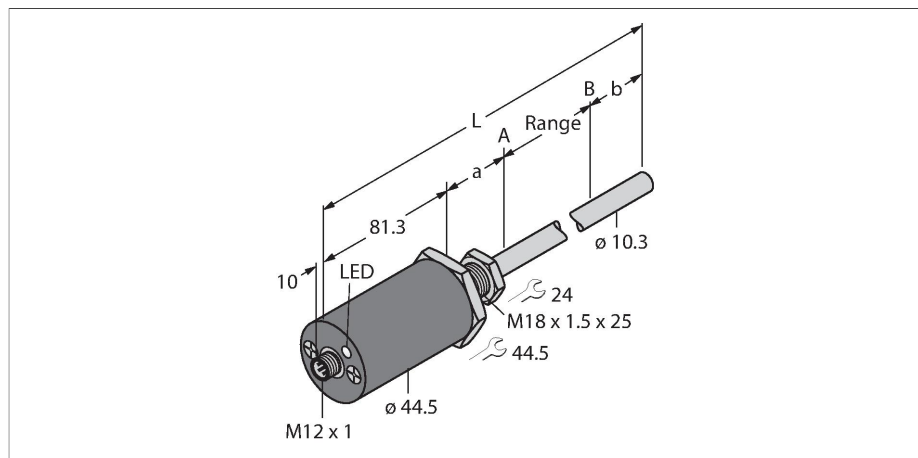


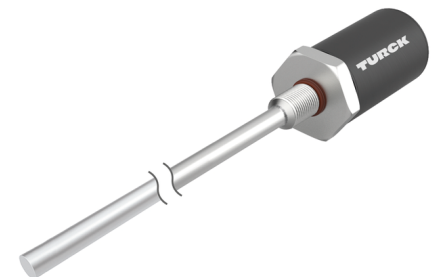
# LTX650M-F10-LI0-X3-H1151

## Pressure-Resistant Linear Position Sensor – Analog



### Technical data

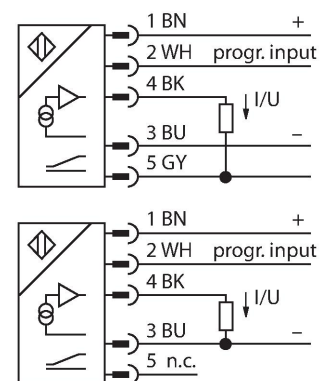
|                                        |                                                                  |
|----------------------------------------|------------------------------------------------------------------|
| Type                                   | LTX650M-F10-LI0-X3-H1151                                         |
| ID                                     | 1540294                                                          |
| Remark to product                      | Please note housing design on page 2                             |
| Measuring principle                    | Magnetostrictive                                                 |
| <b>General data</b>                    |                                                                  |
| Measuring range                        | 650 mm                                                           |
| Resolution                             | 16 bit                                                           |
| Blind zone a                           | 50.8 mm                                                          |
| Blind zone b                           | 63.5 mm                                                          |
| Repeat accuracy                        | ≤ 0.01 % of full scale                                           |
| Linearity deviation                    | ≤ 0.01 % f.s.                                                    |
| Hysteresis                             | ≤ 0.025 mm                                                       |
| <b>Electrical data</b>                 |                                                                  |
| Operating voltage $U_B$                | 7...30 VDC                                                       |
| Ripple $U_{ss}$                        | ≤ 10 % $U_{Bmax}$                                                |
| Short-circuit protection               | yes/Cyclic                                                       |
| Wire break/reverse polarity protection | yes (voltage supply)                                             |
| Output function                        | 5-pin, Analog output, Differential or common ground (see manual) |
| Current output                         | 4...20 mA                                                        |
| Load resistance current output         | ≤ 0.5 kΩ                                                         |
| Current consumption                    | < 60 mA at 24 VDC                                                |
| <b>Mechanical data</b>                 |                                                                  |
| Design                                 | Rod                                                              |
| Dimensions                             | 845.6 mm                                                         |
| Housing material                       | Metal, AL                                                        |
| Active area material                   | Stainless steel, 1.4404 (AISI 316L)                              |



### Features

- Suited for hydraulic cylinders
- The sensor is pressure resistant up to 340 bar (permanent), 680 bar (short-term)
- Shock-proof up to 100g
- Status displayed via 3 color LED
- 16-bit resolution
- Adjustable measuring range
- Operating temperature rod -40 °C...+105 °C
- Operating temperature electronics -40 °C...+85 °C
- Protection class IP68
- 7...30 VDC supply voltage
- Analog output 4...20 mA
- M12 × 1 connector

