

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.

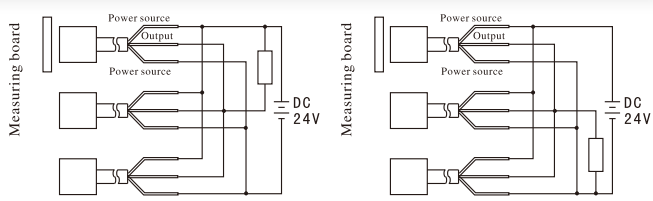
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Sensor characteristics

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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.

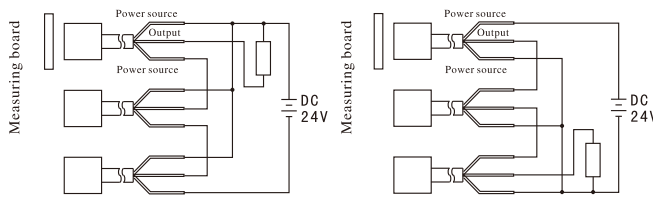


OR connection of NPN output

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.

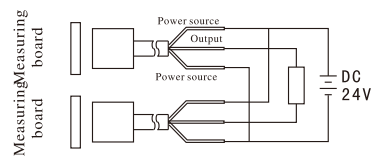


NPN connection of AND output

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)

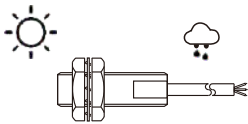
Supply voltage V²

≤R(KΩ)

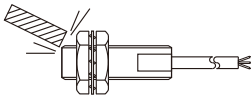
× 2 times above

✧ Installation notice of proximity switch

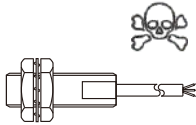
Don't use it in the open air, and use a protective cover, if necessary.



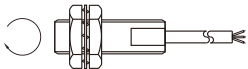
Don't knock the detection surface with hard objects and use a protective cover, if necessary.



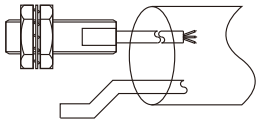
Don't use it in the environment with corrosive objects.



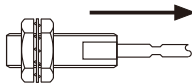
Don't fasten it with a big force, but fasten it with spring washer



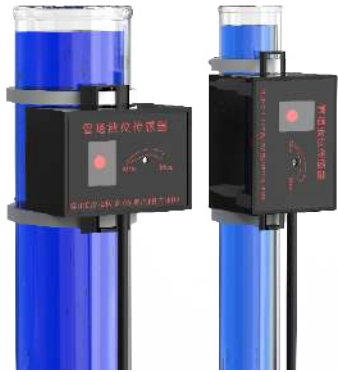
The proximity switch must be equipped individually with metal flexible pipe, and don't make it with the electric line and power line in the same metal flexible pipe



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



- ✧ It can detect various liquids in the tube. It is only suitable for non-metallic tubes and is not affected by the color of the liquid.
- ✧ It is suitable for a wide range of pipe diameters from $\phi 6$ to 13mm and $\phi 14$ to 26mm, with long service life and high stability.
- ✧ The sensitivity adjustment potentiometer can easily adjust the detection distance.



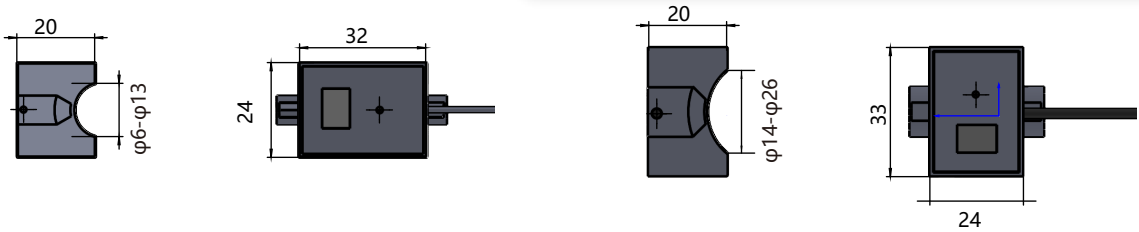
Specifications

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Specifications		
Model	GT-L15	GT-L30
Output mode	DC 3-Wire NPN/PNP.NO	
Detect objects	liquid	
Applicable pipe materials	Non-Metal	
Applicable pipe outer diameter	46-p13mm	p14-26mm
Applicable pipe wall thickness	< 1.5mm	< 2mm
Repeat distance accuracy	<±0.2mm	
Response difference	0.6-5mm	0.3-3mm
	Reference values that vary depending on pipe size and liquid	
Power supply voltage	12-24V DC	
Consumption current	< 12mA	
Load current	< 100mA	
Residual voltage	< 1V (when load current is 100mA, wire length: 2m)	
indicator light	Red indicator light	
ambient temperature range	When using: 0~+55℃ , when storing:-10~+65℃ (no icing or condensation)	
Ambient humidity range	During use and storage. 25-85%RH each (no condensation)	
Effect of temperature	1h ;the temperature range of 0℃~+55℃, at +23℃Detection level is +4mm (pure water and 20% sat water)	
Effect of voltage	Within the range of +10% of the rated power supply voltage range ±0.5mm of the detection level at the rated power supply voltage	
Vibration	1mm amplitude. frequency 10-55Hz (1min) in each XYZ direction for 2 hours	
Shock	500m/s (50G) 3 times each in X and YZ directions	
Protection level	IP66	
Connection method	Wire lead type (standard wire length 2m)	
protection circuit	Surge protection circuit, short circuit protection, reverse polarity protection	
shell material	Heat-resistant ABS	

Dimension

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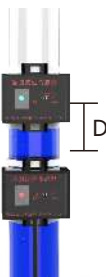


Usage requirements

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- ✧ When installing inline, side by side, or opposite, be sure to set it at a distance greater than the following to avoid interference between sensors.

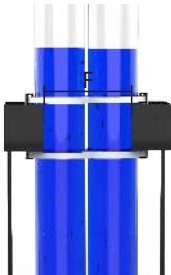
Tandem installation



Parallel installation



Relative installation



Note:Adjustment of the lower sensor will affect the upper sensor, so be sure to adjust the lower sensor first during use

Model	GT-L15	GT-L30
D	10MM	10MM
E	15MM	15MM
F	25MM	30MM



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