



Capacitive Sensors

High Performance

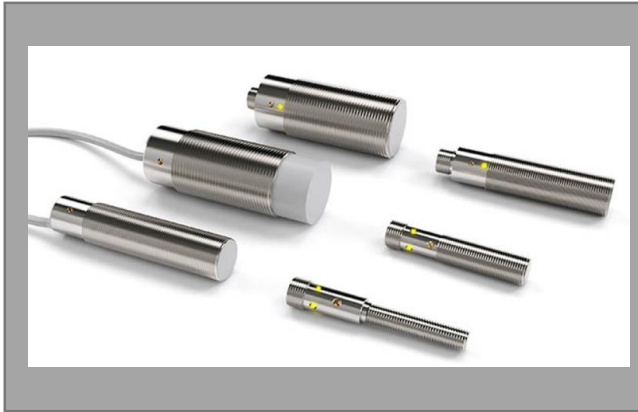
High Temperature

Chem-Resist PTFE housings

Cubic Variants

Ring-Sensors

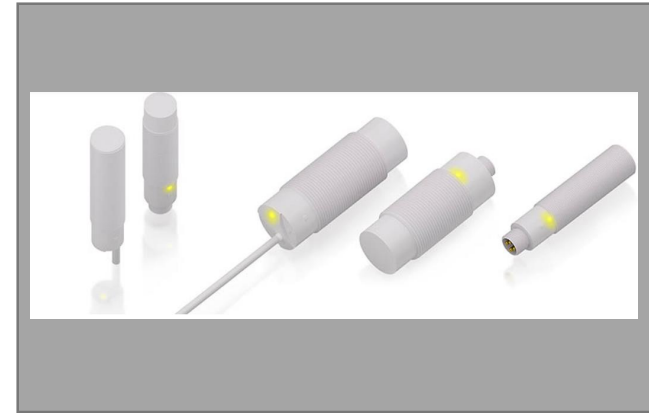
Capacitive Sensors



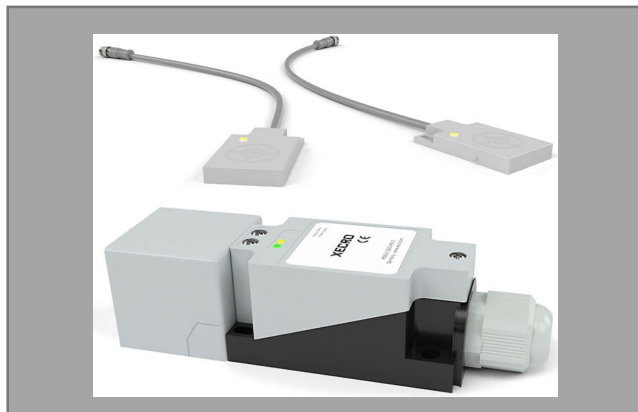
High Performance



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Cubic Variants



Ring-Sensors

High Performance

XECRO's line of capacitive sensors cover all diameters between Ø6.5 mm respectively M8 and M30.

Capacitive Sensors from the Performance Series, offer absolute best-in-class sensing distances. XECRO manufactures shielded capacitive sensors such as e.g. M8 with 2 mm sensing distance, M12 with 6 mm sensing distance and M18 with 12 mm sensing distance. Unshielded Capacitive Performance Series in M30 housings, achieve up to a 35 mm sensing distance.

In order to integrate the sensors into different environments, the diameters M12, M18 and M30 are provided with a build-in multi-turn potentiometer to adjust their sensitivity and adapt them to different application requirements. The potentiometer is also an optional extra for Ø6.5 and M8 sensors.

Standard

XECRO Standard Sensing ranges cover all common industry diameters including □5×5 and □8×8. The Standard Class of sensors represents the basic sensing distances of each size. The capacitive sensors in the Standard Class match with cost-sensitive applications where longer sensing distances are not required. Even the Standard Class sensors which are rated to be used between – 20...+70 °C | -4... 158 °F come with a protection class of IP67 and are ideal for general purpose applications. Also these devices already have reverse-polarity as well as overload and short-circuit protection built-in.

Advanced

In some environments, extremely large sensing distances are essential for proper operation. Sensors from the Advanced Class offer the absolute best sensing distances of their type. XECRO builds sensors as e.g.

