At a glance

- Reliable measurement independent of material color, transparency, gloss and ambient light
- Ranges up to 8 m
- High immunity to dirt, dust, humidity and fog
- Time-of-flight measurement ensures precise background suppression
- Internal temperature compensation
- Tough housing designs in varying shapes and sizes
- Large operational temperature range
- Single button teach-in or advanced setup options available

Your benefits

- Intelligent measurement filters assure reliable measurement results for highest process stability
- Synchronization or multiplexing allows simultaneous use of up to 10 sensors, which improves application flexibility and process stability
- Best process quality thanks to high measurement accuracy based on continuous temperature compensation
- Various housing types, different measurement ranges, and several setup options fit a wide range of applications
- Tough sensor designs ensure long lifetime and low service costs
- Compatible housings allow easy interchange of optical and ultrasonic sensors in challenging applications
- Reliable operation in optically challenging applications

→ **www.mysick.com/en/UM18**

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Ordering information

Other models available at www.mysick.com/en/UM18

Working range, limiting range	Output rate	Ultrasonic frequency (typical)	Sending axis	Response time	Switching frequency	Hysteresis	Switching output [1) 2)]	Analog output	Resolution analog output	Model name	Part no.
20 mm ... 150 mm, 250 mm	8 ms	380 kHz	Straight	40 ms	25 Hz	2 mm	1 x push-pull: PNP/NPN (100 mA); IO-Link	–	–	UM18-21712A211	6048384
			Angled							UM18-21712A212	6048385
			Straight		–	–	–	1 x 4 mA ... 20 mA (≤ 500 Ω) [3) 4)]	12 bit	UM18-217126111	6048386
			Angled							UM18-217126112	6048387
			Straight		–	–	–	1 x 0 V ... 10 V (≥ 100 kΩ), [4)]	12 bit	UM18-217127111	6048388
			Angled							UM18-217127112	6048389

[1)] Output Q short-circuit protected.

[2)] Push-Pull: PNP/NPN HIGH = U_V - (< 4 V) / LOW < 2 V.

[3)] For 4 mA ... 20 mA and V_s ≤ 20 V max. load ≤ 100 Ω.

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

Working range, limiting range	Output rate	Ultrasonic frequency (typical)	Sending axis	Response time	Switching frequency	Hysteresis	Switching output [1] [2]	Analog output	Resolution analog output	Model name	Part no.
30 mm ... 250 mm, 350 mm	8 ms	320 kHz	Straight	40 ms	25 Hz	3 mm	1 x push-pull: PNP/NPN (100 mA); IO-Link	–	–	UM18-21112A211	6048390
			Angled							UM18-21112A212	6048391
			Straight		–	–	–	1 x 4 mA ... 20 mA (≤ 500 Ω) [3] [4]	12 bit	UM18-211126111	6048392
			Angled							UM18-211126112	6048393
			Straight		–	–	–	1 x 0 V ... 10 V (≥ 100 kΩ), [4]	12 bit	UM18-211127111	6048394
			Angled							UM18-211127112	6048395
65 mm ... 350 mm, 600 mm	16 ms	400 kHz	Straight	80 ms	12 Hz	5 mm	1 x push-pull: PNP/NPN (100 mA); IO-Link	–	–	UM18-21212A211	6048396
			Angled							UM18-21212A212	6048397
			Straight		–	–	–	1 x 4 mA ... 20 mA (≤ 500 Ω) [3] [4]	12 bit	UM18-212126111	6048398
			Angled							UM18-212126112	6048399
			Straight		–	–	–	1 x 0 V ... 10 V (≥ 100 kΩ), [4]	12 bit	UM18-212127111	6048400
			Angled							UM18-212127112	6048401
120 mm ... 1,000 mm, 1,300 mm	20 ms	200 kHz	Straight	100 ms	10 Hz	20 mm	1 x push-pull: PNP/NPN (100 mA); IO-Link	–	–	UM18-21812A211	6048402
			Angled							UM18-21812A212	6048403
			Straight		–	–	–	1 x 4 mA ... 20 mA (≤ 500 Ω) [3] [4]	12 bit	UM18-218126111	6048404
			Angled							UM18-218126112	6048405
			Straight		–	–	–	1 x 0 V ... 10 V (≥ 100 kΩ), [4]	12 bit	UM18-218127111	6048406
			Angled							UM18-218127112	6048407

[1] Output Q short-circuit protected.

[2] Push-Pull: PNP/NPN HIGH = U_V - (< 4 V) / LOW < 2 V.

