

SENSOR PRODUCTS SELECTION MANUAL



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Company introduction

Wenzhou Gtric Technology Co., Ltd. is located in Yueqing IoT sensors Park, which covers 5,000 square meters, with over 100 employees. We are focuses on intelligent manufacturing and industrial automation, our main businesses are sensors, encoders, button switch, coupling, expansion set and other industrial automation products, providing standard and individual products and solutions for customers.

Our products cover over 20 series, 1000specificatison, which have passed CCC, CE, UL, ISO9001 certification as well as EU RoHS Environmental Directives.

Based on our technical advantages, Gtric can provide industrial automation solution according to customers' requirements.

**We support OEM & ODM, if you need
please feel free to contact us**

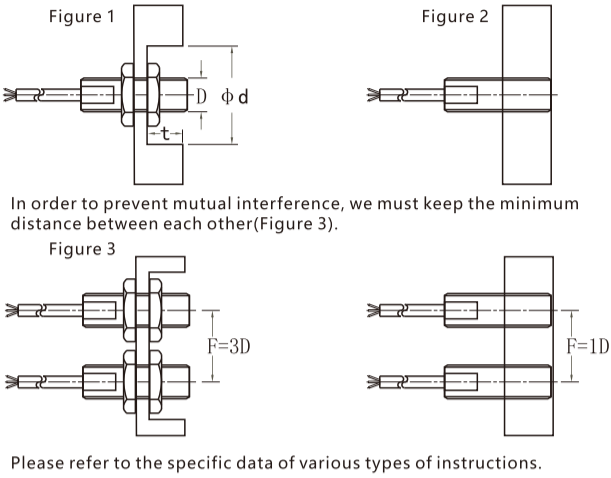


Installation conditions

Non shielded proximity switches can achieve maximum operating distance (with the diameter of the relevant); but in order to prevent the switch around the metal impact on the switch, the sensor head must be in a certain gap with the surrounding metal (Figure 1).

Due to the special shielding effect inside the shield, the radial magnetic field of the side is reduced, and the induction distance is about 60% of the non shield type, because it can be flush mounted in the metal (Figure 2).

The magnetic sensor is not affected by the conditions of installation, as long as the material around the material is not magnetized.



Output mode and electrical characteristics

DC 2-wire system NO or NC		The load must be connected in series in the sensor to work, there is a polarity and short circuit protection function; in the open circuit state, there is a very small leakage current; in the closed circuit, the switching element has a smaller voltage drop.			Detection object	Yes	NO	NC	
					Load	No			
					Indicator detected	Action			
						Reset			
						ON			
						OFF			

DC 3-wire system(N,P type) NO or NC		These switches are connected to the load and power supply separately; the polarity, short circuit and overload protection function, and the residual current can be ignored.			Detection object	Yes	NO	NC	
					Load	No			
					Indicator detected	Action			
						Reset			
						ON			
						OFF			

					Detection object	Yes	NO	NC	
					Load	No			
					Indicator detected	Action			
						Reset			
						ON			
						OFF			

AC 2-wire system NO or NC		The load must be connected in series in the sensor, in the closed circuit, the switching element has a smaller voltage drop.			Detection object	Yes	NO	NC	
					Load	No			
					Indicator detected	Action			
						Reset			
						ON			
						OFF			

DC 4-wire system (NPN,PNP Type) NO+NC		Sensor switches can provide 2 groups of output NO+NC			Detection object	Yes	NO	NC	
					Load	No			
					Indicator detected	Action			
						Reset			
						ON			
						OFF			

					Detection object	Yes	NO	NC	
					Load	No			
					Indicator detected	Action			
						Reset			
						ON			
						OFF			

DC 4-wire system (NPN,PNP Type) NO/NC		The switches can provide two groups of output NO or NC			Detection object	Yes	NO	NC	
					Load	No			
					Indicator detected	Action			
						Reset			
						ON			
						OFF			

					Detection object	Yes	NO	NC	
					Load	No			
					Indicator detected	Action			
						Reset			
						ON			
						OFF			

