

# Cylindrical Capacitive Proximity Sensors



## CR Series (AC 2-wire) CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

### 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

### Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website.

CR ① - ② A ③

#### ① DIA. of sensing side

Number: DIA. of sensing side (unit: mm)

#### ③ Control output

O: Normally Open  
C: Normally Closed

#### ② Sensing distance

Number: Sensing distance (unit: mm)

### Sold Separately

- Connector cable, connector connection cable
- Transmission coupler
- Spatter protection cover
- Fixed bracket

### Specifications

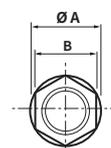
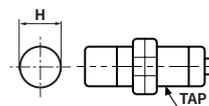
Installation	Non-flush type	
	CR18-8A□	CR30-15A□
Model	CR18-8A□	CR30-15A□
DIA. of sensing side	Ø 18 mm	Ø 30 mm
Sensing distance	8 mm	15 mm
Setting distance	0 to 5.6 mm	0 to 10.5 mm
Hysteresis	≤ 20 % of sensing distance	
Standard sensing target: iron	50 × 50 × 1 mm	
Response frequency <sup>(01)</sup>	20 Hz	
Affection by temperature	≤ ± 20 % for sensing distance at ambient temperature 20 °C	
Indicator	Operation indicator (red)	
Approval	ERC	ERC
Unit weight (package)	≈ 70 g (≈ 82 g)	≈ 200 g (≈ 237 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	100 -240 VAC~ 50 / 60 Hz, operating voltage: 85 - 264 VAC~
Leakage current	≤ 2.2 mA
Control output	≤ 5 to 200 mA
Residual voltage	≤ 20 V
Protection circuit	Surge protection circuit
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 <sup>2</sup> (≈ 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, 2-wire, 2 m DIA. of sensing side Ø 30 mm: Ø 5 mm, 2-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

### Cut-out Dimensions

- Unit: mm, For the detailed drawings, follow the Autonics web site.



	Ø 18 mm	Ø 30 mm
Mounting hole (H)	Ø 18.5 <sup>+0.5</sup> / <sub>0</sub>	Ø 30.5 <sup>+0.5</sup> / <sub>0</sub>
TAP	M18×1	M30×1.5

	Ø 18 mm	Ø 30 mm
Ø A	26.5	42
B	24	35