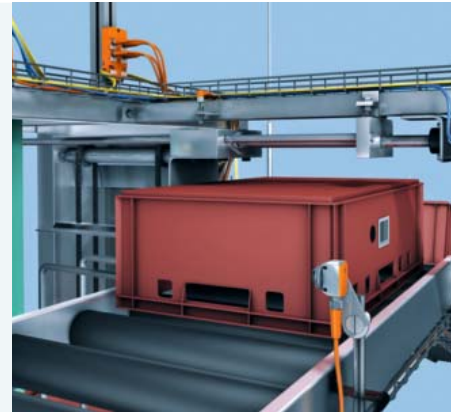




Position sensors

# Precise object detection under extreme conditions



## Ultrasonic sensors



**Robust high-grade stainless steel housing for demanding applications**

**Sensing range up to 1.2 m in M18 cube design and 2.2 m in M18 design**

**The vibrating sound transducer reduces the deposit of dirt**

**Retro-reflective operation for orientation-independent object detection**

**Easy setting via teach button, wire teach or IO-Link**



Ultrasound



High-grade stainless steel



TEACH-IN



IO-Link

### The alternative for difficult surfaces

Ultrasonic sensors transmit and receive sound waves in the ultrasonic range. The object to be detected reflects the sound waves and the distance information is determined via time of flight measurement. As opposed to photoelectric sensors, colour, transparency or the object's surface shine do not play a role. Blister packages in packaging technology or transparent plastic bowls in the food industry, for example, can be reliably detected.

### High performance

The ifm ultrasonic sensors in M18 design provide a particularly small blind zone and long sensing ranges which are usually only achieved by sensors of a considerably larger design.



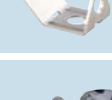






The sensors operate reliably with heavy soiling so that they can be used in applications in which photoelectric sensors meet their limits.



Type	Housing length/ dimensions [mm]	Setting	Output	Order no.	Order no.	Order no.	Order no.	Order no.
<b>Ultrasonic diffuse-reflection sensor · 3-wire DC, 4-pole</b>				<b>300 mm*</b>	<b>800 mm*</b>	<b>1200 mm*</b>	<b>1600 mm*</b>	<b>2200 mm*</b>
M18	60	Wire	PNP	<b>UGT500</b>	<b>UGT503</b>	<b>UGT506</b>	–	–
M18	60	Wire	NPN	<b>UGT521</b>	<b>UGT522</b>	<b>UGT523</b>	–	–
M18	60	Wire	4...20 mA	<b>UGT501</b>	<b>UGT504</b>	<b>UGT507</b>	–	–
M18	60	Wire	0...10 V	<b>UGT502</b>	<b>UGT505</b>	<b>UGT508</b>	–	–
M18	60	IO-Link	PNP	<b>UGT524</b>	<b>UGT525</b>	<b>UGT526</b>	–	–
<b>Ultrasonic diffuse-reflection sensor · 3-wire DC, 4-pole</b>				<b>300 mm*</b>	<b>800 mm*</b>	<b>1200 mm*</b>	<b>1600 mm*</b>	<b>2200 mm*</b>
M18 Cube	53 x 20 x 38	Pushbutton	PNP + 4...20 mA	<b>UGT580</b>	<b>UGT582</b>	<b>UGT584</b>	–	–
M18 Cube	53 x 20 x 38	Pushbutton	PNP + 0...10 V	<b>UGT581</b>	<b>UGT583</b>	<b>UGT585</b>	–	–
M18 Cube	53 x 20 x 38	Pushbutton	NPN + 4...20 mA	<b>UGT586</b>	<b>UGT588</b>	<b>UGT590</b>	–	–
M18 Cube	53 x 20 x 38	Pushbutton	NPN + 0...10 V	<b>UGT587</b>	<b>UGT589</b>	<b>UGT591</b>	–	–
M18 Cube	53 x 20 x 38	Pushbutton, IO-Link	PNP	<b>UGT592</b>	<b>UGT593</b>	<b>UGT594</b>	–	–
<b>Ultrasonic diffuse-reflection sensor · 3-wire DC, 4-pole</b>				<b>300 mm*</b>	<b>800 mm*</b>	<b>1200 mm*</b>	<b>1600 mm*</b>	<b>2200 mm*</b>
M18	98	Pushbutton, IO-Link	2 x PNP	–	–	–	<b>UGT509</b>	<b>UGT512</b>
M18	98	Pushbutton, IO-Link	PNP + 4...20 mA	–	–	–	<b>UGT510</b>	<b>UGT513</b>
M18	98	Pushbutton, IO-Link	PNP + 0...10 V	–	–	–	<b>UGT511</b>	<b>UGT514</b>
M18	98	Pushbutton	2x NPN	–	–	–	<b>UGT515</b>	<b>UGT518</b>
M18	98	Pushbutton	NPN + 4...20 mA	–	–	–	<b>UGT516</b>	<b>UGT519</b>
M18	98	Pushbutton	NPN + 0...10 V	–	–	–	<b>UGT517</b>	<b>UGT520</b>
<b>Ultrasonic retro-reflective sensor · 3-wire DC, 3-pole</b>				<b>300 mm*</b>	<b>800 mm*</b>	<b>1200 mm*</b>	<b>1600 mm*</b>	<b>2200 mm*</b>
M18	98	Pushbutton, IO-Link	PNP	–	–	–	<b>UGR500</b>	<b>UGR501</b>
M18	98	Pushbutton	NPN	–	–	–	<b>UGR502</b>	<b>UGR503</b>


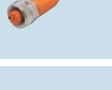


\* Max. range

## Accessories

Type	Description	Order no.
	Sound tube, M18, POM	<b>E23000</b>
	Sound deflection angle for sensors with a range of ≤ 1,2 m, stainless steel	<b>E23001</b>
	Sound deflection angle for sensors with a range of ≤ 2,2 m, stainless steel	<b>E23002</b>
	Mounting set for clamp mounting, diecast zinc, Ø 12 mm	<b>E20720</b>
	Mounting set for clamp mounting, stainless steel, Ø 12 mm	<b>E21206</b>
	Mounting set for clamp mounting, diecast zinc, Ø 12 mm	<b>E20721</b>
	Mounting set for clamp mounting, stainless steel, Ø 12 mm	<b>E21207</b>
	Rod, 100 mm, Ø 12 mm, M10 thread, stainless steel	<b>E20938</b>
	Cube for mounting on an aluminium profile, M10 thread, diecast zinc	<b>E20951</b>

Common technical data		
Operating voltage	[V DC]	10...30
Current rating	[mA]	100
Switching output		
Operating temperature range	[°C]	-20...70
Temperature compensation		•
Protection		IP 67
Connection		M12 connector
Status indications	LED	yellow
Echo	LED	green

## Connection technology

Type	Description	Order no.
	Socket, M12, 4-pole 2 m black, PUR cable	<b>EVC001</b>
	Socket, M12, 4-pole 5 m black, PUR cable	<b>EVC002</b>
	Socket, M12, 4-pole 2 m black, PUR cable	<b>EVC004</b>
	Socket, M12, 4-pole 5 m black, PUR cable	<b>EVC005</b>

We reserve the right to make technical alterations without prior notice. · 11/2017

**ifm** – close to you!

For further technical details please visit: [ifm.com](http://ifm.com)