UM30-213113

UM30

ULTRASONIC SENSORS
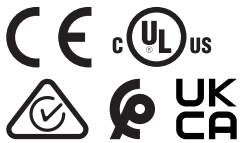
SICK
Sensor Intelligence.

ULTRASONIC SENSORS

Ordering information

Type	part no.
UM30-213113	6036918

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

Detailed technical data

Features

Operating range, limiting range	200 mm … 1,300 mm, 2,000 mm
Target	Natural objects
Resolution	≥ 0.18 mm
Repeatability	± 0.15 % [1]
Measurement accuracy	± 1 % [2] [3]
Temperature compensation	✔
Response time	92 ms [4]
Output time	23 ms
Ultrasonic frequency (typical)	200 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	

[1] For 4 mA … 20 mA and V$_s$ ≤ 20 V max. load ≤ 100 Ω.

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
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] 15 V ... 30 V when using the analog voltage output.
[3] 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

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

Dimensional drawing UM30-211, UM30-212, UM30-213
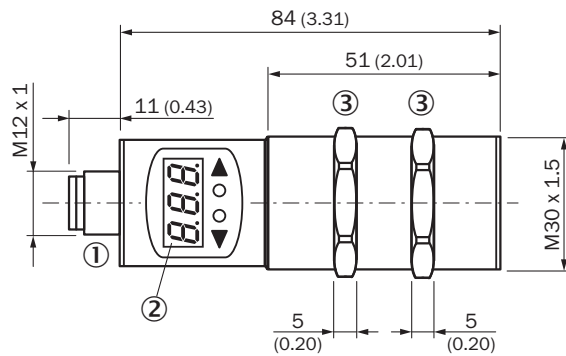
Dimensions in mm (inch)
① Connection
② Display
③ Mounting nuts, SW 36 mm

Connection type
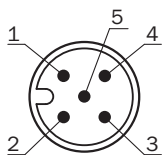
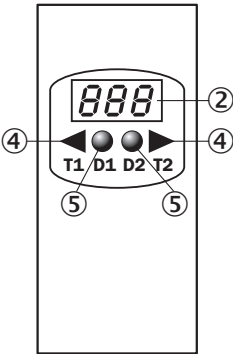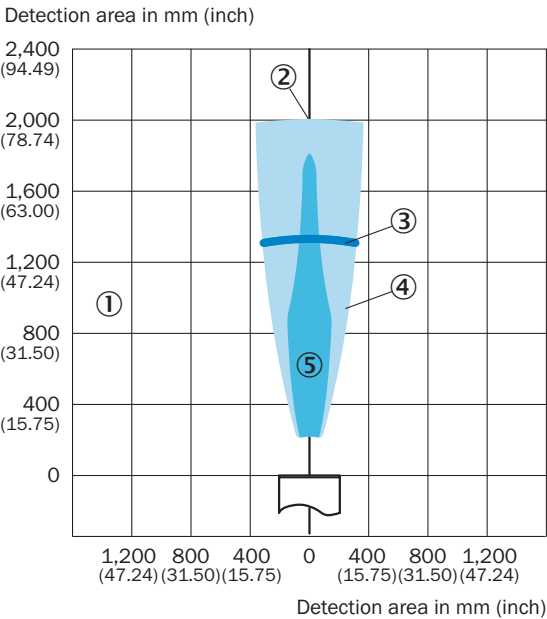## Connection diagram UM30-21x113 Connector M12, 5-pin

brn	1	L+
blk	4	nc ①
blu	3	M
wht	2	Q$_A$
gra	5	Sync/Multi ②
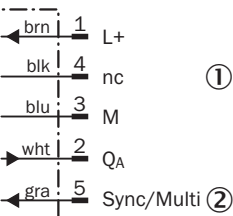
① Not assigned
② Synchronization and multiplex mode, Connect+ communication

Adjustment possible

```
        ②
  888
④ ◄ ● ● ► ④
  T1 D1 D2 T2
  ⑤      ⑤
```

② Display
④ Control elements
⑤ Status indicators

Detection area

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: pipe with 27 mm diameter

Recommended accessories

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

Brief description	Type	part no.
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
Mounting systems		
• **Description:** Mounting bracket for M30 sensors • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Without mounting hardware	BEF-WN-M30	5308445
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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