



## Level sensors TDR-sensor, LFT

LFT1800-01B1A20



**Model Name** > LFT1800-01B1A20  
**Part No.** > 1043647



*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:        | 1,800 mm           |
| Measuring range:     | 30 mm ... 1,790 mm |
| Process pressure:    | 1 bar              |
| Process temperature: | 0 °C ... 80 °C     |
| WHG approval:        | -                  |
| GOST approval:       | ✓                  |
| UL approval:         | -                  |

#### Performance

|                         |        |
|-------------------------|--------|
| Resolution:             | 1 mm   |
| Accuracy:               | ± 3 mm |
| Repeatability:          | < 2 mm |
| 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 1.4404/316L |

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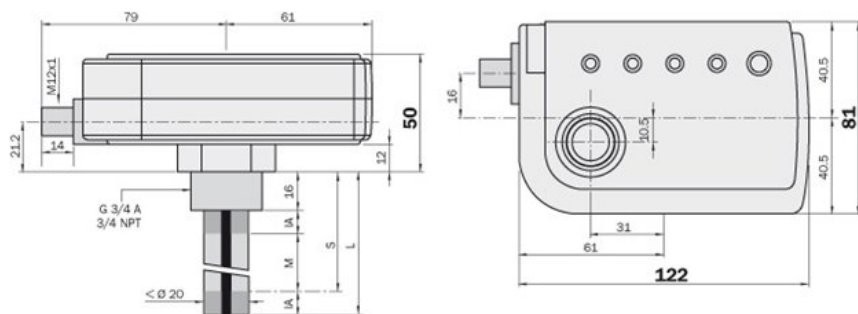
**Electrical data**

|                       |                                          |
|-----------------------|------------------------------------------|
| 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 |
| VDE protection class: | III                                      |
| Initialization time:  | 4 s                                      |
| Output signal:        | 4 mA ... 20 mA2, PNP, NCC                |
| Output load:          | $< 500$ Ohm                              |
| Upper signal level:   | 20 mA ... 20.5 mA                        |
| Lower signal level:   | 3.8 mA ... 4 mA                          |
| 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:       | 1 H                                      |
| Connection type:      | M12x1, 8-pol                             |

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**Ambient data**

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



**Australia**

Phone +61 3 9457 0600  
1800 334 802 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail sac@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Ceská Republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail kundenservice@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6801000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 3358 1341  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederlands**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail austefjord@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail admin@sicksgp.com.sg

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886-2-2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 8865 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 800-325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)