



UM30-213111

UM30

ULTRASONIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

| Type        | Part no. |
|-------------|----------|
| UM30-213111 | 6037537  |

Other models and accessories → [www.sick.com/UM30](http://www.sick.com/UM30)



### Detailed technical data

#### Performance

|  |   |
|--|---|
| <b>Operating range, limiting range</b> | 200 mm ... 1,300 mm, 2,000 mm   |
| <b>Target</b>                          | Natural objects   |
| <b>Resolution</b>                      | ≥ 0.18 mm   |
| <b>Repeatability</b>                   | ± 0.15 % <sup>1)</sup>  |
| <b>Accuracy</b>                        | ± 1 % <sup>1) 2)</sup>  |
| <b>Temperature compensation</b>        | ✓   |
| <b>Response time</b>                   | 92 ms   |
| <b>Switching frequency</b>             | 8 Hz  |
| <b>Output time</b>                     | 23 ms   |
| <b>Ultrasonic frequency (typical)</b>  | 200 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 switching output, set levels of switching outputs, Invertable switching output, set on delay switching output, temperature compensation, synchronization of up to 10 sensors, multiplexing: no cross talk of up to 50 sensors, set measurement filters: value filter, filter strength, adjustable sensitivity, foreground suppression and detection area, switch-off display, reset to factory default <sup>3)</sup> |

<sup>1)</sup> Referring to current measurement value.

<sup>2)</sup> Temperature compensation can be switched off, without temperature compensation: 0.17 % / K.

<sup>3)</sup> Functions may vary depending on sensor type.

#### Interfaces

|                                   |                                |
|-----------------------------------|--------------------------------|
| <b>Switching output</b>           | 1 x PNP (200 mA) <sup>1)</sup> |
| <b>Multifunctional input (MF)</b> | 1 x MF                         |
| <b>Hysteresis</b>                 | 20 mm                          |

<sup>1)</sup> PNP: HIGH = V<sub>S</sub> - (< 2 V) / LOW = 0 V.

## Mechanics/electronics

|  |   |
|--|---|
| <b>Supply voltage <math>V_s</math></b> | DC 9 V ... 30 V <sup>1) 2)</sup>  |
| <b>Power consumption</b>               | $\leq 2.4 \text{ W}$ <sup>3)</sup>  |
| <b>Initialization time</b>             | < 300 ms  |
| <b>Design</b>                          | Cylindrical   |
| <b>Housing material</b>                | Nickel-plated brass, PBT<br>Display: TPU<br>Ultrasonic transducer: polyurethane foam, glass epoxy resin |
| <b>Connection type</b>                 | Male connector, M12, 5-pin  |
| <b>Indication</b>                      | LED display, 2 x LED  |
| <b>Weight</b>                          | 150 g   |
| <b>Sending axis</b>                    | Straight  |
| <b>Enclosure rating</b>                | 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> 15 V ... 30 V when using the analog voltage output.

<sup>3)</sup> Without load.

## Ambient data

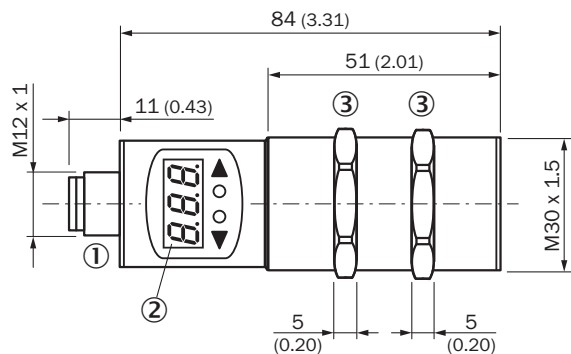
|                                      |                   |
|--------------------------------------|-------------------|
| <b>Ambient temperature operation</b> | -25 °C ... +70 °C |
| <b>Ambient storage temperature</b>   | -40 °C ... +85 °C |

## 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>ETIM 5.0</b>       | EC001846 |
| <b>ETIM 6.0</b>       | EC001846 |
| <b>UNSPSC 16.0901</b> | 41111960 |

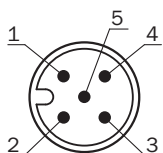
### Dimensional drawing (Dimensions in mm (inch))

UM30-211, UM30-212, UM30-213



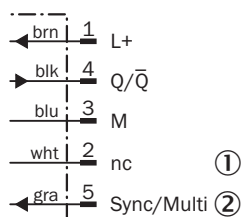
- ① Connection
- ② Display
- ③ Mounting nuts, SW 36 mm

### Connection type



### Connection diagram

UM30-21x111 UM30-21x114 Connector M12, 5-pin



- ① Not assigned
- ② Synchronization and multiplex operation/communication Connect+

Adjustment possible

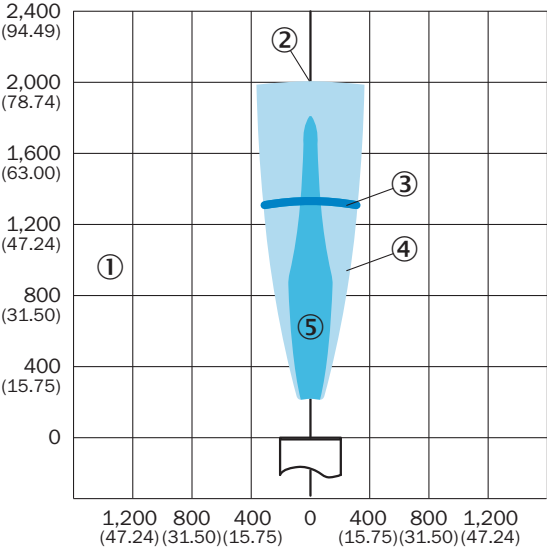


- ② Display
- ④ Operating elements
- ⑤ Status indicators

Detection area

UM30-213


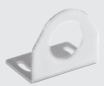




Detection area in mm (inch)



- 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: pipe with 27 mm diameter

### Recommended accessories

Other models and accessories → [www.sick.com/UM30](http://www.sick.com/UM30)

|  | Brief description   | Type                   | Part no. |
|--|---|------------------------|----------|
| <b>Mounting brackets and plates</b>  |   |                        |          |
|   | Mounting plate for M30 sensors, steel, zinc coated, without mounting hardware   | BEF-WG-M30             | 5321871  |
|   | Mounting bracket for M30 sensors, steel, zinc coated, without mounting hardware   | BEF-WN-M30             | 5308445  |
| <b>Terminal and alignment brackets</b>   |   |                        |          |
|   | Mounting bracket, M30, axial rotation possible, with threaded mounting hole M6, without mounting hardware                             | BEF-HA-M30A            | 5311527  |
| <b>Plug connectors and cables</b>  |   |                        |          |
|   | Head A: female connector, M12, 5-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 2 m | YF2A15-020VB5XLEAX     | 2096239  |
|   | Head A: female connector, M12, 5-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PVC, unshielded, 2 m   | YG2A15-020VB5XLEAX     | 2096215  |
| <b>Programming and configuration tools</b>   |   |                        |          |
|  | Tool for visualization, configuration and cloning, 3-digit LED display, supply voltage: DV 9 V ... 30 V                               | Connect+ adapter (CPA) | 6037782  |

## 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)