

Your Global Automation Partner

TURCK

Li-Q25L

Shock-resistant Linear Position Sensors



New Sensor Generation

The new contactless linear position sensors with IP67 protection not only withstand harsh environmental conditions such as humidity and dirt – the devices also reliably output a position signal during vibrations and shocks of up to 200 g. The new contactless linear position sensors are also available with a wide range of applications. The sampling rate of 5 kHz reduces tracking errors to a minimum. This was not achievable in harsh applications until now. The precision has also been further increased with a 16-bit D/A converter.

In general, Li sensors, which are insensitive to magnetic fields, show their advantages in metalworking, since the metal chips produced here do not adhere to the position sensor and do not cause any linearity errors. Thanks to their shock resistance, paths

in all types of presses and punches can be easily detected at any time, but also in woodworking or plastic injection moulding machines.

The Li linear position sensors permanently deliver their output signal twice; in 0...10 V as well as in 4...20 mA. This enables an output signal redundancy which also enables logical tests of the position path and also reduces the number of device variants to be kept available. Turck offers the new devices in measuring lengths from 100 to 2000 mm.

Your Benefits

- Shock resistant up to 200 g
- Better control loop quality due to 5 kHz sampling rate up to 2 meters measuring length
- Insensitive to magnetic interference fields
- High-precision measurement results due to 16-bit resolution

Shock-resistant Linear Position Sensors 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 built-in track board in the sensor, the sensor is extremely immune to shock and vibration. The sensor housing is extremely robust and can also be used in demanding applications with high shock loads, e.g. on presses. The sensor is not destroyed. In addition, the quality of the sensor signal is not affected, even under a shock load of up to 200 g. The sensor signal is not affected by the shock. The Li-Q25L series convinces with outstanding linearity characteristics that do not change even in a shock-loaded environment.
- **High sampling rate 5 kHz**
 In contrast to conventional contactless systems, the inductive measuring principle is not based on a travel time measurement. Therefore, longer detection ranges can be sampled just as quickly as shorter ones. An increased sampling rate is particularly important 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.



Variants

Ident-No.	Type code	Measuring range [mm]
100001932	LI100P0-Q25LM0-ELIU5X3-H1151	100
100001933	LI200P0-Q25LM0-ELIU5X3-H1151	200
100001934	LI300P0-Q25LM0-ELIU5X3-H1151	300
100001935	LI400P0-Q25LM0-ELIU5X3-H1151	400
100001936	LI500P0-Q25LM0-ELIU5X3-H1151	500
100001937	LI600P0-Q25LM0-ELIU5X3-H1151	600
100001938	LI700P0-Q25LM0-ELIU5X3-H1151	700
100001939	LI800P0-Q25LM0-ELIU5X3-H1151	800
100001940	LI900P0-Q25LM0-ELIU5X3-H1151	900
100001941	LI1000P0-Q25LM0-ELIU5X3-H1151	1000
100001317	LI1250P0-Q25LM0-ELIU5X3-H1151	1250
100001318	LI1500P0-Q25LM0-ELIU5X3-H1151	1500
100001319	LI1750P0-Q25LM0-ELIU5X3-H1151	1750
100001320	LI2000P0-Q25LM0-ELIU5X3-H1151	2000

Accessories available separately