[3] For 4 mA ... 20 mA and V_S ≤ 20 V max. load ≤ 100 Ω.

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

Accessories

	Accessory category	Brief description	Model name	Part no.
	Mounting brackets/plates	Mounting plate for M18 sensors, steel, zinc coated, without mounting material	BEF-WG-M18	5321870
		Mounting bracket, M18 thread, steel, zinc coated, without mounting material	BEF-WN-M18	5308446
 Illustration may differ	Plug connectors and cables	Female connector, M12, 5-pin, straight, 2 m, PVC	DOL-1205-G02M	6008899
		Female connector, M12, 5-pin, straight, 5 m, PVC	DOL-1205-G05M	6009868
		Female connector, M12, 5-pin, straight, 2 m, PUR halogen free	DOL-1205-G02MC	6025906
		Female connector, M12, 5-pin, straight, 5 m, PUR halogen free	DOL-1205-G05MC	6025907
	Terminal and alignment brackets	Clamping block for round sensors M18, with fixed stop	BEF-KHF-M18	2051482
		Plate H for universal bar clamp, steel, zinc coated, incl. universal bar clamp and mounting material	BEF-KHS-H01	2022465

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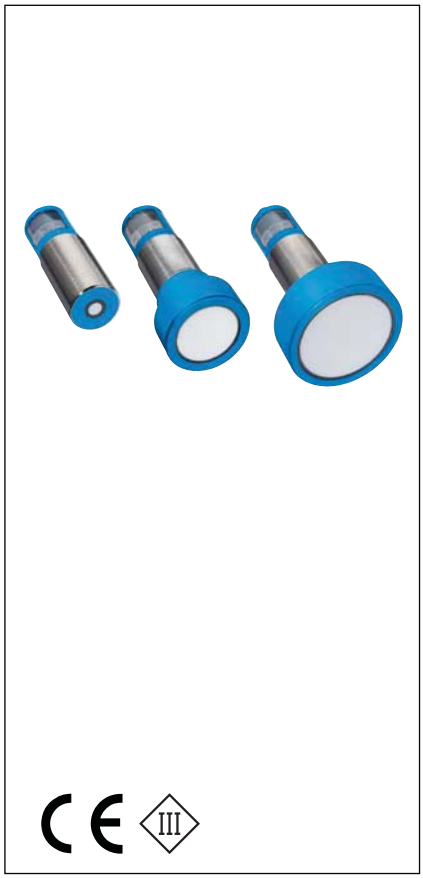

At a glance

- 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 cross-talk 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

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Ordering information

Other models available at www.mysick.com/en/UM30

- **Sending axis:** straight

Working range, limiting range	Output rate	Ultrasonic frequency (typical)	Response time	Switching frequency	Hysteresis	Switching output	Analog output [1] [2] [3]	Resolution analog output	Model name	Part no.
30 mm ... 250 mm, 350 mm	8 ms	320 kHz	50 ms	–	–	–	1 x 0 V ... 10 V (≥ 100 kΩ), 1 x 4 mA ... 20 mA (≤ 500 Ω)	12 bit	UM30-211113	6036916
				11 Hz	3 mm	1 x PNP (200 mA) [4] [5]			UM30-211118	6036921
						2 x PNP (200 mA) [4] [5]	–	–	UM30-211112	6037664
						2 x NPN (200 mA) [4] [6]	–	–	UM30-211114	6037674

[1] For 4 mA ... 20 mA and V_s ≤ 20 V max. load ≤ 100 Ω.

[2] Automatic selection of analog current or voltage output dependent on load.

[3] Subsequent smoothing of the analog output, dependent on the application, may increase the response time by up to 200 %.

[4] Output Q short-circuit protected.

[5] PNP: HIGH = V_S - (< 2 V) / LOW = 0 V.

[6] NPN: HIGH ≤ 2 V / LOW = V_S.

