



UM12-1172251

UM12

ULTRASONIC DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
UM12-1172251	6053543

Other models and accessories → www.sick.com/UM12



Detailed technical data

Features

Operating range, limiting range	20 mm ... 150 mm, 250 mm				
Target	Natural objects				
Resolution	≥ 0.069 mm				
Repeatability	± 0.15 % ¹⁾				
Measurement accuracy	± 1 % ²⁾				
Temperature compensation	✓				
Response time	24 ms				
Switching frequency	30 Hz				
Output time	8 ms				
Ultrasonic frequency (typical)	380 kHz				
Additional function	Adjustable operating modes: Switching point (DtO) / Switching window/Background (ObSB), teach-in of digital output, invertible digital output, reset to factory default ³⁾				
Safety-related parameters	<table border="0"> <tr> <td style="text-align: right;">MTTF_D</td> <td>101 years</td> </tr> <tr> <td style="text-align: right;">DC_{avg}</td> <td>0%</td> </tr> </table>	MTTF _D	101 years	DC _{avg}	0%
MTTF _D	101 years				
DC _{avg}	0%				

¹⁾ In relation to the current measured value, minimum value ≥ resolution.

²⁾ Referring to current measurement value.

³⁾ Functions may vary depending on sensor type.

Interfaces

Digital output	<table border="0"> <tr> <td style="text-align: right;">Number</td> <td>1 ¹⁾</td> </tr> <tr> <td style="text-align: right;">Type</td> <td>NPN</td> </tr> <tr> <td style="text-align: right;">Maximum output current I_A</td> <td>≤ 200 mA</td> </tr> </table>	Number	1 ¹⁾	Type	NPN	Maximum output current I _A	≤ 200 mA
Number	1 ¹⁾						
Type	NPN						
Maximum output current I _A	≤ 200 mA						
Hysteresis	2 mm						

¹⁾ NPN: HIGH = ≤ 2 V / LOW = U_v.

Electronics

Supply voltage U_B	DC 10 V ... 30 V ¹⁾
Power consumption	≤ 0.75 W ²⁾
Initialization time	< 300 ms
Indication	2 x LED
Enclosure rating	IP65 / IP67
Protection class	III

¹⁾ Limit values, reverse-polarity protected Operation in short-circuit protected network: max. 8 A, class 2.

²⁾ Without load.

Mechanics

Dimensions (W x H x D)	12 mm x 12 mm x 55.1 mm
Design	Cylindrical
Sending axis	Straight
Housing material	Metal (nickel-plated brass, PBT, ultrasonic transducer: polyurethane foam, glass epoxy resin)
Weight	15 g
Thread size	M12 x 1
Connection type	Male connector, M12, 4-pin

Ambient data

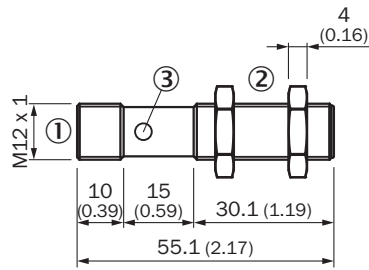
Ambient temperature, operation	-25 °C ... +70 °C
Ambient temperature, storage	-40 °C ... +85 °C

Classifications

ECLASS 5.0	27270804
ECLASS 5.1.4	27270804
ECLASS 6.0	27270804
ECLASS 6.2	27270804
ECLASS 7.0	27270804
ECLASS 8.0	27270804
ECLASS 8.1	27270804
ECLASS 9.0	27270804
ECLASS 10.0	27270804
ECLASS 11.0	27270804
ECLASS 12.0	27272806
ETIM 5.0	EC001846
ETIM 6.0	EC001846
ETIM 7.0	EC001846
ETIM 8.0	EC001846
UNSPSC 16.0901	41111960

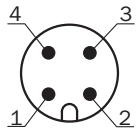
Dimensional drawing (Dimensions in mm (inch))

UM12-11x2211, UM12-11x2251



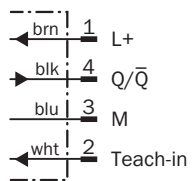
- ① Connection
- ② Mounting nuts, SW 17 mm
- ③ Status display supply voltage active (green), switching and analog output (orange)

Connection type



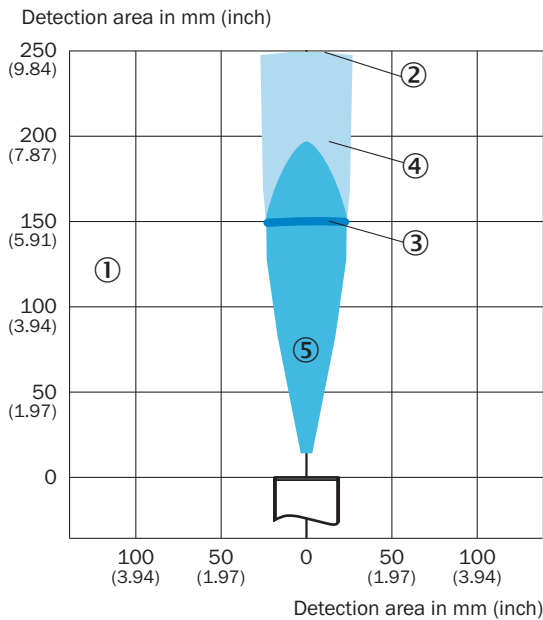
Connection diagram

UM12-11x2211, UM12-11x2251



Detection area



UM1x-x17



- ① Detection range dependent on reflection properties, size, and alignment of the object
- ② Limiting range
- ③ Operating range
- ④ Example object: aligned plate 500 mm x 500 mm
- ⑤ Example object: cylindrical bar with a diameter of 10 mm

Recommended accessories

Other models and accessories → www.sick.com/UM12

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting plate for M12 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M12	5321869
Others			
	<ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 2 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals 	YF2A14-020VB3XLEAX	2096234

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

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