Sensor diameter	Sensing distance	Mounting	Body Length	Features
M8×1	2 mm	flush		• Robust metal body
M8×1	4 mm	non-flush		
M12×1	6 mm	flush		
M12×1	10 mm	non-flush		
M18×1	12 mm	flush		• High sensing distances
M18×1	20 mm	non-flush		
M30×1.5	25 mm	flush		• Polarity reversal and short-circuit protected
M30×1.5	35 mm	non-flush		

Common Specifications	
Operating Voltage	10 ... 30 VDC
Reverse Polarity Protection	Built-in
Output Load Capability	200 mA
Short Circuit Protection	Built-in, self-resetting
Voltage Drop	1.5 V @ 200 mA
Operating Temperature	-20 ... 70°C -4 ... 158 °F
Protection Class	IP67
Switching Indicator	Integrated, yellow
Sensing Face Material	PBT
Housing Material	Nickel plated brass



High Temperature

XECRO's Capacitive High Temperature Series sensors has been designed for use in permanent environmental temperatures ranging between -25...+150 °C (-13...302 °F). The electronics of the Capacitive High Temperature Series fit into the identical housing as other capacitive sensors from XECRO. XECRO's Capacitive High Temperature Series sensors are available in sizes ranging from M8 to M30 and are equipped with silicone or Teflon® (PTFE) cables. Silicone cable has an impressive flexibility which makes it a perfect choice for installations where the sensor permanently moves. Conversely, Teflon® has an excellent robustness and should be considered for installations where the sensor body is located on a stationary mount.

Features

- Wide temperature ranges
- Robust Metal housings
- Polarity reversal and short-circuit protected

Common Specifications

Operating Voltage	10 ... 30 VDC
Reverse Polarity Protection	Built-in
Output Load Capability	200 mA
Short Circuit Protection	Built-in, self-resetting
Voltage Drop	1.5 V @ 200 mA
Operating Temperature	From -20 up to 150°C 302 °F
Protection Class	IP67
Switching Indicator	Depending on Model and temperature range
Sensing Face Material	PTFE
Housing Material	Nickel plated brass



Chem-Resist PTFE housings

To survive in most arressive environments, as e.g. the chemical industry, XECRO builds capacitive sensors in M18 and M30 also with hermetically sealed Teflon® (PTFE) housings as well as PTFE connecting cable.

The housing is made from one solid part where the body and the sensing face form one continual element. The switching indicator is placed behind the translucent PTFE body to avoid contact with agressive material.

Since adjustment of the sensing distance is sometime required, the sensors are equipped with a multi-turn potentiometer, mounted behind a protective cap also made from PTFE.

Features

- Chemical resistant PTFE housing
- High sensing distances
- Polarity reversal and short-circuit protected
- LED status indication

Common Specifications

Operating Voltage	10 ... 30 VDC
Reverse Polarity Protection	Built-in
Output Load Capability	200 mA
Short Circuit Protection	Built-in, self-resetting
Voltage Drop	1.5 V @ 200 mA
Operating Temperature	-20 ... 70°C -4 ... 158 °F
Protection Class	Sensing side: IP69, back side: IP67
Switching Indicator	Integrated, yellow
Sensing Face Material	PTFE
Housing Material	PTFE



