



**Sensors**



**Switches**



**Controls**

## Application notes



**Application Note : October 2020**

**Market involved : Building automation**

**Product : PA18 series and CD50CNF07**

**Customer : Manufacturers of hygiene and safety equipment**

**Subject : Hand detection for sanitizer dispensers**

### CUSTOMER ISSUE :

Customers need a reliable detection, at a constant distance, of the user's hands in order to dispense an amount of hydro-alcoholic gel onto them.

This application is mainly linked to the Covid-19 health crisis, but these machines are useful in all the areas open to the public, even beyond the current situation.

This is an automatic machine, but there are also manual versions where the disadvantage is the higher consumption of gel.

The use of a sensor helps the regulation of the gel flow.

The dispenser has a gel tank where a level sensor provides information about the need to change or refill the tank.

### OUR SOLUTION :

Carlo Gavazzi offers a wide range of fully customizable photoelectric sensors.

For this specific application, we have fixed the detection range to 15 cm and added a time delay adjustable from 0 to 1.5 S on the exit.

The breaking capacity has been increased from 100 mA to 300 mA in order to directly control a 12 VDC dosing pump.

The customer also needs to know when the minimum level of gel has been reached.

For this reason a CD50 sensor is placed against the plastic reservoir containing the gel and it transmits the minimum level information required for changing (or refilling) the tank.

### BENEFITS :

- PA18 sensor in M18 housing with mounting cover for easy installation and not accessible to the user
- Creation of a bespoke sensor in less than two weeks according to the customer's specifications
- Capacitive sensor CD50
- Ultra-slim sensor to detect through a plastic wall of up to 7mm thick at a very competitive price, which is lower than that of a magnetic type mechanical sensor.