



UM12-1192261

UM12

ULTRASONIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
UM12-1192261	6053548

Other models and accessories → [www.sick.com/UM12](http://www.sick.com/UM12)



### Detailed technical data

#### Mechanics/electronics

<b>Supply voltage <math>V_s</math></b>	DC 10 V ... 30 V <sup>1)</sup>
<b>Power consumption</b>	≤ 1.2 W <sup>2)</sup>
<b>Initialization time</b>	< 300 ms
<b>Design</b>	Cylindrical
<b>Housing material</b>	Metal (nickel-plated brass, PBT) Ultrasonic transducer: polyurethane foam, glass epoxy resin
<b>Thread size</b>	M12 x 1
<b>Connection type</b>	Male connector, M12, 4-pin
<b>Indication</b>	2 x LED
<b>Weight</b>	15 g
<b>Sending axis</b>	Straight
<b>Dimensions (W x H x D)</b>	12 mm x 12 mm x 60.1 mm
<b>Enclosure rating</b>	IP65 / IP67
<b>Protection class</b>	III

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

<sup>2)</sup> Without load.

#### Performance

<b>Operating range, limiting range</b>	40 mm ... 240 mm, 350 mm
<b>Target</b>	Natural objects
<b>Resolution</b>	≥ 0.069 mm
<b>Repeatability</b>	± 0.15 % <sup>1)</sup>
<b>Accuracy</b>	± 1 % <sup>2)</sup>
<b>Temperature compensation</b>	✓
<b>Response time</b>	30 ms <sup>3)</sup>
<b>Output time</b>	10 ms

<sup>1)</sup> In relation to the current measured value, minimum value ≥ resolution.

<sup>2)</sup> Referring to current measurement value.

<sup>3)</sup> Subsequent smoothing of the analog output, depending on the application, may increase the response time by up to 200 %.

<sup>4)</sup> Functions may vary depending on sensor type.

<b>Ultrasonic frequency (typical)</b>	500 kHz
<b>Additional function</b>	Teach-in of analog output, Invertable analog output, reset to factory default 4)

1) In relation to the current measured value, minimum value  $\geq$  resolution.

2) Referring to current measurement value.

3) Subsequent smoothing of the analog output, depending on the application, may increase the response time by up to 200 %.

4) Functions may vary depending on sensor type.

## Interfaces

<b>Analog output</b>	
Number	1
Type	Current output
Current	4 mA ... 20 mA, $\leq 500 \Omega$ <sup>1)</sup>
Resolution	12 bit

1) For 4 mA ... 20 mA and  $V_s \leq 20$  V max. load  $\leq 100 \Omega$ .

## Ambient data

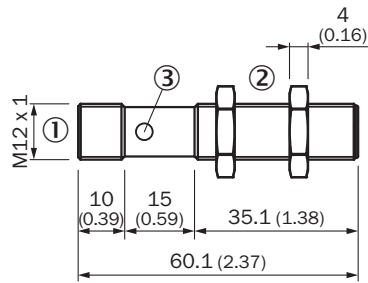
<b>Ambient temperature, operation</b>	-25 °C ... +70 °C
<b>Ambient temperature, storage</b>	-40 °C ... +85 °C

## Classifications

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

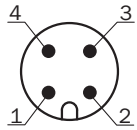
### Dimensional drawing (Dimensions in mm (inch))

UM12-11x2261, UM12-11x2271



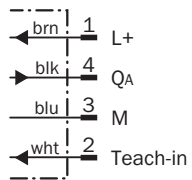
- ① Connection
- ② Mounting nuts, SW 17 mm
- ③ Status display supply voltage active (green), switching and analog output (orange)

### Connection type



### Connection diagram

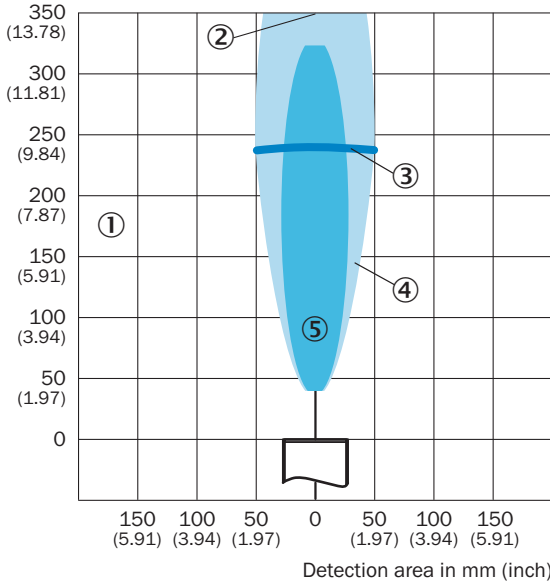
UM12-11x2261, UM12-11x2271



## Detection area

UM12-119



Detection area in mm (inch)



- 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](http://www.sick.com/UM12)

	Brief description	Type	Part no.
<b>Mounting brackets and plates</b>			
	Mounting plate for M12 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M12	5321869
<b>Plug connectors and cables</b>			
	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

### Recommended services

Additional services → [www.sick.com/UM12](http://www.sick.com/UM12)

	Type	Part no.
Warranty extensions		
<ul style="list-style-type: none"><li>• <b>Product area:</b> Identification solutions, machine vision, Distance sensors, Detection and ranging solutions</li><li>• <b>Range of services:</b> The services correspond to the scope of the statutory manufacturer warranty (SICK general terms and conditions of purchase)</li><li>• <b>Duration:</b> Five-year warranty from delivery date.</li></ul>	Extended warranty for a total of five years from delivery date	1680671

## 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](http://www.sick.com)