



Ultrasonic sensors UC4

UC4-13341



SICK
Sensor Intelligence.

ONLINE DATA SHEET
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Model Name > UC4-13341
Part No. > 6034669

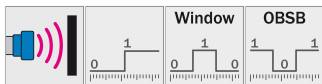


At a glance

- Reliable measurement, regardless of material color, transparency, gloss, and ambient light
- Ultrasonic technology in a miniature housing
- Detection, measurement, and positioning with ultrasonic technology
- Immune to dirt, dust, humidity, and fog
- Variants with PNP/NPN switching output or analog output
- Precise background suppression
- Teach-in button

Your benefits

- Mini housing allows for quick and easy integration, even in the most confined spaces
- The sensor's immunity to optically difficult environment enables it to take accurate measurements even in dirty, dusty, humid, and foggy conditions
- Integrated temperature compensation ensures high measurement accuracy at all times for optimum process quality
- Various operating modes provide optimal application flexibility and solutions, which increase reliability and productivity
- Full mechanical compatibility to photoelectric sensors allows for the use of the suitable technology for every application without machine modification
- Teach-in button for fast and easy commissioning



Performance

Resolution:	≥ 0.1 mm
Working range, limiting range ¹⁾ :	13 mm ... 150 mm, 250 mm
Repeatability ²⁾ :	± 0.15 %
Accuracy ³⁾ :	± 1 %
Response time:	30 ms
Switching frequency:	25 Hz
Ultrasonic frequency (typical):	380 kHz
Detection area (typical):	See diagrams
Temperature compensation:	✓
Additional function ⁴⁾ :	Set switching mode: Distance to object (DtO)/Window (Wnd)/Object between sensor and background (ObSB)teach-in of switching outputswitching output invertibletemperature compensationreset to factory defaultlock user interface
Output time:	10 ms

1) Teach-in from 21 mm 2) 3) Referring to current measurement value 4) Functions may vary depending on sensor type

Interfaces

Output type ^{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
Electrical connection: Male connector, M8, 3-pin
Indication: 2 x LED
Weight: 10 g

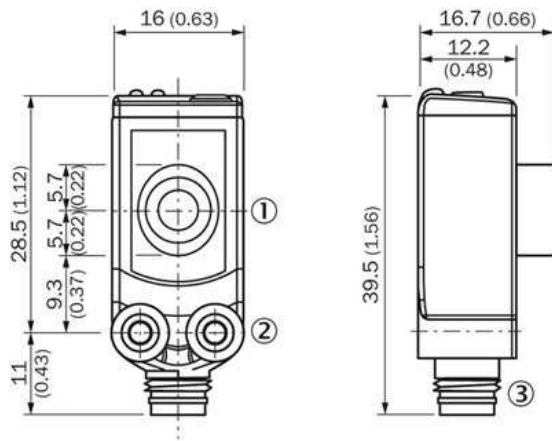
1) Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A 2) Without load

Ambient data

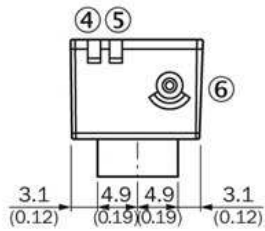
Enclosure rating: IP 67
Protection class: III
Ambient temperature ¹⁾: Operation: -25 ... +70 °C
Storage: -40 ... +85 °C

1) At operating temperatures of $> 50 °C$, the rear side of the UC4 must be installed with its surface flat against a bracket.

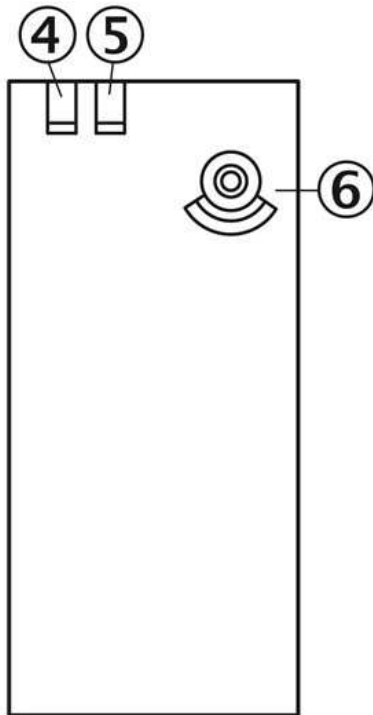
Dimensional drawing



- |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

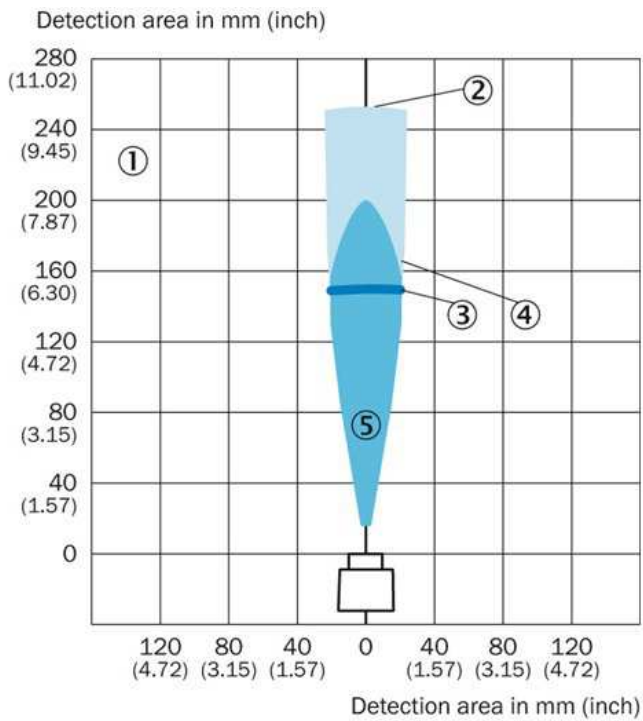


Adjustment possible



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

Detection area



- |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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