



## Ultrasonic sensors UC4

UC4-13341



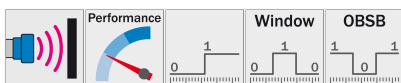
**Model Name** > UC4-13341  
**Part No.** > 6034669

#### 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)<br>Teach-in of switching output<br>Inverted switching output<br>Temperature compensation<br>Reset to factory default<br>Lock user interface |

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

## Interfaces

---

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

<sup>1)</sup> Output Q short-circuit protected    <sup>2)</sup> PNP: HIGH =  $V_S - (< 2 \text{ V})$  / LOW = 0 V

## Mechanics/electronics

---

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

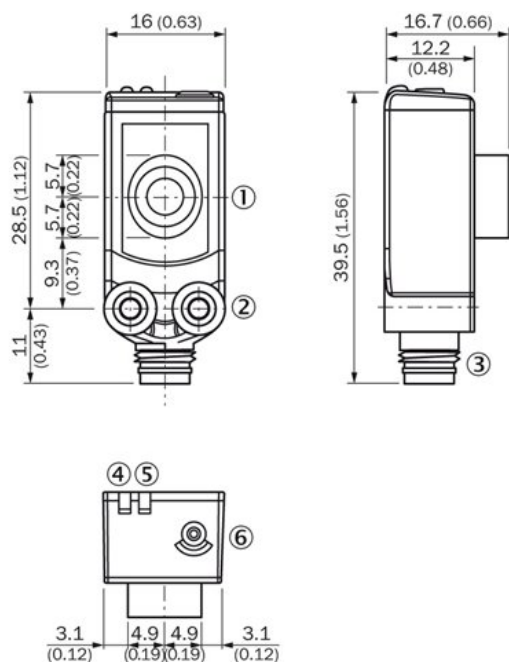
<sup>1)</sup> Limit values, reverse-polarity protected, operation in short-circuit protected network, max. 8 A    <sup>2)</sup> Without load    <sup>3)</sup> Ultrasonic transducer: polyurethane foam, glass epoxy resin

## Ambient data

---

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

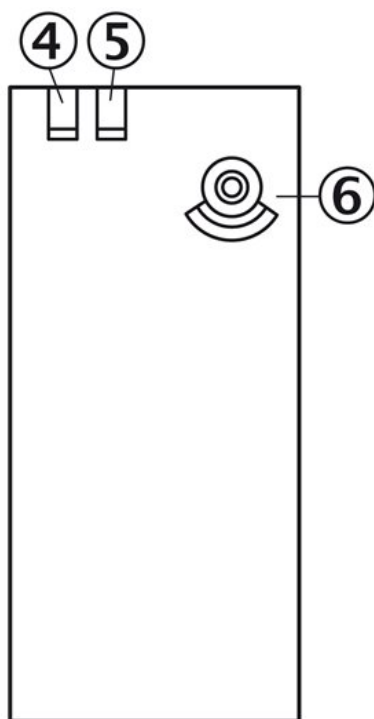
## Dimensional drawing



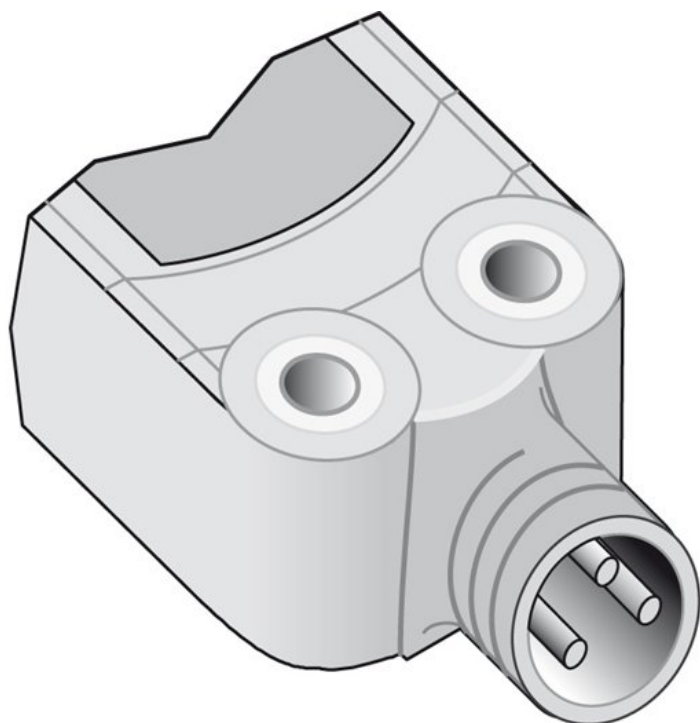
- |1| Transmission and reception axis
- |2| Threaded mounting hole M3
- |3| Connection
- |4| Status indicator switching output (orange)
- |5| Status indicator power on (green)
- |6| Control elements

