UC12-12231

UC12

ULTRASONIC SENSORS

SICK
Sensor Intelligence.

UC12-12231 | UC12

ULTRASONIC SENSORS

Ordering information

Type	Part no.
UC12-12231	6029832

Other models and accessories ➜ www.sick.com/UC12

CE

Detailed technical data

Performance

Working range, limiting range	55 mm ... 250 mm, 350 mm
Resolution	≥ 0.1 mm
Repeatability	± 0.15 % [1]
Accuracy	± 1 % [1]
Temperature compensation	✓
Response time	30 ms
Switching frequency	25 Hz
Output time	8 ms
Ultrasonic frequency (typical)	500 kHz
Detection area (typical)	See diagrams
Additional function	Set switching mode: Distance to object (DtO) / Window (Wnd) / Object between sensor and background (ObSB), teach-in of switching output, temperature compensation, lock user interface, reset to factory default

[1] Referring to current measurement value.

Interfaces

Switching output	2 x PNP (500 mA) [1] [2] [3]
Hysteresis	2 mm

[1] Output Q short-circuit protected.
[2] Complementary switching outputs (Q, Q̄).
[3] PNP: HIGH = V_S - (< 2 V) / LOW = 0 V.

Mechanics/electronics

Supply voltage V_s	DC 10 V ... 30 V [1]
Power consumption	≤ 1.2 W [2]
Initialization time	< 300 ms

[1] Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.
[2] Without load.

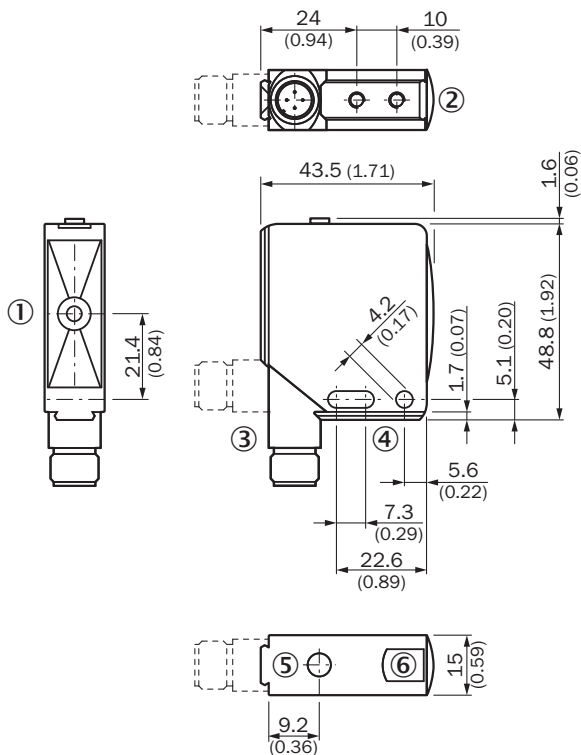| Design	Rectangular
Housing material	Die-cast zinc Ultrasonic transducer: polyurethane foam, glass epoxy resin
Connection type	Male connector, M12, 4-pin
Indication	Dual LED
Weight	75 g
Sending axis	Straight

[1] Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.
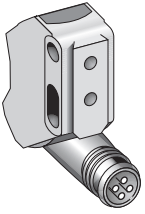
[2] Without load.

Ambient data

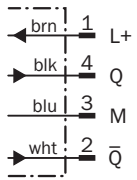| Enclosure rating	IP 67
Protection class	III
Ambient temperature	Operation: –25 °C ... +70 °C Storage: –40 °C ... +85 °C

Dimensional drawing (Dimensions in mm (inch))

① Sender and receiver axis
② M4 threaded mounting hole, 4 mm deep
③ Connection
④ Fixing hole
⑤ Operating elements
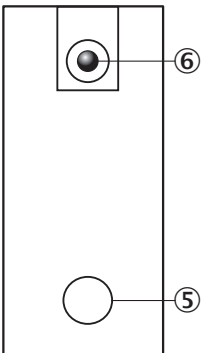⑥ Status indicator switching output (orange) and power on (green)

Connection type

Connection diagram

```
  brn   1  L+
  blk   4  Q
  blu   3  M
  wht   2  Q̄
```
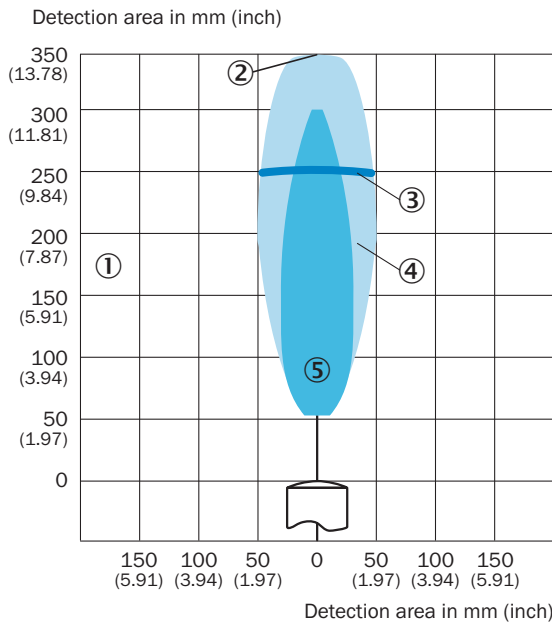
Adjustment possible

⑤ Operating elements
⑥ Status indicator switching output (orange) and power on (green)

Detection area

UC12-12

Detection area in mm (inch)

Detection area in mm (inch)

① Sensing range dependent on reflection properties, size and orientation of the object
② Limiting range
③ Working range
④ Example object: aligned plate 10 mm x 10 mm
⑤ Example object: pipe with 10 mm diameter

Recommended accessories

Other models and accessories ➜ www.sick.com/UC12

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate D for universal clamp bracket, steel, zinc coated, universal clamp and mounting hardware included	BEF-KHS-D01	2022461
	Plate L for universal clamp bracket, steel, zinc coated, universal clamp and mounting hardware included	BEF-KHS-L01	2023057
	Plate N02 for universal clamp bracket, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N02	2051608
Mounting brackets and mounting plates			
	Mounting bracket, large, Stainless steel, mounting hardware included	BEF-WG-W12	2013942
	Mounting bracket, small, Stainless steel, mounting hardware included	BEF-WK-W12	2012938

Brief description	Type	Part no.
Plug connectors and cables		
Head A: female connector, M12, 4-pin, straight Head B: cable Cable: PVC, unshielded, 2 m	DOL-1204-G02M	6009382
Head A: female connector, M12, 4-pin, angled Head B: cable Cable: PVC, unshielded, 2 m	DOL-1204-W02M	6009383

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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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