



Ultrasonic sensors UC12

UC12-12235



Model Name > UC12-12235
Part No. > 6029834

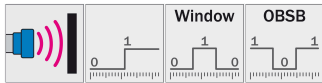


At a glance

- Object detection independent of material color and ambient light - even transparent foils, glass, liquids and bottles are reliably detected
- Fast and easy teach-in with single push-button
- Immune to dirt, dust and fog
- Two ambivalent switching outputs (Q, /Q)
- Excellent background suppression
- Three operation modes: Distance to Object (DtO), Window (Wnd) or Object between sensor and background (ObSB)

Your benefits

- Fast commissioning due to single-button teach-in
- Full mechanical compatibility to photoelectric sensors increase application flexibility without machine modification
- Standard proximity, window and reflection modes provide application flexibility, which increases reliability and productivity
- Integrated temperature compensation ensures high measurement accuracy
- Complementary switching outputs immediately signal broken wiring, reducing faulty production results



Performance

Resolution:	≥ 0.1 mm
Working range, limiting range:	55 mm ... 250 mm, 350 mm
Repeatability ¹⁾ :	± 0.15 %
Accuracy ²⁾ :	± 1 %
Response time:	30 ms
Switching frequency:	25 Hz
Ultrasonic frequency (typical):	500 kHz
Detection area (typical):	See diagrams
Temperature compensation:	✓
Additional function:	Set switching mode: Distance to object (DtO)/switching window (Wnd)/ Object Between Sensor and Background (ObSB) Teach-in of switching output Temperature compensation Reset to factory default Lock user interface
Output time:	8 ms

1) 2) Referring to current measurement value

Interfaces

Output type ^{1), 2), 3)}: 2 x NPN (500 mA)
Hysteresis: 2 mm
¹⁾ Output Q short-circuit protected ²⁾ Complementary switching outputs (Q, /Q) ³⁾ NPN: HIGH $\leq 2\text{ V}$ / LOW = V_S

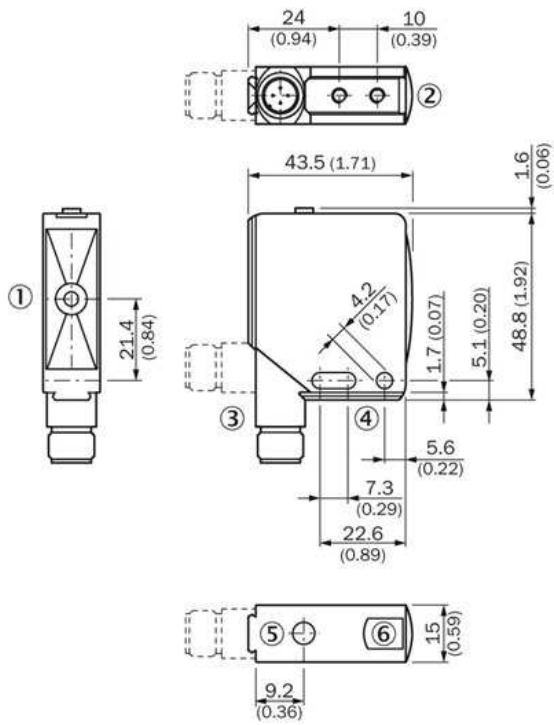
Mechanics/electronics

Sending axis: Straight
Supply voltage V_S ¹⁾: DC 10 V ... 30 V
Power consumption ²⁾: $\leq 1.2\text{ W}$
Initialization time: $< 300\text{ ms}$
Design: Rectangular
Housing material: Die-cast zinc
ultrasonic transducer: polyurethane foam, glass epoxy resin
Electrical connection: Male connector, M12, 4-pin
Indication: Dual LED
Weight: 75 g
¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ Without load

Ambient data

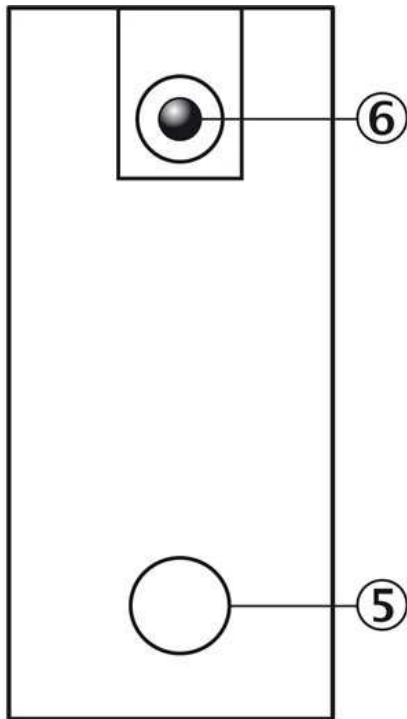
Enclosure rating: IP 67
Protection class: III
Ambient temperature: Operation: $-25 \dots +70\text{ }^\circ\text{C}$
Storage: $-40 \dots +85\text{ }^\circ\text{C}$

