



UM30-212111S10

UM30

ULTRASONIC DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
UM30-212111S10	6050943

This UM30 variant is certified according to "DIN EN 50155: Railway applications - Rolling stock - Electronic equipment" as well as "EN 45545-2: Railway applications - Fire protection on railway vehicles - Part 2: Requirements for fire behaviour of materials and components" (see "Downloads" -> "Certificates")

Other models and accessories → www.sick.com/UM30



Detailed technical data

Features

Operating range, limiting range	65 mm ... 350 mm, 600 mm
Target	Natural objects
Resolution	≥ 0.18 mm
Repeatability	± 0.15 % ¹⁾
Measurement accuracy	± 1 % ^{2) 3)}
Temperature compensation	✓
Response time	64 ms
Switching frequency	12 Hz
Output time	16 ms
Ultrasonic frequency (typical)	400 kHz
Detection area (typical)	See diagrams
Additional function	Adjustable operating modes: Switching point (DtO) / Switching window/Background (ObSB), teach-in of digital output, set levels of digital outputs, invertable digital output, set on delay digital output, synchronization of up to 50 sensors, multiplexing: no cross talk of up to 50 sensors, adjustable measurement filters: Measured value filters/Filter strength/Foreground suppression/Detection area/Sensitivity and sound beam, Display (can be deactivated), reset to factory default
Special characteristic	Platform detection
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

Digital output

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

Number	1 ¹⁾
Type	PNP
Maximum output current I _A	≤ 200 mA
Multifunctional input (MF)	1 x MF
Hysteresis	5 mm

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

Electronics

Supply voltage U_B	DC 9 V ... 30 V ¹⁾
Power consumption	≤ 2.4 W ²⁾
Initialization time	< 300 ms
Indication	LED 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)	30 mm x 30 mm x 84 mm
Design	Cylindrical
Sending axis	Straight
Housing material	Metal (nickel-plated brass, PBT, ultrasonic transducer: polyurethane foam, glass epoxy resin)
Weight	150 g
Thread size	M30 x 1.5
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

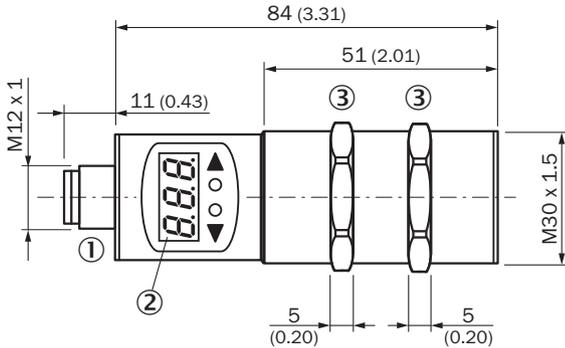
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ULTRASONIC DISTANCE SENSORS

ETIM 7.0	EC001846
ETIM 8.0	EC001846
UNSPSC 16.0901	41111960

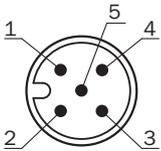
Dimensional drawing (Dimensions in mm (inch))

UM30-211, UM30-212, UM30-213



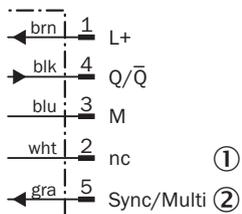
- ① Connection
- ② Display
- ③ Mounting nuts, SW 36 mm

Connection type



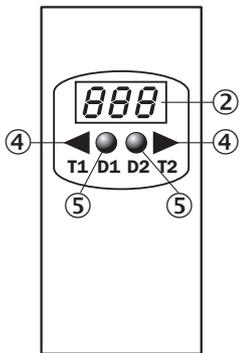
Connection diagram

UM30-21x111 UM30-21x114 Connector M12, 5-pin



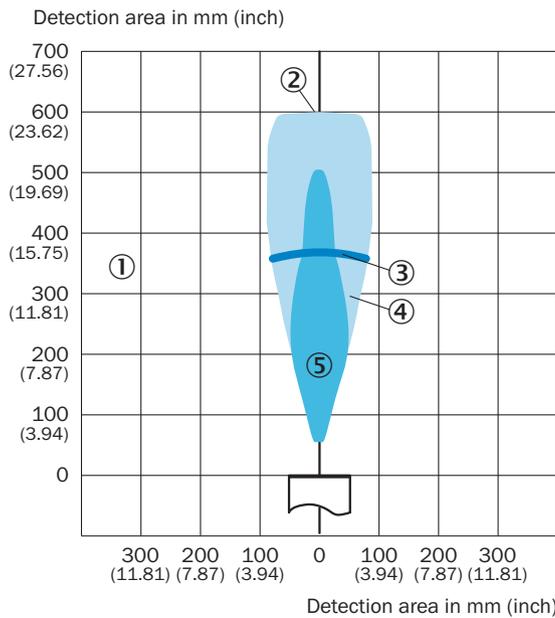
- ① Not assigned
- ② Synchronization and multiplex mode, Connect+ communication

Adjustment possible



- ② Display
- ④ Control elements
- ⑤ Status indicators

Detection area



- 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/UM30

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket for M30 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M30	5308445
Others			
	<ul style="list-style-type: none"> • 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 	YF2A15-020VB5XLEAX	2096239

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