



UC4-13345

UC4

ULTRASONIC SENSORS

SICK
Sensor Intelligence.



Ordering information

| Type | Part no. |
|-----------|----------|
| UC4-13345 | 6034670 |

Other models and accessories → www.sick.com/UC4



Detailed technical data

Mechanics/electronics

| | |
|--|--|
| Supply voltage V_s | DC 15 V ... 30 V ¹⁾ |
| Power consumption | $\leq 0.75 \text{ W}$ ²⁾ |
| Initialization time | < 300 ms |
| Design | Rectangular |
| Housing material | Plastic (ABS) Ultrasonic transducer: polyurethane foam, glass epoxy resin |
| Connection type | Male connector, M8, 3-pin |
| Indication | 2 x LED |
| Weight | 10 g |
| Sending axis | Straight |
| Dimensions (W x H x D) | 16 mm x 40.1 mm x 16.7 mm |
| Enclosure rating | IP65 / IP67 |
| Protection class | III |

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

²⁾ Without load.

Performance

| | |
|--|--|
| Operating range, limiting range | 13 mm ... 150 mm, 250 mm ¹⁾ |
| Target | Natural objects |
| Resolution | $\geq 0.1 \text{ mm}$ |
| Repeatability | $\pm 0.15 \%$ ²⁾ |
| Accuracy | $\pm 1 \%$ ³⁾ |
| Temperature compensation | ✓ |

¹⁾ Teach-in from 21 mm.

²⁾ In relation to the current measured value, minimum value \geq resolution.

³⁾ Referring to current measurement value.

⁴⁾ Functions may vary depending on sensor type.

| | |
|---------------------------------------|---|
| Response time | 24 ms |
| Switching frequency | 30 Hz |
| Output time | 8 ms |
| Ultrasonic frequency (typical) | 380 kHz |
| Detection area (typical) | See diagrams |
| Additional function | Adjustable operating modes: Switching point (Dt0) / Switching window/Background (ObSB), teach-in of digital output, invertable digital output, teach-in button(s) (can be deactivated), re-set to factory default 4) |

1) Teach-in from 21 mm.

2) In relation to the current measured value, minimum value \geq resolution.

3) Referring to current measurement value.

4) Functions may vary depending on sensor type.

Interfaces

| | | |
|-----------------------|------------------------------|-----------------|
| Digital output | | |
| | Number | 1 ¹⁾ |
| | Type | NPN |
| | Maximum output current I_A | ≤ 200 mA |
| Hysteresis | | 2 mm |

1) NPN: HIGH = ≤ 2 V / LOW = U_V .

Ambient data

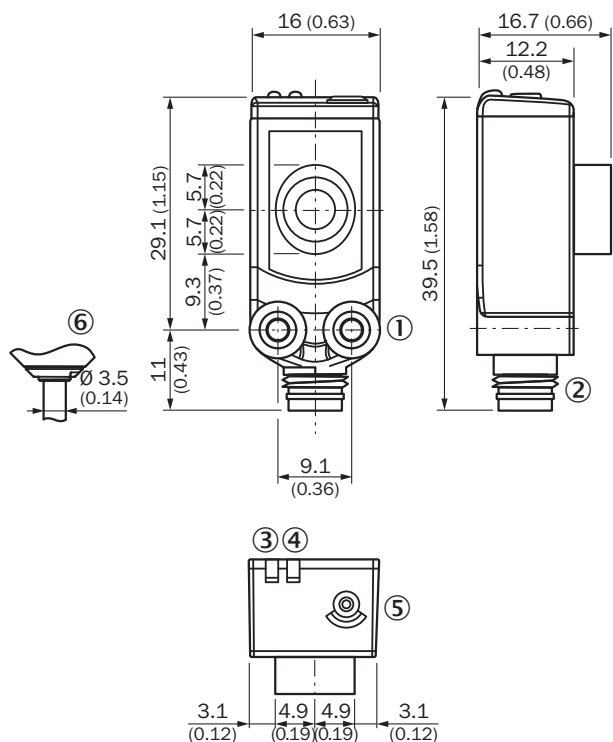
| | |
|--------------------------------------|---------------------------------|
| Ambient temperature operation | -25 °C ... +70 °C ¹⁾ |
| Ambient storage temperature | -40 °C ... +85 °C |