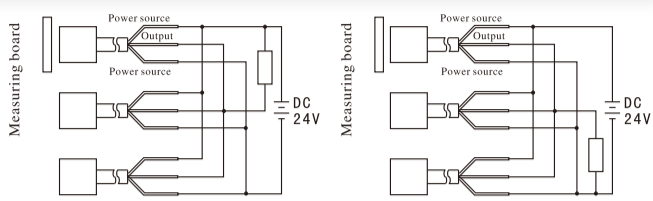
NO+NC Ac/Dc five wire (relay output) NO + NC		These switches can provide to often open, closed two group relay output.			Detection object	Yes	NO	NC	
					Load	No			
					Indicator detected	Action			
						Reset			
						ON			
						OFF			

Sensor characteristics

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✧ Series and parallel connection of proximity switch

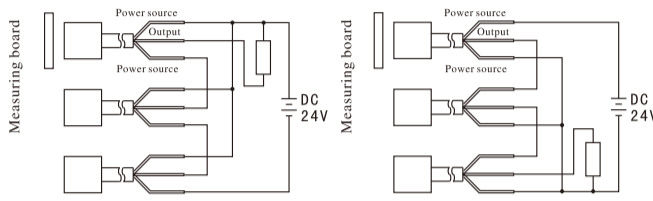
OR connection (NPN and PNP types can be used mixed) series When the proximity switch is OR connected, the action of any proximity switch can drive load. The quantity of the proximity switches depends on the sum of leakage current. More connections are available given that it doesn't affect the loading action.



OR connection of NPN output OR connection of PNP output

✧ AND connection (series)

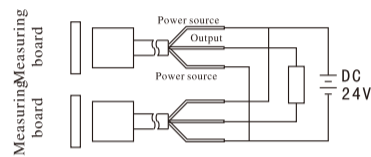
When the proximity switch is AND connected, the action of all proximity switches can drive load. The quantity of the proximity switches depends on the sum of saturation voltage. More connections are available given that it doesn't affect the supply voltage of the proximity switch. The response frequency of the proximity switch is the accumulation of initialized reset of various proximity switch.



NPN connection of AND output PNP connection of AND output

✧ Series and parallel connection of proximity switch

AND connection (series) NPN, PNP mixed–use



Promixity switches matters need attention

✧ Cautions when connected or disconnected with the power supply

When connecting the proximity switch with the counter and the programmable controller, there isn't any problem because of the built–in initialized reset circuit. Please avoid the conditions mentioned below

The detection object lies around the detection distance of the proximity switch; For DC voltage type and DC switch type, when power supply is turned on (turned off), time constant rises (drops) greatly; There is self-excitation and noise when the AC switch type proximity switch is power-on (off)

✧ Capacitor, light load

The proximity switch can't have the capacitor or light that has larger jumping current as the load directly connected to be connected through a relay or series connected with a current-limiting resistance. The peak current set by current-limiting resistance R is within the load current of the proximity switch; Make sure to connect through load.

Supply voltage V

Peak load current value of proximity switch mA

≤R(KΩ)

Allowable loss of resistance R (W)

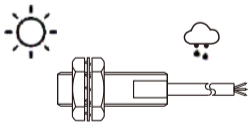
Supply voltage V²

≤R(KΩ)

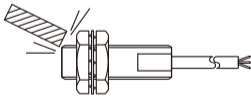
× 2 times above

✧ Installation notice of proximity switch

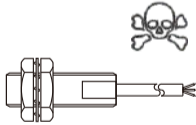
Don't use it in the open air, and use a protective cover, if necessary.



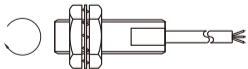
Don't knock the detection surface with hard objects and use a protective cover, if necessary.



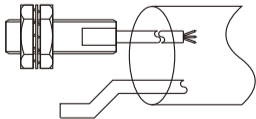
Don't use it in the environment with corrosive objects.



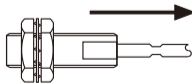
Don't fasten it with a big force, but fasten it with spring washer



The proximity switch must be equipped individually with metal flexible pipe, and don't make it with the electric line and power line in the same metal flexible pipe



Don't stretch the power line of the proximity switch with a big force.



