



## UC40

The intelligent ultrasonic allrounder with the flexible design

**SICK**  
Sensor Intelligence.

## Advantages



### Push-lock-and-play

It doesn't get much easier than this: Thanks to the intuitive push-lock mounting concept, the UC40 is installed in no time at all. Proven factory settings that ensure proper operation in numerous standard applications, a fast teach-in of the sensor, and pre-defined sound beam setups are three key features that ensure problem-free integration in a plug and play manner. Thanks to its market-proven, compact housing design and rotatable sensor head, the UC40 is also ideal for tight installation situations.



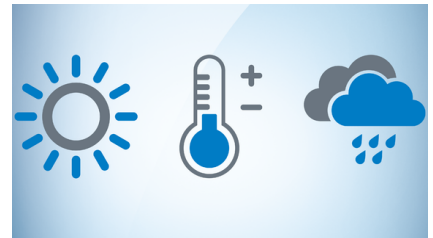
#### Compact powerhouse

The state-of-the-art ultrasonic technology in the UC40 ensures a high level of performance at distances up to 5,000 mm despite its especially compact design.



#### Press, rotate, start

The practical push-lock mounting concept speeds up installation thereby saving money sensor by sensor.

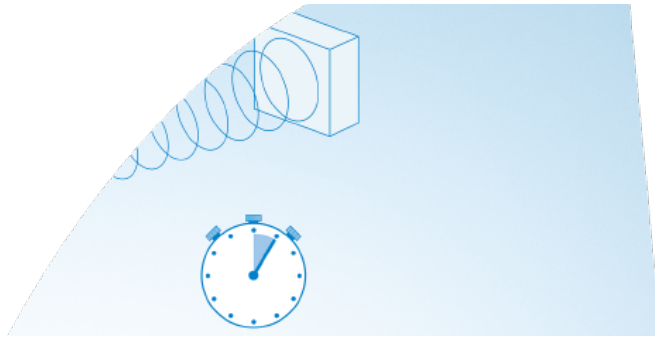


#### Imperviousness to heat included

Ultrasonic distance measurement is temperature-dependent. To nevertheless provide reliable data at all times, the UC40 comes with an integrated temperature compensation. The ambient temperature is continuously recorded and the measured value calculation automatically adjusted.



**Added convenience:** Thanks to easy mounting and tried-and-tested factory settings, the compact UC40 can be very quickly integrated into a system.



## Strong performance meets full flexibility

Every application has its unique requirements. It's great when a sensor can be tailored to these. The UC40 comes with three pre-defined sound cone settings that can be used to optimize its performance for the specific application. A configurable interference echo suppression is also included. It effectively removes unwanted ranges and ensures a stable signal. A selectable sensitivity hysteresis also stabilizes the signal for laterally approaching objects. Whether everything is working as expected can be checked on-site in a fraction of a second by means of the 4 status LEDs.



### Teach-in anywhere, anytime

The UC40 provides flexible teach-in options. On-site via teach-in buttons on the sensor, or remotely via a cable and IO-Link. The special feature for more efficient use of your time: All synchronized devices can be parameterized at once.



### Parameterization in seconds, diagnostics in real time

The sensor can be precisely tailored using the latest version of our configuration and visualization software SOPAS.

The signal quality can also be monitored during operation via IO-Link. If the signal strength drops, the cause can be quickly found and corrected before it has a costly effect on system availability.



### Less variants, more possibilities

Whether with a push-pull output for IO-Link or as a variant with a second signal output that can be used as an analog current/voltage output or additional push-pull output: The lean interface concept ensures more flexibility while also lowering inventory costs.

