



## Top product features!

- Ultrasonic sensors with 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 tubular design
- Additional features such as plug-and-play replacement, real-time recipe changes and diagnostic feedback
- Digital transmission of target distance and sensor health diagnostics
- Digital and analog outputs for object detection and level applications

## Compact ultrasonic sensors with robust metal housings – Object detection for long ranges and challenging surfaces

**NEW!** Ultrasonic sensors emit short bursts of very high frequency sound waves. When the sound waves strike an object, an echo is reflected back to the ultrasonic sensor. The time it takes for the sound to travel to the object and back is measured and converted into a distance. This information may be used for both position and level sensing applications.

### Ability to solve challenging applications

Ultrasonic sensors are similar to photoelectric sensors in their ability to detect targets at long ranges. Since they operate by sensing sound, ultrasonic sensors are not subject to interference from light sources such as UV or direct sunlight. Ultrasonic sensors are capable of sensing irregular-shaped targets including objects with holes. They are particularly well suited for sensing sound-reflecting targets regardless of their color, transparency or surface reflectivity.

### The solution for a wide variety of position applications

- Ideal for sensing clear objects and diffuse sensing of targets at long ranges (up to 2.2 meters), such as automobile windshields.
- Detects full or empty positions in stack height control applications.
- Senses position of the material loop so the roller speed can be adjusted as required for non-contact web loop control.
- Detection of roll diameters to determine when the material will run out; or for stamping applications where shiny metal surfaces can be challenging to detect with photoelectric sensors.
- Well suited for level applications with liquids and materials with uneven surfaces such as granules and powders.
- Retro-reflective models detect objects regardless of orientation.
- Good solution for dusty environments because vibrating sound transducer reduces the accumulation of deposits.

### Application solutions



ifm's ultrasonic sensors detect targets regardless of their color, transparency or surface reflectivity.

Company	IO-Link		Position Sensors				Ultrasonic	Motion Control		Vision Sensors	
	IO-Link	Inductive	Capacitive	Cylinder / valve position	Photoelectrics / lasers / fiber optics	Distance / Application specific		Encoders / Speed monitors	2D / 3D inspection		
1 - 5	6 - 21	22 - 55	56 - 61	62 - 71	72 - 111	112 - 117	118 - 119	120 - 127	128 - 143		





# Product + accessory selector

Type	Housing Length/ Dimensions	Setting	Output	Part No.	Part No.	Part No.	Part No.	Part No.	List Price (1-pc.)	
<b>Diffuse-reflection sensor · 4-wire DC</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 mm	Pushbutton	PNP + 4...20 mA	<b>UGT580</b>	<b>UGT582</b>	<b>UGT584</b>	–	–	<b>\$164.00</b>
	M18 Cube	53 x 20 x 38 mm	Pushbutton	PNP + 0...10 V	<b>UGT581</b>	<b>UGT583</b>	<b>UGT585</b>	–	–	<b>\$164.00</b>
	M18 Cube	53 x 20 x 38 mm	Pushbutton	NPN + 4...20 mA	<b>UGT586</b>	<b>UGT588</b>	<b>UGT590</b>	–	–	<b>\$164.00</b>
	M18 Cube	53 x 20 x 38 mm	Pushbutton	NPN + 0...10 V	<b>UGT587</b>	<b>UGT589</b>	<b>UGT591</b>	–	–	<b>\$164.00</b>
<b>Diffuse-reflection sensor · 4-wire DC</b>				<b>300 mm</b>	<b>800 mm</b>	<b>1200 mm</b>	<b>1600 mm</b>	<b>2200 mm</b>		
	M18	98 mm	Pushbutton	2 x PNP	–	–	–	<b>UGT509</b>	<b>UGT512</b>	<b>\$198.00</b>
	M18	98 mm	Pushbutton	PNP + 4...20 mA	–	–	–	<b>UGT510</b>	<b>UGT513</b>	<b>\$198.00</b>
	M18	98 mm	Pushbutton	PNP + 0...10 V	–	–	–	<b>UGT511</b>	<b>UGT514</b>	<b>\$198.00</b>
	M18	98 mm	Pushbutton	2 x NPN	–	–	–	<b>UGT515</b>	<b>UGT518</b>	<b>\$198.00</b>
	M18	98 mm	Pushbutton	NPN + 4...20 mA	–	–	–	<b>UGT516</b>	<b>UGT519</b>	<b>\$198.00</b>
	M18	98 mm	Pushbutton	NPN + 0...10 V	–	–	–	<b>UGT517</b>	<b>UGT520</b>	<b>\$198.00</b>
<b>Retro-reflective sensor · 4-wire DC</b>				<b>300 mm</b>	<b>800 mm</b>	<b>1200 mm</b>	<b>1600 mm</b>	<b>2200 mm</b>		
	M18	98 mm	Pushbutton	PNP	–	–	–	<b>UGR500</b>	<b>UGR501</b>	<b>\$188.00</b>
	M18	98 mm	Pushbutton	NPN	–	–	–	<b>UGR502</b>	<b>UGR503</b>	<b>\$188.00</b>

## Accessories

Type	Description	Part No.	List Price (1-pc.)
	Short swivel bracket for UGT, 316 stainless steel bracket, Die cast zinc clamp	<b>E20718</b>	<b>\$12.00</b>
	Tall swivel bracket for UGT, 316 stainless steel bracket, Die cast zinc clamp	<b>E20719</b>	<b>\$11.00</b>
	Rail mount package, Short swivel bracket for UGT, 316 stainless steel bracket, Die cast zinc clamp and cube	<b>E20867</b>	<b>\$18.00</b>
	Rail mount package, Tall swivel bracket for UGT, 316 stainless steel bracket, Die cast zinc clamp and cube	<b>E20866</b>	<b>\$18.00</b>
	Sound beam focuser for types UG	<b>E23000</b>	<b>\$30.00</b>

Visit [www.ifm.com/us](http://www.ifm.com/us) for additional accessories.

## Cordsets

Type	Description	Part No.	List Price (1-pc.)
	M12 Micro DC, (4-pin) 2 m, PUR	<b>EVC001</b>	<b>\$11.00</b>
	M12 Micro DC, (4-pin) 5 m, PUR	<b>EVC002</b>	<b>\$15.00</b>
	M12 Micro DC, (4-pin) 2 m, PUR	<b>EVC004</b>	<b>\$11.00</b>
	M12 Micro DC, (4-pin) 5 m, PUR	<b>EVC005</b>	<b>\$15.00</b>

## Technical Specs

Operating voltage	10...30 V DC
Current consumption	100 mA
Operating temperature	-4...158 °F (-20...70 °C)
Temperature compensation	yes
Protection	IP 67
Connection	M12 connector
Status indication	Yellow LED
Echo	Green LED

### Safety Technology

### Process Sensors

### Industrial Networks

### ID Systems

### Machine Condition

### Power Supplies

### Wiring Technology

Safety products

Pressure

Flow

Level

Temperature

AS-i network

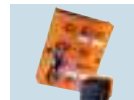
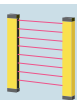
Safety systems

RF identification systems

Diagnostic systems

Power supplies

Cordset solutions



144 - 155

156 - 175

176 - 191

192 - 207

208 - 225

226 - 239

240 - 251

252 - 253

254 - 259

260 - 263

264 - 277