



## Ultrasonic sensors UC4

UC4-13345



**Model Name** > UC4-13345  
**Part No.** > 6034670



**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**

Working range, limiting range <sup>1)</sup> :	13 mm ... 150 mm, 250 mm
Repeatability <sup>2)</sup> :	± 0.15 %
Accuracy <sup>3)</sup> :	± 1 %
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 Inverted switching output Temperature compensation Reset to factory default Lock user interface

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

## Interfaces

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

1) Output Q short-circuit protected 2) NPN: HIGH  $\leq 2\text{ V}$ /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>:  $\leq 0.75\text{ W}$   
Initialization time:  $< 300\text{ ms}$   
Housing material <sup>3)</sup>: ABS-plastic  
Connection type: Connector M8, 3-pin  
Indication: 2 x LED  
Weight: 10 g

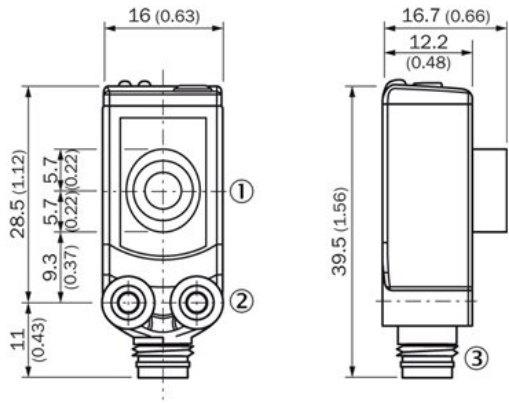
1) Limit values, reverse-polarity protected, operation in short-circuit protected network, max. 8 A 2) Without load 3) Ultrasonic transducer: polyurethane foam, glass epoxy resin

## Ambient data

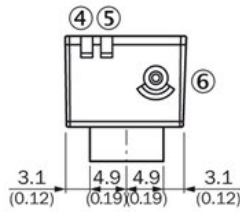
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Enclosure rating: IP 67  
Protection class: III  
Ambient temperature: Operation:  $-25 \dots 70\text{ }^\circ\text{C}$   
Storage:  $-40 \dots 85\text{ }^\circ\text{C}$

## Dimensional drawing

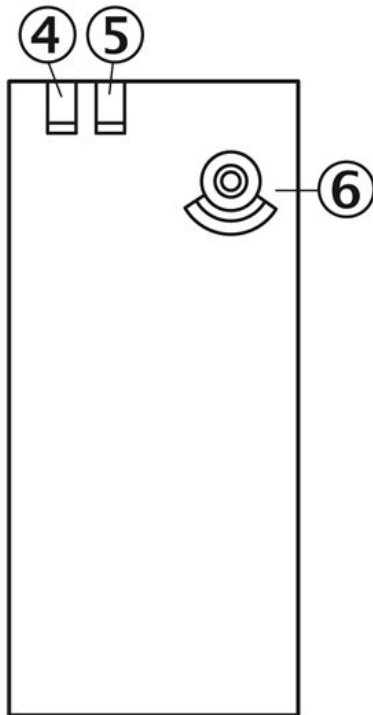


- |1| Transmission and reception axis
- |2| Threaded mounting hole M3
- |3| Connection
- |4| Status indicator switching output (orange)
- |5| Status indicator power on (green)
- |6| Control elements



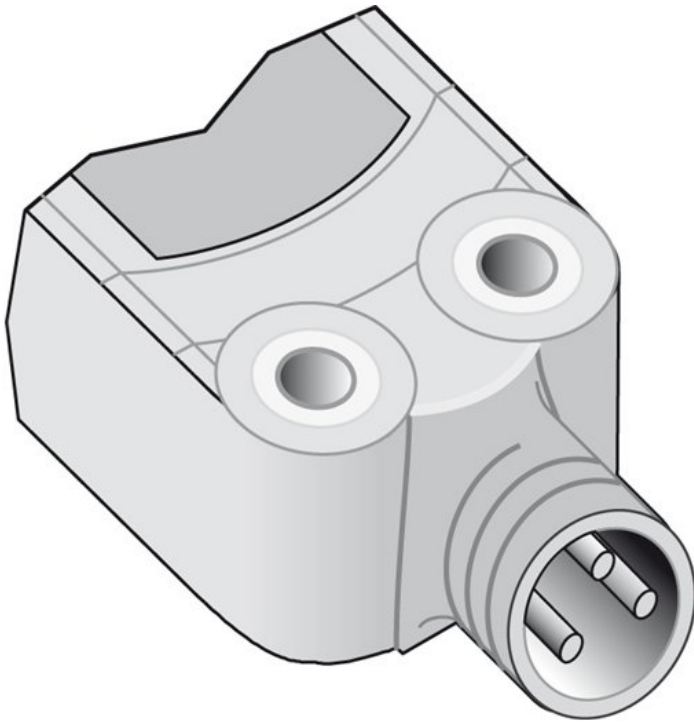
All dimensions in mm (inch)

