



UM18-211165101

UM18

ULTRASONIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

| Type           | Part no. |
|----------------|----------|
| UM18-211165101 | 6048414  |

Other models and accessories → [www.sick.com/UM18](http://www.sick.com/UM18)



### Detailed technical data

#### Performance

|                                       |  |
|---------------------------------------|--|
| <b>Working range, limiting range</b>  | 30 mm ... 250 mm, 350 mm   |
| <b>Resolution</b>                     | 0.2 mm   |
| <b>Repeatability</b>                  | ± 0.15 % <sup>1)</sup>   |
| <b>Accuracy</b>                       | 0.17 % / K <sup>1)</sup>   |
| <b>Response time</b>                  | 32 ms  |
| <b>Switching frequency</b>            | 25 Hz  |
| <b>Output time</b>                    | 8 ms   |
| <b>Ultrasonic frequency (typical)</b> | 320 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, invertible switching output, reset to factory default |

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

#### Interfaces

|                         |                                |
|-------------------------|--------------------------------|
| <b>Switching output</b> | 1 x NPN (200 mA) <sup>1)</sup> |
| <b>Hysteresis</b>       | 3 mm                           |

<sup>1)</sup> NPN: HIGH ≤ 2 V / LOW = V<sub>S</sub>.

#### Mechanics/electronics

|                                     |  |
|-------------------------------------|--|
| <b>Supply voltage V<sub>s</sub></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>             | PBT<br>Ultrasonic transducer: polyurethane foam, glass epoxy resin |
| <b>Connection type</b>              | Male connector, M12, 4-pin   |
| <b>Indication</b>                   | 2 x LED  |

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

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

|                     |          |
|---------------------|----------|
| <b>Weight</b>       | 15 g     |
| <b>Sending axis</b> | Straight |

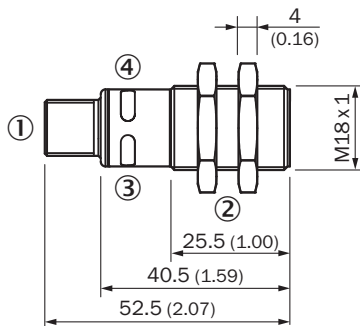
- 1) Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.  
2) Without load.

### Ambient data

|                            |  |
|----------------------------|--|
| <b>Enclosure rating</b>    | IP 67  |
| <b>Protection class</b>    | III  |
| <b>Ambient temperature</b> | Operation: -25 °C ... +70 °C<br>Storage: -40 °C ... +85 °C |

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

UM18-2xxxxx1



- ① Connection
- ② Mounting nuts, SW 24 mm
- ③ Status indicator operating voltage active (green)
- ④ Status indicator switching/analog output (orange)

### Connection type

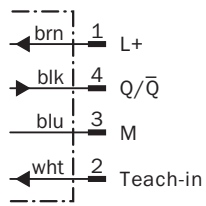
UM1x-x17 connector M12, 5-pin



Male connector M12, 5-pin

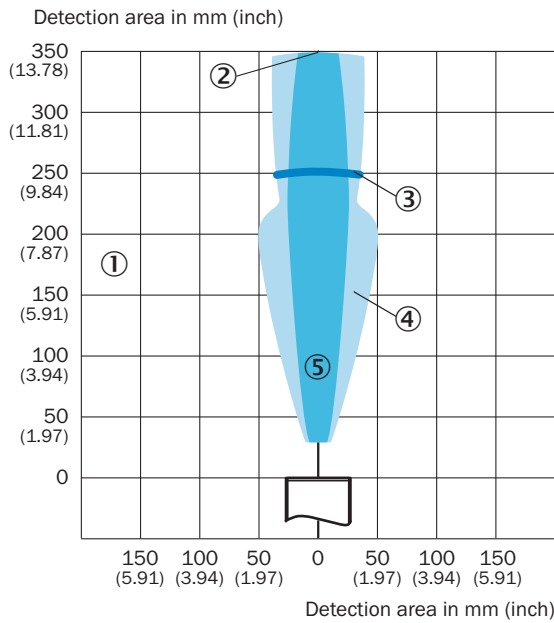


### Connection diagram



### Detection area


UM18-211









- ① Sensing range dependent on reflection properties, size and orientation of the object
- ② Limiting range
- ③ Working range
- ④ Example object: aligned plate 500 mm x 500 mm
- ⑤ Example object: pipe with 10 mm diameter

### Recommended accessories

Other models and accessories → [www.sick.com/UM18](http://www.sick.com/UM18)

|   | Brief description   | Type        | Part no. |
|---|---|-------------|----------|
| Universal bar clamp systems   |   |             |          |
|  | Plate H for universal clamp bracket, steel, zinc coated, universal clamp and mounting hardware included | BEF-KHS-H01 | 2022465  |
| Mounting brackets and mounting plates   |   |             |          |

|   | Brief description   | Type            | Part no. |
|---|---|-----------------|----------|
|  | Mounting plate for M18 sensors, steel, zinc coated, without mounting hardware   | BEF-WG-M18      | 5321870  |
|  | Mounting bracket, M18 thread, steel, zinc coated, without mounting hardware   | BEF-WN-M18      | 5308446  |
| <b>Terminal and alignment brackets</b>  |   |                 |          |
|  | Mounting bracket with ball-and-socket, plastic, mounting hardware included  | BEF-WN-M18-ST02 | 5312973  |
|  | Clamping block for round sensors M18, with fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included | BEF-KHF-M18     | 2051482  |
| <b>Plug connectors and cables</b>   |   |                 |          |
|  | Head A: female connector, M12, 4-pin, straight<br>Head B: cable<br>Cable: PVC, unshielded, 2 m                            | DOL-1204-G02M   | 6009382  |
|  | Head A: female connector, M12, 4-pin, angled<br>Head B: cable<br>Cable: PVC, unshielded, 2 m                              | DOL-1204-W02M   | 6009383  |

## 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)