



## Level sensors TDR level sensor, LFT

LFT1500-01A1A50



**Model Name** > [LFT1500-01A1A50](#)  
**Part No.** > [1045921](#)



*Product may differ  
from illustration*

#### At a glance

- Time-of-flight measurement technology
- Up to 4 switching outputs, combination of analog and digital outputs possible
- Small deadband, ideal for small containers
- Simple, single-button teach
- Flexible probe length up to 2,000 mm
- No re-calibration necessary when fluid properties change
- Measurement independent of installation conditions and tank material
- Filter available for dirty and contaminated fluids

#### Your benefits

- High resolution, accuracy, and repeatability
- Reliable measurement independent of liquid type, installation condition and tank material due to TDR technology
- One device performs the functionality for switching and continuous applications, reducing the number of sensors required
- Reduced installation time and costs through high flexibility
- No re-calibration necessary, saving commissioning time
- A variety of available probe lengths meets the needs of many applications
- No moving parts reduces maintenance costs



#### Features

|                      |                    |
|----------------------|--------------------|
| Medium:              | Fluids             |
| Measurement:         | Switch, Continuous |
| Probe length:        | 1,500 mm           |
| Measuring range:     | 30 mm ... 1,490 mm |
| Process pressure:    | ≤ 1 bar            |
| Process temperature: | 0 °C ... 80 °C     |
| WHG approval:        | -                  |
| GOST approval:       | ✓                  |
| UL approval:         | -                  |

#### Performance

|                             |        |
|-----------------------------|--------|
| Resolution:                 | ≤ 1 mm |
| Accuracy of sensor element: | ± 3 mm |
| Repeatability:              | 2      |
| Dielectricity constant:     | 1.8    |

Response time: 200 ms

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**Mechanical data**

|                     |                                     |
|---------------------|-------------------------------------|
| Inactive area:      | Each 10 mm                          |
| Housing material:   | PBT                                 |
| Process connection: | G 3/4 A                             |
| Wetted parts:       | Stainless steel 316L/301, PBT, PTFE |

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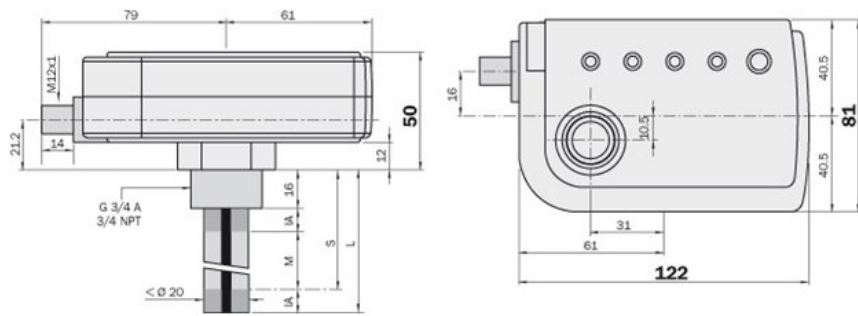
**Electrical data**

|                      |                                                                |
|----------------------|----------------------------------------------------------------|
| Temperature drift:   | $\pm 0.05$ mm/K                                                |
| Enclosure rating:    | IP 67                                                          |
| Supply voltage:      | 18 V DC ... 30 V DC                                            |
| Ripple:              | $\leq 5$ Vpp                                                   |
| Power consumption:   | $\leq 90$ mA at 24 V without output load                       |
| Protection class:    | III                                                            |
| Initialization time: | $\leq 4$ s                                                     |
| Output signal:       | 4 mA ... 20 mA, 1x PNP, normally closed, hysteresis adjustable |
| Output load:         | $< 500 \Omega$                                                 |
| Upper signal level:  | 20 ... 20.5                                                    |
| Lower signal level:  | 3.8 ... 4                                                      |
| Hysteresis:          | 3 mm                                                           |
| Signal voltage HIGH: | $V_s - 2$ V                                                    |
| Signal voltage LOW:  | $0 \text{ V} \leq 1 \text{ V}$                                 |
| Capacitive load:     | $< 100$ nF                                                     |
| Inductive load:      | $\leq 1$ H                                                     |
| Connection type:     | M12x1, 5-pin                                                   |

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**Ambient data**

|                                |                  |
|--------------------------------|------------------|
| Ambient operating temperature: | -10 °C ... 60 °C |
| Ambient storage temperature:   | -40 °C ... 80 °C |



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