

## Operation manual



### Precautions

- When choosing flush mounting, please pay attention to the change of sensing distance caused by the material of surrounding environment
- The capacitive sensor belongs to dielectric sensitive products, please avoid using in oil, water and other similar environments, especially when there are oil, water or condensation on the sensing surface, since it may be mistaken or causes wrong actions
- The sensor can be detected normally until 300ms after the power is turned on
- When using different power sources for the sensor and load, be sure to turn on the power of the sensor first
- When installing the sensor, do not subject the sensor to severe external force (such as hammering, etc.), which may damage the sensor performance
- When used in high humidity and dust environment, the detection distance may change, please clean the sensor regularly
- When the sensor is not used, it is recommended to cut off the power of the load first and then turn off the power of the sensor
- Please separately wire sensor cable, power line and high-voltage line, and avoid using the same wiring slot and conduit
- If the cable needs to be lengthened to less than 30m, please choose the cable with section above 0.3mm<sup>2</sup> and conductor impedance less than 100Ω/km. Tip: Under the influence of the distributed capacitance between the wires, the output waveform may be distorted when the cable is too long and responds at high speed.

### Safety Warning

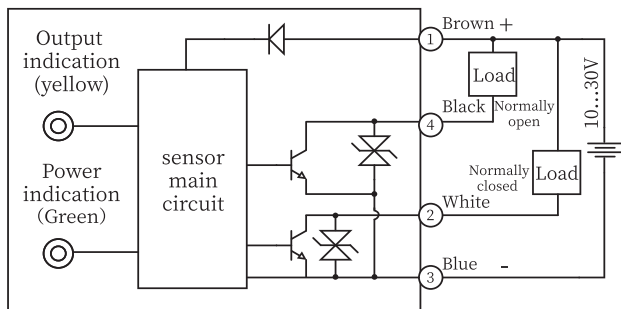
- Do not use in an environment with flammable, explosive or corrosive gases
- Do not use in other environmental conditions that exceed the rated value
- Do not disassemble, repair or modify this product without authorization

### Scrap Treatment

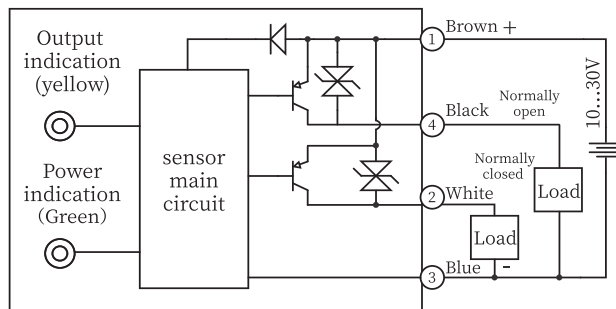
- When the product is scrapped, please dispose of it as industrial waste

