



## Ultrasonic sensors UC4

UC4-11345



**Model Name** > UC4-11345  
**Part No.** > 6034668

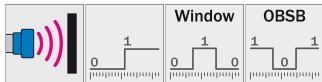


**At a glance**

- 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 <sup>1)</sup> :	13 mm ... 100 mm, 150 mm
Repeatability <sup>2)</sup> :	± 0.15 %
Accuracy <sup>3)</sup> :	0.17 %/K
Response time:	10 ms
Switching frequency:	25 Hz
Ultrasonic frequency (typical):	380 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  
Reset to factory default  
Lock user interface  
Switching output invertible  
Functions may vary depending on sensor type

Output time: 10 ms

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

## Interfaces

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Output type <sup>1)</sup>; <sup>2)</sup>: 1 x NPN (200 mA)  
Hysteresis: 2 mm

1) Output Q short-circuit protected 2) NPN: HIGH  $\leq 2$  V / LOW =  $V_S$

## Mechanics/electronics

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Sending axis: Straight  
Supply voltage  $V_S$  <sup>1)</sup>: DC 20 V ... 30 V  
Power consumption <sup>2)</sup>:  $\leq 0.75$  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

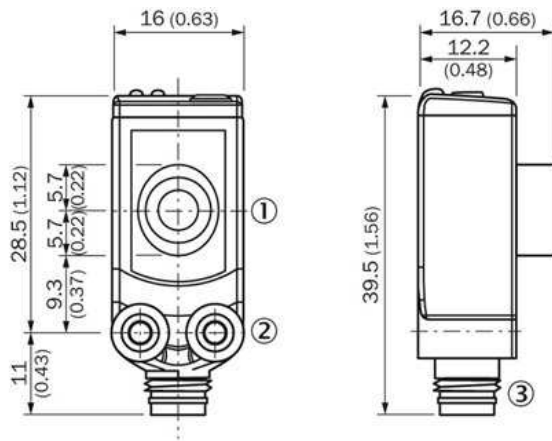
## Ambient data

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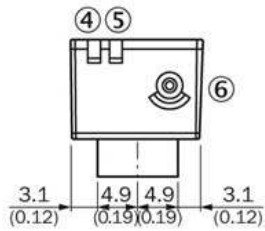
Enclosure rating: IP 67  
Protection class: III  
Ambient temperature <sup>1)</sup>:  
Operation:  $-25 \dots +70$  °C  
Storage:  $-40 \dots +85$  °C

