

UM18-212161102 UM18

ULTRASONIC DISTANCE SENSORS





Ordering information

Туре	part no.
UM18-212161102	6048417

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



Detailed technical data

Features

Operating range, limiting range	65 mm 350 mm, 600 mm
Target	Natural objects
Resolution	≥ 0.2 mm
Repeatability	± 0.15 % ¹⁾
Measurement accuracy	± 1 % ²⁾
Response time	64 ms
Switching frequency	12 Hz
Output time	16 ms
Ultrasonic frequency (typical)	400 kHz
Detection area (typical)	See diagrams
Additional function	Set switching mode: Distance to object (DtO) / Window (Wnd) / Object between sensor and background (ObSB) Teach-in of digital output Invertible digital output Reset to factory default

 $^{^{1)}}$ In relation to the current measured value, minimum value \geq resolution.

Interfaces

Digital output	
Number	1 ¹⁾
Туре	PNP
Maximum output current I _A	≤ 200 mA
Hysteresis	5 mm

¹⁾ PNP: HIGH = $V_S - (< 2 V) / LOW = 0 V$.

²⁾ Referring to current measurement value.

Electronics

Supply voltage U _B	DC 10 V 30 V ¹⁾
Power consumption	\leq 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.

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	$0.17 \% / K^{1)}$

¹⁾ Referring to current measurement value.

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China-RoHS	✓
cULus certificate	✓

Classifications

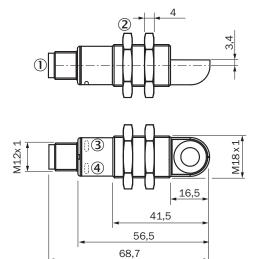
ECLASS 5.0	27270804
ECLASS 5.1.4	27270804
ECLASS 6.0	27270804
ECLASS 6.2	27270804
ECLASS 7.0	27270804
ECLASS 8.0	27270804
ECLASS 8.1	27270804
ECLASS 9.0	27270804
ECLASS 10.0	27270804

²⁾ Without load.

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ECLASS 11.0	27270804
ECLASS 12.0	27272806
ETIM 5.0	EC001846
ETIM 6.0	EC001846
ETIM 7.0	EC001846
ETIM 8.0	EC001846
UNSPSC 16.0901	41111960

Dimensional drawing UM18-2xxxxxx2



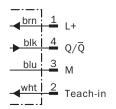
Dimensions in mm (inch)

- 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

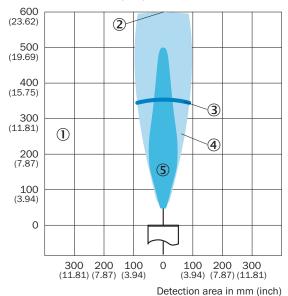


Connection diagram



Detection area 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

Recommended accessories

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

	Brief description	Туре	part no.	
Mounting syst	Mounting systems			
	 Description: Mounting plate for M18 sensors Material: Steel Details: Steel, zinc coated Items supplied: Without mounting hardware Suitable for: GR18, V180-2, V18, W15, Z1, Z2 	BEF-WG-M18	5321870	
reflectors and optics				
600		USP-UM18	5323658	

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	Brief description	Туре	part no.	
connectors an	connectors and cables			
	Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 2 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A14-020VB3XLEAX	2096234	
	 Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 0.6 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF2A14- C60VB3XLEAX	2145707	
	Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 1 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones	YF2A14-010VB3XLEAX	2145708	

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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.

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For us, that is "Sensor Intelligence."

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