DADISICK®

TECHNICAL DATA SHEET

PHOTOELECTRIC SWITCH SENSOR
THROUGH-BEAM
GM18 series

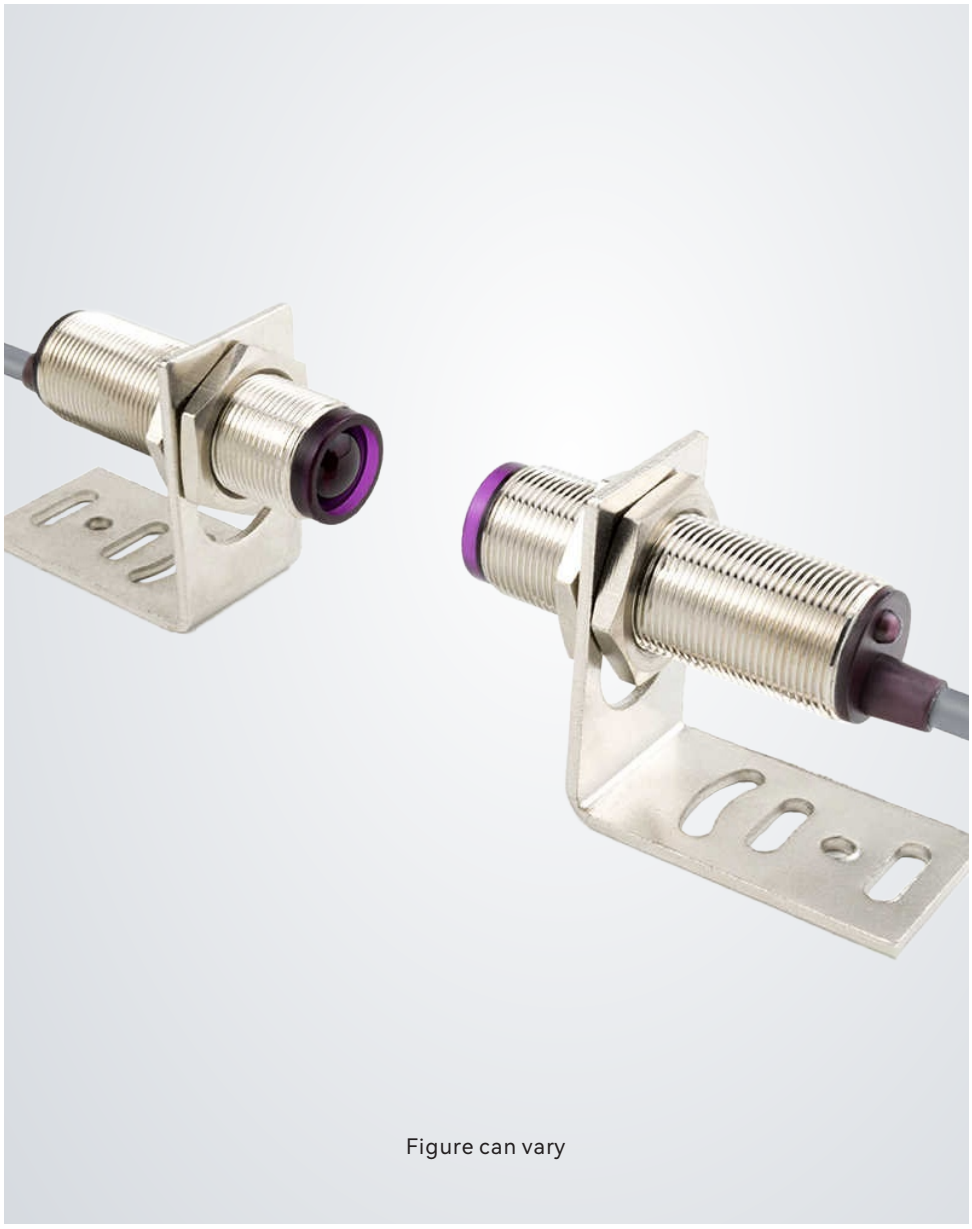

Figure can vary

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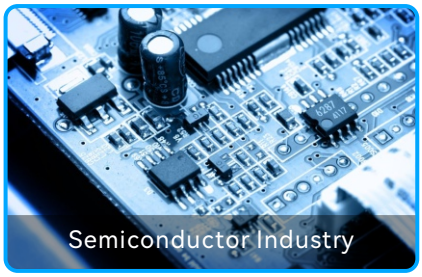
We reserve the right to make technical changes

2024-12-06

Product Introduction

The GM18 cylindrical photoelectric sensor series has a round 18 mm housing. Due to its unique design and superior performance, it has a wide range of application scenarios in multiple fields:



1. In automated production lines, it can be used to detect the position, speed and existence of objects, thereby controlling the movement of equipment such as robotic arms and conveyor belts to ensure smooth and efficient production processes.

2. In the metal processing industry, it can be used to detect tiny objects such as metal chips, debris, etc. to ensure the cleanliness and safety of the production process.

