

Model CCS-CR25V Cylindrical Type Capacitive Proximity Sensor



□Model List

Normally Open	CCS-CR25V
Normally Closed	CCS-CR25V1

Application

- Chemicals and water level detection inside tanks
- Presence detection of food within the package
- Detection of the liquid in the PET bottle or in paper pack

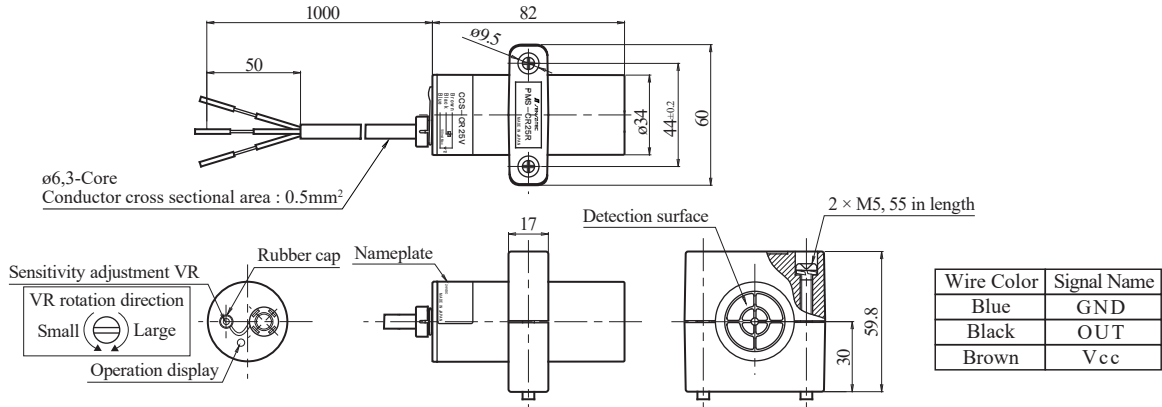
Characteristics

- High-sensitivity long-distance electrostatic-capacity proximity sensor that can detect almost any target regardless of the material.
- Cylindrical type (ø34) with a dedicated installation jig for easy installation and position adjustment.
- Can detect indirectly objects with high permittivity through plastic cases or other containers.
- Equipped with a 15-turn trimmer potentiometer to adjust the sensitivity.
- 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.)

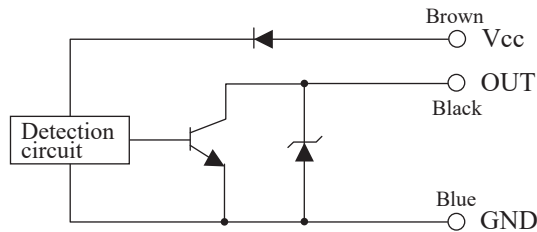
Rating / Performance

Model	CCS-CR25V	CCS-CR25V1
Detection Surface	Front side detection	
Detection Distance	25 mm	
Hysteresis	10% or less of the detection distance	
Detection Distance Variable Range	5.0 to 25.0 mm	
Standard Detection Target	Grounded metal of 50 × 50 mm and 1 mm in thickness	
Power Supply Voltage	12 V to 24 V DC, ripple 10% or less (Operating voltage range : 10 V to 30 V DC)	
Power Consumption	10 mA DC or less (With 24 V DC)	
Output	30 V DC 100 mA DC or less NPN transistor open collector	
Output Residual Voltage	1 V DC or less (Load current 100 mA DC)	
Operation Configuration	Normally open (On output with detection target)	Normally closed (Off output with detection target)
Operation Display	Red LED (Lit when On output)	
Response Frequency	70 Hz or more	
Operating Temperature Range	-10 to 55 °C (-15 to 60 °C during storage)(Without dew condensation or freezing)	
Operating Humidity Range	35 to 95% RH (35 to 95% RH during storage)(Without dew condensation)	
Withstand Voltage	1 min at 500 V AC 50/60 Hz (Between the live part and case)	
Insulation Resistance	50 MΩ or more measured with an ohmmeter at 500 V DC (Between the live part and case)	
Vibration Resistance	Durability : 2 hours in each X, Y, Z direction at 10 to 55 Hz and with peak-to-peak amplitude of 1.5 mm (At power off)	
Shock Resistance	Durability : 3 times at 500 m/s ² (approx. 50 G) in each X, Y, Z direction (At power off)	
Protection Rating	IP66	
Case Material	PBT	
Cable	ø6, 3-core round cord of 0.5 mm ² and 1 m in length (Oil and heat resistant)	
Weight	Approx. 92 g (Without accessories)	
Accessories	Installation tool set : 2 pan head screws M5 × 55 mm, 1 slotted screwdriver for adjustment	

External Dimensions Diagram



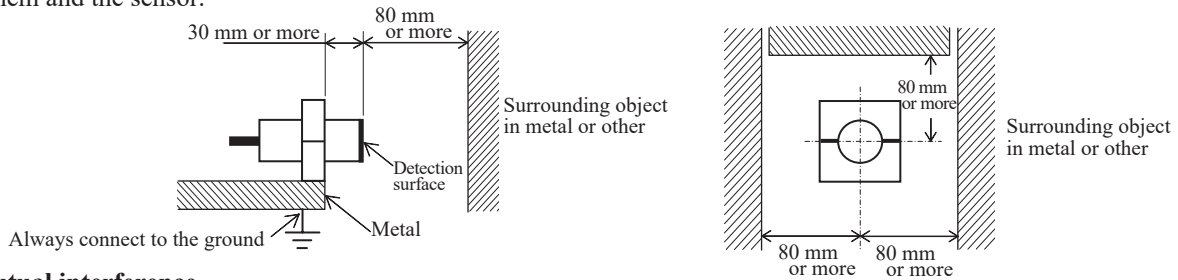
Output Circuit



Usage Precautions

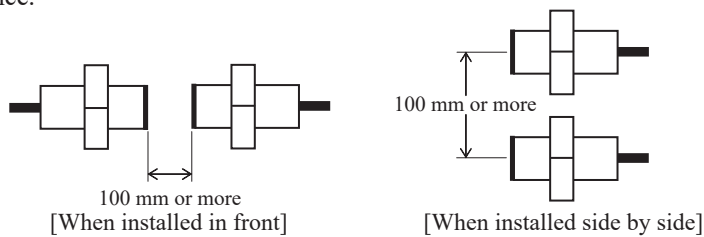
- Influence of surrounding metal

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.



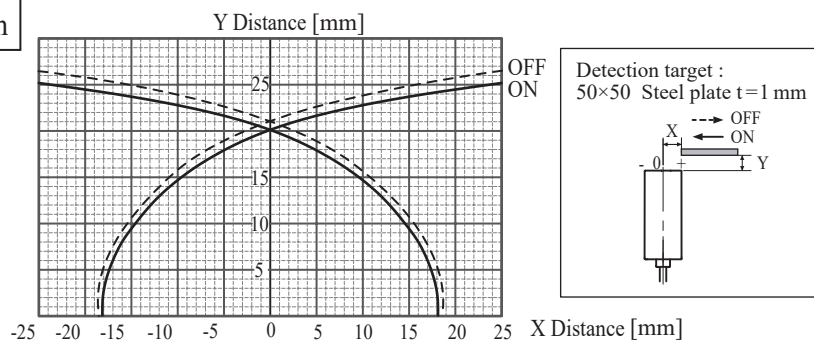
- Installation

Tighten the case with a torque of 0.5 N.m or less.

- See proximity sensor general usage precautions for other precautions.

Characteristics Graph (Typical Example)

Detection area diagram



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