

Capacitive cylindrical Proximity switch

■ Features



- U Detecting metallic & non-metallic targets
(Water, plastic, stone, lumber, grass, etc)
- U Ensuring long life & high reliance.
- U Adjust the sensitivity by the adjustment.
- U Application for level control & position control.





■ Type

○ DC 3wire switching type

○ AC 2wire switching type

Appearances	Model
	CR18-8DN
	CR18-8DP
	CR18-8DN2 ※
	CR30-15DN
	CR30-15DP
	CR30-15DN2 ※

Appearances	Model
	CR18-8AO
	CR18-8AC
	CR30-15AO
	CR30-15AC

※ Mark is option

■ Specification (DC switching type)

Model	CR18-8DN CR18-8DP CR18-8DN2	CR30-15DN CR30-15DP CR30-15DN2
Detecting distance	8mm ±10%	15mm ±10%
Hysteresis	Max. 20% of detecting distance	
Standard detecting target	50×50×1mm (Iron)	
Setting distance	0 to 5.6	0 to 10.5
Power supply (Operating voltage)	12 to 24VDC (10 to 30VDC)	
Power consumption	Max. 15mA	
Response frequency	50Hz	
Residual voltage	Max. 1.5V	
Variation due to Temp. fluctuation	±20% Max. of detecting distance at +20℃ within temperature range of -25 to +70℃	
Control output	Resistive load:200mA, Inductive load:100mA	
Insulation resistance	Min. 50MΩ (500VDC)	
Dielectric strength	1500VAC 50/60Hz for 1minute	
Vibration	1mm amplitude at frequency of 10 to 55Hz in each of X,Y,Z directions for 2 hours	
Shock	500m/s ² (50G) in X,Y,Z directions for 3 times	
Indicator	Operating indicator : red LED	
Operating temperature	-25 to +70℃ (non-freezing condition)	
Storage temperature	-30 to +80℃ (non-freezing condition)	
Ambient humidity	35 to 95% RH	
Protection circuit	Reverse polarity protection, surge protection circuit	
Protection	IP66(IEC specification)	IP65(IEC specification)
Weight	About 72g	About 212g

※ The weight of above chart is net weight.

CR SERIES

■ Specification(AC switching type)

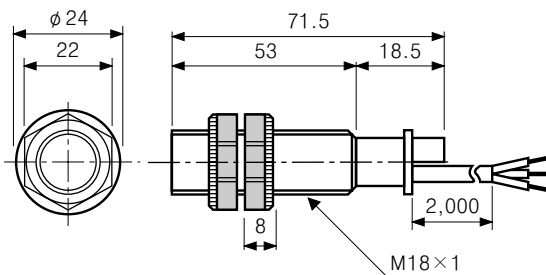
Model	CR18-8AO CR18-8AC	CR30-15AO CR30-15AC
Detecting distance	8mm ±10%	15mm ±10%
Hysteresis	Max. 20% of detecting distance	
Standard detecting target	50×50×1mm (Iron)	
Setting distance	0 to 5.6	0 to 10.5
Power supply (Operating voltage)	110 to 220VAC (90 to 250VAC)	
Leakage current	Max. 2.2mA	
Response frequency	20Hz	
Residual voltage	Max. 20V	
Variation due to Temp. fluctuation	±20% Max. of detecting distance at +20°C within temperature range of -25 to +70°C	
Control output	Resistive load:200mA, Inductive load:100mA	
Insulation resistance	Min. 50M Ω (500VDC)	
Dielectric strength	1500VAC 50/60Hz for 1minute	
Vibration	1mm amplitude at frequency of 10 to 55Hz in each of X,Y,Z directions for 2 hours	
Shock	500m/s ² (50G) in X,Y,Z directions for 3 times	
Indicator	Operating indicator : red LED	
Operating temperature	-25 to +70°C (non-freezing condition)	
Storage temperature	-30 to +80°C (non-freezing condition)	
Ambient humidity	35 to 95% RH	
Protection circuit	surge protection circuit	
Protection	IP66(IEC specification)	IP65(IEC specification)
Weight	About 63g	About 220g

※The weight of above chart is net weight.