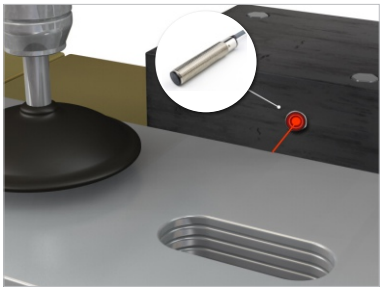
3. It can be used for security applications such as intrusion detection and object tracking. When abnormal objects or personnel are detected, the alarm system can be triggered to ensure the safety of the site.

4. In the manufacturing and testing process of electronic equipment, it can be used to detect the position and integrity of components such as circuit boards and connectors to ensure the quality and performance of communication equipment.

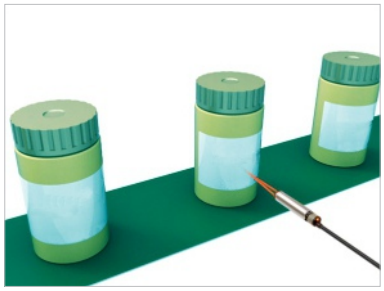
Functional Description

- Two scanning ranges are optional;
- Free switching between light-incoming action (L.on)/shading action (D.on);
- The metal housing is sturdy and durable;
- Short-circuit protection and reverse polarity protection functions;
- Switching frequency can reach up to 5000Hz;
- With 2m cable, fast response time.