All dimensions in mm (inch)

## Adjustments

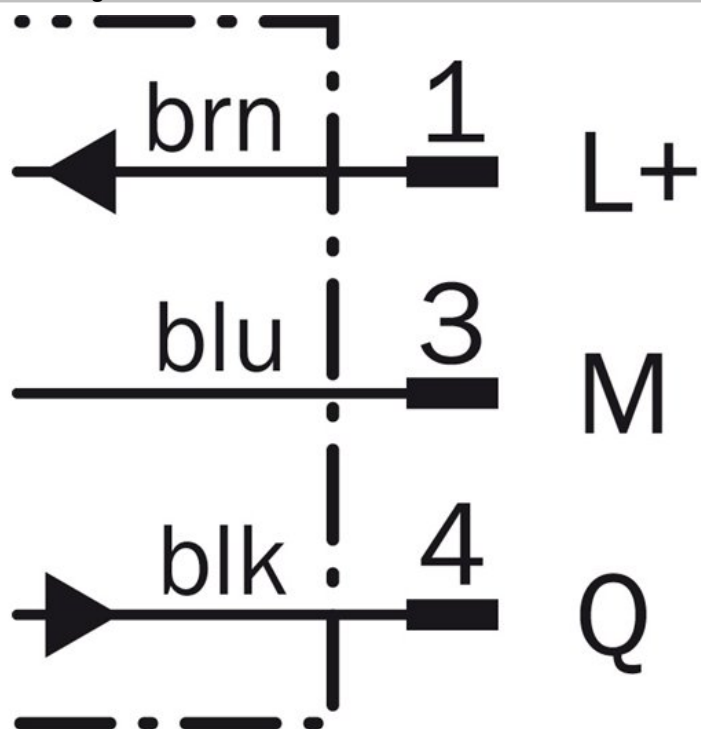


- |4| Status indicator switching output (orange)
- |5| Status indicator power on (green)
- |6| Control elements

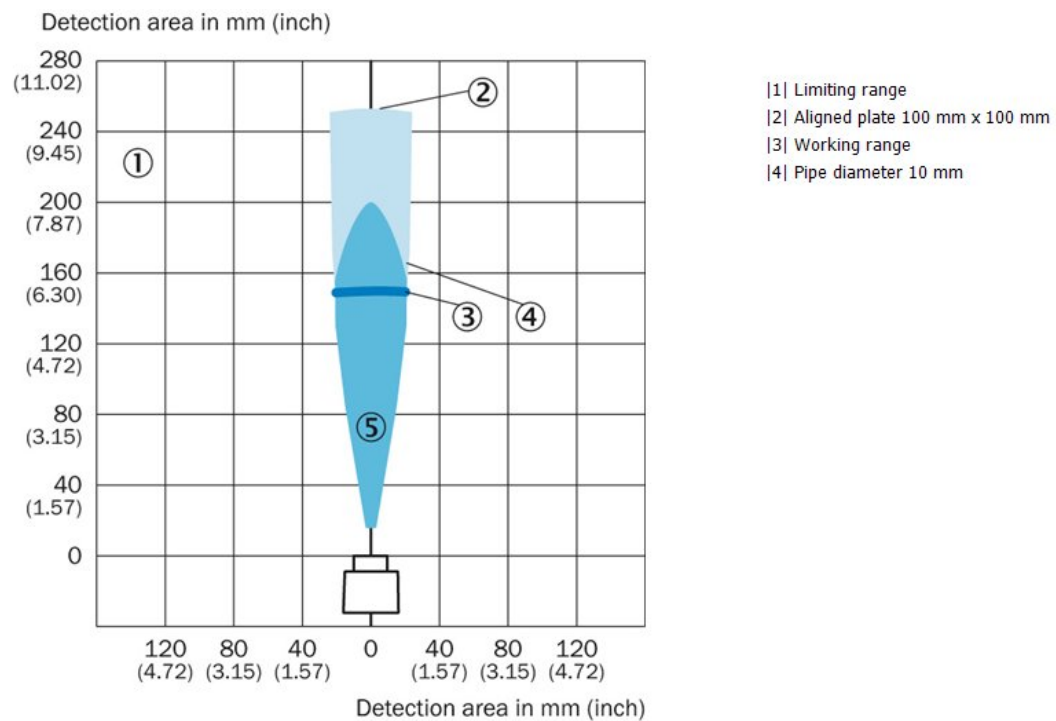


Connection diagram

---



Characteristic curve



**Australia**

Phone +61 3 9457 0600  
1800 334 802 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail sac@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Ceská Republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail kundenservice@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6801000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 3358 1341  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederlands**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail austefjord@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail admin@sicksgp.com.sg

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886-2-2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 8865 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 800-325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)