### Wiring diagram



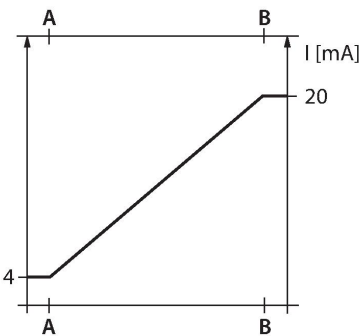
### Functional principle

The LTX is a magnetostrictive sensor, optimized for precise position control in hydraulic cylinders. With the assistance of optional floats, the magnetically actuated position sensors also implement additional fill level monitoring. The absolute value sensor is very robust and precise, and also saves the position

Technical data

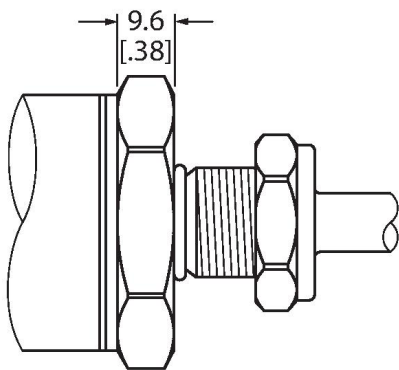
|                          |                    |
|--------------------------|--------------------|
| Electrical connection    | Connector, M12 × 1 |
| Environmental conditions |                    |
| Ambient temperature      | -40...+85 °C       |
| Vibration resistance     | 30 Hz (1 mm)       |
| Shock resistance         | 100 g (11 ms)      |
| Protection class         | IP68               |
| Measuring range display  | multifunction LED  |

information in the event of a voltage failure, so that additional zeroing is unnecessary. The sensors operate on the contactless function principle and are thus wear and maintenance free.



Mounting instructions

Mounting instructions/Description



Flat Face Design

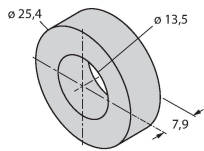
This sensor comes in flat face design (see drawing).

To fasten the sensor, the end cap of the hydraulic cylinder must have an M18 × 1.5 threaded bore according to ISO 6149-1. For more information, refer to the operating instructions.

Accessories

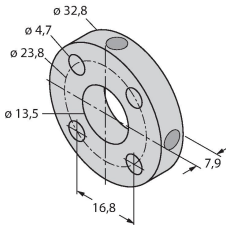
CM-R10 6900416

Standard positioning element, suitable for mounting in hydraulic cylinders



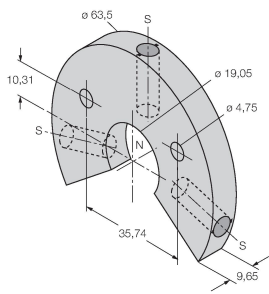
STM-AL-R10 6900409

Standard 4-hole positioning element, material: Aluminum



## LSPM-AL-R10

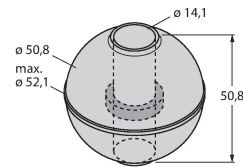
6900414



Ring-type positioning element with slot, can be used for external mounting with mounting bracket RB-R10, material: Aluminum

## EF-R10

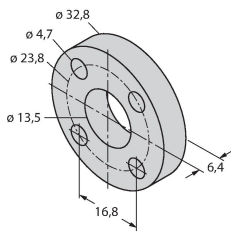
6900417



Float-type positioning element, specific weight 0.62 kg/m<sup>3</sup>, suitable for external mounting for level monitoring, material: Stainless steel

## STS-R10

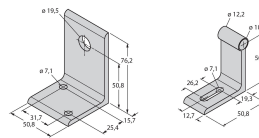
6900411



Standard spacer made of non-ferrous material for separating the positioning element from the base of the hydraulic piston rod

## MB-R10

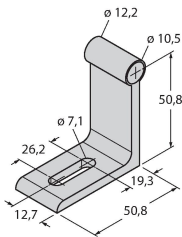
6900419



Mounting bracket for sensor head and rod, for external mounting

## RB-R10

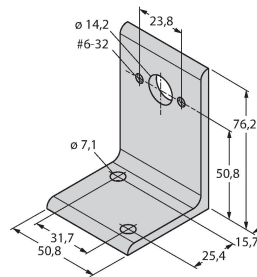
6900420



Mounting bracket for rod, for external mounting

## MMB-R10

6900004



Mounting bracket for positioning element, for external mounting

## RP-Q21

6900005

Teach adapter to adjust the measuring range

Kein Maßbild vorhanden/  
No dimension drawing available