Distance Sensor

U1KM002

- **Detection of multiple objects**
- **Miniature design**
- **Range of up to 3 m**
- **Reliable detection of a wide range of objects**

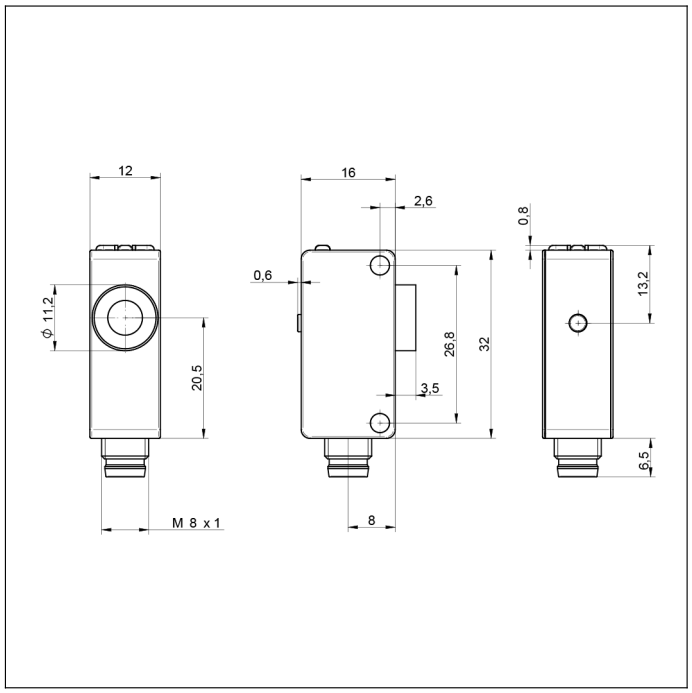
These ultrasonic sensors evaluate the sound reflected from the object. Transparent, shiny and dark objects of a wide range of materials are reliably detected. They are therefore particularly suitable for presence control, level monitoring or distance measurement. The measured value can be read out via IO-Link, five objects displayed and the sensor can be optimally adapted to the application. The sensor can be used as a reflex sensor.

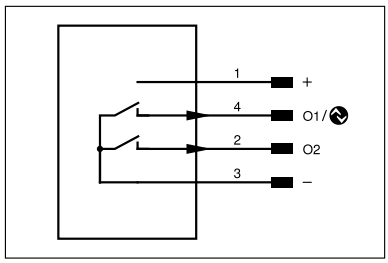
Ultrasonic Data	
Working range, reflex sensor	50...3000 mm
Setting Range	250...3000 mm
Reproducibility maximum	6 mm
Linearity Deviation	15 mm
Ultrasonic frequency range	70...95 kHz
Switching Hysteresis	2 %
Electrical Data	
Supply Voltage	10...30 V DC
Supply Voltage with IO-Link	18...30 V DC
Current Consumption (Ub = 24 V)	< 20 mA
Switching Frequency	8 Hz
Response Time	70 ms
Temperature Drift	< 1 %
Temperature Range	-30...50 °C
Number of Switching Outputs	2
Switching Output Voltage Drop	< 1,5 V
Switching Output/Switching Current	100 mA
Synchronous Mode	Up to 32 sensors
Multiplex Mode	up to 16 sensors
Short Circuit Protection	yes
Reverse Polarity Protection	yes
Overload Protection	yes
Lockable	yes
Interface	IO-Link
Data Storage	yes
Protection Class	III
Mechanical Data	
Setting Method	IO-Link
Setting Method	Teach-In
Housing Material	Plastic, ABS/PC
Sensing face	Stainless steel, V4A (1.4404/316L)
Degree of Protection	IP62*
Connection	M8 × 1; 4-pin
Safety-relevant Data	
MTTFd (EN ISO 13849-1)	1417,85 a
Scope of delivery	1 × initial start-up instructions
	1 × sensor
NPN NO	●
IO-Link	●

* Hopper facing down

Complementary Products

IO-Link Master
Software





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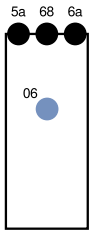
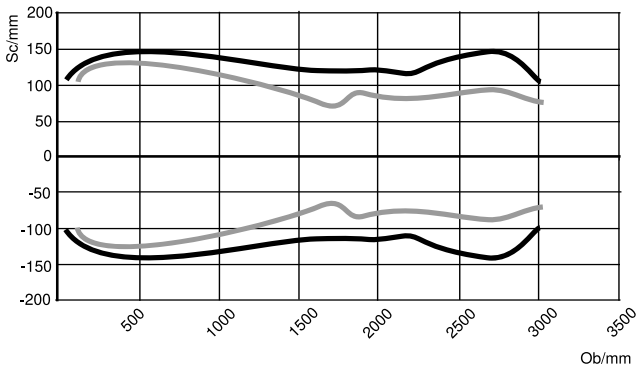


06 = Teach Button
5a = Switching Status Indicator, O1
68 = Power LED
6a = Switching Status Indicator, O2

Characteristic response curve

Characteristic curves show the position of the center of the measured object (200 × 200 mm plate) at the time of switching.

U1KM



Ob = Object

Sc = Sonic cone width

Standard sonic cone (center of the measured object)

Narrow sonic cone (center of the measured object)