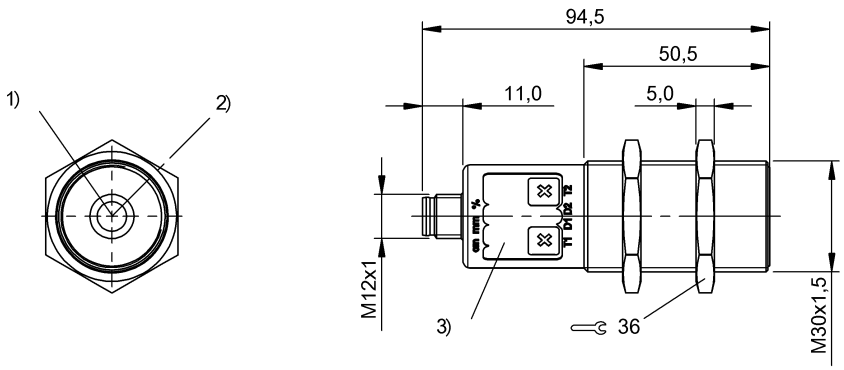
Ultrasonic Sensors

BUS M30M1-PPC-03/025-S92K
Order Code: BUS002L



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

IND. CONT. EQ
5HP6
for use in the secondary of
a class 2 source of supply

Basic features

Application	Distance measurement Object detection
Approval/Conformity	cULus LISTED CE EAC WEEE
Operating mode	Refl.light scanner (window) Reflectionlight scanner (switching point) Retro-reflector Analog measurement (output curve)
Series	M30M1

Display/Operation

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

Electrical connection

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

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Electrical data

Current draw max.	80 mA
Hysteresis H max.	3 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	25 Hz
Synchronization	internal, max. 10 sensors
Ultrasonic Frequency	320 kHz

Environmental conditions

Ambient temperature	-25...70 °C
Protection degree	IP67
Storage temperature	-40...85 °C

Functional safety

MTTF (40 °C)	1483 a

Material

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

Mechanical data

Dimension	Ø 30 x 94.5 mm
Mounting	Nut M30x1.5

Output/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)

Range/Distance

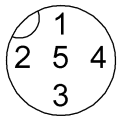
Range	30...350 mm
Rated operating distance Sn	250 mm
Repeat accuracy	± 0.15 %FS
Resolution	≤ 0.025 mm

Remarks

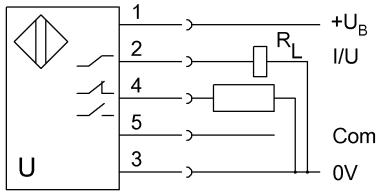
Do not press key using a pointed tool.
For additional information, refer to user's guide.
Order accessories separately.
The sensor is functional again after the overload has been eliminated.
Reference object for Sn: tube ø10mm. Max. range refers to the aligned plate.
For more information about MTTF and 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.

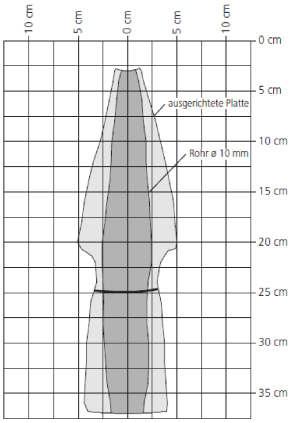
Connector Drawings



Wiring Diagrams



Technical Drawings



Help Views