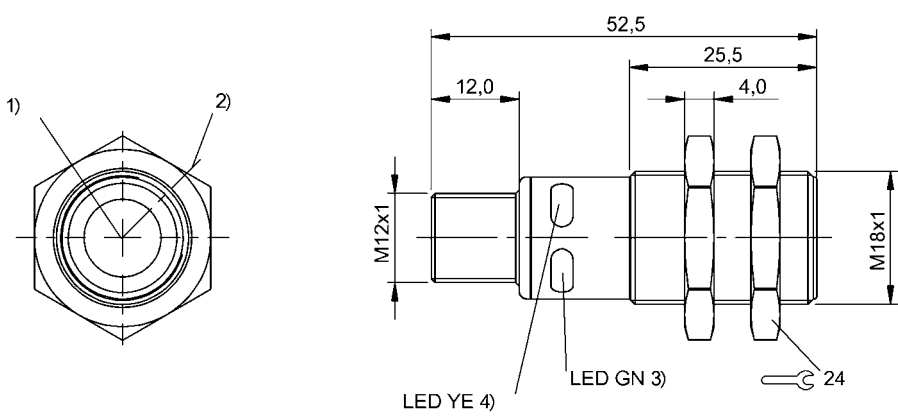


Ultrasonic Sensors  
BUS M18M1-GPXI-12/100-S92G  
Order Code: BUS004P



1) Ultrasonic transducer axis, 2) Exit direction 90° connector, 3) LED function indicator, 4) Output function



Basic features

|                     |                                                                                                        |
|---------------------|--------------------------------------------------------------------------------------------------------|
| Application         | Distance measurement<br>Object detection                                                               |
| Approval/Conformity | cULus<br>CE<br>WEEE<br>UKCA                                                                            |
| Operating mode      | IO-Link<br>Reflectionlight scanner (switching point)<br>Refl.light scanner (window)<br>Retro-reflector |
| Series              | M18M1                                                                                                  |

Display/Operation

|          |                                                 |
|----------|-------------------------------------------------|
| Adjuster | no                                              |
| Display  | Output function- LED yellow<br>LED green: Power |

Electrical connection

|                             |                   |
|-----------------------------|-------------------|
| Connection                  | M12x1-Male, 5-pin |
| Polarity reversal protected | yes               |
| Short-circuit protection    | yes               |

Electrical data

|                               |                                                                                                                                                                              |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Current draw max.             | 40 mA                                                                                                                                                                        |
| Hysteresis H max.             | 20 mm                                                                                                                                                                        |
| Input function                | Select operating mode<br>Factory setting (Reset)<br>Synchronization on/off<br>NO/NC<br>SIO mode/IO-Link mode<br>Teach switching distance, 2 values<br>Synchronization signal |
| Operating voltage Ub          | 10...30 VDC                                                                                                                                                                  |
| Output current max.           | 100 mA                                                                                                                                                                       |
| Rated operating voltage Ue DC | 24 V                                                                                                                                                                         |
| Switching frequency           | 10 Hz                                                                                                                                                                        |
| Synchronization               | internal, max. 10 sensors                                                                                                                                                    |
| Ultrasonic Frequency          | 200 kHz                                                                                                                                                                      |

Environmental conditions

|                     |             |
|---------------------|-------------|
| Ambient temperature | -25...70 °C |
| IP rating           | IP67        |
| Storage temperature | -40...85 °C |

Functional safety

|              |        |
|--------------|--------|
| MTTF (40 °C) | 1134 a |
|--------------|--------|

Interface

|                          |                                                                                                                                                                                                                                            |
|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interface                | IO-Link 1.0                                                                                                                                                                                                                                |
| Interface setting option | Switch. point (2x for window)<br>SIO mode/IO-Link mode<br>Measured value filter<br>Hysteresis<br>Filter strength (10 levels)<br>Operating mode<br>Foreground suppression range<br>Normally open/Normally closed<br>Factory setting (Reset) |
| Process data OUT         | Distance value<br>Switching state                                                                                                                                                                                                          |
| Process data cycle min.  | 20 ms                                                                                                                                                                                                                                      |
| Switching output         | PNP/NPN NO/NC push-pull                                                                                                                                                                                                                    |

Material

|                          |                             |
|--------------------------|-----------------------------|
| Housing material         | Brass, nickel-plated<br>PBT |
| Material sensing surface | PU foam/Epoxy resin/Glass   |
| Surface protection       | nickel-plated               |

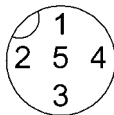
Mechanical data

|               |                |
|---------------|----------------|
| Dimension     | Ø 18 x 52.5 mm |
| Mounting part | Nut M18x1      |

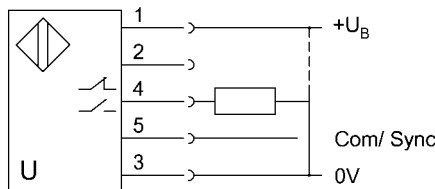
Range/Distance

|                             |               |
|-----------------------------|---------------|
| Measuring range             | 120...1300 mm |
| Rated operating distance Sn | 1000 mm       |
| Repeat accuracy             | ± 0.15 %FS    |
| Resolution                  | ≤ 0.069 mm    |

Connector Drawings



Wiring Diagrams



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Technical Drawings

