



Ultrasonic sensors UC4

UC4-11341



Model Name > UC4-11341
Part No. > 6034667

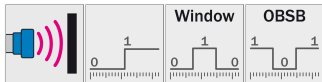


At a glance

- Integrated time-of-flight technology detects objects such as glass, liquids and transparent foils, independent of color
- Three operation modes: Distance to Object (DtO), Window (Wnd) or Object between sensor and background (ObSB)
- Immunity to dirt, dust and fog
- One PNP/NPN switching output
- Excellent background suppression

Your benefits

- Mini housing allows for quick and easy integration, even in the most confined spaces
- Immunity to dirt and dust ensures reliable object detection, even in challenging environmental conditions
- Integrated temperature compensation ensures high measurement accuracy
- Various switching outputs provide application flexibility, which increases reliability and productivity
- Full mechanical compatibility to photoelectric sensors increase application flexibility without machine modification
- Economical version available for simple, cost-sensitive applications
- Fast machine setup due to easy-to-use teach-in button



Performance

Resolution:	≥ 0.1 mm
Working range, limiting range ¹⁾ :	13 mm ... 100 mm, 150 mm
Repeatability ²⁾ :	± 0.15 %
Accuracy ³⁾ :	0.17 %/K
Response time:	30 ms
Output rate:	8 ms
Switching frequency:	20 Hz
Ultrasonic frequency (typical):	380 kHz
Detection area (typical):	See diagrams
Temperature compensation:	-

Additional function: Set switching mode: Distance to object (DtO)/Window (Wnd)/Object between sensor and background (ObSB)
Teach-in of switching output
Reset to factory default
Lock user interface
Switching output invertible

1) Teach-in from 21 mm 2) 3) Referring to current measurement value

Interfaces

Switching output ¹⁾; ²⁾: 1 x PNP (200 mA)
Hysteresis: 2 mm

¹⁾ Output Q short-circuit protected ²⁾ PNP: HIGH = $V_S - (< 2 V)$ /LOW = 0 V

Mechanics/electronics

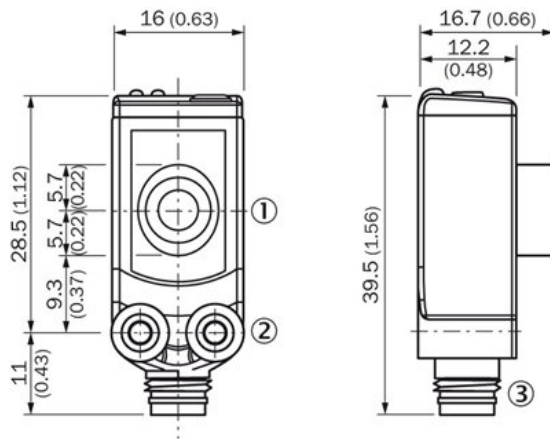
Sending axis: Straight
Supply voltage V_S ¹⁾: DC 20 V ... 30 V
Power consumption ²⁾: $\leq 0.75 W$
Initialization time: $< 300 ms$
Design: Rectangular
Housing material: ABS-plastic
ultrasonic transducer: polyurethane foam, glass epoxy resin
Connection type: Male connector, M8, 3-pin
Indication: 2 x LED
Weight: 10 g

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

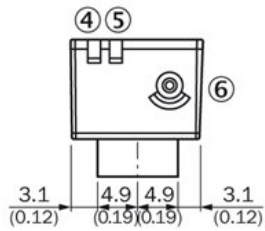
Ambient data

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

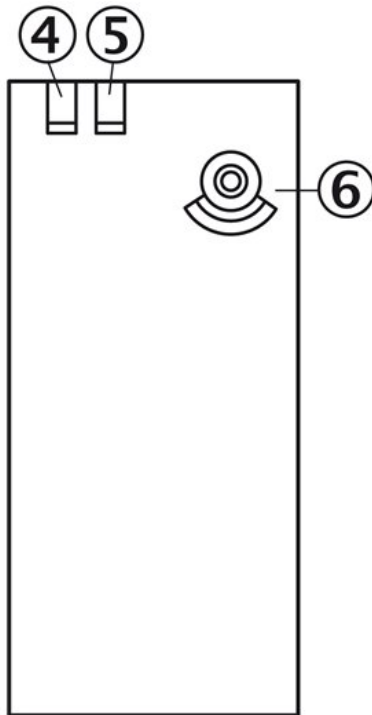
Dimensional drawing



- |1| Transmission and reception axis
- |2| Threaded mounting hole M3
- |3| Connection
- |4| Status indicator switching output (orange)
- |5| Status indicator power on (green)
- |6| Control elements

