

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**

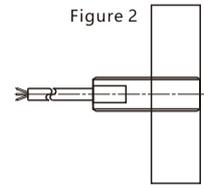
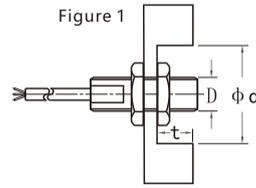


Installation conditions

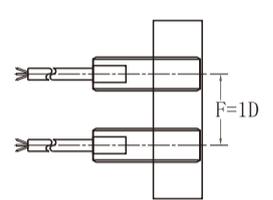
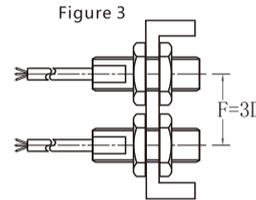
Non shielded proximity switches can achieve maximum operating distance (with the diameter of the relevant); but in order to prevent the switch around the metal impact on the switch, the sensor head must be in a certain gap with the surrounding metal (Figure 1).

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.



In order to prevent mutual interference, we must keep the minimum distance between each other (Figure 3).

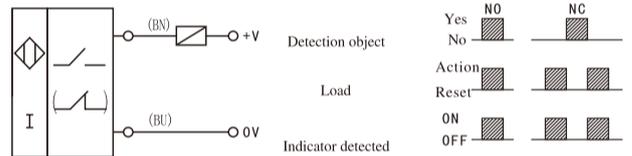


Please refer to the specific data of various types of instructions.

Output mode and electrical characteristics

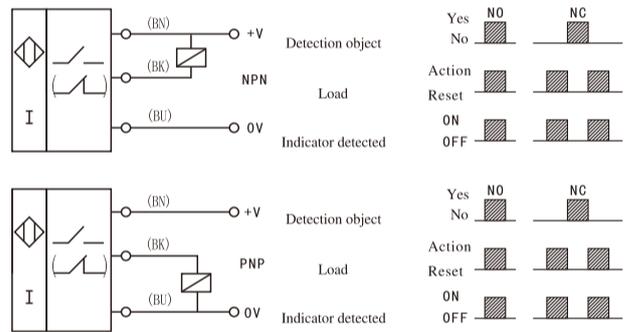
DC 2-wire system NO or NC

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.



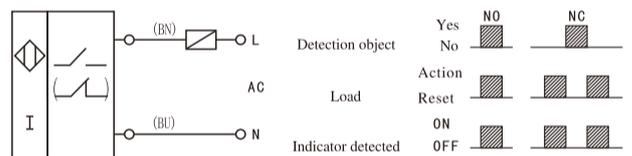
DC 3-wire system (N,P type) NO or NC

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.



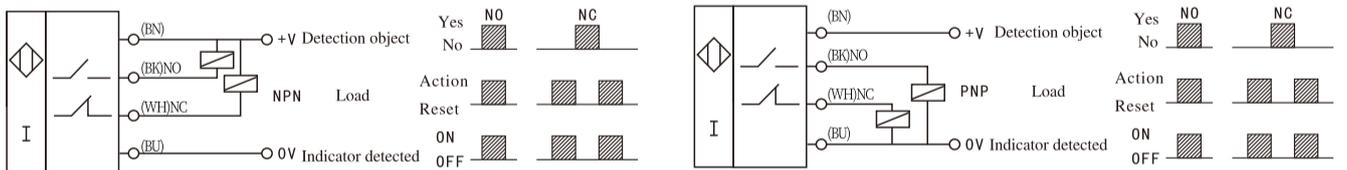
AC 2-wire system NO or NC

The load must be connected in series in the sensor, in the closed circuit, the switching element has a smaller voltage drop.