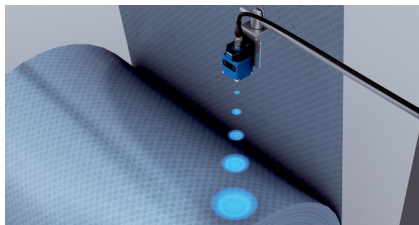


**An ultrasonic sensor that adapts: Almost all mid-range applications from 65 mm to 5,000 mm can be unproblematically equipped with the UC40 – thanks to its diverse parameterization options and imperviousness to interference signals.**



## The all-rounder for distance measurement

From production to logistics – the UC40 makes reliable distance measurement possible in a wide range of applications. Being an all-rounder, it is used for position measuring, presence detection, level measurement, or the detection of solid, powdery and liquid media. Even demanding conditions do not impact its performance. The rugged housing design with enclosure rating IP65/67 makes the sensor impervious to dust, contamination and fog. The measurement quality also remains consistently high thanks to the powerful ultrasonic technology – regardless of material color, gloss, transparency and ambient light.



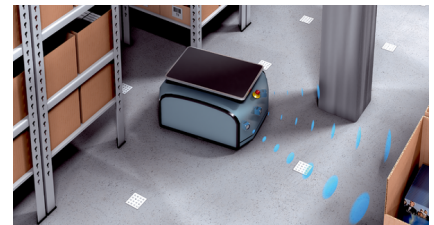
### Packing machines

The UC40 detects reliably and regardless of ambient light when there is an object in the machine and how far it is from the sensor.



### Conveyor systems

Whether snow or sunshine, dust or fog – the distance sensor delivers precise measurement data in both indoor and outdoor use. This is made possible by a combination of rugged housing and low interference technology including integrated temperature compensation.



### Mobile Machines

When used in autonomous transport vehicles, the UC40 measures the distance to other objects especially reliably and provides continuously updated data for collision avoidance.

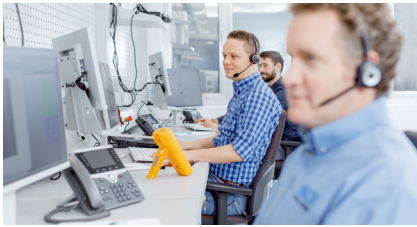


**Reliable distance values regardless of wind and weather: Thanks to state-of-the-art ultrasonic technology, the UC40 delivers reliable data even in demanding conditions. The makes it an all-rounder and the sensor of choice when you need more than just a standard device.**

## SICK LifeTime Services

SICK's services increase machine and plant productivity, enhance the safety of people all over the world, provide a solid foundation for a sustainable business operation, and protect investment goods. In addition to its usual consulting services, SICK provides direct on-site support during the conceptual design and commissioning phases as well as during operation.

The range of services not only covers aspects like maintenance and inspection, but also includes performance checks as well as upgrades and retrofits. Modular or customized service contracts extend the service life of plants and therefore increase their availability. If faults occur or limit values are exceeded, these are detected at all times by the corresponding sensors and systems.



#### **Consulting and design**

Application-specific advice on the product, its integration and the application itself.



#### **commissioning and maintenance**

Application-optimized and sustainable — thanks to professional commissioning and maintenance by a trained SICK service technician.



#### **service contracts**

Extended warranty, SICK Remote Service, 24-hour helpdesk, maintenance, availability guarantees and other modular components can be individually combined on request.





## Technical data overview

<b>Measuring range</b>	Operating range	65 mm ... 3,400 mm (depending on type)
	Limiting range	600 mm ... 5,000 mm (depending on type)
<b>Resolution</b>		0.1 mm / 1 mm (depending on type)
<b>Repeatability</b>		± 0.15 %
<b>Response time</b>		64 ms ... 160 ms <sup>1)</sup> (depending on type)
<b>Output time</b>		16 ms ... 41.6 ms (depending on type)
<b>Switching frequency</b>		10 Hz 7 Hz 4 Hz
<b>Analog output</b>		4 mA ... 20 mA, ≤ 500 Ω <sup>2)</sup> 0 V ... 10 V, ≥ 100,000 Ω
<b>Digital output</b>	Type	Push-pull: PNP/NPN
<b>IO-Link</b>		✓, IO-Link V1.1
<b>Enclosure rating</b>		IP65 IP67
<b>Sending axis</b>		Straight
<b>Ambient temperature, operation</b>		-25 °C ... +70 °C

<sup>1)</sup> Subsequent smoothing of the analog output, depending on the application, may increase the response time by up to 200 %.