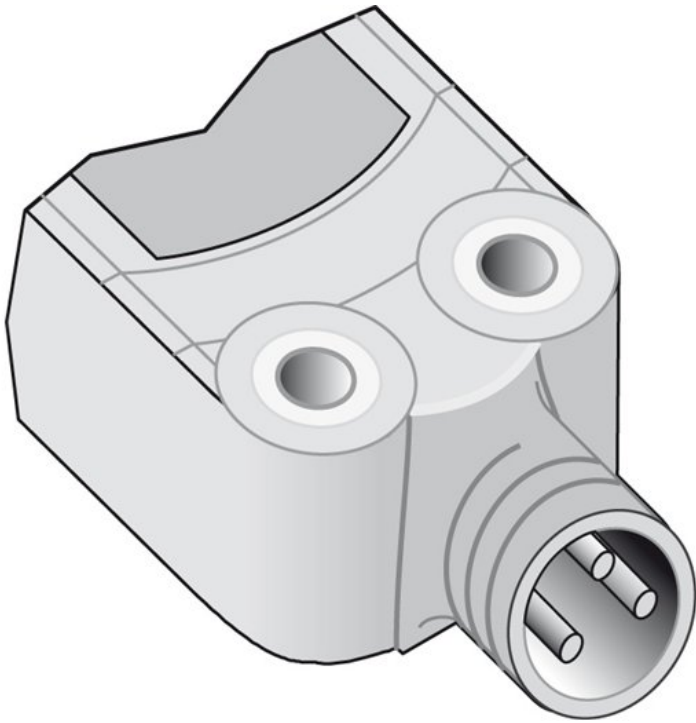


Adjustments

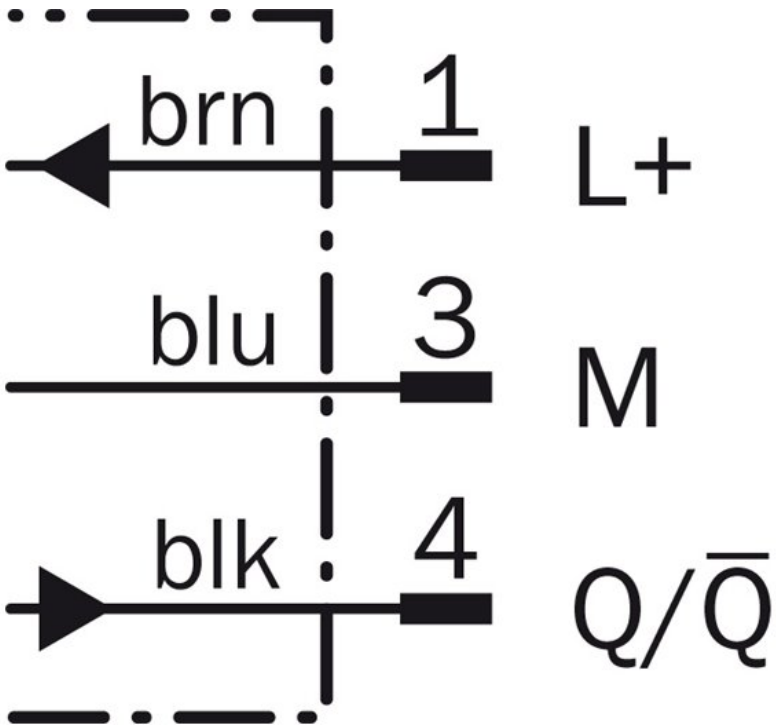


- |4| Status indicator switching output (orange)
- |5| Status indicator power on (green)
- |6| Control elements

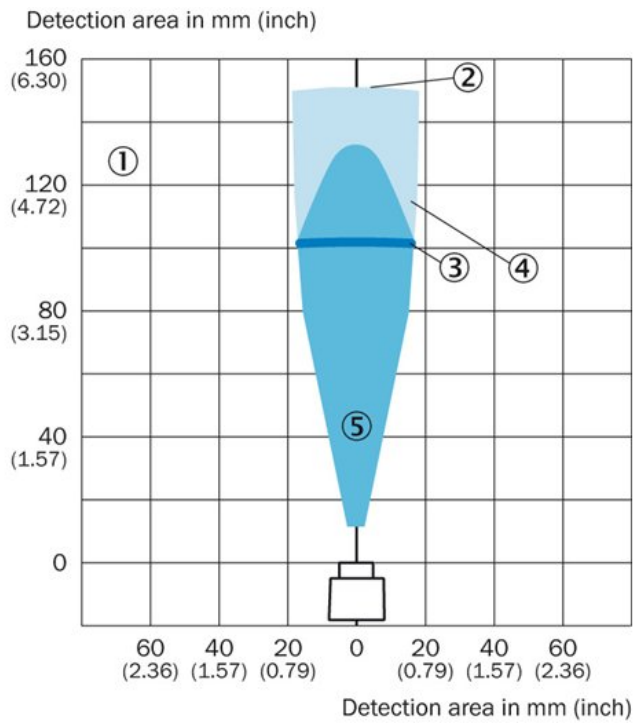
Connection type



Connection diagram



Characteristic curve



- [1] Sensing range dependent on reflection properties, size and orientation of the object
- [2] Limiting range
- [3] Working range
- [4] example object: aligned plate 100 mm x 100 mm
- [5] example object: pipe with 10 mm diameter

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