



UM30-211113

UM30

ULTRASONIC DISTANCE SENSORS

**SICK**  
Sensor Intelligence.



## Ordering information

| Type        | Part no. |
|-------------|----------|
| UM30-211113 | 6036916  |

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



## Detailed technical data

### Mechanics/electronics

|  |   |
|--|---|
| <b>Supply voltage <math>V_s</math></b> | DC 9 V ... 30 V <sup>1) 2)</sup>  |
| <b>Power consumption</b>               | ≤ 2.4 W <sup>3)</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>                     | M30 x 1.5   |
| <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>Dimensions (W x H x D)</b>          | 30 mm x 30 mm x 84 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> 15 V ... 30 V when using the analog voltage output.

<sup>3)</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> | 30 mm ... 250 mm, 350 mm |
| <b>Target</b>                          | Natural objects          |

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

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

<sup>3)</sup> Temperature compensation can be switched off, without temperature compensation: 0.17 % / K.

<sup>4)</sup> Subsequent smoothing of the analog output, depending on the application, may increase the response time by up to 200 %.

|                                       |   |
|---------------------------------------|---|
| <b>Resolution</b>                     | ≥ 0.18 mm   |
| <b>Repeatability</b>                  | ± 0.15 % <sup>1)</sup>  |
| <b>Accuracy</b>                       | ± 1 % <sup>2) 3)</sup>  |
| <b>Temperature compensation</b>       | ✓   |
| <b>Response time</b>                  | 32 ms <sup>4)</sup>   |
| <b>Output time</b>                    | 8 ms  |
| <b>Ultrasonic frequency (typical)</b> | 320 kHz   |
| <b>Detection area (typical)</b>       | See diagrams  |
| <b>Additional function</b>            | Teach-in of analog output<br>Scaling of analog outputs<br>Invertable analog output<br>Synchronization of up to 50 sensors<br>Multiplexing: no cross talk of up to 50 sensors<br>Adjustable measurement filters: Measured value filters/Filter strength/Foreground suppression/Detection area/Sensitivity and sound beam<br>Display (can be deactivated)<br>Reset to factory default |

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

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

<sup>3)</sup> Temperature compensation can be switched off, without temperature compensation: 0.17 % / K.

<sup>4)</sup> Subsequent smoothing of the analog output, depending on the application, may increase the response time by up to 200 %.

## Interfaces

|                                   |   |
|-----------------------------------|---|
| <b>Analog output</b>              |   |
| Number                            | 1   |
| Type                              | Current output / voltage output   |
| Function                          | Automatic selection of analog current or voltage output dependent on load |
| Current                           | 4 mA ... 20 mA, ≤ 500 Ω <sup>1)</sup>                                     |
| Voltage                           | 0 V ... 10 V, ≥ 100,000 Ω   |
| Resolution                        | 12 bit  |
| <b>Multifunctional input (MF)</b> | 1 x MF  |

<sup>1)</sup> For 4 mA ... 20 mA and  $V_s \leq 20$  V max. load ≤ 100 Ω.

## 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 |

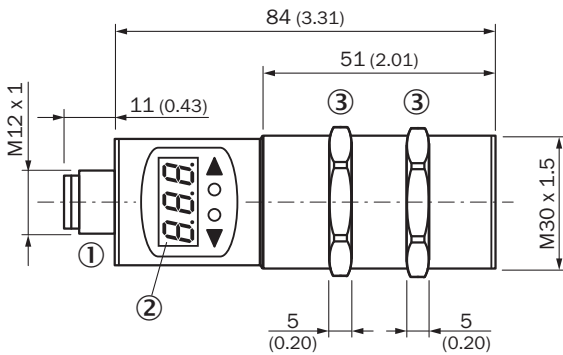
# UM30-211113 | UM30

## ULTRASONIC DISTANCE SENSORS

|                       |          |
|-----------------------|----------|
| <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 |

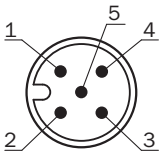
### Dimensional drawing (Dimensions in mm (inch))

UM30-211, UM30-212, UM30-213



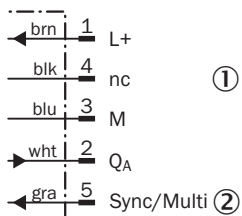
- ① Connection
- ② Display
- ③ Mounting nuts, SW 36 mm

### Connection type



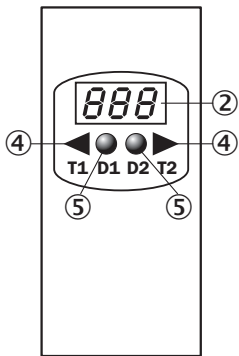
### Connection diagram

UM30-21x113 Connector M12, 5-pin



- ① Not assigned
- ② Synchronization and multiplex mode, Connect+ communication

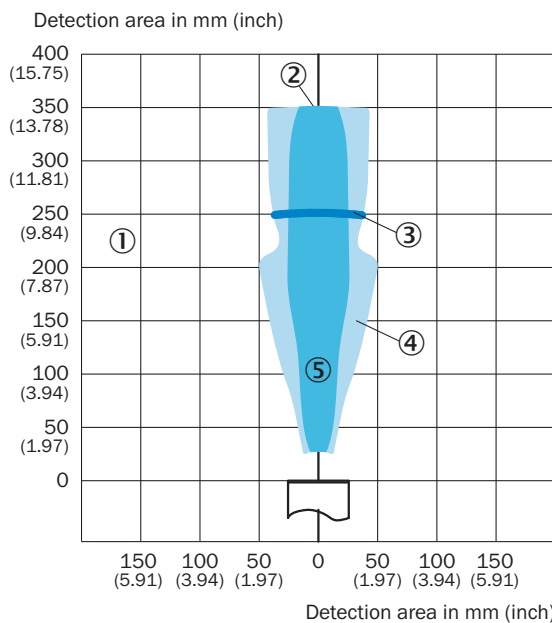
## Adjustment possible



- ② Display
- ④ Control elements
- ⑤ Status indicators

## Detection area




UM30-211



- 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/UM30](http://www.sick.com/UM30)

|   | Brief description   | Type                   | Part no. |
|---|---|------------------------|----------|
| Cloning modules   |   |                        |          |
|  | Tool for visualization, configuration and cloning, 3-digit LED display, supply voltage: DV 9 V ... 30 V   | Connect+ adapter (CPA) | 6037782  |
| Mounting brackets and plates  |   |                        |          |
|  | Mounting bracket for M30 sensors, steel, zinc coated, without mounting hardware   | BEF-WN-M30             | 5308445  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M12, 5-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, 5-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals</li> </ul> | YF2A15-020VB5XLEAX     | 2096239  |

## 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)