



UC4

Small, precise, ultrasonic

ULTRASONIC SENSORS

SICK
Sensor Intelligence.



Technical data overview

Measuring range	Operating range	13 mm ... 150 mm ¹⁾ (depending on type)
	Limiting range	150 mm / 250 mm (depending on type)
Resolution		≥ 0.1 mm
Repeatability		± 0.15 %
Response time		10 ms ... 24 ms 24 ms ²⁾
Output time		5 ms ... 8 ms (depending on type)
Switching frequency		30 Hz / 100 Hz (depending on type)
Analog output		4 mA ... 20 mA, ≤ 500 Ω ³⁾ 0 V ... 10 V, ≥ 100,000 Ω
Digital output	Type	PNP / NPN / push-pull: PNP/NPN (depending on type)
-		
IO-Link		✓ / V1.0 / ✓ / V1.1 (depending on type)
Enclosure rating		IP65 / IP67
Sending axis		Straight

¹⁾ Teach-in from 21 mm.

²⁾ Subsequent smoothing of the analog output, depending on the application, may increase the response time by up to 200 %.

³⁾ For 4 mA ... 20 mA and $V_s \leq 20$ V max. load ≤ 100 Ω.

Product description

The UC4 ultrasonic sensor family combines state-of-the-art ultrasonic technology in a miniature housing. With reliable functionality in even difficult operating conditions, the UC4 is a real miniature all-rounder when it comes to demanding, specialized tasks such as detecting transparent objects or measuring the levels of fluids and bulk materials. Even in situations with high requirements for background suppression or contamination tolerance, the UC4 with switching, analog, or push-pull output with IO-Link has proven itself as the ideal choice. And to top it all off, the portfolio even includes variants with increased switching frequency for extremely fast applications.

At a glance

- Reliable measurement, regardless of material color, transparency, gloss, or ambient light
- Ultrasonic technology in a small housing
- Detection, measurement, and positioning with ultrasonic technology
- Variants with PNP/NPN digital output, analog output or push-pull output with IO-Link
- Teach-in button
- Precise background suppression
- Immune to dirt, dust, humidity, and fog

Your benefits

- Mini housing allows for quick and easy integration, even in the most confined spaces
- Teach-in button for fast and easy commissioning
- Integrated temperature compensation ensures high measurement accuracy at all times for optimum process quality
- Various operating modes provide optimal application flexibility and solutions, which increase reliability and productivity
- Full mechanical compatibility to photoelectric sensors allows for the use of the suitable technology for every application without machine modification
- The sensor's immunity to optically difficult environment enables it to take accurate measurements even in dirty, dusty, humid, and foggy conditions

Fields of application

Detection, measurement, and positioning of dark, shiny, and transparent materials

Level control for fluid and bulk materials of every shape and color

Diameter check for metal, paper, and plastic coils

Continuous detection of fabrics and wire grids

Detection of very fast objects

Outdoor applications

Ordering information

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

- **Operating range, limiting range:** 13 mm ... 100 mm, 150 mm (Teach-in from 21 mm.)
- **Connection type:** male connector, M8, 3-pin
- **Response time:** 24 ms
- **Communication interface:** -
- **Weight:** 10 g
- **Sending axis:** straight

Digital output	Type	Part no.
1 x NPN	UC4-11345	6034668
1 x PNP	UC4-11341	6034667

- **Operating range, limiting range:** 13 mm ... 150 mm, 250 mm (Teach-in from 21 mm.)
- **Connection type:** male connector, M8, 3-pin
- **Response time:** 24 ms
- **Weight:** 10 g
- **Sending axis:** straight

Digital output	Communication interface	Communication Interface detail	Type	Part no.
1 x NPN	-	-	UC4-13345	6034670
1 x PNP	-	-	UC4-13341	6034669
1 x push-pull: PNP/NPN	IO-Link	V1.0	UC4-1334A	6063574
		V1.1	UC4-1334B	6068454

- **Operating range, limiting range:** 13 mm ... 150 mm, 250 mm (Teach-in from 21 mm.)
- **Connection type:** male connector, M8, 3-pin
- **Response time:** 10 ms
- **Communication interface:** -
- **Weight:** 10 g
- **Sending axis:** straight

Digital output	Type	Part no.
1 x NPN	UC4-13345S02	6049510
1 x PNP	UC4-13341S01	6049509

- **Operating range, limiting range:** 20 mm ... 150 mm, 250 mm (Teach-in from 21 mm.)
- **Connection type:** male connector, M8, 3-pin
- **Response time:** 24 ms (Subsequent smoothing of the analog output, depending on the application, may increase the response time by up to 200 %.)
- **Communication interface:** -
- **Weight:** 10 g
- **Sending axis:** straight

Type of analog output	Type	Part no.
Current output	UC4-13346	6054708
Voltage output	UC4-13347	6054709

- **Operating range, limiting range:** 13 mm ... 150 mm, 250 mm (Teach-in from 21 mm.)
- **Connection type:** cable with male connector (300 mm), M8, 3-pin
- **Response time:** 24 ms

Digital output	Communication interface	Communication Interface detail	Weight	Sending axis	Type	Part no.
1 x push-pull: PNP/NPN	IO-Link	V1.1	10 g	Straight	UC4-1354B	6063576

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