

# UR12.P50-GP2C.7BF

Ultrasonic 2 point proximity switch

Article number: 11704836

## Overview

- Fastest limit value detection due to extremely short response times
- Acquisition of two independent limit values
- Flexible parameterization and additional diagnostic data thanks to IO-Link
- Shortest blind zone in its class
- High performance in compact housing



## IO-Link

### Technical data

#### General data

|                                 |   |
|---------------------------------|---|
| Special type                    | 2 point proximity switch                                  |
| Scanning range Sd               | 15 ... 500 mm   |
| Scanning range close limit Sdc  | 15 ... 500 mm   |
| Scanning range far limit Sde    | 15 ... 500 mm   |
| Version                         | IO-Link dual channel Multiplex version                    |
| Hysteresis typ.                 | 4 % Sde   |
| Repeat accuracy                 | < 0.5 mm  |
| Temperature drift               | > 50 mm < 2 % of distance to target Sde<br>< 50 mm ± 1 mm |
| Power-up drift                  | Compensated after 15 min.                                 |
| Response time ton/toff min      | < 16 ms   |
| Response time ton/toff standard | < 40 ms   |
| Sonic frequency                 | 290 kHz   |
| Adjustment                      | line-Teach, IO-Link                                       |
| Output indicator                | Yellow LED / red LED                                      |
| Light indicator                 | LED yellow  |
| Power on indication             | LED green   |
| Alignment measuring axis        | < 2°  |
| Resolution                      | < 0.3 mm  |

#### Electrical data

|                             |                |
|-----------------------------|----------------|
| Voltage supply range +Vs    | 12 ... 30 VDC  |
| Current consumption typ.    | 35 mA          |
| Output circuit              | Push-pull      |
| Output current              | 100 mA         |
| Voltage drop Vd             | <3 VDC         |
| Residual ripple             | < 10 % Vs      |
| Short circuit protection    | Yes            |
| Reverse polarity protection | Yes, Vs to GND |

#### Communication interface

|                        |   |
|------------------------|---|
| Interface              | IO-Link V1.1  |
| Baud rate              | 38,4 kBaud (COM 2)  |
| Cycle time             | ≥ 8 ms  |
| Process data length    | 48 Bit  |
| Process data structure | Bit 0 = SSC1 (distance)<br>Bit 1 = SSC2 (distance)<br>Bit 2 = quality<br>Bit 3 = alarm<br>Bit 5 = SSC4 (counter)<br>Bit 8-15 = scale factor<br>Bit 16-47 = 32 Bit measurement |
| IO-Link port type      | Class A   |
| Additional data        | Distance<br>Excess gain<br>Operating cycles<br>Operating hours<br>Boot cycles<br>Operating voltage<br>Device temperature<br>Histograms  |
| Adjustable parameters  | Time filters<br>LED status indicators<br>Output logic<br>Output circuit<br>Counter<br>Beam forming<br>Deactivate the sensor element<br>Find Me function                       |
| IO-Link                | Yes   |

#### Mechanical data

|                        |                      |
|------------------------|----------------------|
| Design                 | Cylindrical threaded |
| Housing material       | Brass nickel plated  |
| Width / diameter       | 12 mm                |
| Height / length        | 50 mm                |
| Connection types       | Connector M12 5 pin  |
| Tightening torque max. | 15 Nm (Front: 10 Nm) |

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### Ambient conditions

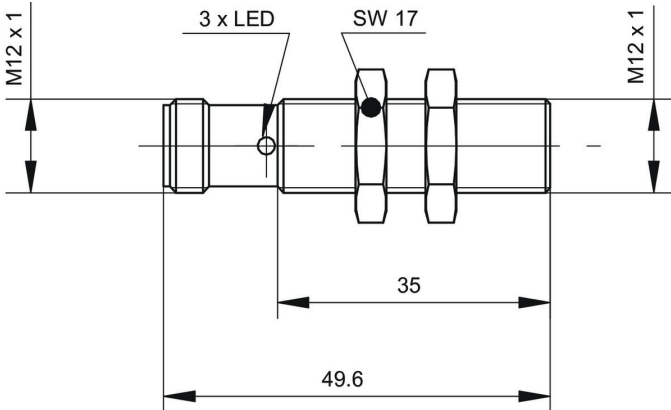
Operating temperature -25 ... +65 °C

### Ambient conditions

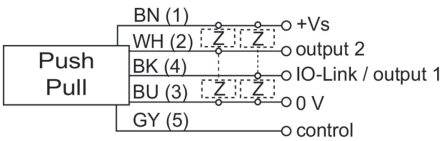
Storage temperature -40 ... +75 °C

Protection class IP 67

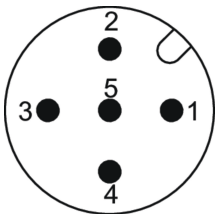
## Dimension drawing



## Connection diagram



## Pin assignment



## Typical sonic cone profile