- ※ Accurate identification of subtle color differences, 4-channel design, saving space and cost
- ※ Accurately identify more than 1000 colors, multiple detection modes
- ※ Suitable for various application scenarios, can be equipped with color-specific probes, and compatible with all fiber optic probes
- ※ Suitable for detecting objects that do not emit light by themselves
- ※

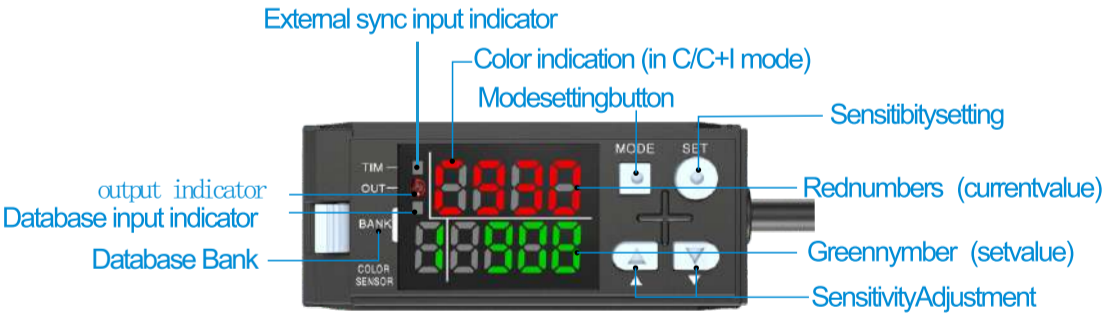


Specifications

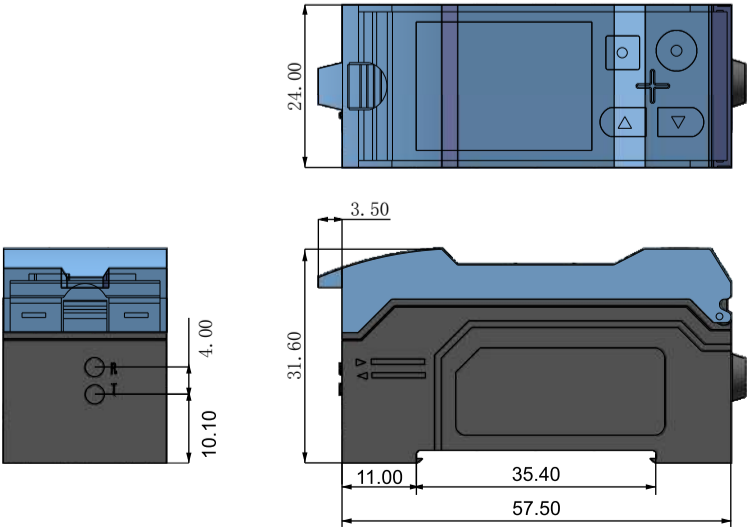


Specifications		
Model	EB-C1	EB-C1P
Output type	NPN	PNP
Light source	Red LED, Green LED, Blue LED	
Response time	200μs(HSP)/1ms(FINE)	
Indicator light	Output: Red LED, External sync input: Red LED Matching rate/received light intensity: LED(green/red)	
Error display	Excessive light intensity, insufficient light intensity, insufficient chromatic aberration	
Calibration method	One-point/two-point calibration	
Error adjustment	Digital display value setting	
Differential recognition Mode	Cmode/C+Imode/Imode	Cmode/C+Imode/Imode
Timer function	Timer OFF/ON Delay/OFF Delay/One-shot Shot	
output selection	Matching output: Turn on when the target color matches the memory color Mismatch output: Turn on when the color of the target object is different from the recorded color	
External sync input	Response speed: maximum 500us	
External Calibration Input	Input response time: minimum 20ms	
Record color choices	Library selection(operated by external input or key), no voltage input	
Control Output	NPN(PNP):Max 40VDC Max(100mA),Residual voltage: Max 1.0V	
protection circuit	Reverse electrode protection, overcurrent protection, overvoltage	
power supply	12 to 24VDC±10%, Ripple(P-P): 10%max	
Consumption current	75mAmax	
Ambient Luminosity	Incandescent: Max. 5,000lux, Daylight: Max. 10,000lux	
ambient temperature	-10~55°C	
Relative humidity	35-85%RH	
Anti-vibration	10-55 Hz, double amplitude 1.5 mm, XYZ three directions, 1 hours each	
Impact resistance	(50G)500m/S2 X, Y, Z three directions	
Sensing side	PC	
Connection	2MPVC Cable	

If you need a detailed amplifier product manual, please contact our company



Dimension





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