



DATA SHEET

UM18-21812D212

UM18
Ultrasonic distance sensors

SICK

Sensor Intelligence



ULTRASONIC DISTANCE SENSORS

UM18-21812D212

ORDERING INFORMATION

Type	part no.
UM18-21812D212	6066185

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



DETAILED TECHNICAL DATA

FEATURES

Operating range, limiting range	120 mm ... 1,000 mm, 1,300 mm
Resolution	≥ 0.069 mm
Repeatability	± 0.15 % ¹⁾
Measurement accuracy	± 1 % ^{2) 3)}
Temperature compensation	✓
Response time	80 ms
Switching frequency	10 Hz
Output time	20 ms
Ultrasonic frequency (typical)	200 kHz
Additional function	Adjustable operating modes: Switching point (DtO) / Switching window/Background (ObSB), teach-in of digital output, invertible digital output, teach-in of analog output, Invertible 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	MTTF _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.

INTERFACES

IO-Link	✓ , IO-Link V1.1
Function	Process data, parameterization, diagnosis, data storage
Digital output	Number 1 ¹⁾
Type	Push-pull: PNP/NPN

¹⁾ Push-pull: PNP/NPN HIGH = U_V - (< 3 V) / LOW < 3 V.

Maximum output current I_A		$\leq 100 \text{ mA}$
Analog output	Number	1
	Type	Voltage output
	Voltage	0 V ... 10 V, $\geq 100,000 \Omega$
	Resolution	12 bit
Multifunctional input (MF)		1 x MF
Hysteresis		20 mm

¹⁾ Push-pull: PNP/NPN HIGH = $U_V - (< 3 \text{ V})$ / LOW < 3 V.

ELECTRONICS

Supply voltage U_B	DC 10 V ... 30 V ^{1) 2)}
Power consumption	$\leq 1.2 \text{ W}$ ³⁾
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⁾ 15 V ... 30 V when using the analog voltage output.

³⁾ 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

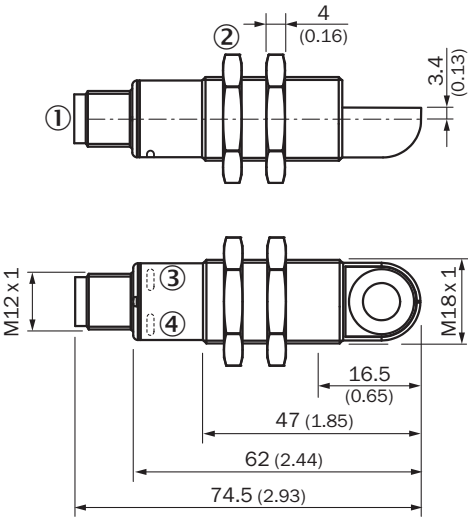
AMBIENT DATA

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	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

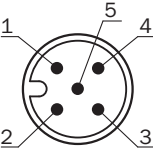
DIMENSIONAL DRAWING UM18-2XXXXXX2



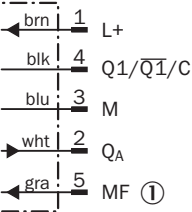
Dimensions in mm (inch)

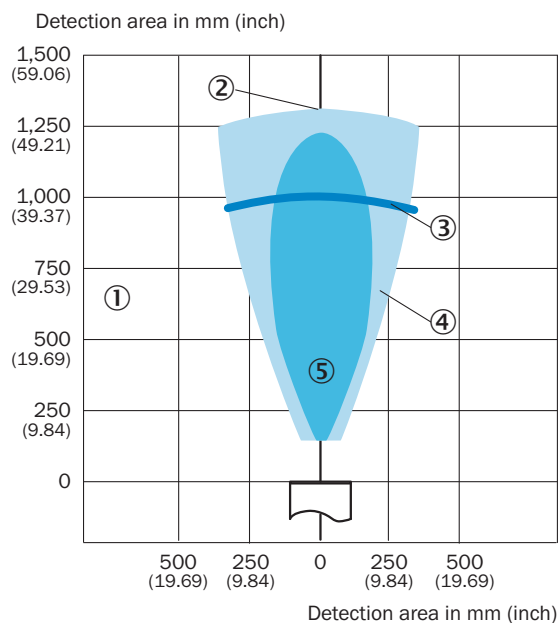
- ① Connection
- ② Fixing nuts, width 24 mm
- ③ Status display for supply voltage active (green)
- ④ Status indicator switching/analog output (orange)

CONNECTION TYPE



CONNECTION DIAGRAM UM18-21XXXCXXX_DXXX, MALE CONNECTOR M12, 5-PIN



DETECTION AREA UM18-218

- 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/6066185



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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

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