

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



**Basic features**

|                            |                                   |
|----------------------------|-----------------------------------|
| <b>Application</b>         | Distance measurement              |
| <b>Approval/Conformity</b> | cULus<br>CE<br>WEEE<br>UKCA       |
| <b>Operating mode</b>      | Analog measurement (output curve) |
| <b>Series</b>              | W18M1                             |

**Display/Operation**

|                 |  |
|-----------------|--|
| <b>Adjuster</b> | no   |
| <b>Display</b>  | LED green: Power<br>Object in range - LED yellow |

**Electrical connection**

|                                    |                   |
|------------------------------------|-------------------|
| <b>Connection</b>                  | M12x1-Male, 5-pin |
| <b>Polarity reversal protected</b> | yes               |
| <b>Short-circuit protection</b>    | yes               |

**Electrical data**

|   |  |
|---|--|
| <b>Current draw max.</b>                  | 40 mA  |
| <b>Input function</b>                     | Output curve rising/falling<br>Teach in the working range<br>Factory setting (Reset)<br>Synchronization on/off<br>Synchronization signal |
| <b>Load resistance RL min. (Analog V)</b> | 100 kOhm at UB > 15 V  |
| <b>Operating voltage Ub</b>               | 15...30 VDC  |
| <b>Rated operating voltage Ue DC</b>      | 24 V   |
| <b>Synchronization</b>                    | internal, max. 10 sensors  |
| <b>Ultrasonic Frequency</b>               | 380 kHz  |

**Environmental conditions**

|                            |             |
|----------------------------|-------------|
| <b>Ambient temperature</b> | -25...70 °C |
| <b>IP rating</b>           | IP67        |
| <b>Storage temperature</b> | -40...85 °C |

**Functional safety**

|                     |        |
|---------------------|--------|
| <b>MTTF (40 °C)</b> | 1134 a |
|---------------------|--------|

Ultrasonic Sensors  
**BUS W18M1-XA-02/015-S92G**  
**Order Code: BUS0028**

**BALLUFF**

**Interface**

|                              |                          |
|------------------------------|--------------------------|
| <b>Analog output</b>         | Analog, voltage 0...10 V |
| <b>Output characteristic</b> | linear rising/falling    |

**Material**

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

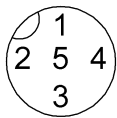
**Mechanical data**

|                      |                |
|----------------------|----------------|
| <b>Dimension</b>     | Ø 18 x 68.4 mm |
| <b>Mounting part</b> | Nut M18x1      |

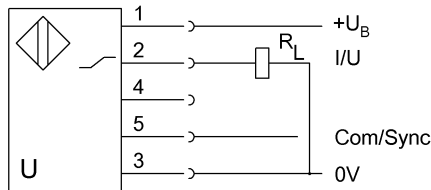
**Range/Distance**

|  |             |
|--|-------------|
| <b>Measuring range</b>                           | 25...250 mm |
| <b>Rated operating distance <math>S_n</math></b> | 150 mm      |
| <b>Repeat accuracy</b>                           | ± 0.15 %FS  |
| <b>Resolution</b>                                | ≤ 0.070 mm  |

**Connector Drawings**



**Wiring Diagrams**



Technical Drawings