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Working range, limiting range	Output rate	Ultrasonic frequency (typical)	Response time	Switching frequency	Hysteresis	Switching output	Analog output [1) 2) 3)]	Resolution analog output	Model name	Part no.
65 mm ... 350 mm, 600 mm	16 ms	400 kHz	70 ms	–	–	–	1 x 0 V ... 10 V (≥ 100 kΩ), 1 x 4 mA ... 20 mA (≤ 500 Ω)	12 bit	UM30-212113	6036917
				8 Hz	5 mm	1 x PNP (200 mA) [4) 5)]			UM30-212118	6036922
						2 x PNP (200 mA) [4) 5)]	–	–	UM30-212112	6037665
						2 x NPN (200 mA) [4) 6)]	–	–	UM30-212114	6037675
200 mm ... 1,300 mm, 2,000 mm	23 ms	200 kHz	110 ms	–	–	–	1 x 0 V ... 10 V (≥ 100 kΩ), 1 x 4 mA ... 20 mA (≤ 500 Ω)	12 bit	UM30-213113	6036918
				6 Hz	20 mm	1 x PNP (200 mA) [4) 5)]			UM30-213118	6036923
						2 x PNP (200 mA) [4) 5)]	–	–	UM30-213112	6037666
						2 x NPN (200 mA) [4) 6)]	–	–	UM30-213114	6037676
350 mm ... 3,400 mm, 5,000 mm	43 ms	120 kHz	180 ms	–	–	–	1 x 0 V ... 10 V (≥ 100 kΩ), 1 x 4 mA ... 20 mA (≤ 500 Ω)	12 bit	UM30-214113	6036919
				3 Hz	50 mm	1 x PNP (200 mA) [4) 5)]			UM30-214118	6036924
						2 x PNP (200 mA) [4) 5)]	–	–	UM30-214112	6037667
						2 x NPN (200 mA) [4) 6)]	–	–	UM30-214114	6037677
600 mm ... 6,000 mm, 8,000 mm	60 ms	80 kHz	240 ms	–	–	–	1 x 0 V ... 10 V (≥ 100 kΩ), 1 x 4 mA ... 20 mA (≤ 500 Ω)	12 bit	UM30-215113	6036920
				2 Hz	100 mm	1 x PNP (200 mA) [4) 5)]			UM30-215118	6036925
						2 x PNP (200 mA) [4) 5)]	–	–	UM30-215112	6037668
						2 x NPN (200 mA) [4) 6)]	–	–	UM30-215114	6037678

[1)] For 4 mA ... 20 mA and V_s ≤ 20 V max. load ≤ 100 Ω.

[2)] Automatic selection of analog current or voltage output dependent on load.

[3)] Subsequent smoothing of the analog output, dependent on the application, may increase the response time by up to 200 %.

[4)] Output Q short-circuit protected.

[5)] PNP: HIGH = V_S - (< 2 V) / LOW = 0 V.

[6)] NPN: HIGH ≤ 2 V / LOW = V_S.

Accessories

	Accessory category	Brief description	Model name	Part no.
	Mounting brackets/plates	Mounting plate for M30 sensors, steel, zinc coated, without mounting material	BEF-WG-M30	5321871
		Mounting bracket, M30 thread, steel, zinc coated, without mounting material	BEF-WN-M30	5308445
 Illustration may differ	Plug connectors and cables	Female connector, M12, 5-pin, straight, 2 m, PVC	DOL-1205-G02M	6008899
		Female connector, M12, 5-pin, straight, 5 m, PVC	DOL-1205-G05M	6009868
		Female connector, M12, 5-pin, straight, 2 m, PUR halogen free	DOL-1205-G02MC	6025906
		Female connector, M12, 5-pin, straight, 5 m, PUR halogen free	DOL-1205-G05MC	6025907
	Terminal and alignment brackets	Integrated adapter	BEF-EA-CM30	2043770
		Mounting bracket, axial adjustable, with tapering thread M6, without mounting material	BEF-HA-M30A	5311527
		Mounting bracket, radial adjustable, with fixing holes for M4, without mounting material	BEF-HA-M30R	5311528

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At a glance

- Integrated time-of-flight technology detects objects such as glass, liquids and transparent foils, independent of color
- Three operation modes: Distance to Object (DtO), Window (Wnd) or Object between sensor and background (OBSB)
- Immunity to dirt, dust and fog
- One PNP/NPN switching output
- Excellent background suppression

Your benefits

- Mini housing allows for quick and easy integration, even in the most confined spaces
- Immunity to dirt and dust ensures reliable object detection, even in challenging environmental conditions
- Integrated temperature compensation ensures high measurement accuracy
- Various switching outputs provide application flexibility, which increases reliability and productivity
- Full mechanical compatibility to photoelectric sensors increase application flexibility without machine modification
- Economical version available for simple, cost-sensitive applications
- Fast machine setup due to easy-to-use teach-in button

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Ordering information

Other models available at www.mysick.com/en/UC4

- **Response time:** 30 ms
- **Ultrasonic frequency (typical):** 380 kHz

Accuracy [1]	Temperature compensation	Working range, limiting range [2]	Switching output [3]	Model name	Part no.
0.17 % / K	–	13 mm ... 100 mm, 150 mm	1 x PNP (200 mA) [4]	UC4-11341	6034667
			1 x NPN (200 mA) [5]	UC4-11345	6034668
± 1 %	✔	13 mm ... 150 mm, 250 mm	1 x PNP (200 mA) [4]	UC4-13341	6034669
			1 x NPN (200 mA) [5]	UC4-13345	6034670

[1] Referring to current measurement value.

