

UC30-21416A

UC30

ULTRASONIC DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
UC30-21416A	6054710

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



Detailed technical data

Mechanics/electronics

Supply voltage V_s	DC 9 V ... 30 V ¹⁾
Power consumption	≤ 1.2 W ²⁾
Initialization time	< 380 ms
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 mm x 62 mm x 33.2 mm ³⁾ 62 mm x 62 mm x 32.7 mm ⁴⁾
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.

³⁾ From serial number S/N 2405xxxx.

⁴⁾ Up to serial number S/N 2404xxxx.

Safety-related parameters

MTTF_D	101 years
DC_{avg}	0%

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	✓
Response time	180 ms
Switching frequency	4 Hz
Output time	43 ms
Ultrasonic frequency (typical)	120 kHz
Detection area (typical)	See diagrams
Additional function	Adjustable operating modes: Switching point (Dt0) / 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 Teach-in button(s) (can be deactivated) 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.

Interfaces

IO-Link	✓, IO-Link V1.0
Function	Process data, parameterization, diagnosis
Digital output	
Number	1 ¹⁾
Type	Push-pull: PNP/NPN
Maximum output current I_A	≤ 100 mA
Multifunctional input (MF)	1 x MF
Hysteresis	50 mm

¹⁾ Push-pull: PNP/NPN HIGH = $U_V - (< 3 V) / LOW < 3 V$.

Ambient data

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

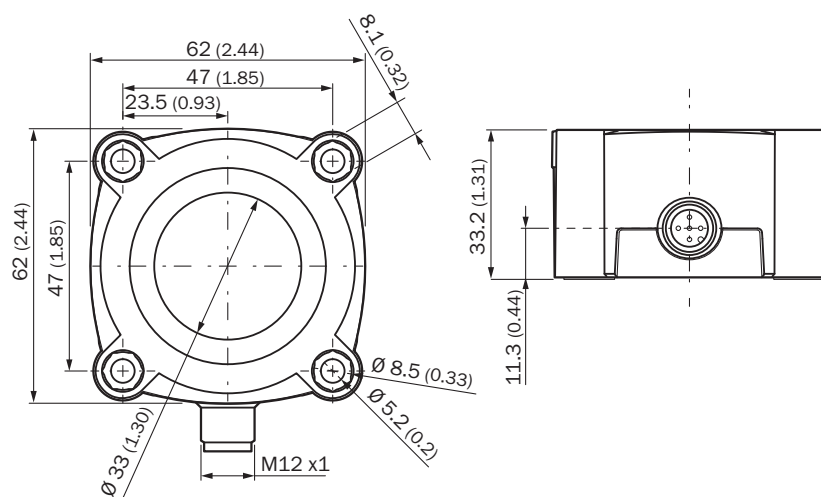
Classifications

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

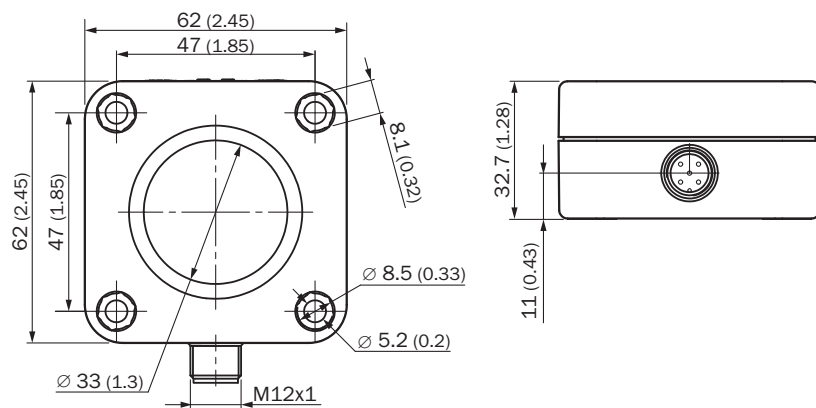
Dimensional drawing (Dimensions in mm (inch))

| from serial number S/N 2405xxxx

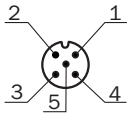


Attention: The position of the screw head in the drill hole is now 12 mm lower, please check the screw length.

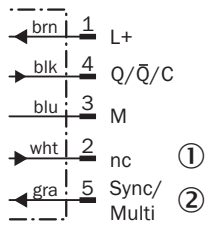
| up to serial number S/N 2404xxxx



Connection type



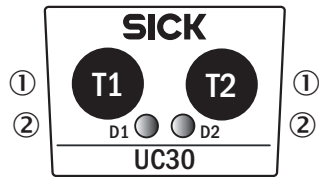
Connection diagram



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

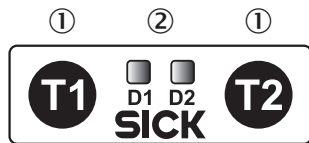
Adjustment possible

| from serial number S/N 2405xxxx



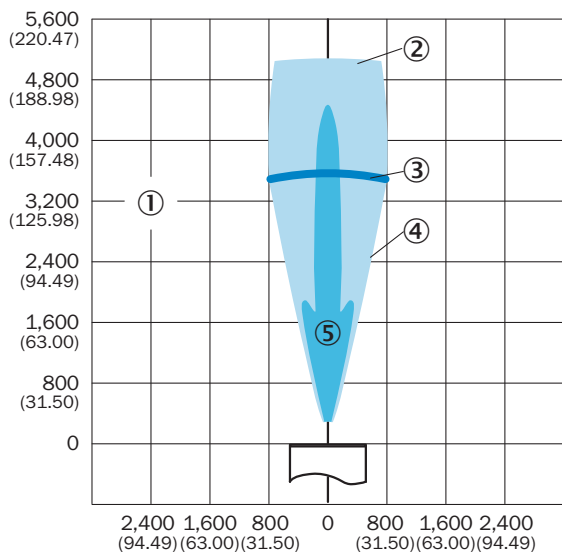
- ① Control elements
- ② LED status indicator

| up to serial number S/N 2404xxxx



- ① Control elements
- ② LED status indicator

Detection area





Dimensions 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/UC30

	Brief description	Type	Part no.
Connection modules			
	IO-Link V1.1 Class A port, USB2.0 port, optional external power supply 24V / 1A	IOLA2US-01101 (SiLink2 Master)	1061790
	<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

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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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