely insensitive to shock and vibration. The sensor housing itself is extremely robust and can also be used in demanding applications with high shock loads, e.g. on presses. In addition, the sensor signal is not affected in its quality even under a shock load of up to 200 g. In summary, the Li-Q25L family convinces with excellent linearity properties that do not change even in shock-loaded environments.
- High sampling rate 5 kHz**  
 Unlike conventional contactless systems, the inductive measuring principle is not based on a time-of-flight measurement. Therefore, longer detection ranges can be

sampled just as quickly as shorter ones. An increased sampling rate is essential, especially where control quality is important. It is up to five times faster than with conventional systems.

- High resolution 16 bit**  
 The new Li generation uses a 16-bit converter as standard, which guarantees a high-resolution output signal even with long sensor versions offering large measuring ranges.
- Automatic error diagnostics**  
 The inductive linear position sensors indicate the current operating status via a diagnostic LED. If, for example, the distance between the sensor and the positioning element is likely to become

too large, this is indicated by a yellow LED. The new generation also offers an error signal in the process output of 24 mA or 11 V as soon as the distance between the sensor and the positioning element is outside the permissible range. This information can be easily evaluated in the controller and facilitates the error diagnostics of a machine.

- Advantages of the IO-Link interface**
  - Simplified installation
  - Automated parameterization
  - Extended diagnostics
  - Seamless integration into automation systems



## Variants with analog interface

ID	Type code	Measuring range [mm]
100001932	<a href="#">LI100P0-Q25LM0-ELIU5X3-H1151</a>	100
100001933	<a href="#">LI200P0-Q25LM0-ELIU5X3-H1151</a>	200
100001934	<a href="#">LI300P0-Q25LM0-ELIU5X3-H1151</a>	300
100001935	<a href="#">LI400P0-Q25LM0-ELIU5X3-H1151</a>	400
100001936	<a href="#">LI500P0-Q25LM0-ELIU5X3-H1151</a>	500
100001937	<a href="#">LI600P0-Q25LM0-ELIU5X3-H1151</a>	600
100001938	<a href="#">LI700P0-Q25LM0-ELIU5X3-H1151</a>	700
100001939	<a href="#">LI800P0-Q25LM0-ELIU5X3-H1151</a>	800
100001940	<a href="#">LI900P0-Q25LM0-ELIU5X3-H1151</a>	900
100001941	<a href="#">LI1000P0-Q25LM0-ELIU5X3-H1151</a>	1000
100001317	<a href="#">LI1250P0-Q25LM0-ELIU5X3-H1151</a>	1250
100001318	<a href="#">LI1500P0-Q25LM0-ELIU5X3-H1151</a>	1500
100001319	<a href="#">LI1750P0-Q25LM0-ELIU5X3-H1151</a>	1750
100001320	<a href="#">LI2000P0-Q25LM0-ELIU5X3-H1151</a>	2000

## Variants with IO-Link interface

ID	Type code	Measuring range [mm]
100012822	<a href="#">LI100P0-Q25LM0-IOLX3-H1141</a>	100
100012823	<a href="#">LI200P0-Q25LM0-IOLX3-H1141</a>	200
100012825	<a href="#">LI300P0-Q25LM0-IOLX3-H1141</a>	300
100012827	<a href="#">LI400P0-Q25LM0-IOLX3-H1141</a>	400
100012828	<a href="#">LI500P0-Q25LM0-IOLX3-H1141</a>	500
100012829	<a href="#">LI600P0-Q25LM0-IOLX3-H1141</a>	600
100012830	<a href="#">LI700P0-Q25LM0-IOLX3-H1141</a>	700
100012831	<a href="#">LI800P0-Q25LM0-IOLX3-H1141</a>	800
100012832	<a href="#">LI900P0-Q25LM0-IOLX3-H1141</a>	900
100012833	<a href="#">LI1000P0-Q25LM0-IOLX3-H1141</a>	1000
100012834	<a href="#">LI1250P0-Q25LM0-IOLX3-H1141</a>	1250
100012835	<a href="#">LI1500P0-Q25LM0-IOLX3-H1141</a>	1500
100012836	<a href="#">LI1750P0-Q25LM0-IOLX3-H1141</a>	1750
100012837	<a href="#">LI2000P0-Q25LM0-IOLX3-H1141</a>	2000

Accessories available separately



Products are linked with further information.

