TECHNICAL DATA SHEET

PHOTOELECTRIC SWITCH SENSOR RETRO-REFLECTION
GM18 series

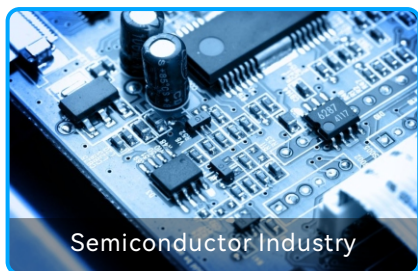Figure can vary

Contents

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:

Semiconductor Industry

Logistics Packaging

Electronics Manufacturing

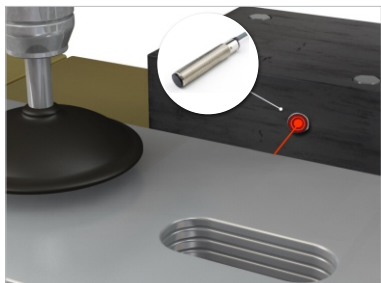Automation Industry

Textile Industry

Printing Industry

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;
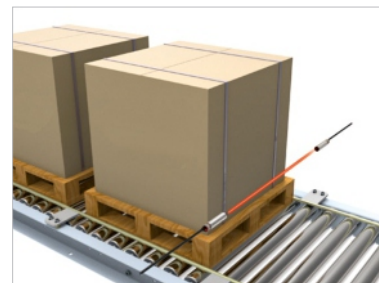⊙ With 2m cable, fast response time.
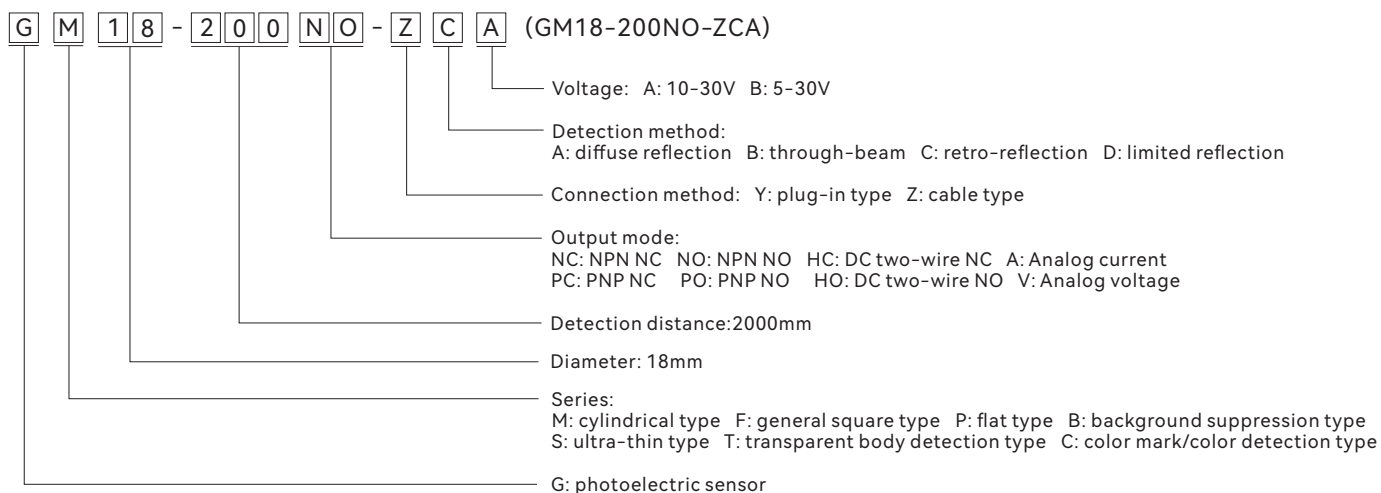
Application Scenarios

Detecting the presence of parts

Detecting the presence of packaging bottles

Detecting the positioning of packaging

Photoelectric sensor model specifications

G M 1 8 - 2 0 0 N O - Z C A (GM18-200NO-ZCA)

- Voltage: A: 10-30V B: 5-30V
- Detection method:
  A: diffuse reflection B: through-beam C: retro-reflection D: limited reflection
- Connection method: Y: plug-in type Z: cable type
- Output mode:
  NC: NPN NC NO: NPN NO HC: DC two-wire NC A: Analog current
  PC: PNP NC PO: PNP NO HO: DC two-wire NO V: Analog voltage
- Detection distance:2000mm
- Diameter: 18mm
- Series:
  M: cylindrical type F: general square type P: flat type B: background suppression type
  S: ultra-thin type T: transparent body detection type C: color mark/color detection type
- G: photoelectric sensor