<sup>2)</sup> For 4 mA ... 20 mA and  $V_S \leq 20$  V max. load ≤ 100 Ω.

## Product description

The UC40 is a compact ultrasonic sensor for medium distances that precisely detects the distance, presence or position of objects, regardless of material color and ambient light. That means it is also suitable for level monitoring and collision avoidance. Thanks to the convenient push-lock mounting concept and integrated analog and digital interfaces with IO-Link, the UC40 can be installed quickly and used anywhere. A rotatable sensor head facilitates alignment while IO-Link and teach-in buttons accelerate parameterization. The sonic cone can be adjusted variably to the requirements on site. Interference signals can be easily suppressed. This increases performance and ensures reliable object detection.

## At a glance

- Measuring range up to 5,000 mm
- Individually adaptable sonic cone and interference echo suppression
- Push-pull digital output with IO-Link and analog output
- Teach-in buttons and status detection with 4 LEDs
- Rotatable sensor head and push-lock mounting concept
- Integrated temperature compensation
- Diagnostic functions via IO-Link

## Your benefits

- High performance in compact housing
- Insensitive to harsh conditions such as rain, fog and dust
- Powerful due to application-specific adaptable sonic cone with interference echo suppression
- Quick integration thanks to push-lock mounting concept
- Plug and play sensor with proven factory settings for covering numerous standardized applications
- Easy parameterization via teach-in buttons and IO-Link
- Lower warehousing costs due to variant reduction thanks to combined interfaces
- Ideal solution for optically demanding conditions

## Fields of application

- Distance measurement
- Positioning
- Presence detection
- Collision avoidance
- 2D / 3D area monitoring
- Filling level and bulk level control

## Ordering information

Other models and accessories → [www.sick.com/UC40](http://www.sick.com/UC40)

- **Communication interface:** IO-Link
- **Operating range, limiting range:** 65 mm ... 350 mm, 600 mm
- **Connection type:** male connector, M12, 5-pin
- **Sending axis:** straight

Response time	Digital output	Type of analog output	Communication Interface detail	Type	Part no.
64 ms <sup>1)</sup>	1 ... 2 x push-pull: PNP/NPN	Current output / voltage output	IO-Link V1.1	UC40-11211H	6081948
	1 x push-pull: PNP/NPN	–	IO-Link V1.1	UC40-11211B	6081945

<sup>1)</sup> Subsequent smoothing of the analog output, depending on the application, may increase the response time by up to 200 %.

- **Communication interface:** IO-Link
- **Operating range, limiting range:** 200 mm ... 1,300 mm, 2,000 mm
- **Connection type:** male connector, M12, 5-pin
- **Sending axis:** straight

Response time	Digital output	Type of analog output	Communication Interface detail	Type	Part no.
96 ms <sup>1)</sup>	1 ... 2 x push-pull: PNP/NPN	Current output / voltage output	IO-Link V1.1	UC40-11311H	6081949
	1 x push-pull: PNP/NPN	–	IO-Link V1.1	UC40-11311B	6081946

<sup>1)</sup> Subsequent smoothing of the analog output, depending on the application, may increase the response time by up to 200 %.

- **Communication interface:** IO-Link
- **Operating range, limiting range:** 350 mm ... 3,400 mm, 5,000 mm
- **Connection type:** male connector, M12, 5-pin
- **Sending axis:** straight

Response time	Digital output	Type of analog output	Communication Interface detail	Type	Part no.
160 ms <sup>1)</sup>	1 ... 2 x push-pull: PNP/NPN	Current output / voltage output	IO-Link V1.1	UC40-11411H	6081950
	1 x push-pull: PNP/NPN	–	IO-Link V1.1	UC40-11411B	6081947

<sup>1)</sup> Subsequent smoothing of the analog output, depending on the application, may increase the response time by up to 200 %.

## 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](http://www.sick.com)