Cubic Variants

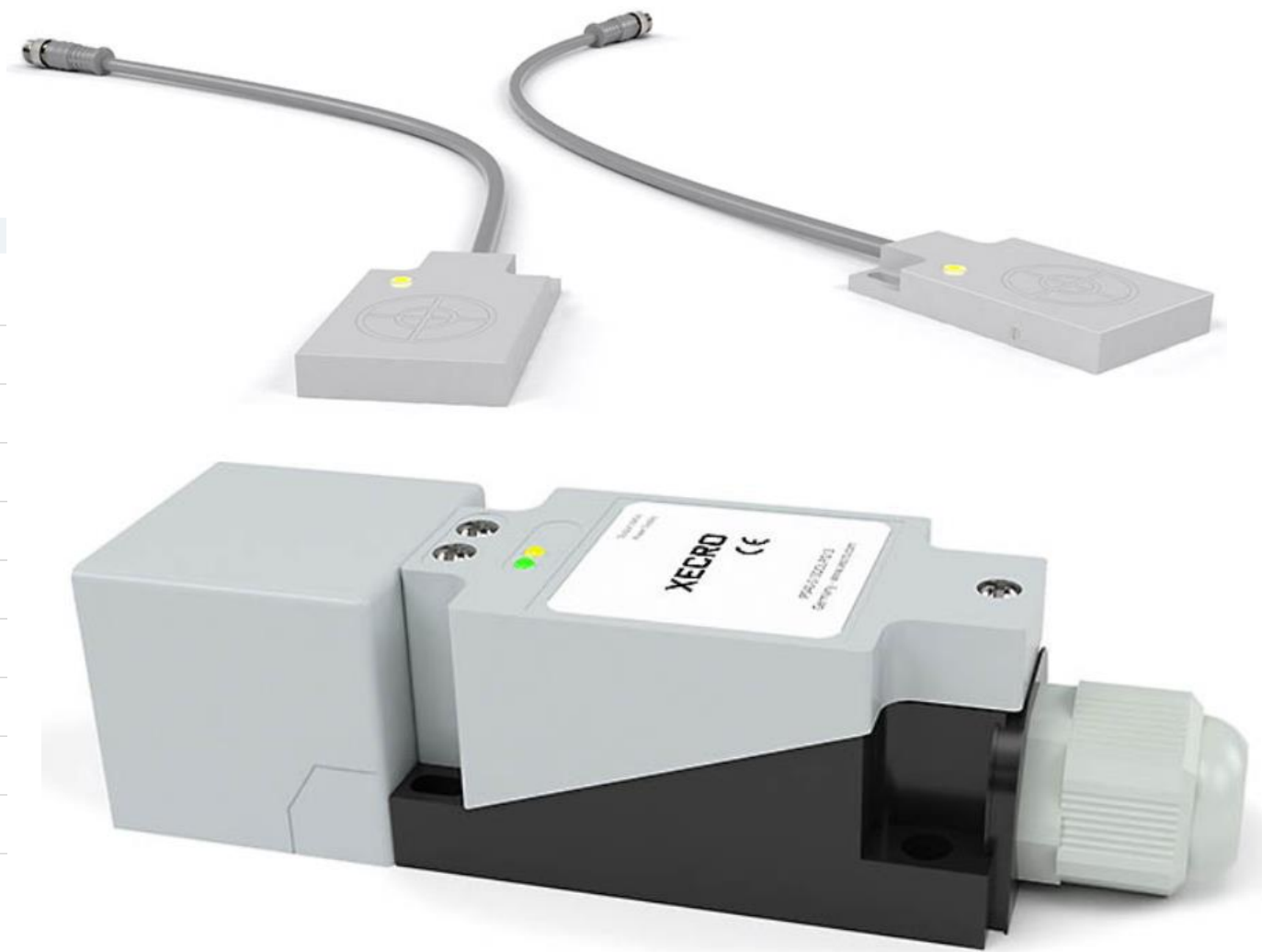
The capacitive sensors from XECRO also include a subset with cubic housings made of plastic. A 40×40 model, that best flexibility due to its rotatable sensing head which can be mounted in five directions. And an extra thin model which is a great choice for installations on non-metal tanks and containers. The built-in potentiometer allows to adjust sensitivity until the device senses material through container walls. Its flat design eliminates the need for extra fixtures as by cylindrical sensors.

Features

- High sensing distances
- Polarity reversal and short-circuit protected
- LED status indication

Common Specifications

Operating Voltage	10 ... 30 VDC
Reverse Polarity Protection	built-in
Output Load Capability	200 mA
Short Circuit Protection	built-in, self-resetting
Voltage Drop	1.5 V @ 200 mA
Operating Temperature	-20 ... 70°C -4 ... 158 °F
Protection Class	IP67
Switching Indicator	yes, yellow
Sensing Face Material	PBT
Mousing Material	PBT



Ring-Sensors

Capacitive ring-sensors from XECRO are ideal to detect liquids or other high conductive material in tubes. They're ideal for level sensing applications based on the principle of communicating pipes.

Note: since the capacitive sensing principle does not support high switching frequencies, these capacitive ring sensors are only suitable for objects which remain static inside the inner ring. Furthermore the circular design of the sensing electrode requires highly conductive material to function. Therefore wooden plugs or lime balls are no suitable targets.

Features

- Different Ring-Diameters
- Sensitivity adjustment
- Polarity reversal and short-circuit protected
- LED status indication

Common Specifications

Operating Voltage	10 ... 30 VDC
Reverse Polarity Protection	Built-in
Output Load Capability	200 mA
Short Circuit Protection	Built-in, self-resetting
Voltage Drop	1.5 V @ 200 mA
Operating Temperature	-20 ... 70°C -4 ... 158 °F
Protection Class	IP67
Switching Indicator	Integrated, yellow
Sensing Face Material	PBT
Ring Material	PA6.6-GF30