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

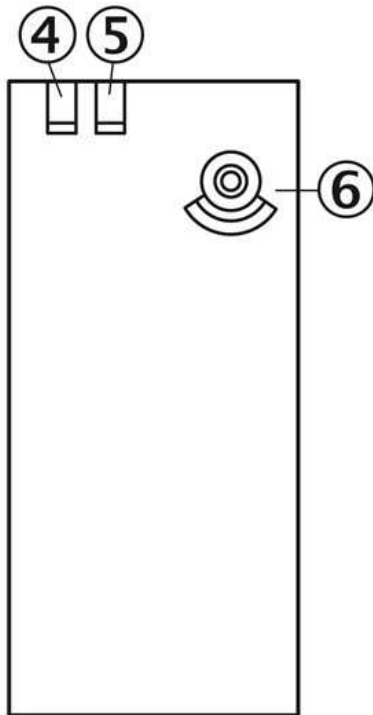
## Dimensional drawing



- |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

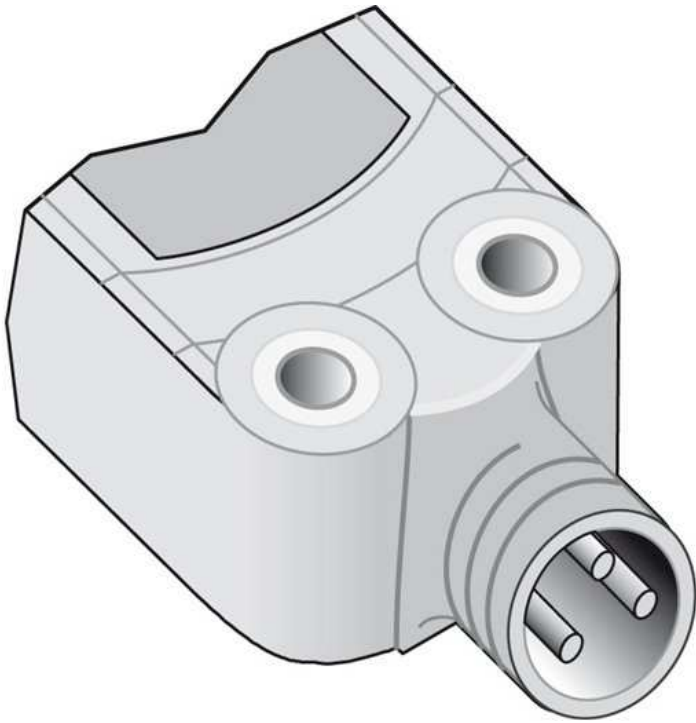


## Adjustments

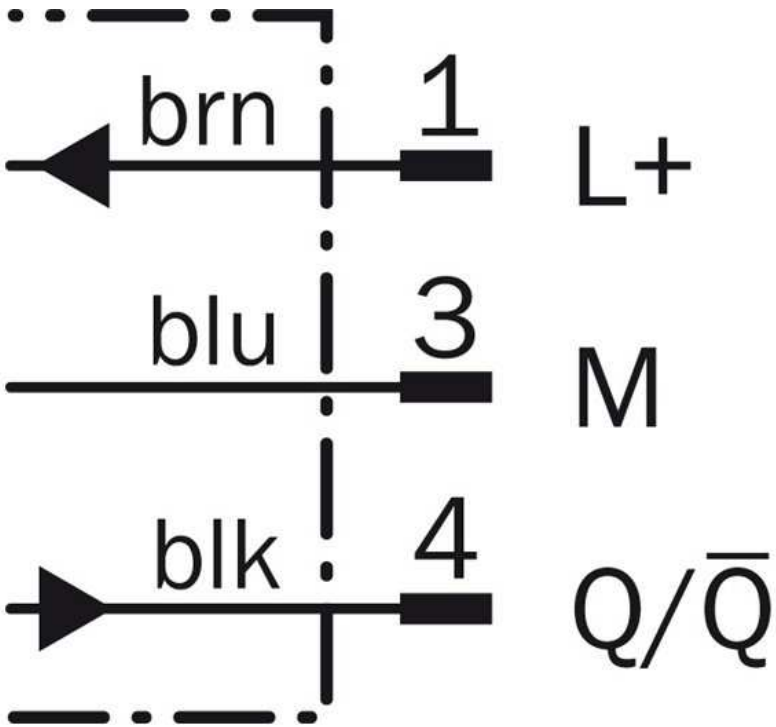


- |4| Status indicator switching output (orange)
- |5| Status indicator power on (green)
- |6| Control elements

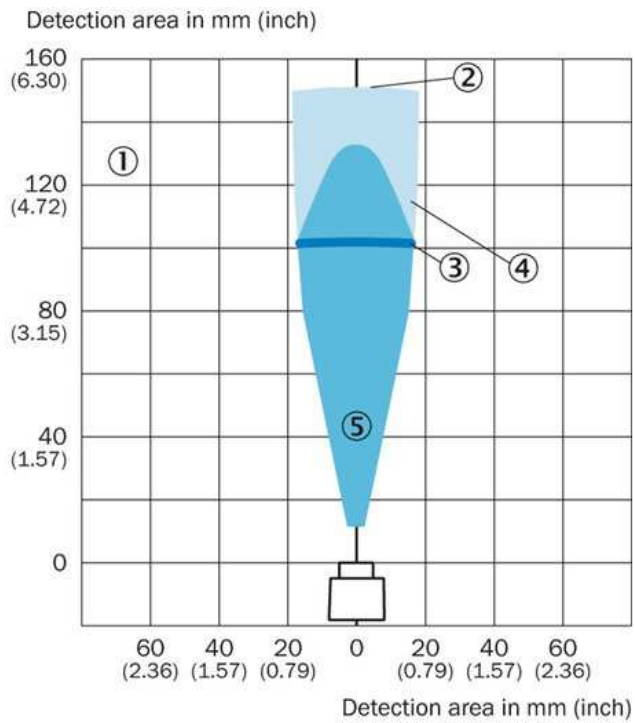
Connection type



Connection diagram



## 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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