

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



Basic features

Application	Distance measurement
Approval/Conformity	cULus CE WEEE UKCA
Operating mode	Analog measurement (output curve)
Series	M30M1

Display/Operation

Adjuster	Key (2x)
Display	Distance value - segment display Object not in range - LED red Object in range - LED green Sensor settings - segment display
Setting	Filter strength (10 levels) Segment displ. bright/dark/off Synchronous/Multiplex mode 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//Auto Segment display mode Synchronization on/off Multiplex speed Measured value filter Hysteresis Detection range (3 levels) Teach-in mode display/button Factory setting (Reset) Key disable on/off Operating mode Switching distance, 2 values Normally open/Normally closed Output curve window

Ultrasonic Sensors
BUS M30M1-XC-20/130-S92K
Order Code: **BUS003F**

BALLUFF

Electrical connection

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

Electrical data

Current draw max.	80 mA
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
Rated operating voltage Ue DC	24 V
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)	1483 a
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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.

Interface

Analog output	Analog, voltage/Analog, current 0...10 V/4...20 mA
Output characteristic	linear rising/falling

Material

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

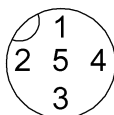
Mechanical data

Dimension	\varnothing 30 x 94.5 mm
Mounting part	Nut M30x1.5

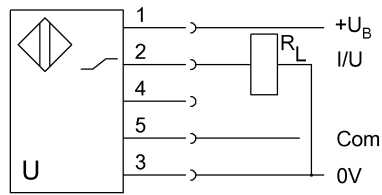
Range/Distance

Measuring range	200...2000 mm
Rated operating distance Sn	1300 mm
Repeat accuracy	\pm 0.15 %FS
Resolution	\leq 0.180 mm

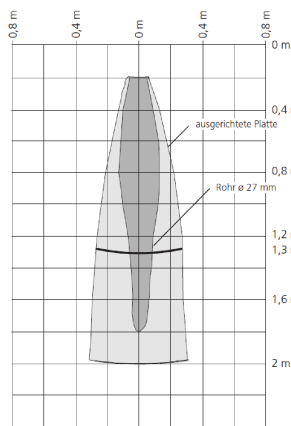
Connector Drawings



Wiring Diagrams



Technical Drawings



Help Views