## Adjustments

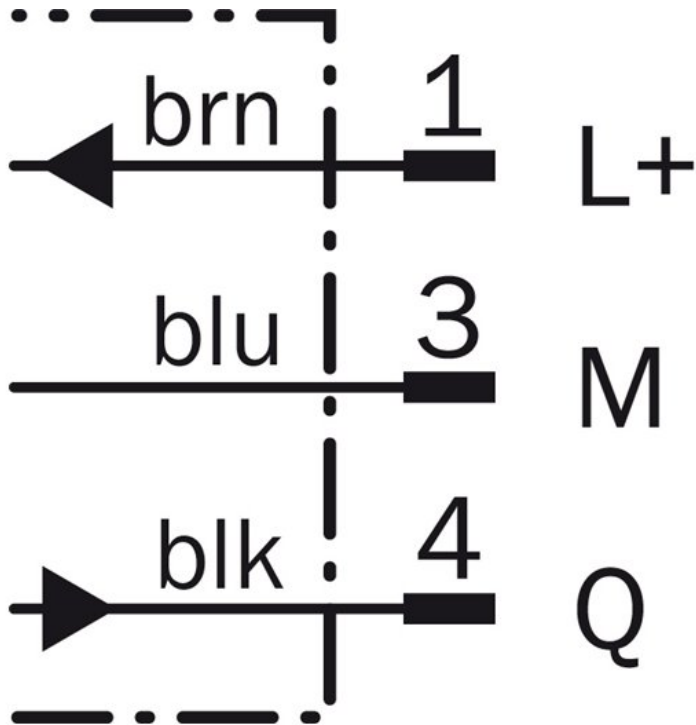


- |4| Status indicator switching output (orange)
- |5| Status indicator power on (green)
- |6| Control elements

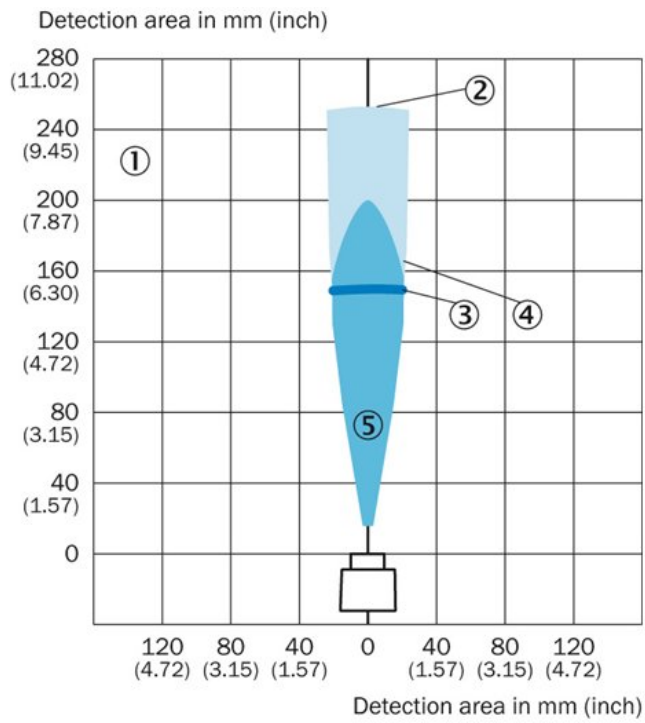
Connection type



Connection diagram



## Characteristic curve



- |1| Limiting range
- |2| Aligned plate 100 mm x 100 mm
- |3| Working range
- |4| Pipe diameter 10 mm

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