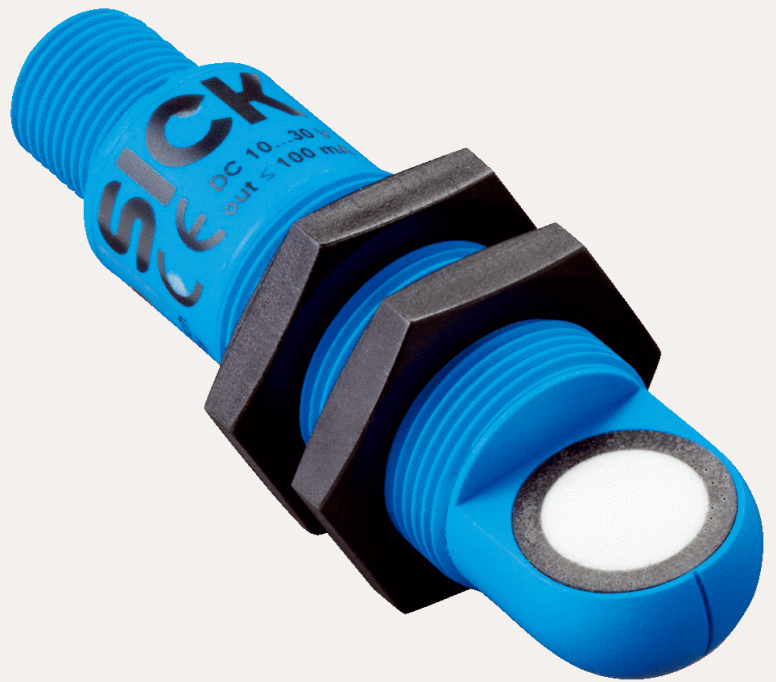


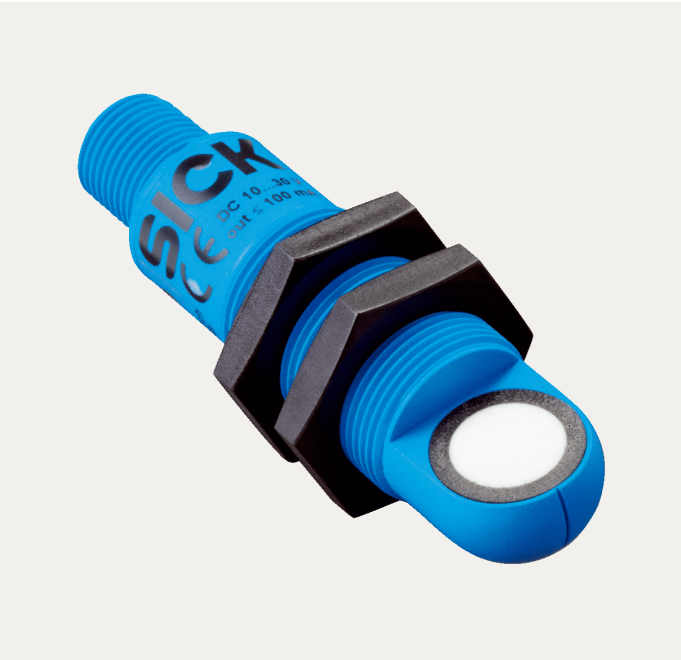


DATA SHEET

UM18-217167102

UM18  
Ultrasonic distance sensors

**SICK** Sensor Intelligence



ULTRASONIC DISTANCE SENSORS

UM18-217167102

ORDERING INFORMATION

| Type           | part no. |
|----------------|----------|
| UM18-217167102 | 6072874  |

Further device versions and accessories at [www.sick.com/UM18](http://www.sick.com/UM18)



DETAILED TECHNICAL DATA

FEATURES

|                                 |                                                                                   |
|---------------------------------|-----------------------------------------------------------------------------------|
| Operating range, limiting range | 20 mm ... 150 mm, 250 mm                                                          |
| Resolution                      | ≥ 0.2 mm                                                                          |
| Repeatability                   | ± 0.15 % <sup>1)</sup>                                                            |
| Measurement accuracy            | ± 1 % <sup>2)</sup>                                                               |
| Response time                   | 32 ms <sup>3)</sup>                                                               |
| Output time                     | 8 ms                                                                              |
| Ultrasonic frequency (typical)  | 380 kHz                                                                           |
| Detection area (typical)        | See diagrams                                                                      |
| Additional function             | Teach-in of analog output<br>Invertable analog output<br>Reset to factory default |
| Safety-related parameters       | MTTF <sub>D</sub> 101 years<br>DC <sub>avg</sub> 0%                               |

<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 %.

