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DATA SHEET

UM30-214113

UM30
Ultrasonic distance sensors

SICK Sensor Intelligence



ULTRASONIC DISTANCE SENSORS

UM30-214113

ORDERING INFORMATION

Type	part no.
UM30-214113	6036919

Further device versions and accessories at www.sick.com/UM30

DETAILED TECHNICAL DATA

FEATURES

Operating range, limiting range	350 mm ... 3,400 mm, 5,000 mm
Resolution	≥ 0.18 mm
Repeatability	± 0.15 % [1]
Measurement accuracy	± 1 % [2] [3]
Temperature compensation	✓
Response time	180 ms [4]
Output time	43 ms
Ultrasonic frequency (typical)	120 kHz
Detection area (typical)	See diagrams
Additional function	Teach-in of analog output, scaling of analog outputs, Invertable analog output, automatic selection of analog current or voltage 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
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.

[4] 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 / voltage output
Function	Automatic selection of analog current or voltage output dependent on load
Current	4 mA ... 20 mA, ≤ 500 Ω [1]
Voltage	0 V ... 10 V, ≥ 100,000 Ω
Resolution	12 bit
Multifunctional input (MF)	1 x MF

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

ELECTRONICS

Supply voltage U_B	DC 9 V ... 30 V [1] [2]
Power consumption	≤ 2.4 W [3]
Initialization time	< 300 ms
Display	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] 15 V ... 30 V when using the analog voltage output.

[3] Without load.

MECHANICS

Dimensions (W x H x D)	47.5 mm x 47.5 mm x 102 mm
Design	Cylindrical
Sending axis	Straight
Housing material	Metal (nickel-plated brass, PBT, ultrasonic transducer: polyurethane foam, glass epoxy resin)
Weight	210 g
Thread size	M30 x 1.5
Connection type	Male connector, M12, 5-pin

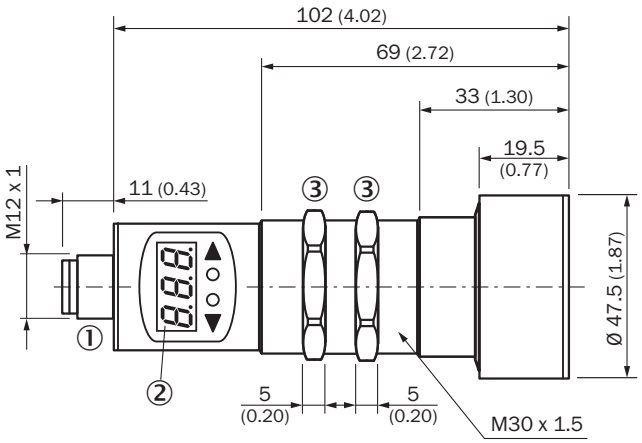
AMBIENT DATA

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

CERTIFICATES

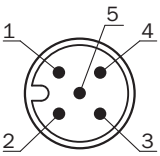
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓

DIMENSIONAL DRAWING UM30-214

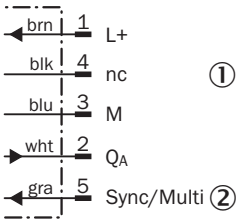


Dimensions in mm (inch)
① Connection
② Display
③ Mounting nuts, SW 36 mm

CONNECTION TYPE

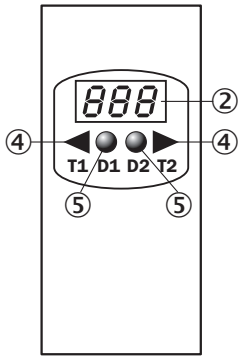


CONNECTION DIAGRAM UM30-21X113 CONNECTOR M12, 5-PIN



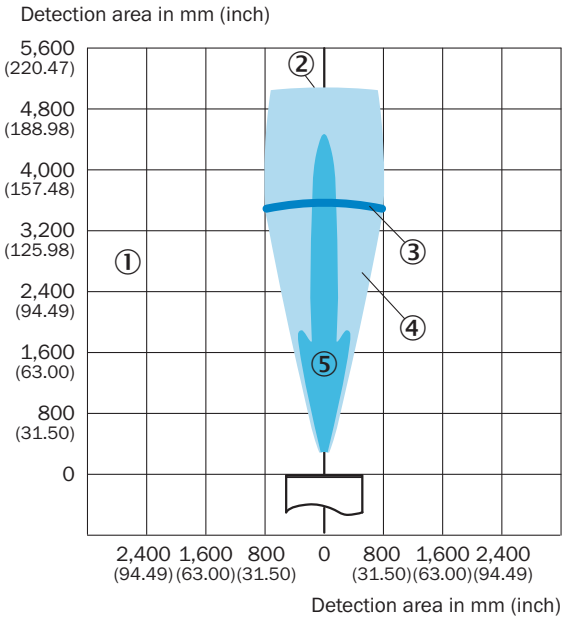
① Not assigned
② Synchronization and multiplex mode, Connect+ communication

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

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6036919

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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