



Ultrasonic sensors UM30, UM30-2

UM30-211113



Model Name > [UM30-211113](#)
Part No. > [6036916](#)

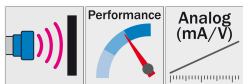


At a glance

- Integrated time-of-flight technology detects objects such as glass, liquids and transparent foils, independent of color
- Range up to 8,000 mm
- Display enables fast and flexible sensor adjustment
- Immune to dust, dirt and fog
- Available with combined analog and digital outputs
- Synchronization and multiplexing
- Adjustable sensitivity
- Three operation modes: Distance to Object (DtO), Window (Wnd) or Object between sensor and background (OBSB)

Your benefits

- Easy machine integration due to compact size
- Various setup options ensure flexible adaptation to applications
- Multiplex mode eliminates crosstalk interference for consistent and reliable detection and high measurement reliability
- Synchronization mode allows multiple sensors to work as one large sensor, providing a low-cost solution for area detection
- Display enables setup prior to installation, reducing on-site installation time
- Integrated temperature compensation and time-of-flight technology ensure high measurement accuracy
- OBSB-mode enables detection of any object between the sensor and a taught background



Performance

Resolution:	(0.18 mm)
Working range, limiting range:	30 mm ... 250 mm, 350 mm
Repeatability ¹⁾ :	± 0.15 %
Accuracy ^{2), 3)} :	± 1 %
Response time:	50 ms
Output rate:	8 ms
Ultrasonic frequency (typical):	320 kHz
Detection area (typical):	See diagrams
Temperature compensation:	✓

Additional function:

- Teach-in of analog output
- Invertible analog output
- Automatic selection of analog current or voltage output
- Temperature compensation
- Synchronization of up to 10 sensors
- Multiplexing: no cross talk of up to 10 sensors
- Set measurement filters: value filter, filter strength, adjustable sensitivity, foreground suppression and detection area
- Reset to factory default
- Switch-off display
- Scaling of analog outputs

1) 2) Referring to current measurement value 3) Temperature compensation can be switched off, without temperature compensation: 0.17 %/° K

Interfaces

Multifunctional input: 1 x MF
 Analog output ^{1), 2), 3), 4)}: 1 x 0 V ... 10 V ($\geq 100 \text{ k}\Omega$), 1 x 4 mA ... 20 mA ($\leq 500 \text{ }\Omega$)
 Resolution analog output: 12 bit

1) 3) Automatic selection of analog current or voltage output dependent on load ²⁾ For 4 mA ... 20 mA and $V_s \leq 20 \text{ V}$ max. load $\leq 100 \text{ }\Omega$ ⁴⁾ Subsequent smoothing of the analog output, depending on the application, may increase the response time by up to 200 %

Mechanics/electronics

Sending axis: Straight
 Supply voltage V_s ^{1), 2)}: DC 9 V ... 30 V
 Power consumption ³⁾: $\leq 2.4 \text{ W}$
 Initialization time: $< 300 \text{ ms}$
 Housing material ⁴⁾: Nickel-plated brass, PBT, TPU
 Connection type: Connector M12, 5-pin
 Indication: LED display, 2 x LED
 Weight: 150 g

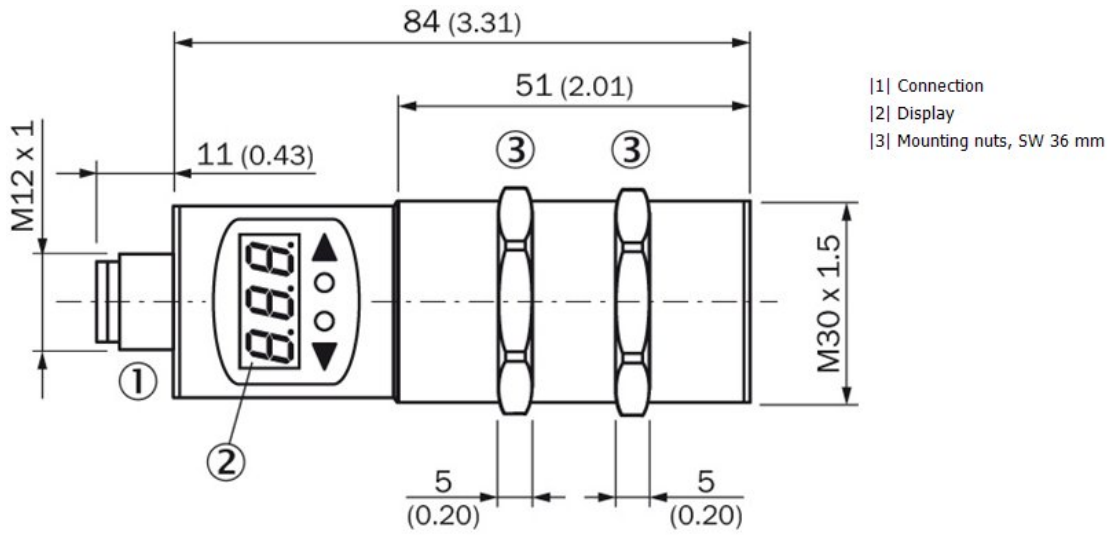
1) Limit values, reverse-polarity protected, operation in short-circuit protected network, max. 8 A ²⁾ 15 V ... 30 V when using analog voltage output ³⁾ Without load ⁴⁾

