

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 0.3mm² 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

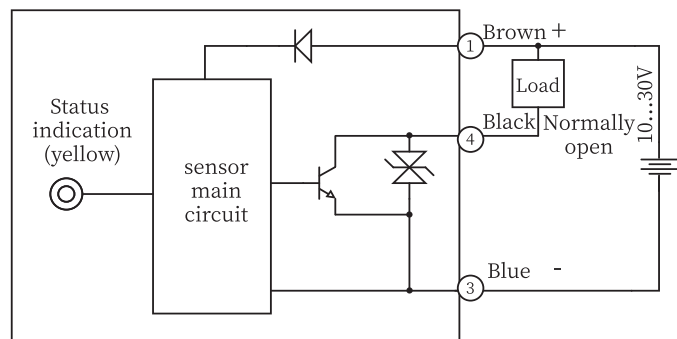
■ Technical specifications

Installation type		Flush	Non-flush	Flush	Non-flush
Cable	NPN NO	CR12XCF04DNOY	CR12XCN08DNOY	CR12XSCF04DNOY	CR12XSCN08DNOY
	NPN NC	CR12XCF04DNCY	CR12XCN08DNCY	CR12XSCF04DNCY	CR12XSCN08DNCY
	PNP NO	CR12XCF04DPOY	CR12XCN08DPOY	CR12XSCF04DPOY	CR12XSCN08DPOY
	PNP NC	CR12XCF04DPCY	CR12XCN08DPCY	CR12XSCF04DPCY	CR12XSCN08DPCY
Connector	NPN NO	CR12XCF04DNOY-E2	CR12XCN08DNOY-E2	CR12XSCF04DNOY-E2	CR12XSCN08DNOY-E2
	NPN NC	CR12XCF04DNCY-E2	CR12XCN08DNCY-E2	CR12XSCF04DNCY-E2	CR12XSCN08DNCY-E2
	PNP NO	CR12XCF04DPOY-E2	CR12XCN08DPOY-E2	CR12XSCF04DPOY-E2	CR12XSCN08DPOY-E2
	PNP NC	CR12XCF04DPCY-E2	CR12XCN08DPCY-E2	CR12XSCF04DPCY-E2	CR12XSCN08DPCY-E2
Rated distance Sn		4mm	8mm	4mm	8mm
Ensure distance Sa		≤2.88mm	≤5.76mm	≤2.88mm	≤5.76mm
Adjust the distance		1...6mm	3...12mm	1...6mm	3...12mm
Adjustment method		Single-turn potentiometer			
Standard test object		Fe 12*12*1t(Grounded)	Fe 24*24*1t(Grounded)	Fe 12*12*1t(Grounded)	Fe 24*24*1t(Grounded)
Supply voltage		10...30VDC			
Load current		≤200mA			
Residual voltage		≤2V			
Consumption current		≤20mA			
Switch point offset [%/Sn]		≤±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			
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		M12 nuts×2, Slotted screwdriver, Operation manual			

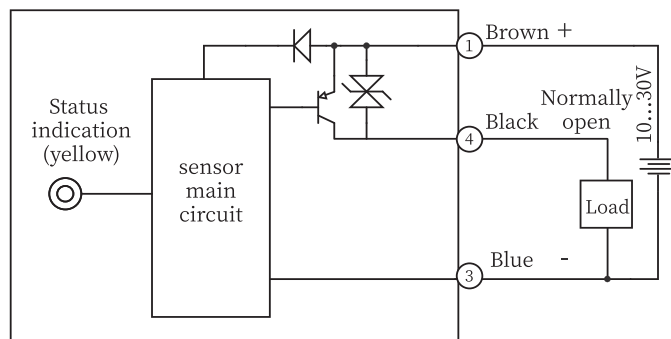
Note: the factory default sensing distance is $S_n \pm 10\%$

■ Wiring diagram

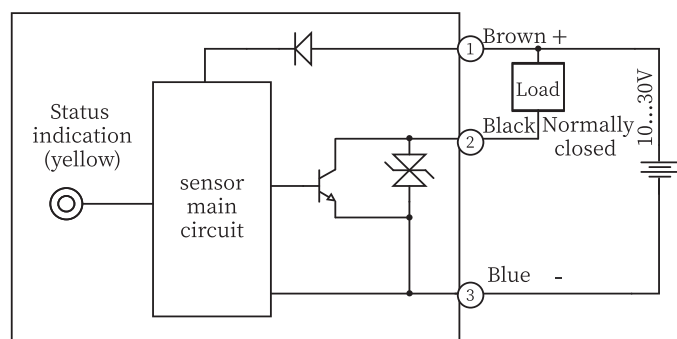
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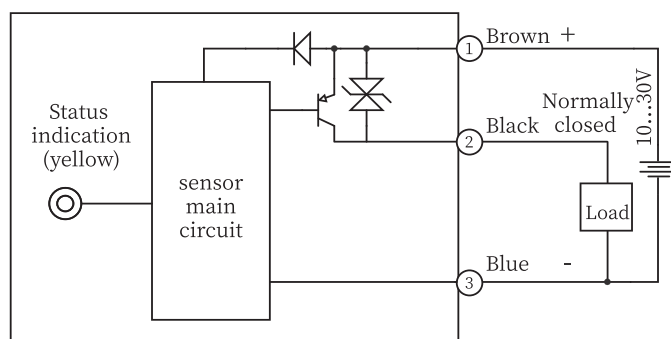
PNP NO



