



UM18-21812A211

UM18

ULTRASONIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
UM18-21812A211	6048402

Other models and accessories → www.sick.com/UM18



Detailed technical data

Performance

Operating range, limiting range	120 mm ... 1,000 mm, 1,300 mm
Target	Natural objects
Resolution	≥ 0.069 mm
Repeatability	± 0.15 % ¹⁾
Accuracy	± 1 % ^{1) 2)}
Temperature compensation	✓
Response time	80 ms
Switching frequency	10 Hz
Output time	20 ms
Ultrasonic frequency (typical)	200 kHz
Detection area (typical)	See diagrams
Additional function	Set switching mode: Distance to object (DtO) / switching window (Wnd) / Object Between Sensor and Background (ObSB), teach-in of digital output, invertible digital 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

¹⁾ Referring to current measurement value.

²⁾ Temperature compensation can be switched off, without temperature compensation: 0.17 % / K.

Interfaces

IO-Link	✓, V1.0
Function	Process data, parameterization, diagnosis
Digital output	
Number	1 ¹⁾
Type	Push-pull: PNP/NPN
Maximum output current I_A	≤ 100 mA

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

Multifunctional input (MF)	1 x MF
Hysteresis	20 mm

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

Mechanics/electronics

Supply voltage V_s	DC 10 V ... 30 V ^{1) 2)}
Power consumption	$\leq 1.2 \text{ W}$ ³⁾
Initialization time	< 300 ms
Design	Cylindrical
Housing material	Nickel-plated brass Ultrasonic transducer: polyurethane foam, glass epoxy resin
Connection type	Male connector, M12, 5-pin
Indication	2 x LED
Weight	25 g
Sending axis	Straight
Enclosure rating	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.

Ambient data

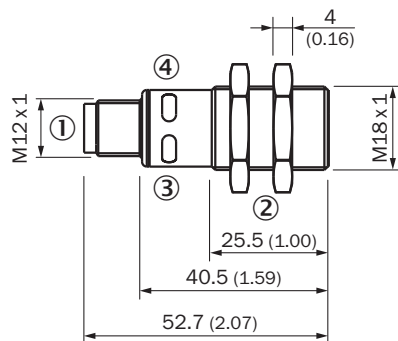
Ambient temperature operation	-25 °C ... +70 °C
Ambient storage temperature	-40 °C ... +85 °C

Classifications

ECI@ss 5.0	27270804
ECI@ss 5.1.4	27270804
ECI@ss 6.0	27270804
ECI@ss 6.2	27270804
ECI@ss 7.0	27270804
ECI@ss 8.0	27270804
ECI@ss 8.1	27270804
ECI@ss 9.0	27270804
ETIM 5.0	EC001846
ETIM 6.0	EC001846
UNSPSC 16.0901	41111960

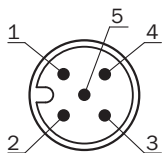
Dimensional drawing (Dimensions in mm (inch))

UM18-2xxxxx1



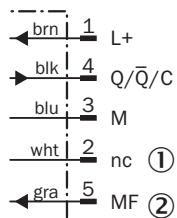
- ① Connection
- ② Mounting nuts, SW 24 mm
- ③ Status display for supply voltage active (green)
- ④ Status indicator switching/analog output (orange)

Connection type



Connection diagram

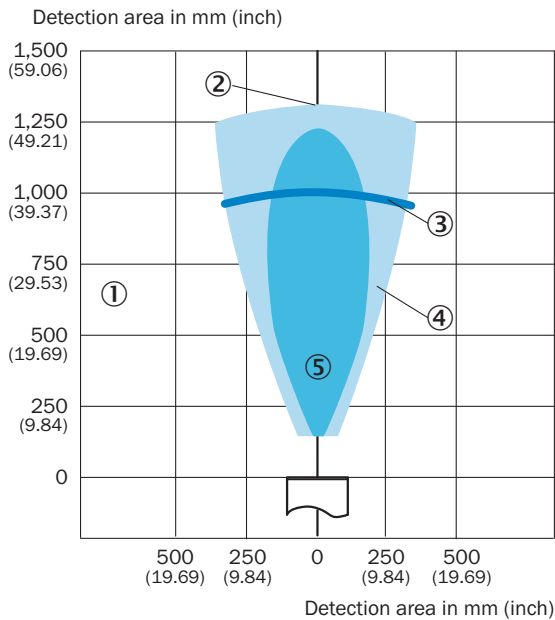
UM18-21xxxAxxx Connector M12, 5-pin



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

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

Recommended accessories

Other models and accessories → www.sick.com/UM18

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate H for universal clamp bracket, steel, zinc coated, Universal clamp (2022726), mounting hardware	BEF-KHS-H01	2022465
Mounting brackets and plates			
	Mounting plate for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WG-M18	5321870
	Mounting bracket for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M18	5308446
Terminal and alignment brackets			
	Mounting bracket with ball-and-socket, Plastic, mounting hardware included	BEF-WN-M18-ST02	5312973

	Brief description	Type	Part no.
	Clamping block for round sensors M18, with fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KHF-M18	2051482
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF2A15-020VB5XLEAX	2096239
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YG2A15-020VB5XLEAX	2096215
Programming and configuration tools			
	Tool for visualization, configuration and cloning, 3-digit LED display, supply voltage: DV 9 V ... 30 V	Connect+ adapter (CPA)	6037782

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