

# LTX5500M-F10-SSI2-GAF1-X3-H1161

## Pressure-Resistant Linear Position Sensor – SSI



### Technical data

|                                        |                                            |
|----------------------------------------|--------------------------------------------|
| Type                                   | LTX5500M-F10-SSI2-GAF1-X3-H1161            |
| ID                                     | 1540270                                    |
| Remark to product                      | Please note housing design on page 2       |
| Measuring principle                    | Magnetostrictive                           |
| <b>General data</b>                    |                                            |
| Measuring range                        | 5500 mm                                    |
| Resolution                             | 0.005 mm                                   |
| 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)                       |
| Communication protocol                 | SSI                                        |
| Output function                        | 6-pin, 25 Bit, Gray, asynchronous, Forward |
| Current consumption                    | < 60 mA at 24 VDC                          |
| <b>Mechanical data</b>                 |                                            |
| Design                                 | Rod                                        |
| Dimensions                             | 5695.6 mm                                  |
| Housing material                       | Metal, AL                                  |
| Active area material                   | Stainless steel, 1.4404 (AISI 316L)        |
| Electrical connection                  | Connector, M12 x 1                         |

### 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
- Resolution 0,005 mm
- Operating temperature rod -40 °C...+105 °C
- Operating temperature electronics -40 °C...+85 °C
- Protection class IP68
- 7...30 V DC power supply
- SSI - output, gray coded, 25 bit
- M12 x 1 connector

### Wiring diagram



### Functional principle

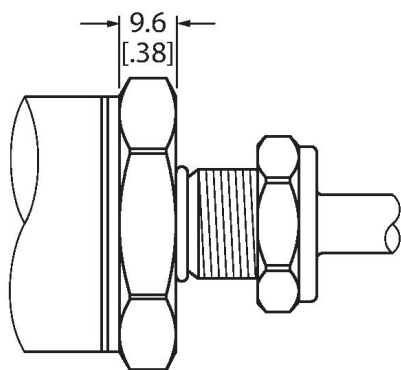
The LTX is a magnetostrictive sensor, optimized for precise position control in hydraulic cylinders. With the assistance of optional floats, the magnetically actuated position sensors also implement additional fill level monitoring. The absolute value sensor is very robust and precise, and also saves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

Technical data

| 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 |

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



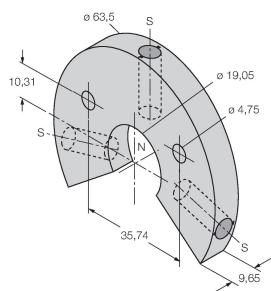
STM-AL-R10 6900409

Standard 4-hole positioning element, material: Aluminum



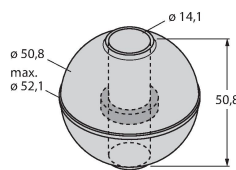
LSPM-AL-R10 6900414

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/m³, suitable for external mounting for level monitoring, material: Stainless steel



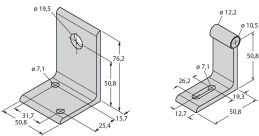
**STS-R10** **6900411**

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



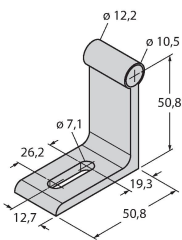
**MB-R10** **6900419**

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