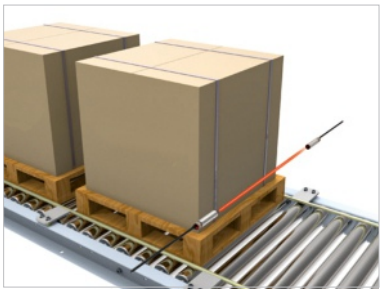
Application Scenarios



Detecting the presence of parts

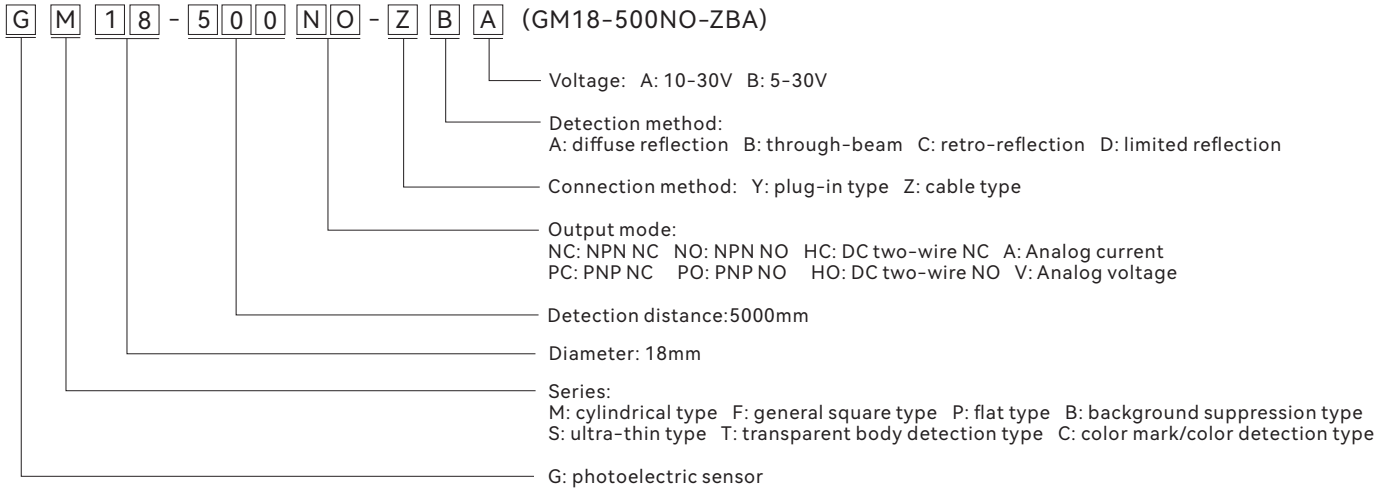


Detecting the presence of packaging bottles



Detecting the positioning of packaging

Photoelectric sensor model specifications



Technical Parameters

Reflection method	Through-beam	
Model	GM18-500	GM18-1500
Detection Distance	5000mm	15000mm
Output Mode	NPN NO / NC, PNP NO / NC	
Repeat Accuracy	< 5%	
Switch Mode	L.on (light-incoming action) / D.on (light-blocking action) switchable	
Indicator Light	Yellow LED	
Response Time	<5ms	
Operating Voltage	10~30V DC	
Consumption Current	<30mA	
Load Current	<200mA	
Operating Temperature	-15℃~+55℃, no freezing	
Environmental Humidity	35%~95%RH, no condensation	
Protection Circuit	Reverse polarity protection/short circuit protection/anti-interference protection	
Protection Level	IP66	
Wire Outlet Method	3pin/4pin with 2M cable	
Material	Nickel-copper alloy	
Light Source	Invisible infrared light (880nm)	

Notes:

1.**NO:** Normally open. **NC:** Normally closed.

2.**NPN:** Common positive voltage, negative voltage output. **PNP:** Common negative voltage, positive voltage output.

3.**NPN NO:** Normally open. When an object is detected, the black line outputs a negative voltage signal.

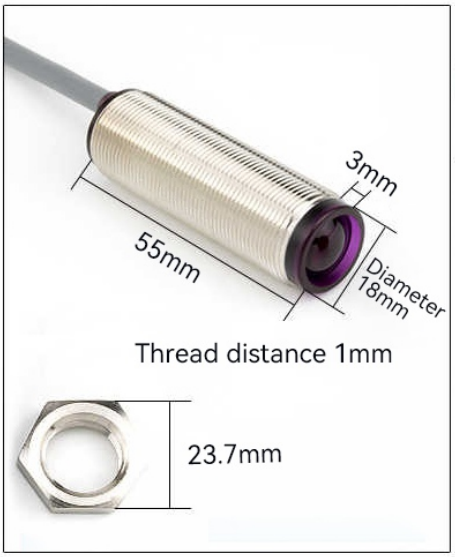
4.**NPN NC:** Normally, the black line outputs a negative voltage signal. When an object is detected, the output signal is disconnected.

5.**PNP NO:** Normally open. When an object is detected, the black line outputs a positive voltage signal.

