



Ultrasonic sensors UC4

UC4-11341



Model Name > UC4-11341
Part No. > 6034667

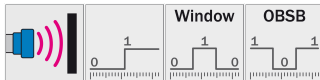


At a glance

- 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

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

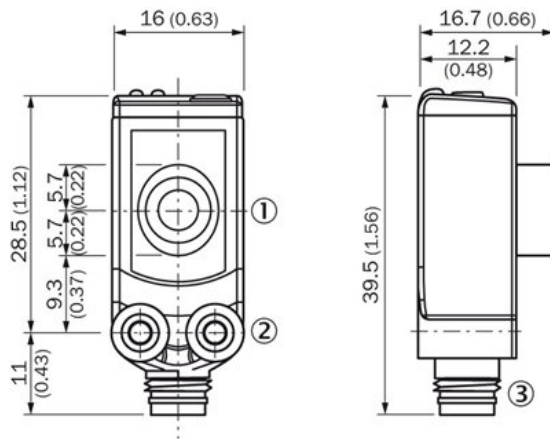
Sending axis: Straight
Supply voltage V_S ¹⁾: DC 20 V ... 30 V
Power consumption ²⁾: $\leq 0.75 W$
Initialization time: $< 300 ms$
Housing: Rectangular
Housing material: ABS-plastic
ultrasonic transducer: polyurethane foam, glass epoxy resin
Connection type: Male connector, M8, 3-pin
Indication: 2 x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

