

CS SERIES CAPACITY TYPE PROXIMITY SENSOR



CS Series

Can detect any object, such as wood, paper, plastics, water, as well as metal.

Merits

Assortment of the types of various shapes, including the resin-cylindrical, metal-cylindrical and rectangular types are available.

Types

Shapes		Rated Operating Distance (mm)			Output Format		Model Number
Resin-cylindrical type, M22	Non-embeddable	5			DC voltage type	-	CS-31-5T [※]
					DC switching type	NPN N.O.	CS-31-5N [※]
Metal-cylindrical type, M30	Non-embeddable	15			DC voltage type	-	CS-85-15T
					DC switching type	NPN N.O.	CS-85-15N
Rectangular type	Non-embeddable	5			DC voltage type	-	CS-16-5T
					DC switching type	NPN N.O.	CS-16-5N

[※] At installation, use the attached dedicated resin nut.

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DC Voltage and DC Switching Output Types

Rated Operating Distance	5 mm ±10%	15 mm ±10%	5 mm ±10%
Outer Dimensions (mm)	<p>VR: Volume control to adjust the operating distance</p>	<p>VR: Volume control to adjust the operating distance</p>	<p>VR: Volume control to adjust the operating distance</p>
Remarks	Resin-cylindrical non-embeddable type	Metal-cylindrical non-embeddable type	Rectangular non-embeddable type
Output Format	DC Current	CS-31-5T※	CS-85-15T
	NPN N.O	CS-31-5N※	CS-85-15N
Power Supply Voltage	Voltage Output T type	DC + 12V(DC+10~+16V) Tolerated ripple rate: Less than 10% p-p	
	DC Switching N type	DC+24V(DC+20~+30V) Full-wave rectified power supply available (average of DC +20~+30V)	DC+12V/24V(DC+10~+30V) Full-wave rectified power supply available (average of DC +10~+30V)
Current Consumption	T type: Less than 27mA N type: Less than 20mA		
Standard Target (mm)	Iron SPCC: 50 x 50 x 1t (grounded)		
Responsive Materials	Ferrous / non-ferrous / non-metal		
Dispersion of Operating Distance	Operating distance is variable through the multi-turn volume		
Responsive Difference	Approx. 20%		
Responsiveness	50 Hz		
Output	T type: Output impedance 1.8kΩ (Reference output: 8P6N) N type: 100mA (Load voltage: Less than 50V)		
Residual Voltage	Less than 2.0V		
Leakage Current	Less than 200 μA		
Pilot Lamp	Display operation status		
Operating Ambient Temperature	-25~+70°C		-10~+50°C
Temperature Characteristics	Within ±20% (of the operating distance at 20°C)		
Withstand Voltage	AC 500V, 50/60 Hz (1 min.)		The circuit grounding is connected to the case body
Insulation Resistance	More than 5MΩ (DC 500V)		
Vibration Resistance	Full-wave amplitude 1.5mm, 10~55 Hz(2 hours for each X, Y, Z direction)		
Impact Resistance	600m/s ² (approx. 60G), less than 11 ms, (10 times for each X, Y, Z direction)		
Environmental Resistance	IP65		IP50 (dust-proof)
Case Materials	Polycarbonate	Ni-plated brass (Sensing face: polycarbonate)	Aluminium (Sensing face: polycarbonate)
Cable	Oil-resistant vinyl-chloride cable, 1.5m, outer diameter ø 4.5 (0.3mm ²), 3 wire	Oil-resistant vinyl-chloride cable, 2m, outer diameter ø 6 (0.5mm ²), 3 wire	Oil-resistant vinyl-chloride cable, 1.5m, outer diameter ø 4 (0.5mm ²), 3 wire
Fastening Torque	Less than 3Nm (approx. 30kg-cm)	Less than 20Nm (approx. 200kg-cm)	Less than 0.8Nm (approx. 8kg-cm)
Weight	Approx. 80g	Approx. 250g	Approx. 100g

※ Use the designated resin nut attached for installation with CS-31-5T and CS-31-5N