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

Classifications

| | |
|-----------------------|----------|
| ECl@ss 5.0 | 27270804 |
| ECl@ss 5.1.4 | 27270804 |
| ECl@ss 6.0 | 27270804 |
| ECl@ss 6.2 | 27270804 |
| ECl@ss 7.0 | 27270804 |
| ECl@ss 8.0 | 27270804 |
| ECl@ss 8.1 | 27270804 |
| ECl@ss 9.0 | 27270804 |
| ECl@ss 10.0 | 27270804 |
| ECl@ss 11.0 | 27270804 |
| ETIM 5.0 | EC001846 |
| ETIM 6.0 | EC001846 |
| ETIM 7.0 | EC001846 |
| UNSPSC 16.0901 | 41111960 |

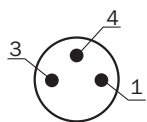
Dimensional drawing (Dimensions in mm (inch))



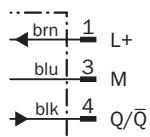
- ① Threaded mounting hole M3
- ② Connection
- ③ Status indicator digital output (orange)
- ④ Status display for supply voltage active (green)
- ⑤ Control elements

Connection type

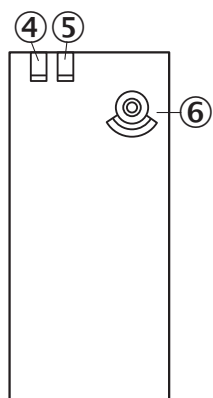
Connector M8, 3-pin



Connection diagram



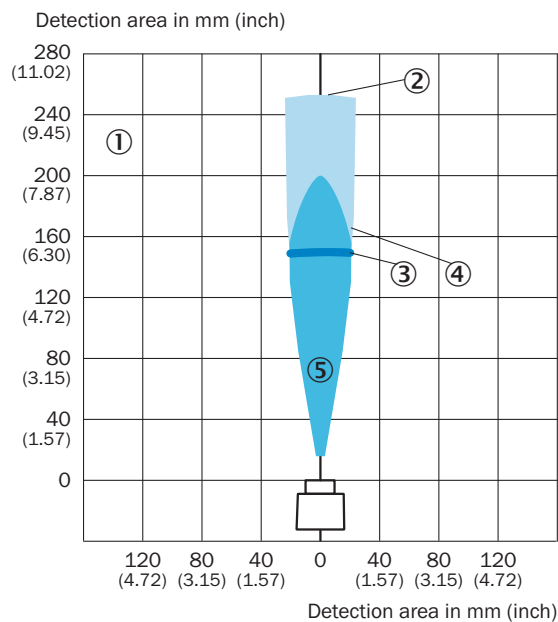
Adjustment possible



- ④ Status indicator digital output (orange)
- ⑤ Status display for supply voltage active (green)
- ⑥ Control elements

Detection area




UC4-13



- ① Detection range dependent on reflection properties, size, and alignment of the object
- ② Limiting range
- ③ Operating range
- ④ Example object: aligned plate 100 mm x 100 mm
- ⑤ Example object: cylindrical bar with a diameter of 10 mm

Recommended accessories

Other models and accessories → www.sick.com/UC4

| | Brief description | Type | Part no. |
|---|--|--------------------|----------|
| Mounting brackets and plates | | | |
|  | Mounting bracket for wall mounting, Stainless steel 1.4571, mounting hardware included | BEF-W4-A | 2051628 |
| Hardware | | | |
|  | Accessory for ultrasonic channeling for the product family UC4 | SonicTube UC4 | 5329249 |
| Plug connectors and cables | | | |
|  | Head A: female connector, M8, 3-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 2 m | YF8U13-020VA1XLEAX | 2095860 |

Recommended services

Additional services → www.sick.com/UC4

| | Type | Part no. |
|--|--|----------|
| Warranty extensions | | |
| <ul style="list-style-type: none"> • Product area: Identification solutions, machine vision, Distance sensors, Detection and ranging solutions • Range of services: The services correspond to the scope of the statutory manufacturer warranty (SICK general terms and conditions of purchase) • Duration: Five-year warranty from delivery date. | Extended warranty for a total of five years from delivery date | 1680671 |

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com