Technical Parameters

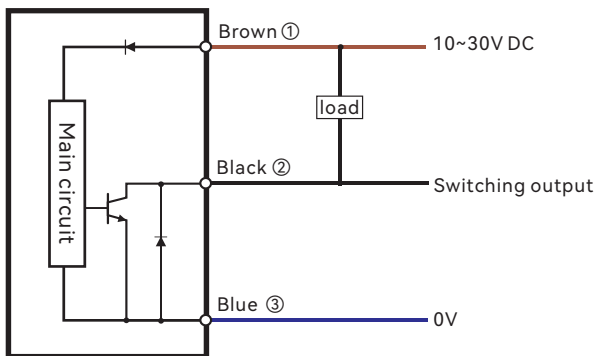| Reflection method	Through-beam	
Model	GM18-200	GM18-300
Detection Distance	2000mm	3000mm
Output Mode	NPN NO / NC, PNP NO / NC	
Repeat Accuracy	< 5%	
Switch Mode	L.on (light-incoming action) / D.on (light-blocking action) switchable	
Indicator Light	Yellow LED	
Response Time	<5ms	
Operating Voltage	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.
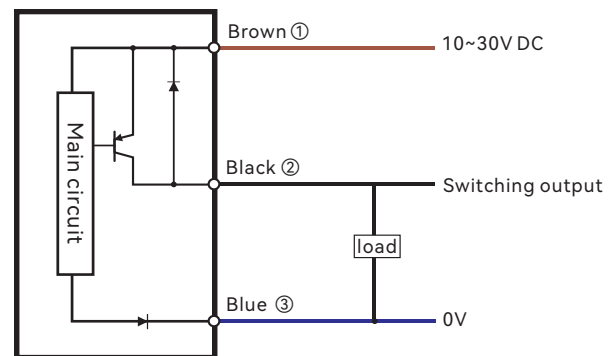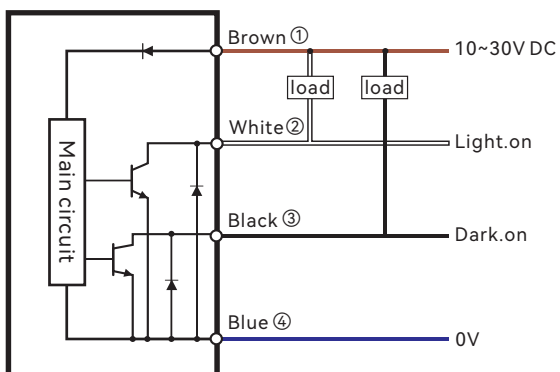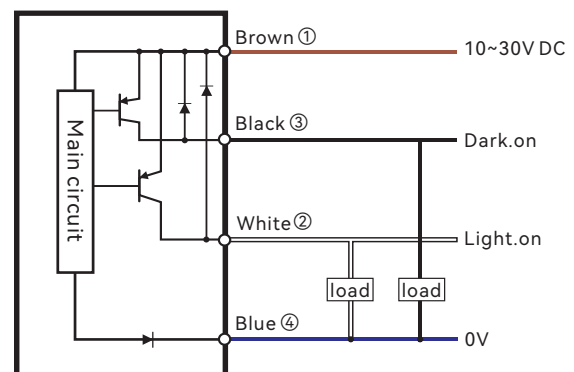
Size parameters

53mm

3.5mm

Diameter 18mm

73mm

Thread distance 1mm

23.7mm

14.5mm

4.5mm

61mm

50mm

Thickness 7.5mm

50mm

Wiring method

Brown ① — 10~30V DC

Main circuit

load

Black ② — Switching output

Blue ③ — 0V

DC 3 line NPN

Brown ① — 10~30V DC

Main circuit

Black ② — Switching output

load

Blue ③ — 0V

DC 3 line PNP

Brown ① — 10~30V DC

Main circuit

load   load

White ② — Light.on

Black ③ — Dark.on

Blue ④ — 0V

DC 4 line NPN

Brown ① — 10~30V DC

Main circuit

Black ③ — Dark.on

White ② — Light.on

load   load

Blue ④ — 0V

DC 4 line PNP