Ultrasonic transducer: polyurethane foam, glass epoxy resin

Ambient data

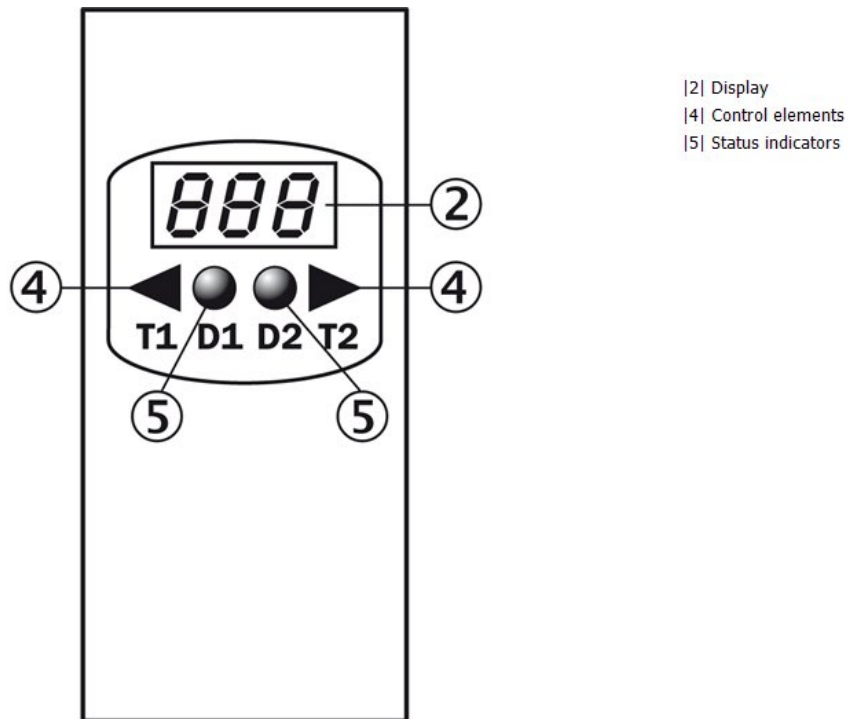
Enclosure rating: IP 67
 Protection class: III
 Ambient temperature: Operation: -25 ... 70 °C
 Storage: -40 ... 85 °C

Dimensional drawing

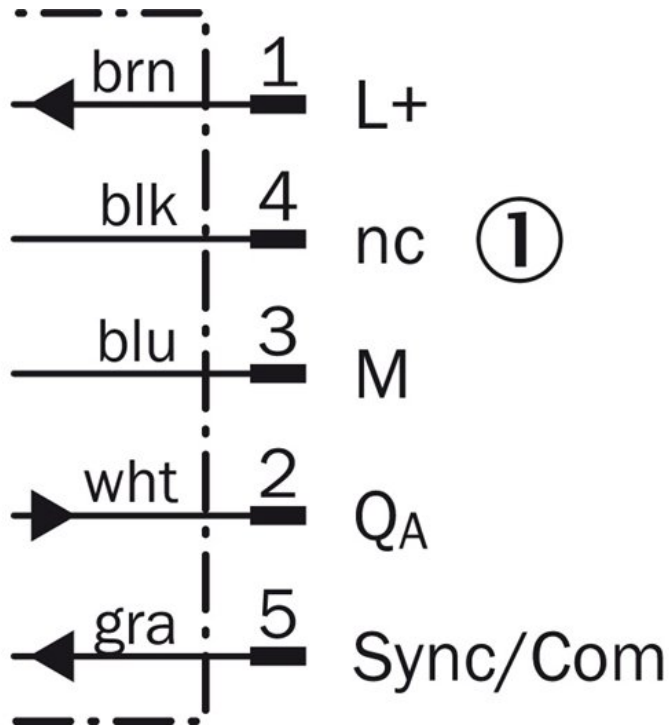


All dimensions in mm (inch)

Adjustments

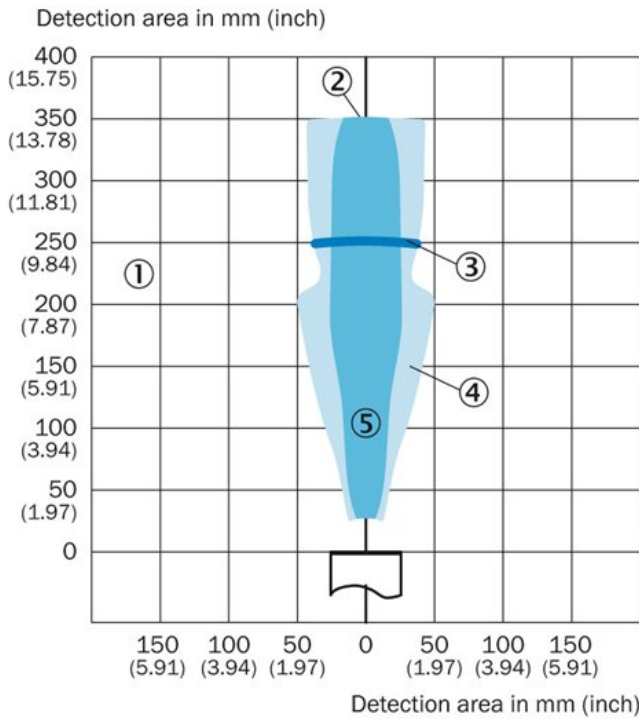


Connection diagram



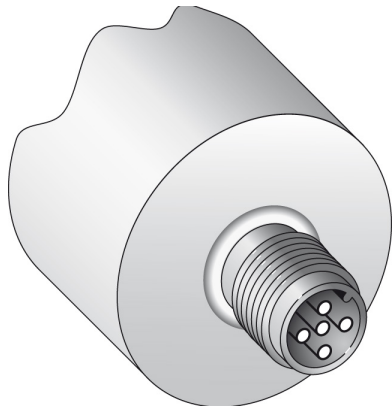
|1| not connected

Detection area



- |1| Limiting range
- |2| Aligned plate 500 mm x 500 mm
- |3| Working range
- |4| Pipe diameter 10 mm

Connection type



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