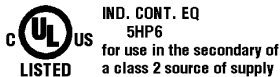


1) Ultrasonic transducer axis, 2) Exit direction 90° connector, 3) Display and control panel



### Basic features

|                            |   |
|----------------------------|---|
| <b>Application</b>         | Object detection  |
| <b>Approval/Conformity</b> | cULus LISTED<br>CE<br>EAC<br>WEEE   |
| <b>Operating mode</b>      | Retro-reflector<br>Reflectionlight scanner (switching point)<br>Refl.light scanner (window) |
| <b>Series</b>              | M30M1   |

### Display/Operation

|                 |   |
|-----------------|---|
| <b>Adjuster</b> | Key (2x)  |
| <b>Setting</b>  | Multiplex speed<br>Synchronization on/off<br>Synchronous/Multiplex mode<br>Segment displ. bright/dark/off<br>Filter strength (10 levels)<br>Response delay 0 to 20 s<br>Foreground suppression range<br>Multiplex sensor address<br>Sensor calibration<br>Temperature comp. on/off<br>Measured value filter<br>Hysteresis<br>Detection range (3 levels)<br>Teach-in mode display/button<br>Factory setting (Reset)<br>Key disable on/off<br>Operating mode<br>Switching distance, 2 values<br>Normally open/Normally closed |

### Electrical connection

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

### Electrical data

|   |                           |
|---|---------------------------|
| <b>Current draw max.</b>                        | 80 mA                     |
| <b>Hysteresis H max.</b>                        | 20 mm                     |
| <b>Input function</b>                           | Synchronization signal    |
| <b>Operating voltage U<sub>b</sub></b>          | 9...30 VDC                |
| <b>Output current max.</b>                      | 200 mA                    |
| <b>Rated operating voltage U<sub>e</sub> DC</b> | 24 V                      |
| <b>Switching frequency</b>                      | 8 Hz                      |
| <b>Synchronization</b>                          | internal, max. 10 sensors |
| <b>Ultrasonic Frequency</b>                     | 200 kHz                   |

### Environmental conditions

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

### Functional safety

|                     |        |
|---------------------|--------|
| <b>MTTF (40 °C)</b> | 1483 a |
|---------------------|--------|

Ultrasonic Sensors  
**BUS M30M1-NPX-20/130-S92K**  
**Order Code: BUS0036**



**Material**

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

**Mechanical data**

|                 |             |
|-----------------|-------------|
| <b>Mounting</b> | Nut M30x1.5 |
|-----------------|-------------|

**Output/Interface**

|                         |   |
|-------------------------|---|
| <b>Switching output</b> | NPN normally open/normally closed (NO/NC) |
|-------------------------|---|

**Range/Distance**

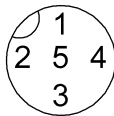
|                                    |               |
|------------------------------------|---------------|
| <b>Range</b>                       | 200...2000 mm |
| <b>Rated operating distance Sn</b> | 1300 mm       |
| <b>Repeat accuracy</b>             | ± 0.15 %FS    |
| <b>Resolution</b>                  | ≤ 0.180 mm    |

**Remarks**

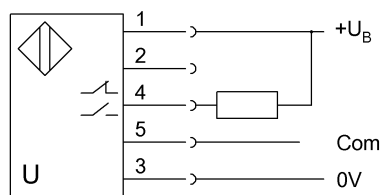
The sensor is functional again after the overload has been eliminated.  
 Reference object for Sn: tube  $\varnothing$ 27mm. Max. range refers to the aligned plate.  
 Do not press key using a pointed tool.  
 Order accessories separately.  
 For additional information, refer to user's guide.  
 For more information about MTTF and B10d see MTTF / B10d Certificate

Indication of the MTTF- / B10d value does not represent a binding composition and/or life expectancy assurance; these are simply experiential values with no warranty implications. These declared values also do not extend the expiration period for defect claims or affect it in any way.

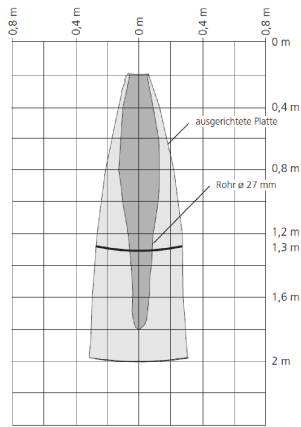
**Connector Drawings**



**Wiring Diagrams**



## Technical Drawings



## Help Views