## ■ Wiring diagram

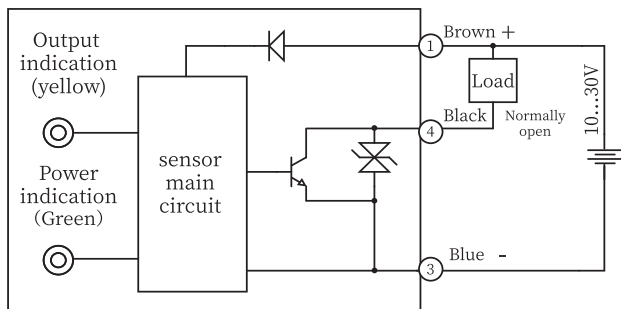
NPN NO+NC



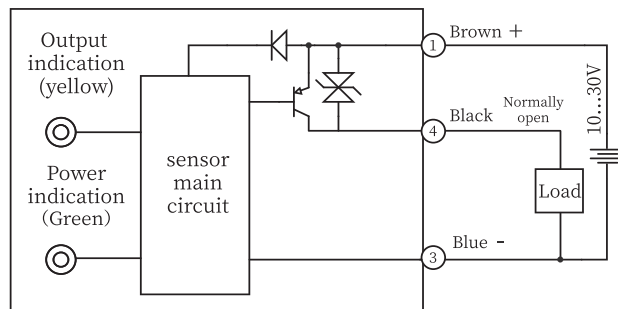
PNP NO+NC



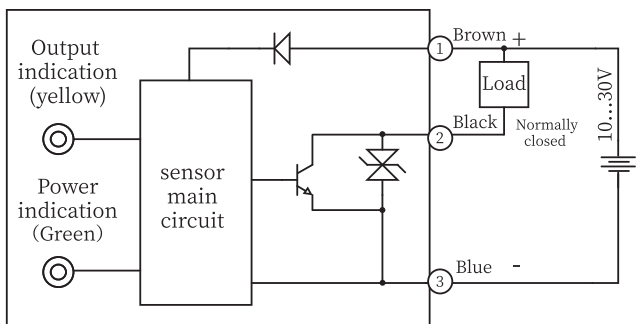
NPN NO



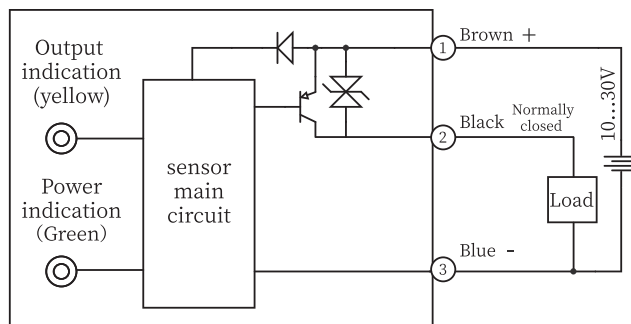
PNP NO



NPN NC



PNP NC



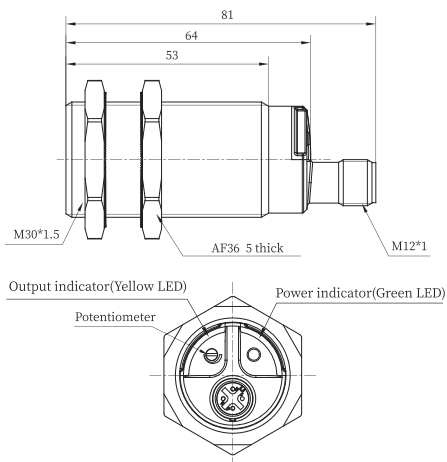
## ■ Technical specifications

Installation type		Flush	Non-flush	Flush	Non-flush
Cable	NPN NO	CR30XCF15DNOY	CR30XCN25DNOY	CR30XSCF15DNOY	CR30XSCN25DNOY
	NPN NC	CR30XCF15DNCY	CR30XCN25DNCY	CR30XSCF15DNCY	CR30XSCN25DNCY
	NPN NO+NC	CR30XCF15DNRY	CR30XCN25DNRY	CR30XSCF15DNRY	CR30XSCN25DNRY
	PNP NO	CR30XCF15DPOY	CR30XCN25DPOY	CR30XSCF15DPOY	CR30XSCN25DPOY
	PNP NC	CR30XCF15DPCY	CR30XCN25DPCY	CR30XSCF15DPCY	CR30XSCN25DPCY
	PNP NO+NC	CR30XCF15DPRY	CR30XCN25DPRY	CR30XSCF15DPRY	CR30XSCN25DPRY
Connector	NPN NO	CR30XCF15DNOY-E2	CR30XCN25DNOY-E2	CR30XSCF15DNOY-E2	CR30XSCN25DNOY-E2
	NPN NC	CR30XCF15DNCY-E2	CR30XCN25DNCY-E2	CR30XSCF15DNCY-E2	CR30XSCN25DNCY-E2
	NPN NO+NC	CR30XCF15DNRY-E2	CR30XCN25DNRY-E2	CR30XSCF15DNRY-E2	CR30XSCN25DNRY-E2
	PNP NO	CR30XCF15DPOY-E2	CR30XCN25DPOY-E2	CR30XSCF15DPOY-E2	CR30XSCN25DPOY-E2
	PNP NC	CR30XCF15DPCY-E2	CR30XCN25DPCY-E2	CR30XSCF15DPCY-E2	CR30XSCN25DPCY-E2
	PNP NO+NC	CR30XCF15DPRY-E2	CR30XCN25DPRY-E2	CR30XSCF15DPRY-E2	CR30XSCN25DPRY-E2
Rated distance Sn	15mm	25mm	15mm	25mm	
Ensure distance Sa	≤10.8mm	≤18mm	≤10.8mm	≤18mm	
Adjust the distance	3...20mm	4...30mm	3...20mm	4...30mm	
