

# Model CPH

## Capacitive Proximity Switch

### ***Most Affordable!***

The most compact level switch technology  
for liquids, powders and granular materials -  
low cost, low profile, high value



*The Next Level*

**BlueLevel**<sup>®</sup>  
technologies

## 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.

## Standard 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

## Technical Data Summary

|                    |   |
|--------------------|---|
| Housing            | 30mm diameter x 80mm long; PBT plastic case; IP67                       |
| Process Temp       | -13° F to +158° F<br>(-25° C to +70° C)                                 |
| Ambient Temp       | -13° F to +158° F<br>(-25° C to +70° C)                                 |
| Sensing Distance   | Varies by Model; Up to 30mm Distance; Adjustable setting                |
| Maximum Load       | 300mA   |
| Process Connection | 30mm Threaded; Optional Sensor Mounting Wells and Accessories Available |
| Certifications     | cCSA <sub>us</sub> Ordinary Location; CE mark                           |

# Model CPH

## Capacitive Proximity Switch

- ✓ AC or DC switches - versatile
- ✓ shielded or unshielded mounting - versatile
- ✓ solidstate - no moving parts
- ✓ liquids, powders, granular materials - flexible
- ✓ industry standard M30 size - convenience
- ✓ you are protected - *golden parachute support*
- ✓ other models are available

## Ordering Information

Final Assembly Part Number Structure

47 - XXX 1 - 1 XX

### Model

- 1 - Unshielded
- 2 - Shielded

### Supply/Wiring

- 1 - AC 2-wire
- 2 - DC NPN 4-wire
- 3 - DC PNP 4-wire

### Output Configuration

- 1 - N.O. (AC only)
- 2 - N.C. (AC only)
- 3 - N.O./N.C. (DC only)

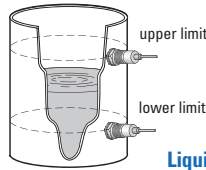
### Approvals

- 1 - Ordinary Locations

### Process Connection

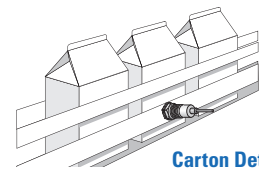
- 1 - 30mm

## Product Use



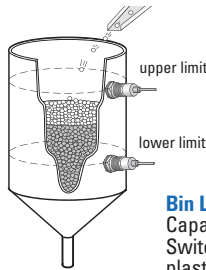
### Liquid Level Control

Capacitive Proximity Switches reliably detect liquid levels.



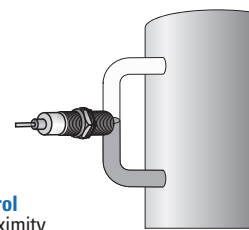
### Carton Detection

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



### Bin Level Control

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



### Sight-Tube Level

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

## The Next Level

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