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

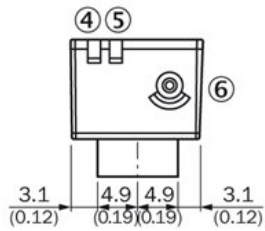
Ambient data

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

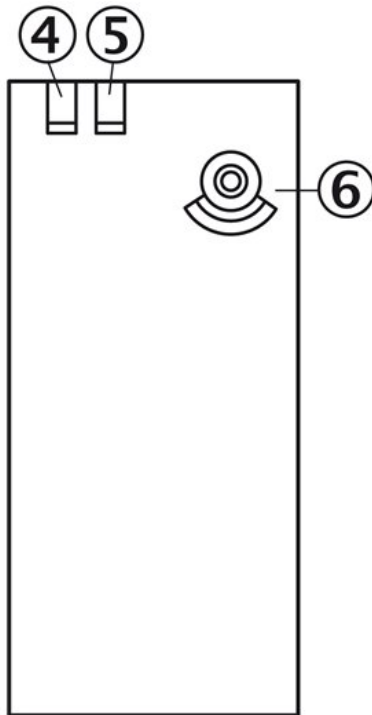
Dimensional drawing



- |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

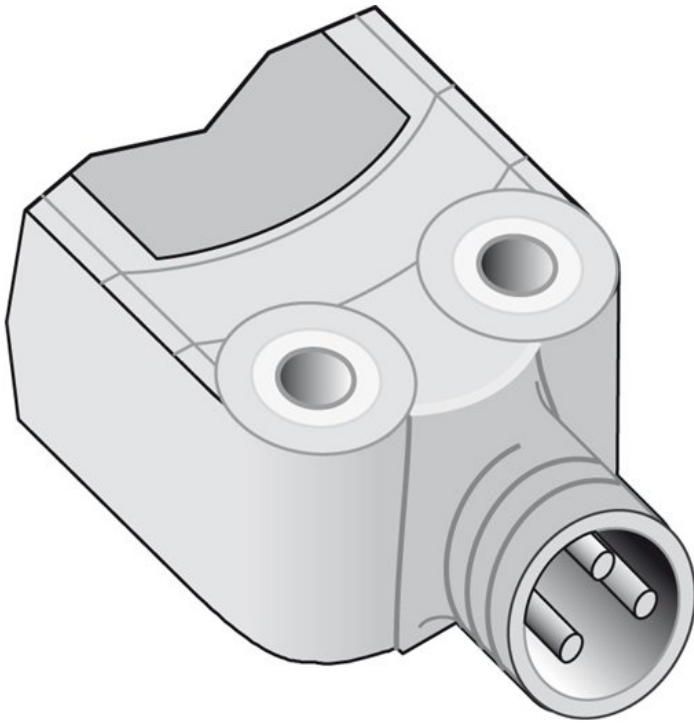


Adjustments

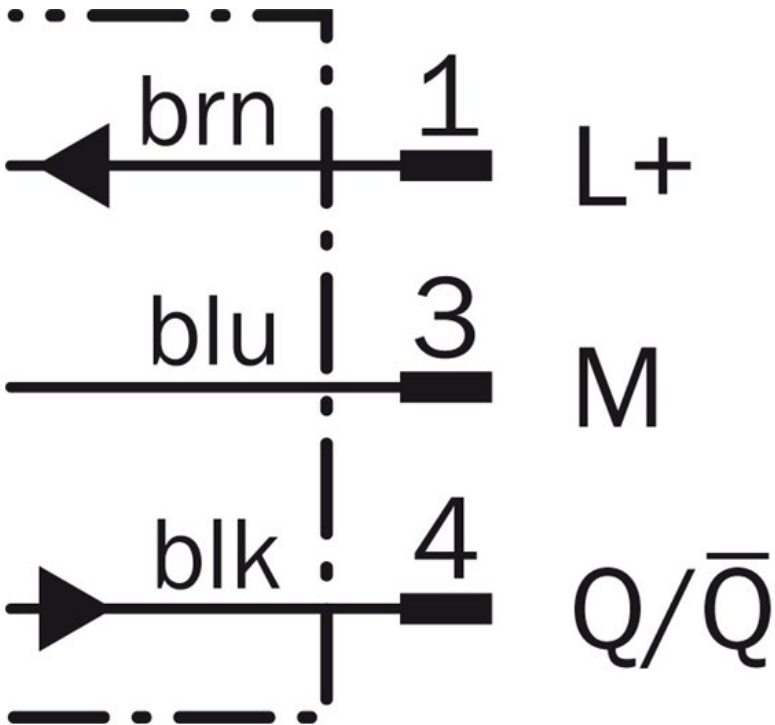


- |4| Status indicator switching output (orange)
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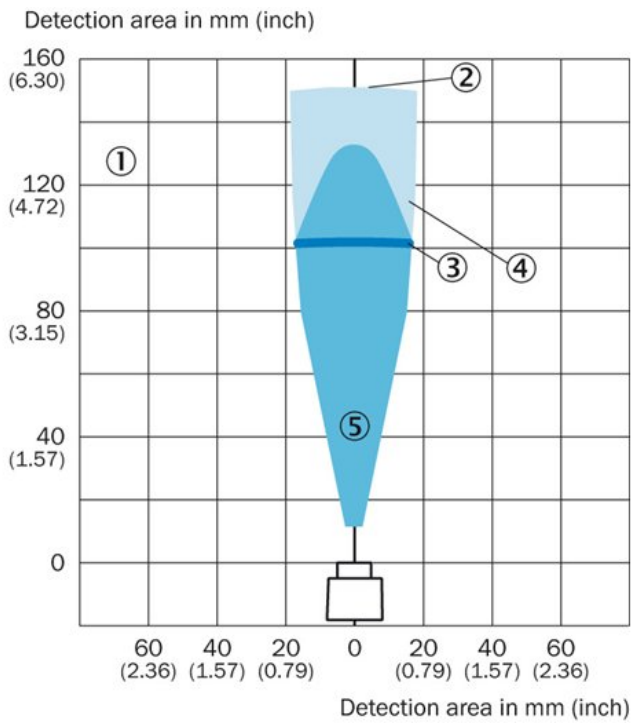
Connection type



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

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

Česká 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 info@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

Nederland

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

Norge

Phone +47 67 81 50 00
E-Mail sick@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 sales.gsg@sick.com

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