Adjustment method	Multi-turn potentiometer (Electrical adjustment > 10)				
Standard test object	Fe 45*45*1t(Grounded)	Fe 75*75*1t(Grounded)	Fe 45*45*1t(Grounded)	Fe 75*75*1t(Grounded)	
Supply voltage	10...30VDC				
Load current	≤200mA				
Residual voltage	≤2V				
Consumption current	≤20mA				
Switch point offset [%/Sr]	≤±10%				
Temperature drift [%/Sr]	≤±20%				
Hysteresis range [%/Sr]	3...20%				
Repetitive error [R]	≤5%				
Circuit protection	Short circuit protection, Overload protection, Reverse polarity protection				
Indicator	Output indication:Yellow LED;Power indicator:Green LED;Overload or short circuit indication:Yellow LED flashes				
Switching frequency	25Hz		20Hz		
Ambient temperature	When working:-25...70°C(No icing, No condensation);when storing:-30...80°C(No icing, No condensation)				
Environment humidity	35...95%RH(No icing, No condensation)				
Vibration resistant	10...55Hz,Dual amplitude 1mm(2 hours each in X, Y, and Z directions)				
Impulse withsand	30g/11ms,3 times each for X,Y,Z direction				
High pressure resistant	1000V/AC 50/60Hz 60s				
Insulation resistance	≥50MΩ (500VDC)				
Protection degree	IP67		IP68		
Housing material	Nickel copper alloy		PBT		
Connection type	2m PVC Cable;M12 Connector				
Accessories	M30 nuts×2, Slotted screwdriver, Operation manual				

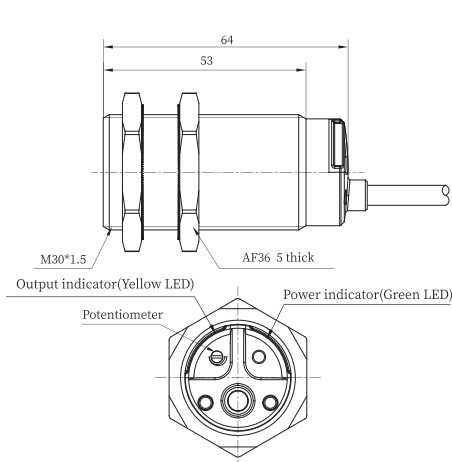
Note: the factory default sensing distance is Sn ±10%

