



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	
	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	
	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	$\leq 0.75 \text{ W}$ 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

Certificates

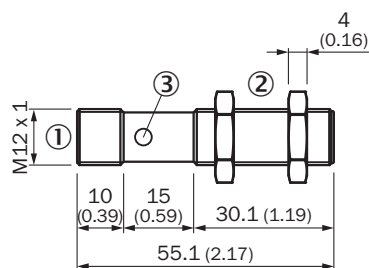
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓

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

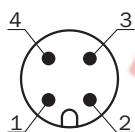
Dimensional drawing UM12-11x2211, UM12-11x2251



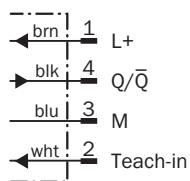
Dimensions in mm (inch)

- 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 systems			
	<ul style="list-style-type: none"> • Description: Mounting plate for M12 sensors • Material: Steel • Details: Steel, zinc coated • Items supplied: Without mounting hardware 	BEF-WG-M12	5321869

	Brief description	Type	part no.
connectors and cables			
	<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, Uncontaminated zones 	YF2A14-020VB3XLEAX	2096234
	<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: 0.6 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones 	YF2A14-C60VB3XLEAX	2145707
	<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: 1 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Zones with chemicals, Uncontaminated zones 	YF2A14-010VB3XLEAX	2145708



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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.”

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