CARLO GAVAZZI
Automation Components

CARLO GAVAZZI



CD46 - Capacitive sensor

Sensors

CD46
Thin profile capacitive level sensor

This thin profile capacitive sensor from Carlo Gavazzi has been designed on the basis of customer demands and our own 20 years of experience. The goal was to develop the smallest and most widely applicable rectangular capacitive sensor in the market.
The very small-size housing has been carefully prepared in all aspects, to enable it to fit into as many applications as possible - without compromising any of the high demands.
The sensor is based on the latest microprocessor technology, which has made it possible to implement features which enhance the user-friendliness and reliability of the application. In addition, it gives us the flexibility to implement exactly the functionality you need, for example timer functions, filters, pulsed output or even logical expressions.





For front, pipe or plane mounting

Teach-in
The most interesting feature is the Teach-in function, with which the sensor is adjusted to detect or not to detect a certain medium. The sensor can be taught to suppress a non-conductive foreground medium and to detect an item behind that foreground.



The Teach-in function can be activated by a pushbutton on the top of the sensor or remotely by a fourth wire connection.

Sensing distance
The sensors are designed with an extremely wide sensing distance interval with a nominal sensing range of 1,0 mm to 10 mm. You will always gain full advantage of the total performance - no matter whether the sensor is set to minimum or maximum distance.

The wide sensing distance also protects the sensor against mechanical damage and ensures reliable detection and production flow.

Tripleshield ™
Best Performance against: Electrostatic discharge, Burst, Airborne HF, Wire-conducted noise, High energy transients, Short circuit and Reverse polarity.



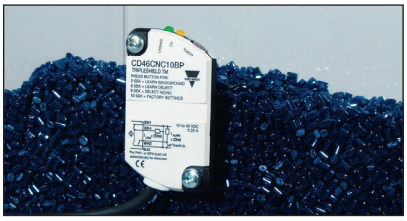
Approvals
CE, UL and CSA

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Mounting

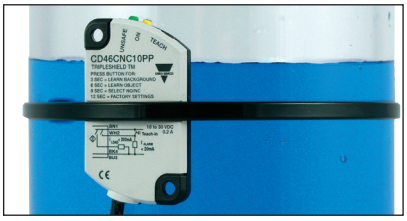
Front mounting

- Direct mounting on non-metallic surfaces
- Stable mounting with screws in diagon mounting holes
- Close-fitting of the sensor against the surface reduces dirt accumulation
- Mounting by use of hot-melt adhesive further eliminates dirt accumulation and error detection
- Detects most solid and fluid materials
- IP68-prepared for harsh and wet environments
- Sunk pushbutton prevents unintended activation



Pipe mounting

- Stable mounting via retaining strap in guide rail
- The thin profile
  - Enables installation on pipes with even small diameters
  - Stabilizes the mounting
- Horizontal or vertical cabling
- Easily accessible Teach-in function
- LEDs visible from several sides



Plane mounting

- Sensor recessed in wall
- Fastened with countersunk screws
- Easily accessible remote Teach-in function
- Provides the highest protection against dirt accumulation and accidental touchby moving target



Specifications

		CD46
Cable	NPN	**CD46CNC10NP**
	PNP	**CD46CNC10PP**
Dimensions		46 x 28 x 5.5 mm
Sensing distance		1 - 10 mm
Sensitivity		Adjustable (Teach-in)
Repeat accuracy		≤ 5%
Hysteresis		Depending on Teach-in
Rated operational voltage		10 to 30 VDC (ripple included)
Ripple		≤ 10%
Operating frequency		10 Hz
No-load supply current		≤ 12 mA
Voltage drop		≤ 2.5 VDC
Degree of protection		IP68
Sensor protection		Short circuit, reverse polarity and transients
Supply current		≤ 200 mA
Led indications		Yellow LED: Output ON, Green LED: Safe/unsafe
Degree of protection		IP68
Ambient temperature		Operating: -25°C to 80°C (-13 to +176 °F), Storage: -40 to +85 °C (-40 to +185 °F)
Housing material		Grey/black PBT
Cable		Black , 2 m, 4 x 0.14 mm², Ø3.2 mm. Oil proof, PVC
Weight		50 g
Approvals/Marks		CE - UL - CSA

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