## ■ Dimensions

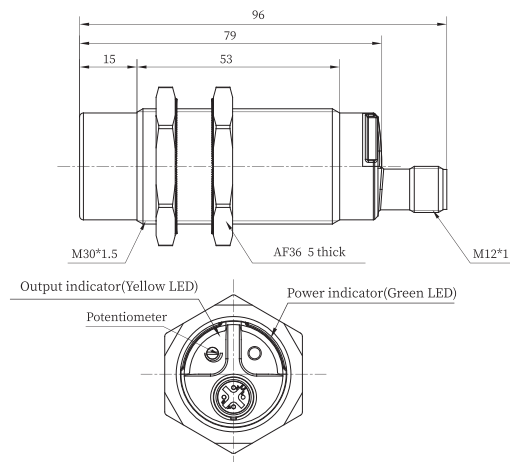
### Metal Housing-Flush-Connector



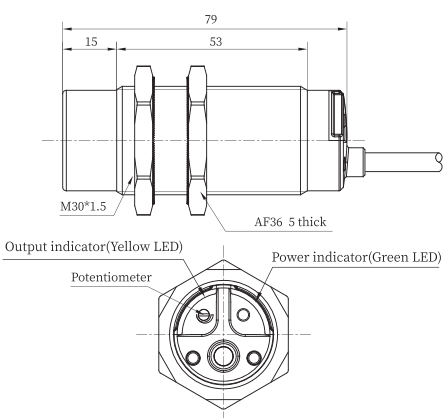
### Metal Housing-Flush-Cable



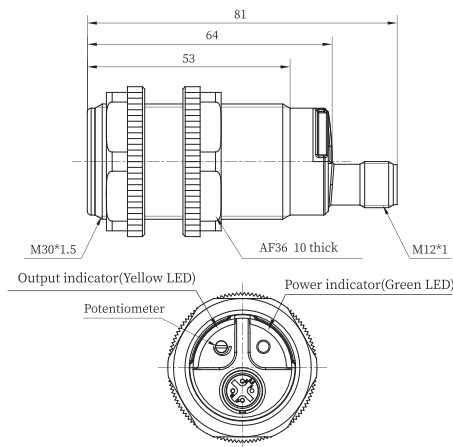
### Metal Housing-Non-flush-Connector



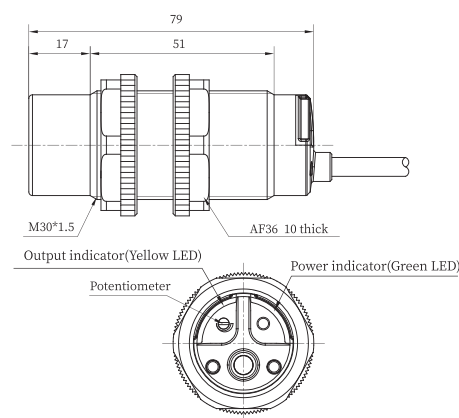
### Metal Housing-Non-flush-Cable



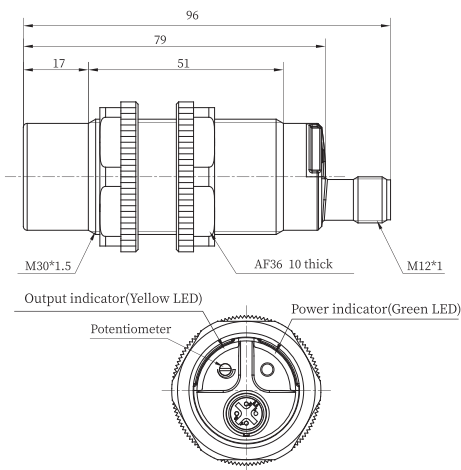
### Plastic Housing-Flush-Connector



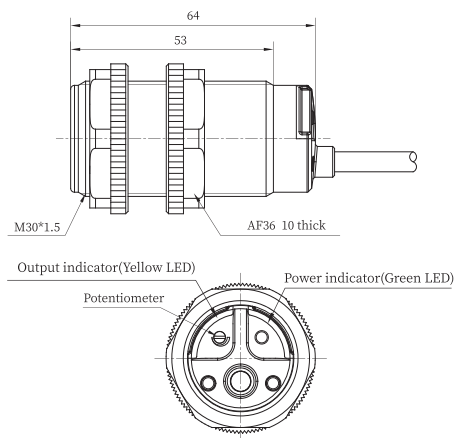
### Plastic Housing-Non-flush-Cable



### Plastic Housing-Non-flush-Connector



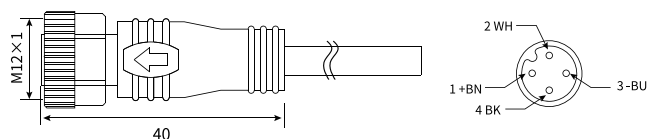
### Plastic Housing-Flush-Cable



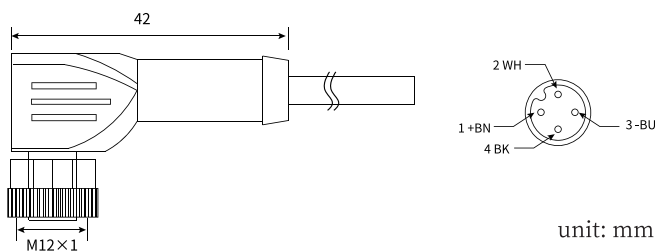
unit: mm

## ■ Accessory Dimensions

### M12 Connector QE12-N4F2(Order separately)



### M12 Connector QE12-N4G2(Order separately)



unit: mm

## ■ Mounting

