

Model CDC-F8 Automotive Capacitive Proximity Sensor



Model list

Model	Detection Distance	Operation Status
CDC-F8	8 mm	Normally open
CDC-F81		Normal close

Application

- Detection of cereals level
- Detection the inside liquid of paper pack
- Detection of insulating materials

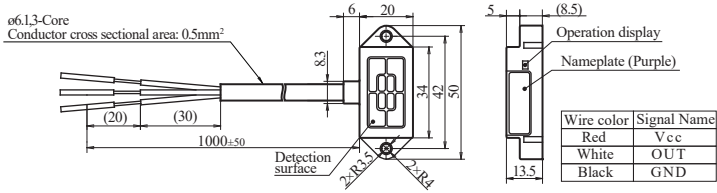
Features

- High-sensitivity small electrostatic-capacity proximity sensor that can detect almost any target regardless of the material. (Can detect metal, wood, paper, plastic, water, powder, rice, etc.)
- A shielded type that is not affected by metal or other objects approaching from the side and that can be used reliably in small places. Specially adapted to detect plastic, glass, wafer, and other isolating materials. Non-shielded types (CCC series) that can indirectly detect a target when an object with low inductance is on the detection surface. Select the sensor according to your needs.
- Can be installed to locations where water, oil, or other liquids may splash thanks to its waterproof construction. (However, note that the sensor cannot be used if water or oil adheres to the detection surface.)
- Supports water-proof connectors.
- Standard Japanese automobile standard JASO D compliance.

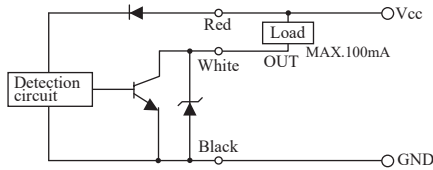
Rating/Performance

Model	CDC-F8	CDC-F81
Detection Surface	Upper side detection	
Detection Distance	8 mm \pm 10 %	
Hysteresis	15 % or less of the detection distance	
Set Distance	0 to 6.4 mm	
Standard Detection Target	Grounded metal of 50 x 50 mm and 1 mm in thickness	
Power Voltage	12 V to 24 V DC (Operating voltage range: 10 V to 30 V DC)	
Power Consumption	10 mA DC or less (With 24 V DC)	
Output	NPN transistor open collector 30 V DC, 100 mA DC or less	
Output Residual Voltage	1 V DC or less (Load current 100 mA DC and a 1-meter cord)	
Operation Status	Normally open (On output with detection target)	Normally closed (Off output with detection target)
Operation Indication	Red LED (lit when On output)	
Response Frequency	100 Hz or more	
Temperature Range	-10 to 55 °C (-15 to 60 °C during storage)(Without dew condensation or freezing)	
Humidity Range	35 to 95 % RH (35 to 95 % RH during storage)(Without dew condensation)	
Breakdown Voltage	500 V AC, 50/60 Hz for 1 min (Between live parts and the case)	
Insulation Resistance	50 M Ω or more, at 500 V DC megger (Between live parts and the case)	
Vibration Resistance	Durability: 10 to 55 Hz, Double amplitude: 1.5 mm in X-, Y-, and Z-direction, each 2 hours (Device not powered)	
Shock Resistance	Durability: 500 m/s ² (Approx. 50 G) in X-, Y-, and Z-direction, each 3 times (Device not powered)	
Ingress Protection	IP66	
Case Material	Polyarylate	
Cable	ϕ 6.1, 3-core round cord of 0.5 mm ² and 1 m in length (Oil and heat resistant)	
Weight	Approx. 60 g	

Dimensions



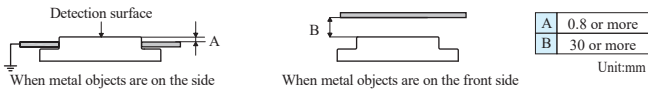
Output Circuit



Precautions during use

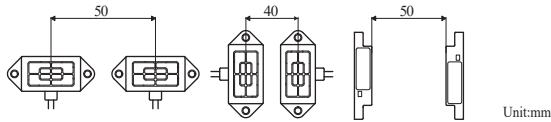
- About the influence of surrounding metal

If there are metal objects around the proximity sensor, leave at least the space indicated in the figure below between them and the sensor.



- Mutual interference

If you use two or more of the same product, separate them at least by the distances shown in the figure below to prevent reciprocal interference.

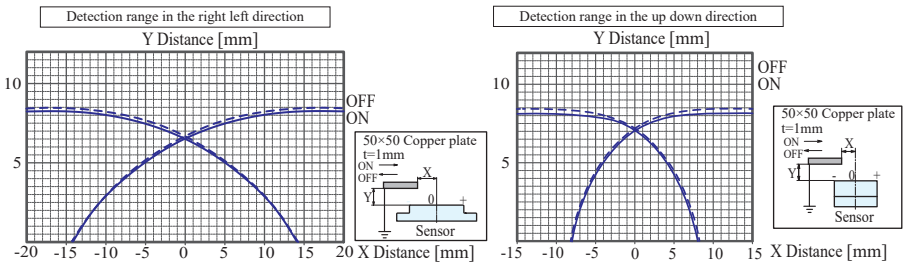


- Installation

Always use plain washers to tighten the case and use a torque of 0.5 N.m or less.

- See proximity sensor general usage precautions for other precautions.

Characteristics graph (typical example)



*For a detailed specification of the other, please refer to specifications.