

Model CCS-SR5V/SR10V Cylindrical Type Capacitive Proximity Sensor



□Model List

Normally open type

Detection Distance

5 mm	CCS-SR5V
10 mm	CCS-SR10V

Normally closed type

Detection Distance

5 mm	CCS-SR5V1
10 mm	CCS-SR10V1

Application

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

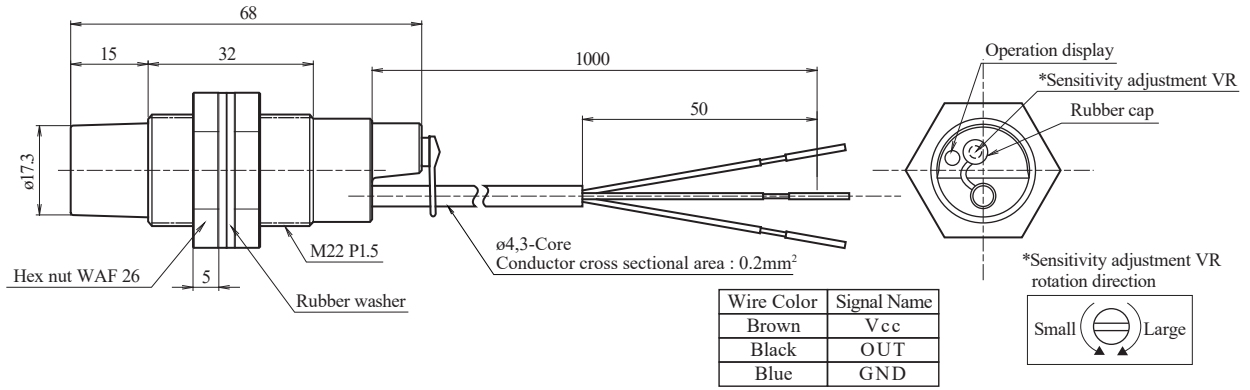
Characteristics

- High-sensitivity electrostatic-capacity proximity sensor that can detect almost any target regardless of the material.
- Shaped as an M22 P1.5 plastic screw for easy installation and position adjustment.
- Equipped with a 18-turn trimmer potentiometer to adjust the sensitivity.
- The interior is filled with solid plastic to increase robustness.
- Non-shielded type, perfect to indirectly detect objects with relatively high inductance through plastic cases or other containers.

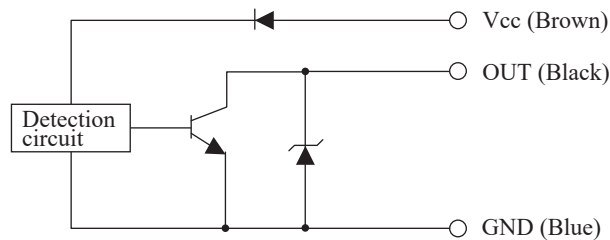
Rating / Performance

Model	CCS-SR5V	CCS-SR5V1	CCS-SR10V	CCS-SR10V1
Detection Surface	Front side detection			
Detection Distance	5 mm		10 mm	
Hysteresis	10 % or less of the detection distance			
Detection Distance Variable Range	2.5 to 5.0 mm		5.0 to 10.0 mm	
Standard Detection Target	Grounded metal of 50 × 50 mm and 1 mm in thickness			
Power Supply Voltage	12 V to 24 V DC (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)	Normally open (On output with detection target)	Normally closed (Off output with detection target)
Operation Indication	Red LED (Lit when On output)			
Response Frequency	50 Hz or more			
Operating Temperature Range	-10 to 55 °C (-15 to 60 °C during storage) (Without dew condensation or freezing)		-10 to 60 °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)			
Breakdown 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)			
Ingress Protection	IP65			
Case Material	ABS (Hex nut : PBT, Rubber washer : NBR)			
Cable	ø4, 3-core round cord of 0.2 mm ² and 1 m in length (Oil and heat resistant)			
Weight	Approx. 52 g			
Accessories	2 hex nuts (plastic), 2 rubber washers, 1 slotted screwdriver for adjustment			

External Dimensions Diagram



Output circuit

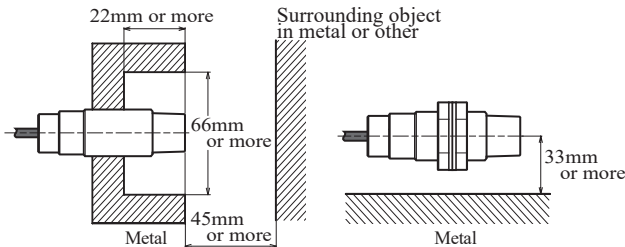


Usage precautions

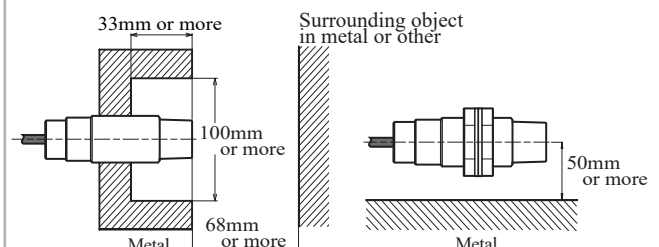
- Influence of surrounding metal

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

CCS-SR5V



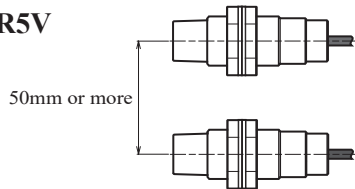
CCS-SR10V



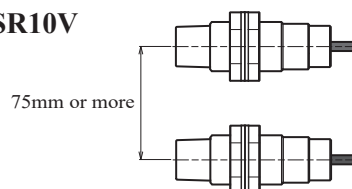
- Mutual interference

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.

CCS-SR5V



CCS-SR10V



- Installation

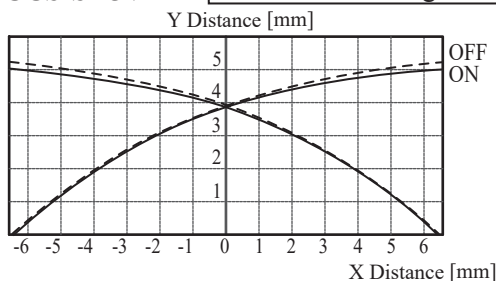
Tighten the case with a torque of 0.5 N.m or less.

- See proximity sensor general usage precautions for other precautions.

Characteristics Graph (Typical Example)

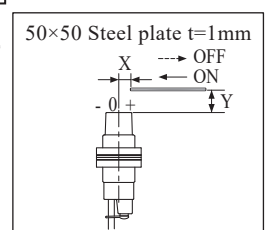
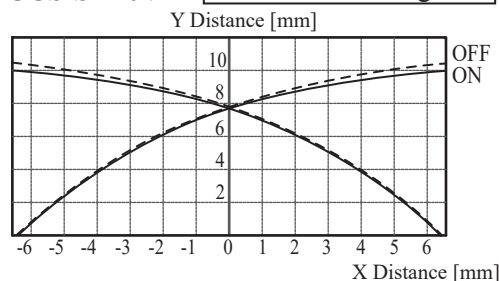
CCS-SR5V

Detection area diagram



CCS-SR10V

Detection area diagram



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