AbN
automation

UM18-217166102

UM18
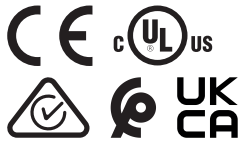
ULTRASONIC SENSORS

SICK
Sensor Intelligence.

UM18-217166102 | UM18

ULTRASONIC SENSORS

Ordering information

Type	part no.
UM18-217166102	6072872

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

Detailed technical data

Features

Operating range, limiting range	20 mm ... 150 mm, 250 mm
Target	Natural objects
Resolution	≥ 0.2 mm
Repeatability	± 0.15 % [1]
Measurement accuracy	± 1 % [2]
Response time	32 ms [3]
Output time	8 ms
Ultrasonic frequency (typical)	380 kHz
Detection area (typical)	See diagrams
Additional function	Teach-in of analog output Invertable analog output 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] 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, ≤ 500 Ω [1]
Resolution	12 bit

[1] For 4 mA ... 20 mA and V_s ≤ 20 V max. load ≤ 100 Ω.

Electronics

Supply voltage U$_B$	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 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

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

Connection type

Connection diagram

brn	1	L+
blk	4	Teach-in
blu	3	M
wht	2	Q_A

Detection area UM1x-x17

Detection area in mm (inch)

Detection area in mm (inch)
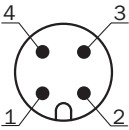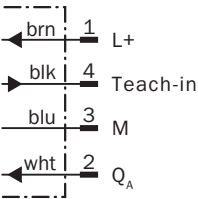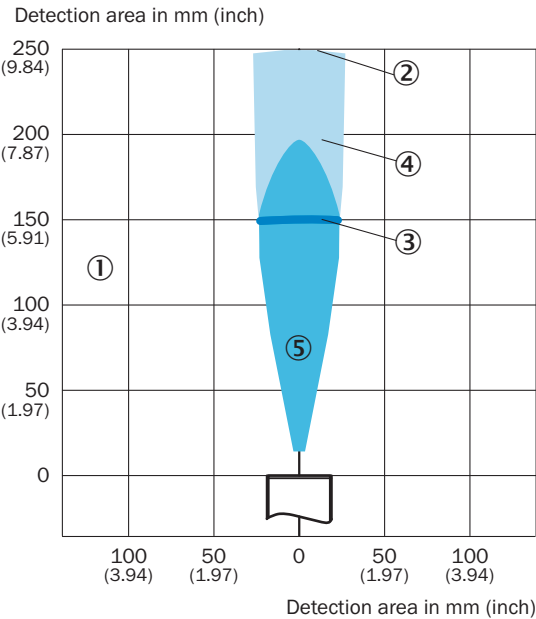
① Detection range dependent on reflection properties, size, and alignment of the object

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

Recommended accessories

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

	Brief description	Type	part no.
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			
		USP-UM18	5323658
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

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."

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