[2] Teach-in from 21 mm.

[3] Output Q short-circuit protected.

[4] PNP: HIGH = V_S - (< 2 V) / LOW = 0 V.

[5] NPN: HIGH ≤ 2 V / LOW = V_S.

Accessories

	Accessory category	Brief description	Model name	Part no.
	Plug connectors and cables	Female connector, M8, 3-pin, straight, 2 m, PVC	DOL-0803-G02M	6010785
		Female connector, M8, 3-pin, straight, 5 m, PVC	DOL-0803-G05M	6022009
		Female connector, M8, 3-pin, straight, 2 m, PUR halogen free	DOL-0803-G02MC	6025888
		Female connector, M8, 3-pin, straight, 5 m, PUR halogen free	DOL-0803-G05MC	6025889
	Terminal and alignment brackets	Ball clamp bracket, Ball joint bracket, plastic (ABS), incl. mounting material	BEF-GH-MINI01	2023160
		Plate H for universal clamp bracket, Plate H for universal bar clamp, steel, zinc coated, incl. universal bar clamp and mounting material	BEF-KHS-H01	2022465

At a glance

- Object detection independent of material color and ambient light – even transparent foils, glass, liquids and bottles are reliably detected
- Fast and easy teach-in with single push-button
- Immune to dirt, dust and fog
- Two ambivalent switching outputs (Q, /$\overline{Q}$)
- Excellent background suppression
- Three operation modes: Distance to Object (DtO), Window (Wnd) or Object between sensor and background (OBSB)

Your benefits

- Fast commissioning due to single-button teach-in
- Full mechanical compatibility to photoelectric sensors increase application flexibility without machine modification
- Standard proximity, window and reflection modes provide application flexibility, which increases reliability and productivity
- Integrated temperature compensation ensures high measurement accuracy
- Complementary switching outputs immediately signal broken wiring, reducing faulty production results

→ **www.mysick.com/en/UC12**

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Ordering information

Other models available at www.mysick.com/en/UC12

- **Response time:** 30 ms
- **Accuracy:** ± 1 % (Referring to current measurement value)
- **temperature compensation:** ✔

Ultrasonic frequency (typical)	Working range, limiting range	Switching output [1) 2)]	Model name	Part no.
380 kHz	20 mm ... 150 mm, 250 mm	2 x PNP (500 mA) [3)]	UC12-11231	6029831
		2 x NPN (500 mA) [4)]	UC12-11235	6029833
500 kHz	55 mm ... 250 mm, 350 mm	2 x PNP (500 mA) [3)]	UC12-12231	6029832
		2 x NPN (500 mA) [4)]	UC12-12235	6029834

[1)] Output Q short-circuit protected.

[2)] Complementary switching outputs (Q, /$\overline{Q}$)

[3)] PNP: HIGH = V_S - (< 2 V) / LOW = 0 V.

[4)] NPN: HIGH ≤ 2 V / LOW = V_S.

Accessories

	Accessory category	Brief description	Model name	Part no.
 Illustration may differ	Plug connectors and cables	Female connector, M12, 4-pin, straight, 2 m, PVC	DOL-1204-G02M	6009382
		Female connector, M12, 4-pin, straight, 5 m, PVC	DOL-1204-G05M	6009866
		Female connector, M12, 4-pin, straight, 2 m, PUR halogen free	DOL-1204-G02MC	6025900
		Female connector, M12, 4-pin, straight, 5 m, PUR halogen free	DOL-1204-G05MC	6025901
	Terminal and alignment brackets	Double clamp bracket for dovetail mounting, Double clamps for dovetail mounting, steel, zinc coated, incl. mounting material	BEF-DKH-W12	2013947
		Plate D for universal clamp bracket, Plate D for universal bar clamp, steel, zinc coated, incl. universal bar clamp and mounting material	BEF-KHS-D01	2022461

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