

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



**Basic features**

<b>Application</b>	Distance measurement Object detection
<b>Approval/Conformity</b>	cULus CE WEEE UKCA
<b>Operating mode</b>	Retro-reflector Refl.light scanner (window) Reflectionlight scanner (switching point) Analog measurement (output curve)
<b>Series</b>	M30E1

**Display/Operation**

<b>Adjuster</b>	Key (2x)
<b>Display</b>	Distance value - segment display Output function- LED yellow Object not in range - LED red Object in range - LED green Sensor settings - segment display
<b>Setting</b>	Synchronous/Multiplex mode Segment displ. bright/dark/off Filter strength (10 levels) Response delay 0 to 20 s Foreground suppression range Multiplex sensor address Sensor calibration Temperature comp. on/off Output curve rising/falling Analog output U/I/Auto Segment display mode Synchronization on/off Multiplex speed Measured value filter Hysteresis Factory setting (Reset) Key disable on/off Normally open/Normally closed Switching distance, 2 values Operating mode Detection range (3 levels) Teach-in mode display/button Output curve window

Ultrasonic Sensors  
**BUS M30E1-PPC-60/600-S92K**  
Order Code: **BUS003Y**

**BALLUFF**

**Electrical connection**

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

**Electrical data**

Current draw max.	80 mA
Hysteresis H max.	100 mm
Input function	Synchronization signal
Load resistance RL max. (Analog I)	500 Ohm at UB > 20 V 100 Ohm at UB < 20 V
Load resistance RL min. (Analog V)	100 kOhm at UB > 15 V
Operating voltage Ub	9...30 VDC
Output current max.	200 mA
Rated operating voltage Ue DC	24 V
Switching frequency	3 Hz
Synchronization	internal, max. 10 sensors
Ultrasonic Frequency	80 kHz

**Environmental conditions**

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

**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.

**Functional safety**

MTTF (40 °C)	1483 a
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**Interface**

Analog output	Analog, voltage/Analog, current 0...10 V/4...20 mA
Output characteristic	linear rising/falling
Switching output	PNP normally open/normally closed (NO/NC)

**Material**

Housing material	Stainless steel PBT, TPU
Material sensing surface	PU foam/Epoxy resin/Glass

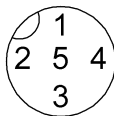
**Mechanical data**

Dimension	$\varnothing$ 65 x 116.2 mm
Mounting part	Nut M30x1.5

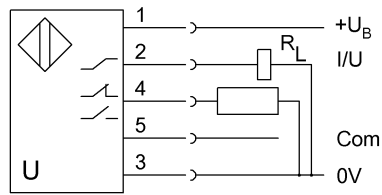
**Range/Distance**

Measuring range	600...8000 mm
Rated operating distance Sn	6000 mm
Repeat accuracy	$\pm$ 0.15 %FS
Resolution	$\leq$ 0.180 mm

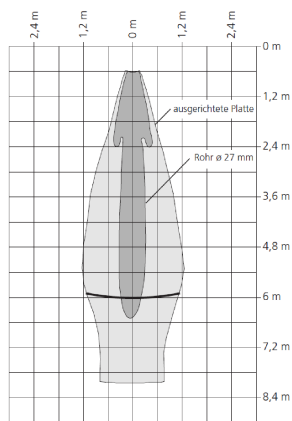
**Connector Drawings**



## Wiring Diagrams



## Technical Drawings



## Help Views

