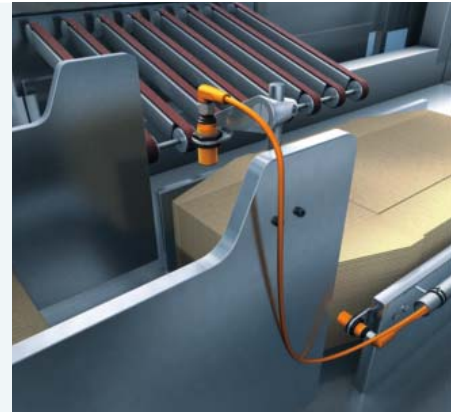# Object detection for long ranges and difficult surfaces

Ultrasonic sensors

M18 plastic housing available in the two lengths 60 mm and 98 mm

Long ranges from 300 mm to 2200 mm available

The vibrating sound transducer reduces the deposit of dirt

Digital and analogue output for point level measurement and distance detection

Easy setting via teach button, wire teach or 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.

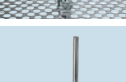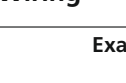| Type	Housing length/ dimensions [mm]	Setting	Output	Order no.	Order no.	Order no.	Order no.	Order no.
Ultrasonic diffuse-reflection sensor · 3-wire DC, 4-pole				300 mm*	800 mm*	1200 mm*	1600 mm*	2200 mm*
M18	60	Wire	PNP	UGT200	UGT201	UGT202	–	–
M18	60	Wire	NPN	UGT209	UGT210	UGT211	–	–
M18	60	IO-Link	PNP	UGT212	UGT213	UGT214	–	–
Ultrasonic diffuse-reflection sensor · 3-wire DC, 4-pole				300 mm*	800 mm*	1200 mm*	1600 mm*	2200 mm*
M18	98	Pushbutton, IO-Link	2 x PNP	–	–	–	UGT203	UGT206
M18	98	Pushbutton, IO-Link	PNP + 4…20 mA	–	–	–	UGT204	UGT207
M18	98	Pushbutton, IO-Link	PNP + 0…10 V	–	–	–	UGT205	UGT208
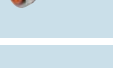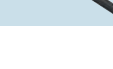
* Max. range
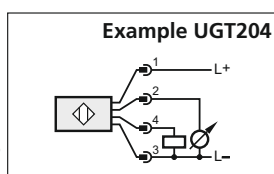
Accessories

Type	Description	Order no.
	Sound tube, M18, POM	E23000
	Sound deflection angle for sensors with a range of ≤ 1,2 m, stainless steel	E23001
	Sound deflection angle for sensors with a range of ≤ 2,2 m, stainless steel	E23002
	Mounting set for clamp mounting, diecast zinc, Ø 12 mm	E20720
	Mounting set for clamp mounting, stainless steel, Ø 12 mm	E21206
	Mounting set for clamp mounting, diecast zinc, Ø 12 mm	E20721
	Mounting set for clamp mounting, stainless steel, Ø 12 mm	E21207
	Rod, 100 mm, Ø 12 mm, M10 thread, stainless steel	E20938
	Rod, 200 mm, Ø 10 mm, M10 thread, stainless steel	E20940
	Cube for mounting on an aluminium profile, M10 thread, diecast zinc	E20951

Common technical data

Operating voltage	[V DC]	10...30
Current rating Switching output	[mA]	100
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	EVC001
	Socket, M12, 4-pole 5 m black, PUR cable	EVC002
	Socket, M12, 4-pole 2 m black, PUR cable	EVC004
	Socket, M12, 4-pole 5 m black, PUR cable	EVC005

Wiring

Example UGT204

ifm – close to you!

For further technical details please visit: www.ifm.com