

MODEL CPH

Capacitive Proximity Switch



Compact, Low Cost, Low Profile, High Value! A great choice where compact size is required.

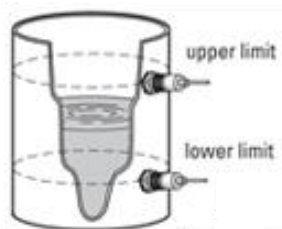


ABOUT

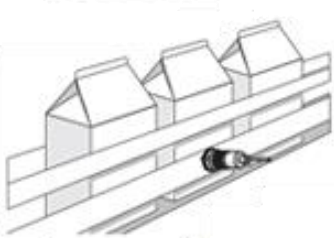
These level sensors are a great choice where compact size and being minimally invasive is required. Capacitive proximity switches are an ideal choice for small machine hoppers and bins. Used exclusively where the solid-state output of these sensors is an input to a PLC/DCS, and where no high current switching is required. They are of the M30 size, can be provided with either 2-wire AC or 4-wire DC (NPN or PNP) output and are applicable for use with clean liquids as well as dry and free-flowing bulk solids with moderate dielectric properties.

Product Use

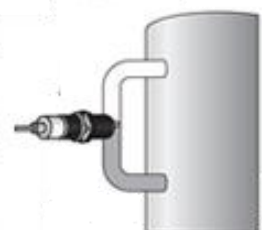
Liquid Level Control
Capacitive Proximity Switches reliably detect liquid levels.



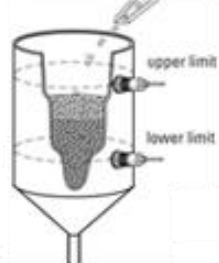
Carton Detection
The packaging industry relies on Capacitive Proximity Switches to detect paper and cardboard cartons.



Sight-Tube Level
Use Capacitive Proximity Switches to monitor liquid levels in sight-tubes and pipes.



Bin Level Control
Capacitive Proximity Switches can detect powders, plastic pellets and other granular materials for level control in bins.



- ✓ AC or DC switches
- ✓ LED indicates sensing condition
- ✓ Shielded or unshielded designs for flush or invasive mounting
- ✓ Up to 30mm sensing distance
- ✓ Solid-state design, no moving parts
- ✓ Prewired 2m long cable
- ✓ Normally open or normally closed
- ✓ Sensor mounting accessories available
- ✓ Compact 30mm M30 size



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Capacitive Proximity Switch



Technical Data

Housing	30mm diameter x 80mm long; PBT plastic case; IP67
Process Temp	-13° F to +158° F (-25° C to +70° C)
Ambient Temp	-13° F to +158° F (-25° C to +70° C)
Sensing Distance	Varies by Model; Up to 30mm Distance; Adjustable setting Adjustable setting
Wire Connection	2m Prewired Cable
Maximum Load	300mA
Process Connection	30mm Threaded; Optional Sensor Mounting Wells and Accessories Available
Certification	Ordinary Location; CE mark

Ordering Information

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Model	Supply Wiring	Output Configuration
1 - Unshielded 2 - Shielded	1 - AC 2-wire 2 - DC NPN 4-wire 3 - DC PNP 4-wire	1 - N.O. (AC only) 2 - N.C. (AC only) 3 - N.O./N.C. (DC only)

Approvals	Process Connection
1 - Ordinary Locations	1 - 30mm

Principal of Operation

Capacitive proximity switches consist of an RC-oscillator with a special multi-part sensing electrode. When the target material is removed from within the active zone, the oscillator is undamped and the oscillation amplitude decreases. The amplifier of the oscillator voltage and the sensitivity of the sensor can be altered by the built-in potentiometer. This allows for a “calibration” for the proximity of the target to activation of the sensor.

Application and Use

Capacitive proximity switches can be either shielded or unshielded and can be used to detect high, low and intermediate levels in tanks and bins. Shielded sensors can be embedded within a vessel wall so that the sensor face is flush with the inside wall of a vessel. Unshielded sensors detect from the face and from the circumference of the front part of the sensor and therefore cannot be embedded.

Vessel contents or target materials to be sensed can be fluids, powders or granulated materials such as PVC powder, dyes, flour, sugar, powdered milk and many other clean and free-flowing materials.

Common applications also include use as end or limit switches for checking and regulating machinery settings. This includes even non-metallic targets such as in conveyor belt positioning and material stacking applications. Capacitive proximity switches can also be used as detectors for counting metallic and non-metallic components.

Models Available

- 2-Wire AC, N.O., Unshielded/Shielded, 2m Cable
- 2-Wire AC, N.C., Unshielded/Shielded, 2m Cable
- 4-Wire DC, PNP, N.O./N.C., Unshielded/Shielded, 2m Cable
- 4-Wire DC, NPN, N.O./N.C., Unshielded/Shielded, 2m Cable



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