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DATA SHEET

# UC4-13345S02

UC4
Ultrasonic distance sensors

SICK Sensor Intelligence



# ULTRASONIC DISTANCE SENSORS

# UC4-13345S02

## ORDERING INFORMATION

| Type | part no. |
|---|---|
| UC4-13345S02 | 6049510 |

Further device versions and accessories at www.sick.com/UC4

## DETAILED TECHNICAL DATA

### FEATURES

| | |
|---|---|
| Operating range, limiting range | 13 mm ... 150 mm, 250 mm [1] |
| Resolution | ≥ 0.1 mm |
| Repeatability | ± 0.15 % [2] |
| Measurement accuracy | ± 1 % [3] |
| Response time | 10 ms |
| Switching frequency | 100 Hz |
| Output time | 5 ms |
| Ultrasonic frequency (typical) | 380 kHz |
| Detection area (typical) | See diagrams |
| Additional function | Adjustable operating modes: Switching point (DtO) / Switching window/Background (ObSB), teach-in of digital output, invertable digital output, teach-in button(s) (can be deactivated), reset to factory default [4] |
| Safety-related parameters | |
| $MTTF_D$ | 101 years |
| $DC_{avg}$ | 0% |

[1] Teach-in from 21 mm.

[2] In relation to the current measured value, minimum value ≥ 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 |

[1] NPN: HIGH = ≤ 2 V / LOW = $U_V$.

| | |
|---|---|
| Hysteresis | 2 mm |

[1] NPN: HIGH = ≤ 2 V / LOW = $U_V$.

## ELECTRONICS

| | |
|---|---|
| Supply voltage $U_B$ | DC 15 V ... 30 V [1] |
| Power consumption | ≤ 0.9 W [2] |
| Initialization time | < 300 ms |
| Display | 2 x LED |
| 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.

## MECHANICS

| | |
|---|---|
| Dimensions (W x H x D) | 16 mm x 40.1 mm x 16.7 mm |
| Design | Rectangular |
| Sending axis | Straight |
| Housing material | Plastic (ABS, ultrasonic transducer: polyurethane foam, glass epoxy resin) |
| Weight | 10 g |
| Connection type | Male connector, M8, 3-pin |

## AMBIENT DATA

| | |
|---|---|
| Ambient temperature, operation | –25 °C ... +70 °C [1] |
| Ambient temperature, storage | –40 °C ... +85 °C |
| Temperature drift | 0.17 % / K [2] |

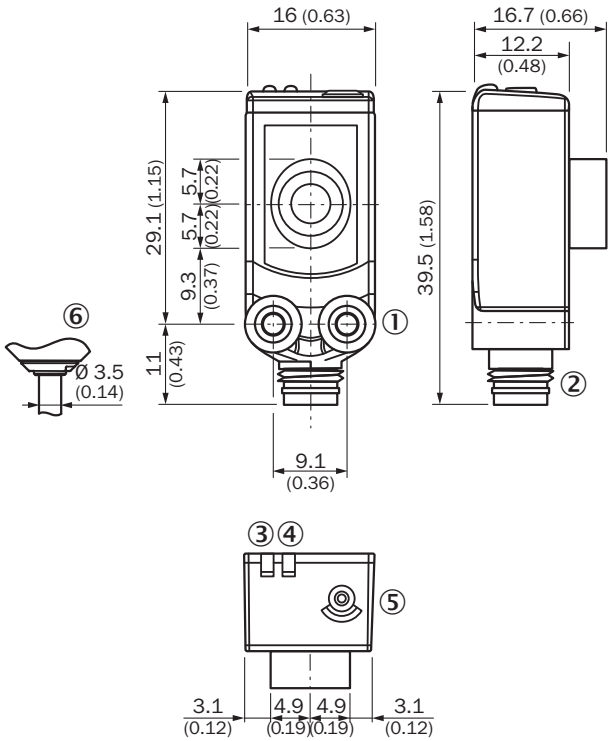
[1] At operating temperatures of > 50 °C, the rear side of the UC4 must be installed with its surface flat against a bracket.

[2] Referring to current measurement value.

## CERTIFICATES

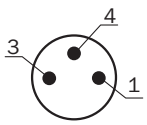
| | |
|---|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| China Compulsory Product Certification (CCC) exempt | ✓ |
| cULus certificate | ✓ |

## DIMENSIONAL DRAWING

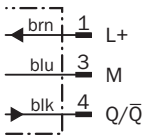



Dimensions in mm (inch)
① Threaded mounting hole M3
② Connection
③ status indicator digital output (orange)
④ Status display for supply voltage active (green)
⑤ Control elements

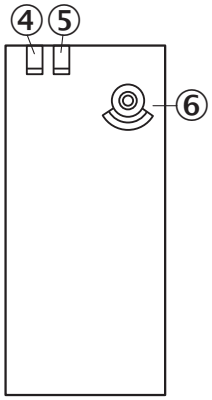
## CONNECTION TYPE CONNECTOR M8, 3-PIN




## CONNECTION DIAGRAM

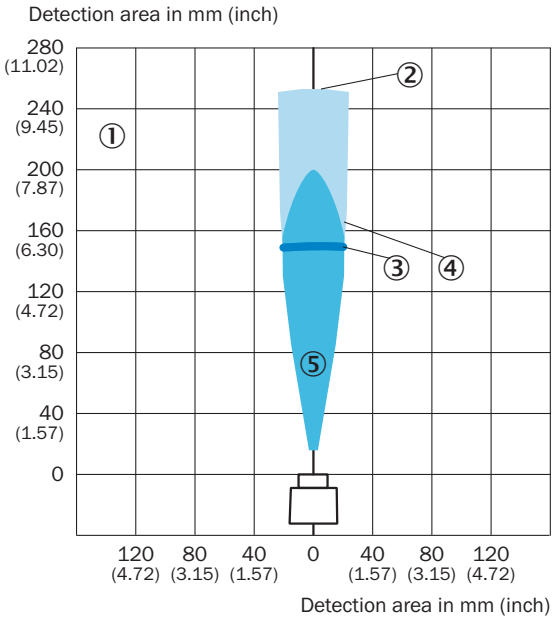


**ADJUSTMENT POSSIBLE**




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

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6049510

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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