

SICK.COM



DATA SHEET

UM18-212126111

UM18
Ultrasonic distance sensors

SICK Sensor Intelligence

ULTRASONIC DISTANCE SENSORS

UM18-212126111

ORDERING INFORMATION

| Type | part no. |
|----------------|----------|
| UM18-212126111 | 6048398 |

Further device versions and accessories at www.sick.com/UM18



DETAILED TECHNICAL DATA

FEATURES

| | |
|---------------------------------|---|
| Operating range, limiting range | 65 mm ... 350 mm, 600 mm |
| Resolution | ≥ 0.069 mm |
| Repeatability | ± 0.15 % ¹⁾ |
| Measurement accuracy | ± 1 % ^{2) 3)} |
| Temperature compensation | ✓ |
| Response time | 64 ms ⁴⁾ |
| Output time | 16 ms |
| Ultrasonic frequency (typical) | 400 kHz |
| Additional function | Teach-in of analog output, Invertable analog output, multifunctional input: external teach / synchronization / multiplexing, synchronization of up to 20 sensors, multiplexing: no cross talk of up to 20 sensors, reset to factory default |
| Safety-related parameters | MTF _D 101 years DC _{avg} 0% |

¹⁾ In relation to the current measured value, minimum value ≥ resolution.

²⁾ Referring to current measurement value.

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

⁴⁾ 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 | Current output |
| | Current | 4 mA ... 20 mA, $\leq 500 \Omega$ ¹⁾ |
| | Resolution | 12 bit |
| Multifunctional input (MF) | | 1 x MF |

¹⁾ For 4 mA ... 20 mA and $V_s \leq 20$ V max. load $\leq 100 \Omega$.

ELECTRONICS

| | |
|----------------------|--------------------------------|
| Supply voltage U_s | DC 10 V ... 30 V ¹⁾ |
| Power consumption | ≤ 1.2 W ²⁾ |
| Initialization time | < 300 ms |
| Display | 2 x LED |
| Enclosure rating | IP65 / IP67 |
| Protection class | III |

¹⁾ Limit values, reverse-polarity protected Operation in short-circuit protected network: max. 8 A, class 2.

²⁾ Without load.

MECHANICS

| | |
|------------------------|--|
| Dimensions (W x H x D) | 18 mm x 18 mm x 52.7 mm |
| Design | Cylindrical |
| Sending axis | Straight |
| Housing material | Metal (nickel-plated brass, ultrasonic transducer: polyurethane foam, glass epoxy resin) |
| Weight | 25 g |
| Thread size | M18 x 1 |
| Connection type | Male connector, M12, 5-pin |

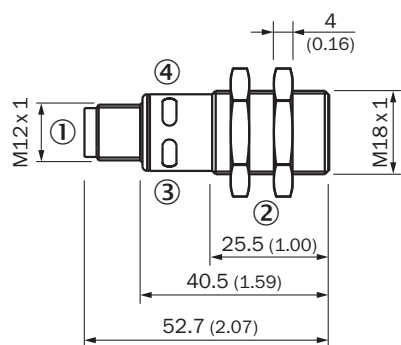
AMBIENT DATA

| | |
|--------------------------------|-------------------|
| Ambient temperature, operation | -25 °C ... +70 °C |
| Ambient temperature, storage | -40 °C ... +85 °C |

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 | ✓ |

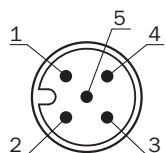
DIMENSIONAL DRAWING UM18-2XXXXXX1



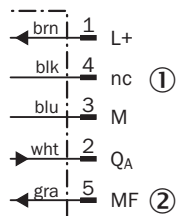
Dimensions in mm (inch)

- 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

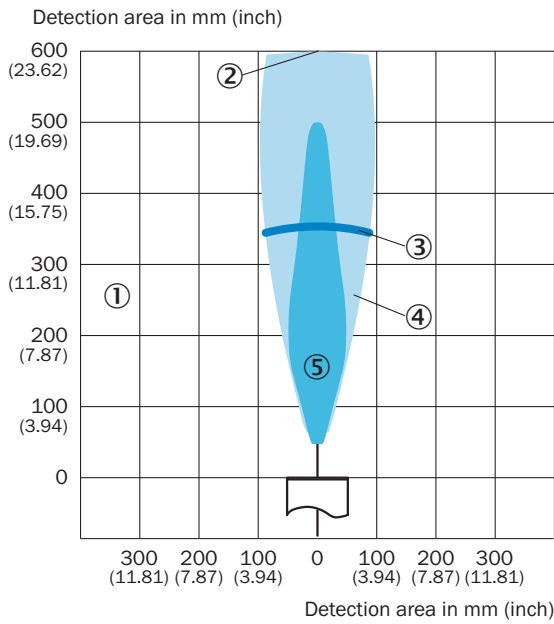


CONNECTION DIAGRAM UM18-21XXX6XXX UM18-21XXX7XXX CONNECTOR M12, 5-PIN



- ① Not assigned
- ② multifunctional input/synchronization and multiplex operation/communication Connect+

DETECTION AREA UM18-212



- 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

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/6048398



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SICK AT A GLANCE

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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

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