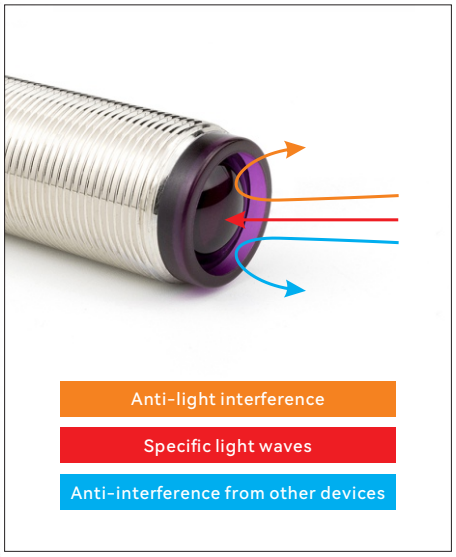
6.**PNP NC:** Normally, the black line outputs a positive voltage signal. When an object is detected, the output signal is disconnected.

Size parameters

GM18-500 size

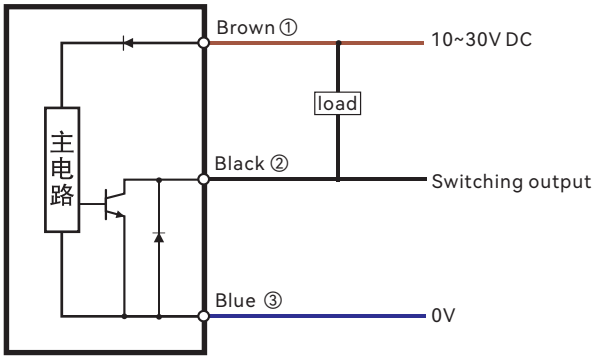


GM18-1500 size

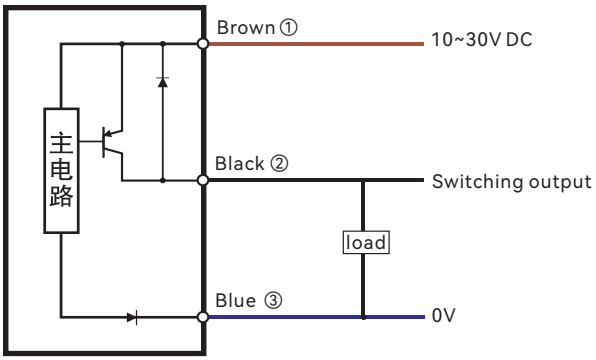


Remark:The appearance size of the transmitter and receiver is the same

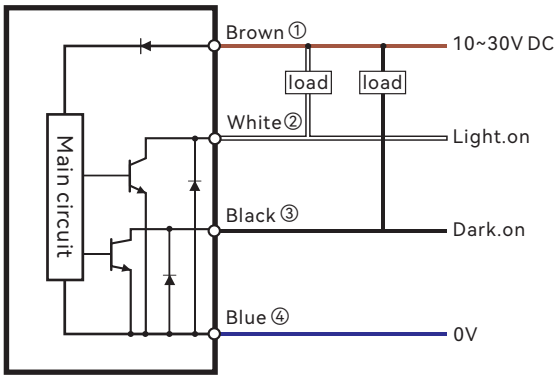
Wiring method



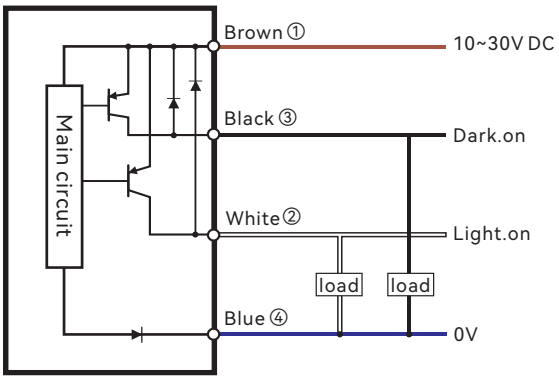
DC 3 line NPN



DC 3 line PNP



DC 4 line NPN



DC 4 line PNP