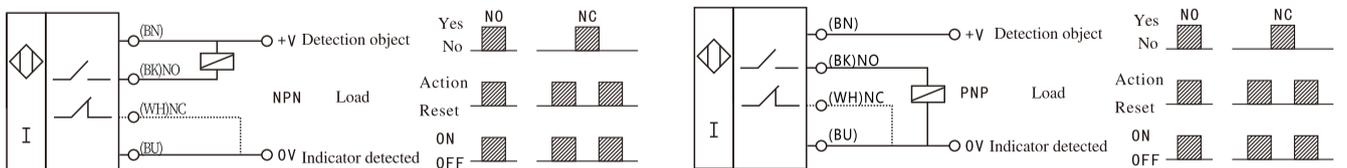
DC 4-wire system (NPN, PNP Type) NO+NC

Sensor switches can provide 2 groups of output NO+NC



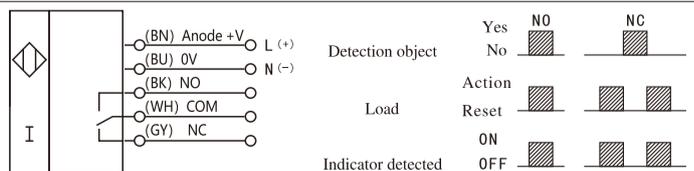
DC 4-wire system (NPN, PNP Type) NO/NC

The switches can provide two groups of output NO or NC



NO+NC Ac/Dc five wire (relay output) NO + NC

These switches can provide to often open, closed two group relay output.



- ※ Small size, suitable for all kinds of small space occasions
- ※ IP65 level of protection



Selection Guide

LS	06	—	D	10	N	1	—	TZ
①	②		③	④	⑤	⑥		⑦

① **Model:**LS: Laser Sensor

② **DIA. of sensing side:**Number: DIA. of sensing side (unit:mm)

③ **Sensing type:**S: Diffuse reflective type、R: Retroreflective type、D: Through-beam type

④ **Sensing distance:**Number: Sensing distance (unit:cm)

⑤ **Control output:**N: NPN、P: PNP

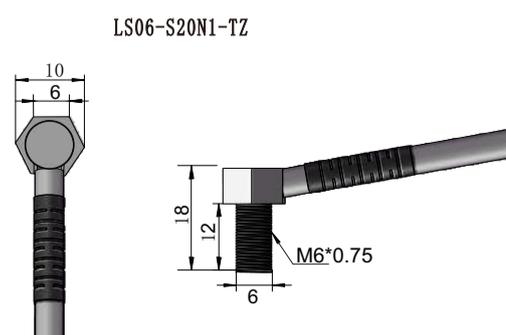
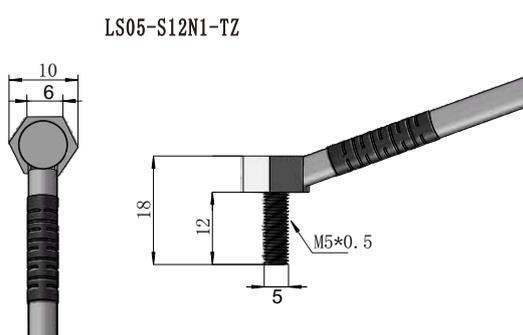
⑥ **Operation mode:**1: Light ON、2: Dark ON

⑦ **Induction direction:**□: standard type、TZ: Right angle 90°

Specifications

Specifications					
Model	NPN.NO	LS05-S12N1-TZ	LS06-S20N1-TZ	LS05-D10MN1-TZ	LS06-D10MN1-TZ
	NPN.NC	LS05-S12N2-TZ	LS06-S20N2-TZ	LS05-D10MN2-TZ	LS06-D10MN2-TZ
	PNP.NO	LS05-S12P1-TZ	LS06-S20P1-TZ	LS05-D10MP1-TZ	LS06-D10MP1-TZ
	PNP.NC	LS05-S12P2-TZ	LS06-S20P2-TZ	LS05-D10MP2-TZ	LS06-D10MP2-TZ
Detection type		Diffuse reflection		Through-beam	
Sensing distance		0-120mm	0-20mm	10M	10M
Setting distance(Sa)		0-1mm	0-1mm	0-1mm	0-1mm
Adjustment method		Tail potentiometer		/	
Spot and beam		beam invisible Spot visible size: 2/1/0.5mm			
Hysteresis		≤10%			
Light pointing angle		3°			
Standard target		white card reflection rate 90%			
Detection target		Opaque Objects and Transparent Objects			
Supply voltage		DC:10-30VDC			
Leakage current		≤0.6mA			
Response frequency(F)		600Hz(DC)			
Ambient illuminance incandescent		incandescent lights 3000Lux sunshine ≤100Lu			
Consumption current		Diffuse reflection and; Through-beam: ≤25mA			
Load current		200mA			
Voltage drop		DC ≤1V			
Circuit protection		short-circuit. EMI protection revers Epolarity protection			
Output indicator		Red LED			
Ambient temperature		-20~+55			
Shock		500m/s(50G) in each X, Y, Z direction for 3 times			
Vibration		1mm amplitude at frequency 10~55Hz (for 1min) in each XY Z direction for 2 hours			
Protection degree		IP65			
Connection		2m PVC cable or connector			
Material		Nickel-copper alloy			

Dimension





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