NPN NC

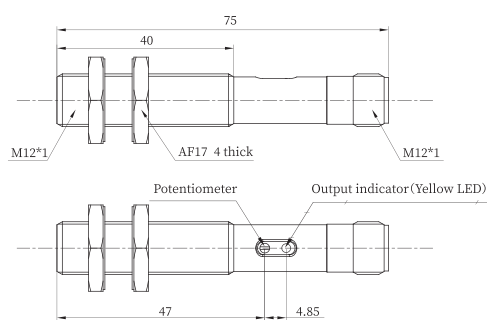


PNP NC

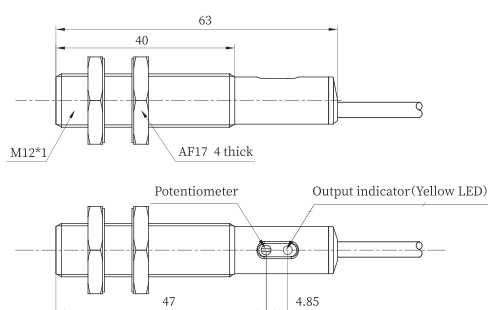


■ Dimensions

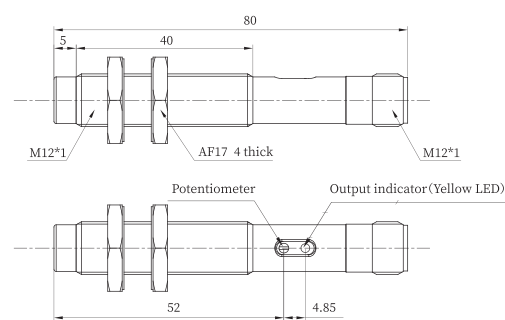
Metal Housing-Flush-Connector



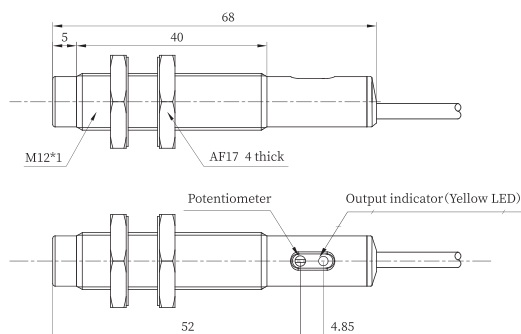
Metal Housing-Flush-Cable



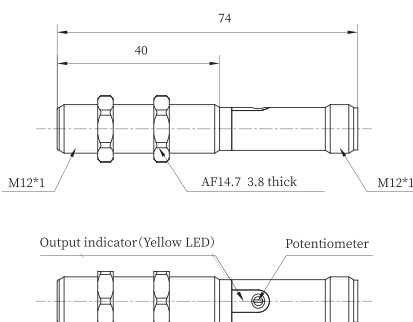
Metal Housing-Non-flush-Connector



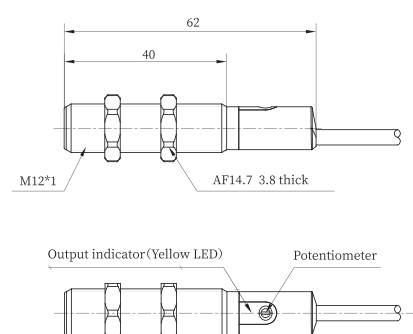
Metal Housing-Non-flush-Cable



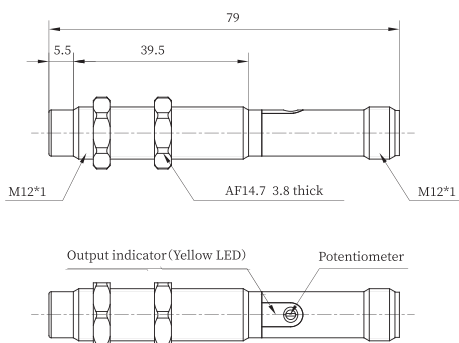
Plastic Housing-Flush-Connector



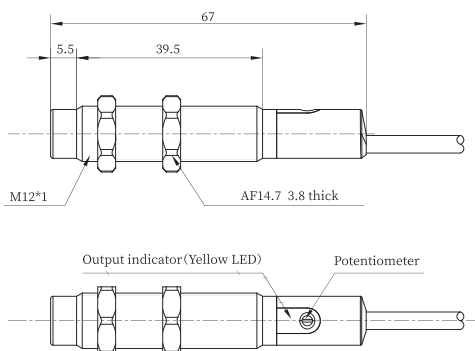
Plastic Housing-Flush-Cable



Plastic Housing-Non-flush-Connector



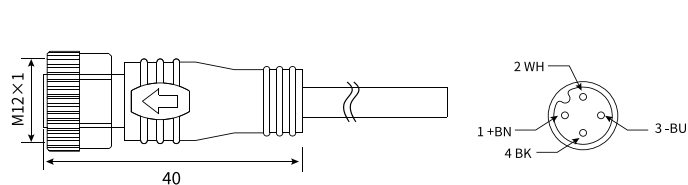
Plastic Housing-Non-flush-Cable



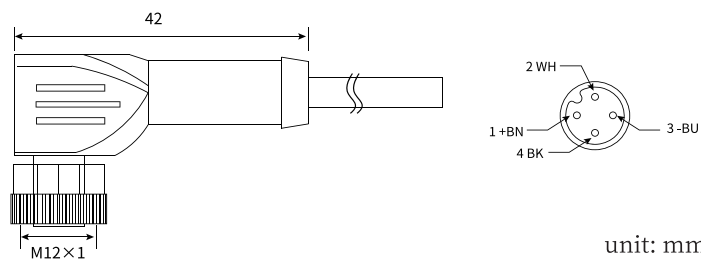
unit: mm

■ Accessory Dimensions

M12 Connector QE12-N4F2(Order separately)



M12 Connector QE12-N4G2(Order separately)



unit: mm

■ Mounting

