

Cylindrical Capacitive Proximity Sensors

(DC 3-Wire)

CR Series



Features

- Detect various materials including metal, iron, stone, plastic, water, and grain
- Built-in sensitivity adjuster for convenient configuration
- Operation indicator (red)
- Ideal for level detection and position control

Specifications

Installation	Non-flush type	
Model	CR18-8D□	CR30-15D□
DIA. of sensing side	Ø 18 mm	Ø 30 mm
Sensing distance	8 mm	15 mm
Setting distance	0 to 5.6 mm	0 to 10.5 mm
Hysteresis	≤ 20 % of sensing distance	
Standard sensing target: iron	50 × 50 × 1 mm	
Response frequency ⁰¹⁾	50 Hz	
Affection by temperature	≤ ± 20 % for sensing distance at ambient temperature 20 °C	
Indicator	Operation indicator (red)	
Approval	ERAC	ERAC
Unit weight (package)	≈ 76 g (≈ 88 g)	≈ 206 g (≈ 243 g)

01) The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

Power supply	12 - 24 VDC≡ (ripple P-P: ≤ 10 %), operating voltage: 10 - 30 VDC≡
Current consumption	≤ 15 mA
Control output	≤ 200 mA
Residual voltage	≤ 1.5 V
Protection circuit	Surge protection circuit, reverse polarity protection
Insulation resistance	≥ 50 MΩ (500 VDC≡ megger)
Dielectric strength	1,500 VAC~ 50 / 60Hz for 1 min (between all terminals and case)
Vibration	1 mm double amplitude at frequency 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours
Shock	500 m/s ² (≈ 50 G) in each X, Y, Z direction for 3 times
Ambient temperature	-25 to 70 °C, storage: -30 to 80 °C (no freezing or condensation)
Ambient humidity	35 to 95 %RH, storage: 35 to 95 %RH (no freezing or condensation)
Protection structure	DIA. of sensing side Ø 18 mm: IP66 (IEC standard) / DIA. of sensing side Ø 30 mm: IP65 (IEC standard)
Connection	Cable type
Cable spec.	DIA. of sensing side Ø 18 mm: Ø 4 mm, 3-wire, 2 m DIA. of sensing side Ø 30 mm: Ø 5 mm, 3-wire, 2 m
Wire spec.	AWG 22 (0.08 mm, 60-core), insulator DIA.: Ø 1.25 mm
Material	Standard type cable (black): polyvinyl chloride (PVC)
DIA. of sensing side Ø 18 mm	Case / Nut: PA6
DIA. of sensing side Ø 30 mm	Case / Nut: nickel-plated brass, washer: nickel-plated iron, sensing side: PBT



View product detail