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Product data sheet



UM12-1172211

UM12

ULTRASONIC SENSORS

SICK
Sensor Intelligence.

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UM12-1172211 | UM12

ULTRASONIC SENSORS



Ordering information

Type	Part no.
UM12-1172211	6053542

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

Detailed technical data

Mechanics/electronics

Supply voltage V_S	DC 10 V ... 30 V [1]
Power consumption	≤ 0.75 W [2]
Initialization time	< 300 ms
Design	Cylindrical
Housing material	Metal (nickel-plated brass, PBT) Ultrasonic transducer: polyurethane foam, glass epoxy resin
Thread size	M12 x 1
Connection type	Male connector, M12, 4-pin
Indication	2 x LED
Weight	15 g
Sending axis	Straight
Dimensions (W x H x D)	12 mm x 12 mm x 55.1 mm
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.

Performance

Operating range, limiting range	20 mm ... 150 mm, 250 mm
Target	Natural objects
Resolution	≥ 0.069 mm
Repeatability	± 0.15 % [1]
Accuracy	± 1 % [2]
Temperature compensation	✓
Response time	24 ms
Switching frequency	30 Hz
Output time	8 ms

[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.

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Ultrasonic frequency (typical)	380 kHz
Additional function	Adjustable operating modes: Switching point (Dt0) / Switching window/Background (ObSB), teach-in of digital output, invertible digital output, reset to factory default [3]

[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	
Number	1 [1]
Type	PNP
Maximum output current I_A	≤ 200 mA
Hysteresis	2 mm

[1] PNP: HIGH = V_S - (< 2 V) / LOW = 0 V.

Ambient data

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

Classifications

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

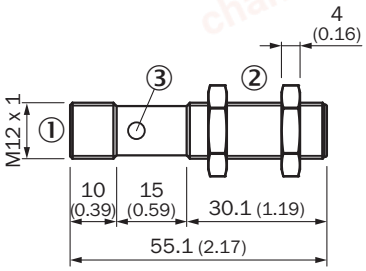
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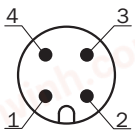
Dimensional drawing (Dimensions in mm (inch))

UM12-11x2211, UM12-11x2251



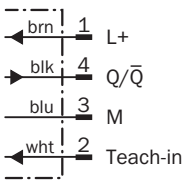
① Connection
② Mounting nuts, SW 17 mm
③ Status display supply voltage active (green), switching and analog output (orange)

Connection type



Connection diagram

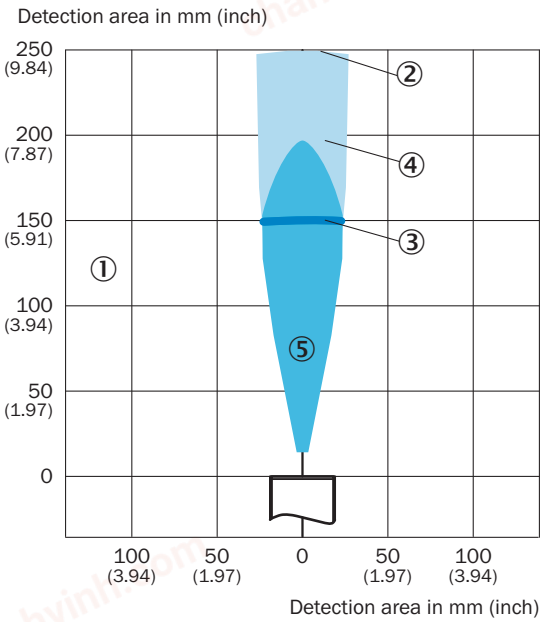
UM12-11x2211, UM12-11x2251



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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
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF2A14-020VB3XLEAX	2096234

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Recommended services

Additional services ➜ www.sick.com/UM12

	Type	Part no.
Warranty extensions		
• **Product area:** Identification solutions, machine vision, Distance sensors, Detection and ranging solutions • **Range of services:** The services correspond to the scope of the statutory manufacturer warranty (SICK general terms and conditions of purchase) • **Duration:** Five-year warranty from delivery date.	Extended warranty for a total of five years from delivery date	1680671

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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:

Contacts and other locations –www.sick.com