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DATA SHEET

**UM18-21126112**

UM18  
Ultrasonic distance sensors

**SICK** Sensor Intelligence

## ULTRASONIC DISTANCE SENSORS

## UM18-211126112

## ORDERING INFORMATION

Type	part no.
UM18-211126112	6048393

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



## DETAILED TECHNICAL DATA

## FEATURES

Operating range, limiting range	30 mm ... 250 mm, 350 mm
Resolution	≥ 0.069 mm
Repeatability	± 0.15 % <sup>1)</sup>
Measurement accuracy	± 1 % <sup>2) 3)</sup>
Temperature compensation	✓
Response time	32 ms <sup>4)</sup>
Output time	8 ms
Ultrasonic frequency (typical)	320 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 <sub>D</sub> 101 years 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> 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**

Analog output	Number	1
	Type	Current output
	Current	4 mA ... 20 mA, $\leq 500 \Omega$ <sup>1)</sup>
	Resolution	12 bit
Multifunctional input (MF)		1 x MF

<sup>1)</sup> 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 <sup>1)</sup>
Power consumption	$\leq 1.2$ 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	Metal (nickel-plated brass, ultrasonic transducer: polyurethane foam, glass epoxy resin)
Weight	30 g
Thread size	M18 x 1
Connection type	Male connector, M12, 5-pin

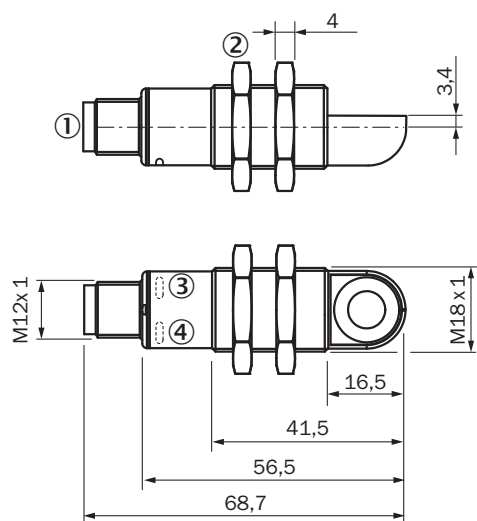
**AMBIENT DATA**

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	✓

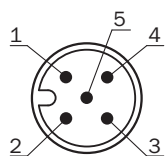
**DIMENSIONAL DRAWING UM18-2XXXXXX2**



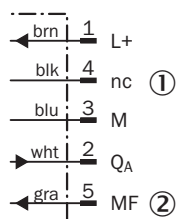
Dimensions in mm (inch)

- 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**

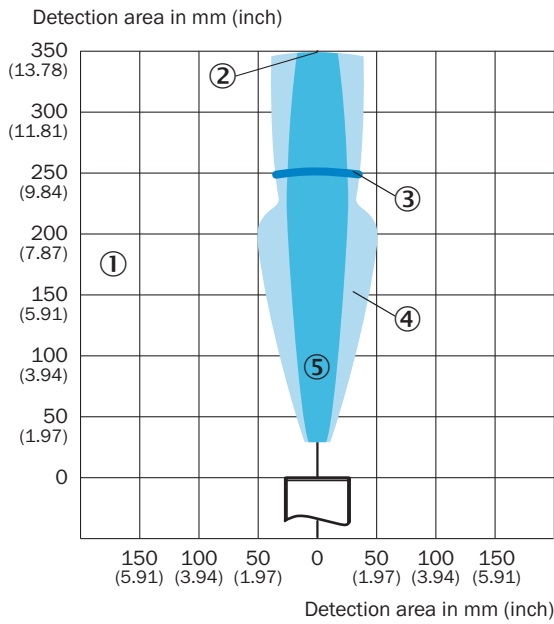


**CONNECTION DIAGRAM UM18-21XXX6XXX UM18-21XXX7XXX CONNECTOR M12, 5-PIN**



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

**DETECTION AREA UM18-211**



- 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

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/6048393](http://www.sick.com/6048393)



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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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