



# UC12-11231

UC12

ULTRASONIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
UC12-11231	6029831

Other models and accessories → [www.sick.com/UC12](http://www.sick.com/UC12)



### 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>	Rectangular
<b>Housing material</b>	Metal (zinc diecast, ultrasonic transducer: polyurethane foam, glass epoxy resin)
<b>Connection type</b>	Male connector, M12, 4-pin
<b>Indication</b>	Dual LED
<b>Weight</b>	75 g
<b>Sending axis</b>	Straight
<b>Dimensions (W x H x D)</b>	15 mm x 48.8 mm x 43.5 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.

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

#### Safety-related parameters

<b>MTTF<sub>D</sub></b>	101 years
<b>DC<sub>avg</sub></b>	0%

#### Performance

<b>Operating range, limiting range</b>	20 mm ... 150 mm, 250 mm
<b>Target</b>	Natural objects
<b>Resolution</b>	≥ 0.1 mm
<b>Repeatability</b>	± 0.15 % <sup>1)</sup>
<b>Accuracy</b>	± 1 % <sup>2)</sup>

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

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

<b>Temperature compensation</b>	✓
<b>Response time</b>	30 ms
<b>Switching frequency</b>	25 Hz
<b>Output time</b>	8 ms
<b>Ultrasonic frequency (typical)</b>	380 kHz
<b>Detection area (typical)</b>	See diagrams
<b>Additional function</b>	Set switching mode: Distance to object (DtO) / Window (Wnd) / Object between sensor and background (ObSB) Teach-in of digital output Teach-in button(s) (can be deactivated) Reset to factory default

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

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

## Interfaces

<b>Digital output</b>	Number	2 <sup>1)</sup>
	Type	PNP
	Function	Complementary digital outputs (Q, $\bar{Q}$ )
	Maximum output current $I_A$	$\leq 500$ mA
<b>Hysteresis</b>		2 mm

<sup>1)</sup> PNP: HIGH =  $V_S - (< 2 \text{ V})$  / LOW = 0 V.

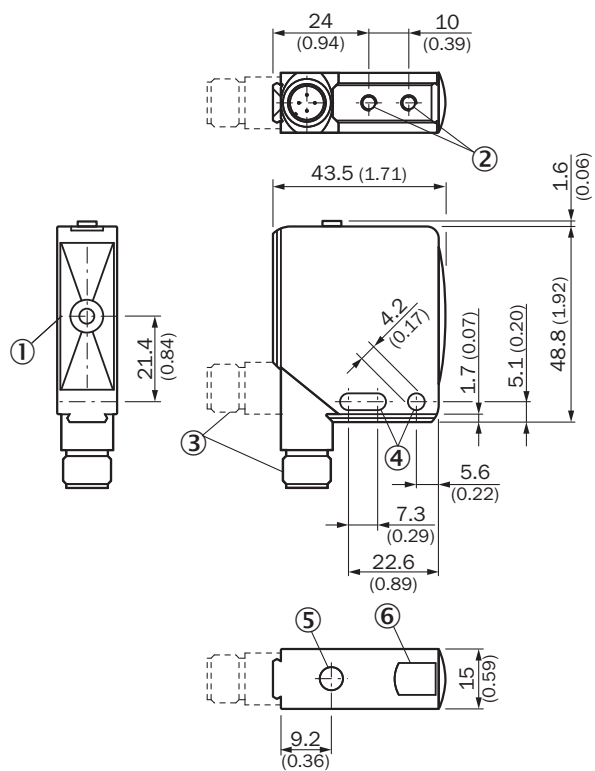
## Ambient data

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

## Classifications

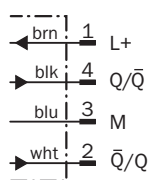
<b>ECLASS 5.0</b>	27270804
<b>ECLASS 5.1.4</b>	27270804
<b>ECLASS 6.0</b>	27270804
<b>ECLASS 6.2</b>	27270804
<b>ECLASS 7.0</b>	27270804
<b>ECLASS 8.0</b>	27270804
<b>ECLASS 8.1</b>	27270804
<b>ECLASS 9.0</b>	27270804
<b>ECLASS 10.0</b>	27270804
<b>ECLASS 11.0</b>	27270804
<b>ECLASS 12.0</b>	27272806
<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))



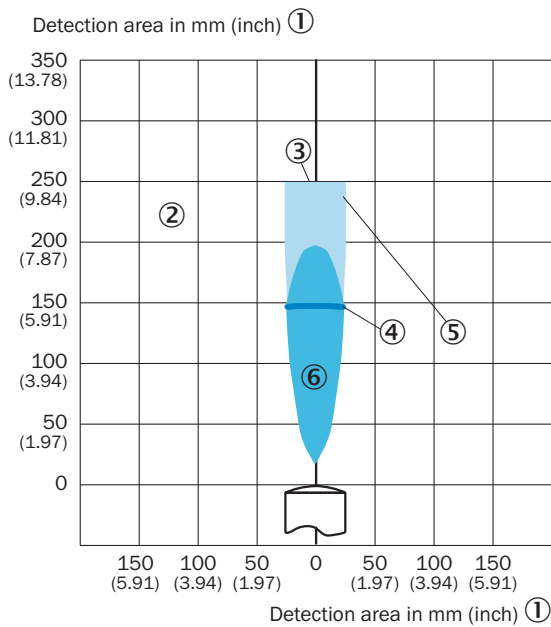
- ① Sender and receiver axis
- ② M4 threaded mounting hole, 4 mm deep
- ③ Connection
- ④ Fixing hole
- ⑤ Control elements
- ⑥ Status indicator digital output (orange) and power on (green)

### Connection diagram



## Detection area



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- ① Detection area in mm (inch)
- ② Detection range dependent on reflection properties, size, and alignment of the object
- ③ Limiting range
- ④ Operating range
- ⑤ Example object: aligned plate 10 mm x 10 mm
- ⑥ Example object: cylindrical bar with a diameter of 10 mm

## Recommended accessories

Other models and accessories → [www.sick.com/UC12](http://www.sick.com/UC12)

	Brief description	Type	Part no.
<b>Mounting brackets and plates</b>			
	Mounting bracket, small, stainless steel, mounting hardware included	BEF-WK-W12	2012938
<b>Plug connectors and cables</b>			
	<ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 2 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul>	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:

Contacts and other locations –[www.sick.com](http://www.sick.com)