




# Proximity Sensor



## ■ CUP series Capacitive type proximity sensor

### ■ Specification

#### ■ Capacitive DC 3 wire type

Model	NPN	CUP18R-8N□□	CUP18RP-8N□□	CUP30R-15N□□	CUP30RP-15N□□
	PNP	CUP18R-8P□□	CUP18RP-8P□□	CUP30R-15P□□	CUP30RP-15P□□
Appearance					
Shield	Non shield			Non shield	
Standard sensing object(mm)	Iron 50 X 50 X 1 (Grounded (earthed) state)				
Sensing distance	8 mm (Volume variation)			15 mm (Volume variation)	
Setting distance	0 ~ 6.4 mm			0 ~ 12 mm	
Hysteresis	Less than 20 % of sensing distance				
Response frequency	50Hz				
Power supply voltage	12 - 24 V d.c. (Usable voltage range 10 - 30 V d.c.)				
Control output	200 mA max (Resistive load)				
Residual voltage	Max 1.5 V				
Current consumption	Max 10 mA				
Operation indication	Red LED				
Protection circuit	Power reversely connected protective circuit, Surge protective circuit and Over current protective circuit are built in.				
Ambient temperature	-25 ~ 70 °C (Less than ±10 % of sensing distance at temperature 20 °C)				
Ambient humidity	35 ~ 85 %RH				
Insulation resistance	min 50 MΩ (500 V d.c. mega standard)				
Dielectric strength	For 1 min at 2,000 V a.c. 50/60 Hz (between the recharging part and case)				
Vibration resistance	10 - 55 Hz (cycle 1 min, double amplitude: 1.5 mm 2 hours for each of X, Y and Z directions)				
Shock resistance	500 % 3 times to each of X, Y and Z directions				
Degree of protection	IP67(IEC standard)				
Connection structure	Cable type (standard cable length 2 m), relay connector type, connector type				
Color	NPN : Green, PNP : Purple				
Material	CUP-18R/CUP-30R (Case: brass chrome plating, sensing surface: PBT resin), CUP-18RP/CUP-30RP (Case and sensing surface one body type: PBT resin)				

#### ■ Capacitive type, DC/AC dual usage 2 wire type

Model	CUP18R-8F□□	CUP18RP-8F□□	CUP30R-15F□□	CUP30RP-15F□□	
Appearance					
Shield	Non shield			Non shield	
Standard sensing object(mm)	Iron 50 X 50 X 1 (Grounded (earthed) state)				
Sensing distance	8 mm (Volume variation)			15 mm (Volume variation)	
Setting distance	0 ~ 6.4 mm			0 ~ 12 mm	
Hysteresis	Less than 20% of sensing distance				
Response frequency	DC : 40 Hz / AC : 20 Hz				
Power supply voltage	20 - 240 V a.c./d.c. (Usable voltage range 18 - 250 V a.c./d.c.)				
Control output	5 - 250 mA max (Resistive load)				
Residual voltage	Max. 7 V (a.c./d.c.)				
Leakage current	Max 2 mA				
Operation indication	Red LED				
Protection circuit	Surge protective circuit built in.				
Ambient temperature	-25 ~ 70 °C (Less than ±10 % of sensing distance at temperature 20 °C)				
Ambient humidity	35 ~ 85 %RH				
Insulation resistance	min 50 MΩ (500 V d.c. mega standard)				
Dielectric strength	For 1 min at 2000 V a.c. 50/60 Hz (between the recharging part and case)				
Vibration resistance	10 - 55 Hz (cycle 1 min, double amplitude: 1.5 mm 2 hours for each of X, Y and Z directions)				
Shock resistance	500 % 3 times to each of X, Y and Z directions				
Degree of protection	IP67(IEC standard)				
Connection structure	Cable type (standard cable length 2 m), relay connector type, connector type				
Case	Brass (Chrome plating)	PTB resin	Brass (Chrome plating)	PTB resin	
Color	NO : Green, NC : Purple	NO/NC : Green	NO : Green, NC : Purple	NO/NC : Green	
Material	CUP-18R/CUP-30R (Case : brass chrome plating, sensing surface: PBT resin), CUP-18RP/CUP-30RP (Case and sensing surface one body type : PBT resin)				

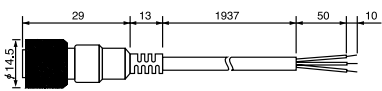
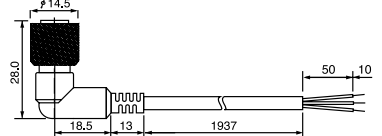
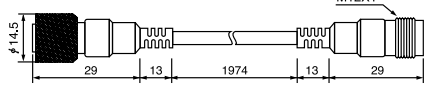
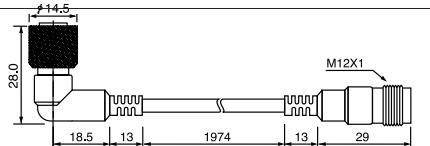
# Proximity Sensor

## Suffix code

Model	Code	Information
CUP	□ □ - □ □ □ □	Capacitive type proximity sensor
Sensing area size	18	M18
	30	M30
Structure type	R	Round type (Brass chrome plating case)
	RP	Round type (Plastic case)
Sensing distance	8	8 mm(Only with CUP-18 □ -8)
	15	15 mm(Only with CUP-30 □ -15)
Power and output type	N	DC NPN output
	P	DC PNP output
	F	AC/DC 2 wire type (dual usage) (No polarity)
Output state	A	Normal Open (NO)
	C	Normal Close (NC)
Connection structure	*	Cable type
	CR	Relay connector type

## Connector cable

### Specification

Type	Code	Power/Number of wire	Dimension	
Connector cable	AD3S	DC 3 wire	·Straight type 	
	AD2S	DC 2 wire		
	AA2S	AC 2 wire		
	AD3A	DC 3 wire	·Angle type 	
		AD2A		DC 2 wire
		AA2A		AC 2 wire
Relay cable	BD4S	DC 4 wire	·Straight type 	
	BA4S	AC 4 wire		
	BD4A	DC 4 wire	·Angle type 	
		BA4A		AC 4 wire

## Suffix code

Model	Code	Information
	□ □ □ □ □	Cable for connecting proximity sensor
Cable	A	Connector cable
	B	Relay cable
Power supply voltage	A	AC
	D	DC
Sensing distance	2	2 wires
	3	3 wires
	4	4 wires
Power and output type	S	Straight type
	A	Angle type
Output state	2M	2 m
	5M	5 m