Dimensional drawing



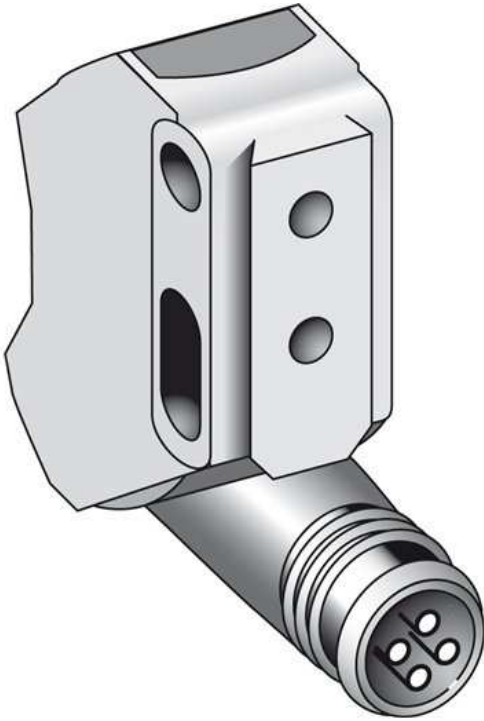
- |1| Transmission and reception axis
- |2| M4 threaded mounting hole, 4 mm deep
- |3| Connection
- |4| Mounting hole
- |5| Control elements
- |6| Status indicator switching
output (orange) and power on (green)

Adjustments

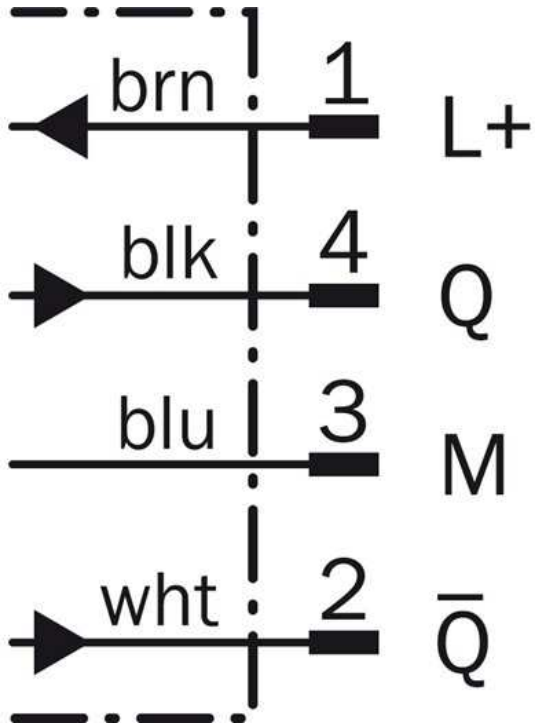


- |5| Control elements
- |6| Status indicator switching
output (orange) and power on (green)

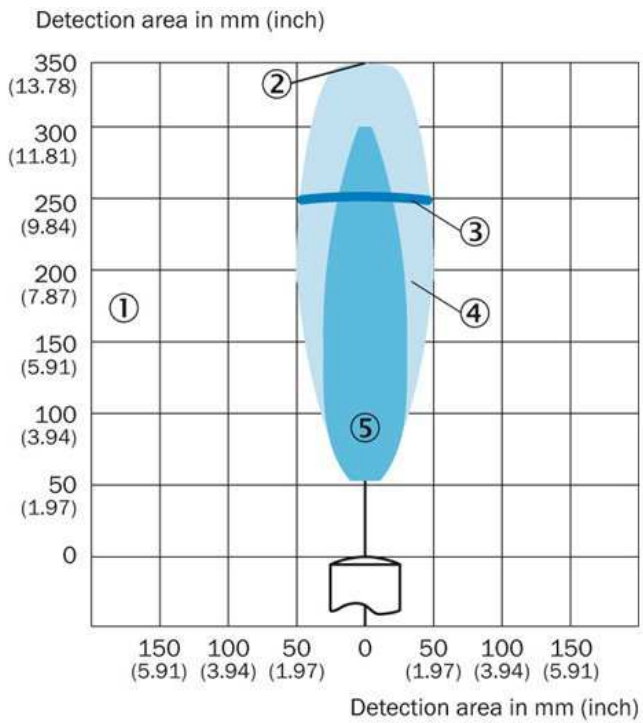
Connection type



Connection diagram



Detection area



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