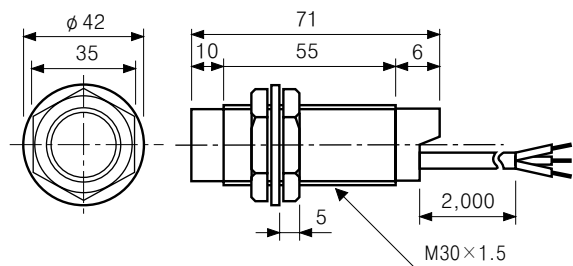
■ Dimensions

Unit:mm

- CR18-8D4
- CR18-8A4

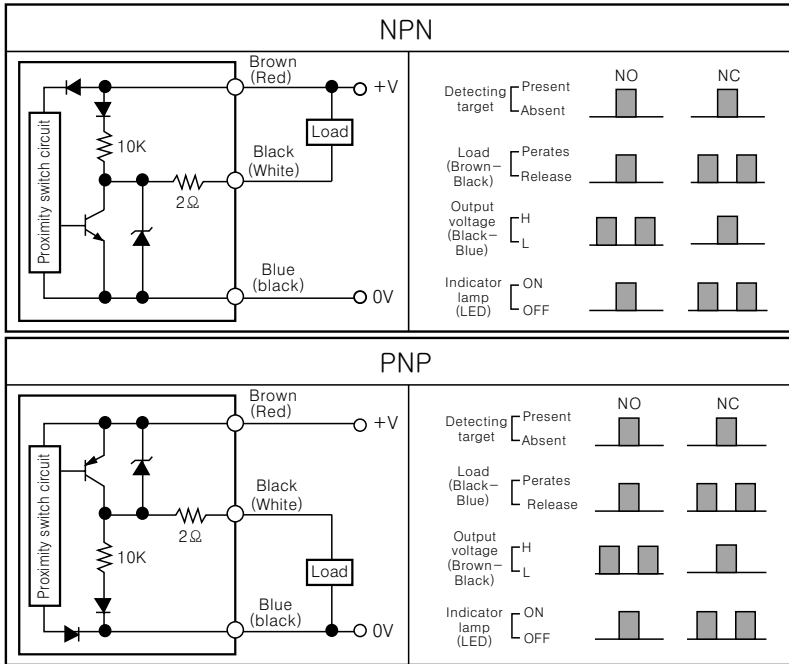


- CR30-15D4
- CR30-15A4

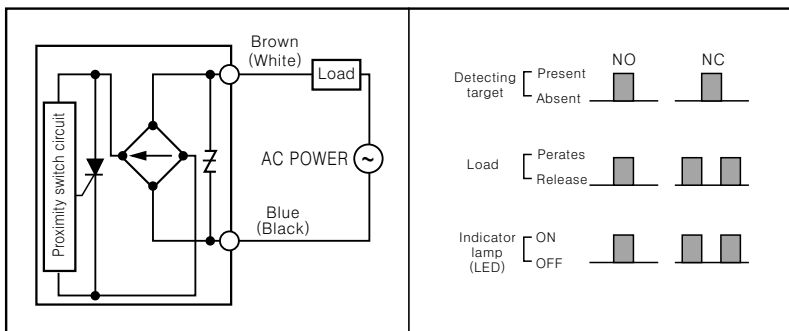


■ Control output circuit & operating load

◎ DC switching type



◎ AC switch type



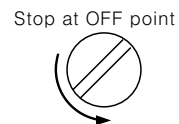
■ How to adjust the sensitivity

Please adjust the sensitivity as follow,

- 1 With out any target in front of the sensing head, turn the sensitivity clock wise until proximity switch turns on.

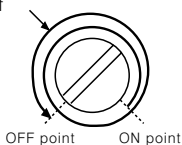


- 2 With a target in front of the sensing head, turn the adjustment counter clock wise from the ON position stated in ①, until the proximity switch turns off.

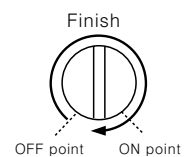


- 3 If the difference between the ON point in ① and OFF point in ② is more than one and a half turns, the sensing operation is performed stably.

Min. 1.5 number of meter rotation is safe.



- 4 Set the adjustment at the center position between the ON and the OFF point.

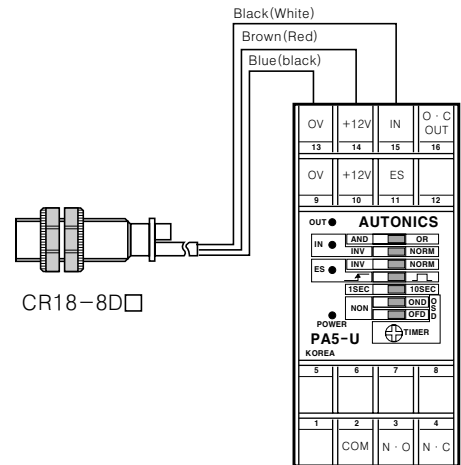


- 5 If the interval between the proximity switch and a target is not constand, set ON point when the target is at the closest position to the proximity switch and set OFF point when the target is at the farthest position from the proximity switch.

※If you rotates the adjustment, the adjustment will be rotated continuously, but the number of meter rotations is 15 ± 3 turns.

■ Connections

◎ DC switching type



◎ AC switch type

