UM18-51115

UM18

ULTRASONIC DISTANCE SENSORS

SICK
Sensor Intelligence.

UM18-51115 | UM18
ULTRASONIC DISTANCE SENSORS

Ordering information

Type	part no.
UM18-51115	6028974

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

Detailed technical data

Features

Operating range, limiting range	30 mm ... 250 mm, 350 mm
Resolution	≥ 0.08 mm
Repeatability	± 0.15 % [1]
Measurement accuracy	0.17 % / K [2]
Response time	32 ms
Switching frequency	± 15 Hz
Output time	8 ms
Ultrasonic frequency (typical)	320 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 Multi functional input: external teach Reset to factory default

[1] In relation to the current measured value, minimum value ≥ resolution.
[2] Referring to current measurement value.

Interfaces

Digital output		
	Number	1 [1]
	Type	NPN
	Maximum output current I_A	≤ 500 mA
Multifunctional input (MF)		1 x
Hysteresis		2 mm

[1] NPN: HIGH = ≤ 2 V / LOW = U_V.

Electronics

Supply voltage U_B	DC 10 V ... 30 V [1]

[1] Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.
[2] Without load.

Power consumption	≤ 1.2 W [2]
Initialization time	< 300 ms
Enclosure rating	IP65 / IP67

[1] Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

[2] Without load.

Mechanics

| Dimensions (W x H x D)	18 mm x 18 mm x 73.3 mm
Design	Cylindrical
Sending axis	Straight
Housing material	Metal, plastic (nickel-plated brass, PBT, ultrasonic transducer: polyurethane foam, glass epoxy resin)
Weight	55 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

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
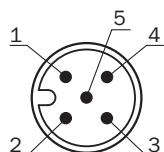
Connection diagram UM18-21xxxAxxx_Bxxx, male connector M12, 5-pin

brn	1	L+
blk	4	Q/$\overline{Q}$/C
blu	3	M
wht	2	nc ①
gra	5	MF ②
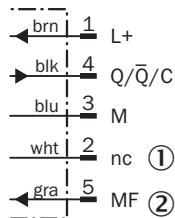
① Not assigned
② multifunctional input/synchronization and multiplex operation/communication Connect+

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
programming devices			
	• **Product segment:** Integration modules and adapters • **Product family:** Cloning modules • **Description:** Tool for visualization, configuration and cloning, 3-digit LED display, supply voltage: DV 9 V … 30 V	Connect+ adapter (CPA)	6037782
reflectors and optics			
		USP-UM18	5323658

Brief description	Type	part no.
connectors and cables		
• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 2 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A15-020VB5XLEAX	2096239
• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 0.6 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A15-C60VB5XLEAX	2145570
• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 3 m, 5-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals, Uncontaminated zones	YF2A15-030VB5XLEAX	2145572

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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