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Product data sheet



UC30-214163

UC30

ULTRASONIC SENSORS

SICK
Sensor Intelligence.

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UC30-214163 | UC30

ULTRASONIC SENSORS



Ordering information

Type	Part no.
UC30-214163	6054712

Other models and accessories → www.sick.com/UC30

Detailed technical data

Mechanics/electronics

Supply voltage V_S	DC 9 V ... 30 V [1) 2)]
Power consumption	≤ 1.2 W [3)]
Initialization time	< 450 ms [4)]
Design	Rectangular
Housing material	Plastic (PBT/PET) Ultrasonic transducer: polyurethane foam, glass epoxy resin
Connection type	Male connector, M12, 5-pin
Indication	2 x LED
Weight	180 g
Sending axis	Straight
Dimensions (W x H x D)	62.2 mm x 62.2 mm x 32.7 mm
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.
4) Subsequent smoothing of the analog output, depending on the application, may increase the initialization time by up to 200 %.

Performance

Operating range, limiting range	350 mm ... 3,400 mm, 5,000 mm
Target	Natural objects
Resolution	≥ 0.18 mm
Repeatability	± 0.15 % [1)]
Accuracy	± 1 % [2) 3)]
Temperature compensation	✓

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 %.

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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, 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, reset to factory default

[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.

Ambient data

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

Classifications

ECl@ss 5.0	27270804
ECl@ss 5.1.4	27270804
ECl@ss 6.0	27270804
ECl@ss 6.2	27270804
ECl@ss 7.0	27270804
ECl@ss 8.0	27270804
ECl@ss 8.1	27270804
ECl@ss 9.0	27270804
ECl@ss 10.0	27270804
ECl@ss 11.0	27270804
ETIM 5.0	EC001846
ETIM 6.0	EC001846
ETIM 7.0	EC001846
ETIM 8.0	EC001846
UNSPSC 16.0901	41111960

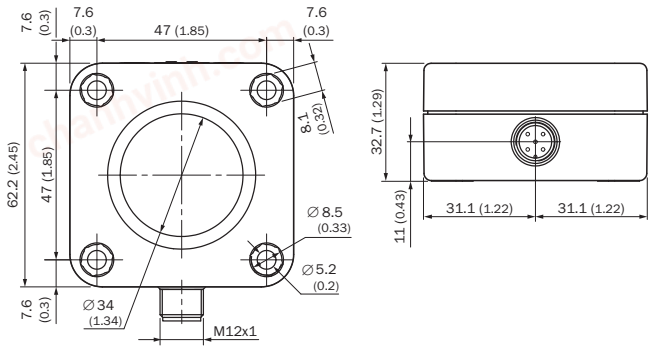
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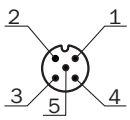
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Dimensional drawing (Dimensions in mm (inch))

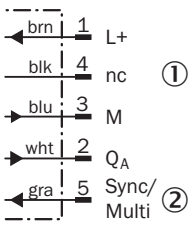
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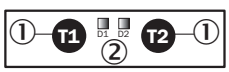
Connection type



Connection diagram



Adjustment possible

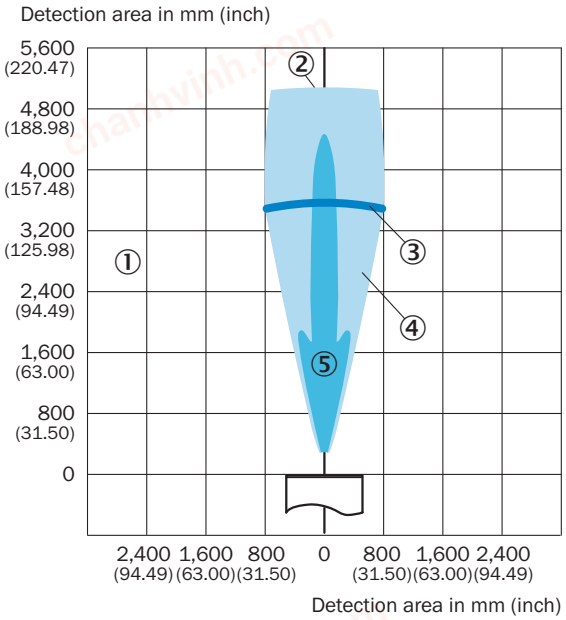


① Control elements
② LED status indicator

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Detection area

UM30-214, UC30-214



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/UC30

	Brief description	Type	Part no.
Programming and configuration tools			
	Tool for visualization, configuration and cloning, 3-digit LED display, supply voltage: DV 9 V ... 30 V	Connect+ adapter (CPA)	6037782
Universal bar clamp systems			
	Plate K for universal clamp bracket, steel, zinc coated, Universal clamp (2022726), mounting hardware	BEF-KHS-K01	2022718
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m	YF2A15-020VB5XLEAX	2096239

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Recommended services

Additional services ➜ www.sick.com/UC30

	Type	Part no.
Warranty extensions		
• **Product area:** Identification solutions, machine vision, Distance sensors, Detection and ranging solutions • **Range of services:** The services correspond to the scope of the statutory manufacturer warranty (SICK general terms and conditions of purchase) • **Duration:** Five-year warranty from delivery date.	Extended warranty for a total of five years from delivery date	1680671

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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:

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