INTERFACES

|               |                                   |
|---------------|-----------------------------------|
| Analog output | Number 1                          |
|               | Type Voltage output               |
|               | Voltage 0 V ... 10 V, ≥ 100,000 Ω |
|               | Resolution 12 bit                 |

**ELECTRONICS**

|                      |                                    |
|----------------------|------------------------------------|
| Supply voltage $U_B$ | DC 15 V ... 30 V <sup>1)</sup>     |
| Power consumption    | $\leq 1.2 \text{ W}$ <sup>2)</sup> |
| Initialization time  | < 300 ms                           |
| Display              | 2 x LED                            |
| Enclosure rating     | IP65 / IP67                        |
| Protection class     | 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.

**MECHANICS**

|                        |                                                                            |
|------------------------|----------------------------------------------------------------------------|
| Dimensions (W x H x D) | 18 mm x 18 mm x 68.7 mm                                                    |
| Design                 | Cylindrical                                                                |
| Sending axis           | Angled                                                                     |
| Housing material       | Plastic (PBT, ultrasonic transducer: polyurethane foam, glass epoxy resin) |
| Weight                 | 20 g                                                                       |
| Thread size            | M18 x 1                                                                    |
| Connection type        | Male connector, M12, 4-pin                                                 |

**AMBIENT DATA**

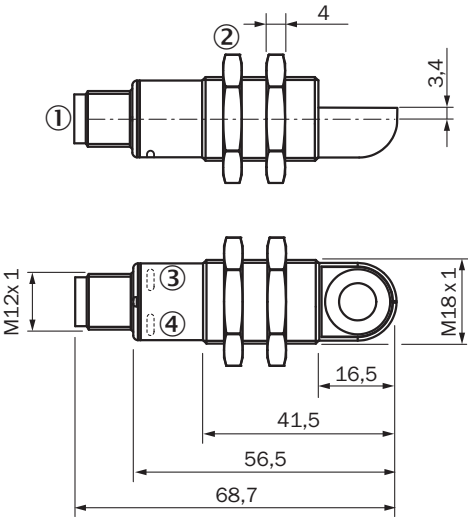
|                                |                          |
|--------------------------------|--------------------------|
| Ambient temperature, operation | -25 °C ... +70 °C        |
| Ambient temperature, storage   | -40 °C ... +85 °C        |
| Temperature drift              | 0.17 % / K <sup>1)</sup> |

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

**CERTIFICATES**

|                                                     |   |
|-----------------------------------------------------|---|
| EU declaration of conformity                        | ✓ |
| UK declaration of conformity                        | ✓ |
| ACMA declaration of conformity                      | ✓ |
| Moroccan declaration of conformity                  | ✓ |
| China RoHS                                          | ✓ |
| China Compulsory Product Certification (CCC) exempt | ✓ |
| cULus certificate                                   | ✓ |

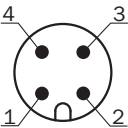
DIMENSIONAL DRAWING UM18-2XXXXXX2



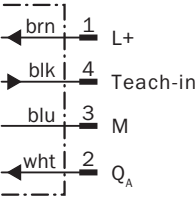
Dimensions in mm (inch)

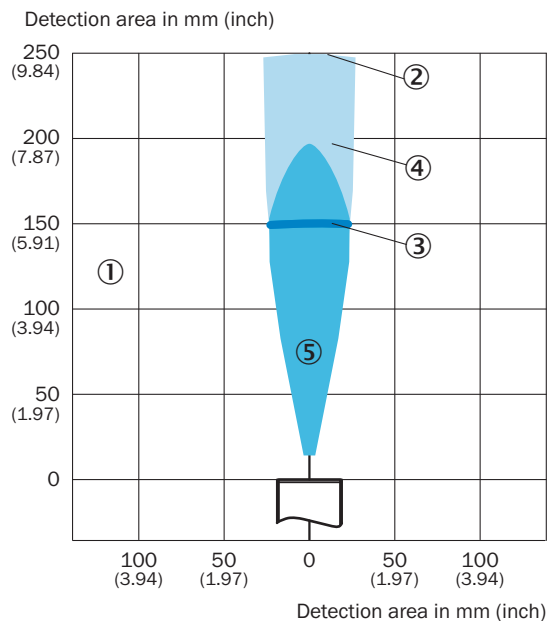
- ① Connection
- ② Fixing nuts, width 24 mm
- ③ Status display for supply voltage active (green)
- ④ Status indicator switching/analog output (orange)

CONNECTION TYPE



CONNECTION DIAGRAM



**DETECTION AREA UM1X-X17**

- 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

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at [www.sick.com/6072874](http://www.sick.com/6072874)



SICK AG  
WALDKIRCH  
GERMANY  
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# SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

**SICK**  
Sensor Intelligence