HALLBROOK
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Remote Reflection Sensor

USER
MANUAL

CE

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BG3010 led BGS and laser sensor

user's Guide

Precautions:

To ensure your safety, please be sure to comply with the following regulations when using:

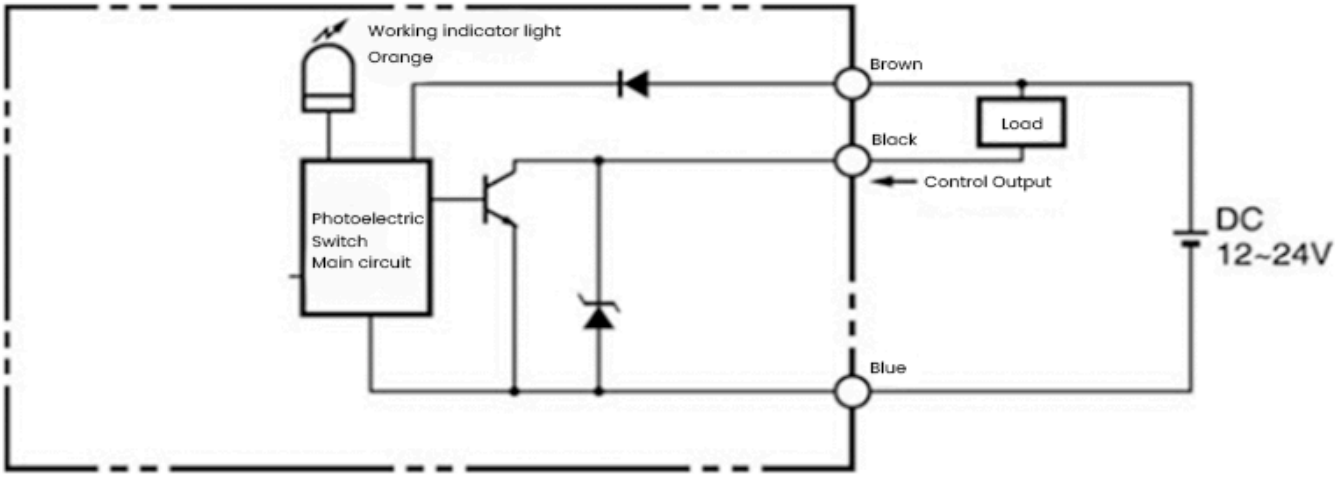
1. This product is only used for target detection. Do not use this product for purposes such as protecting the human body or human body parts.
2. This product must not be used as an explosion-proof product. Do not use this product in hazardous locations and/or potentially explosive gas environments.
3. This product is a DC power sensor. Do not use AC power. Otherwise, the product may explode or catch fire.
4. Do not wire the amplifier along power lines or high-voltage lines, otherwise the sensor may malfunction or be damaged due to noise.
5. When using a commercial switching regulator, ensure that the chassis ground terminal and ground terminal are grounded.
6. Do not use it outdoors or where external light can directly enter the light-receiving surface.

Technical specifications:

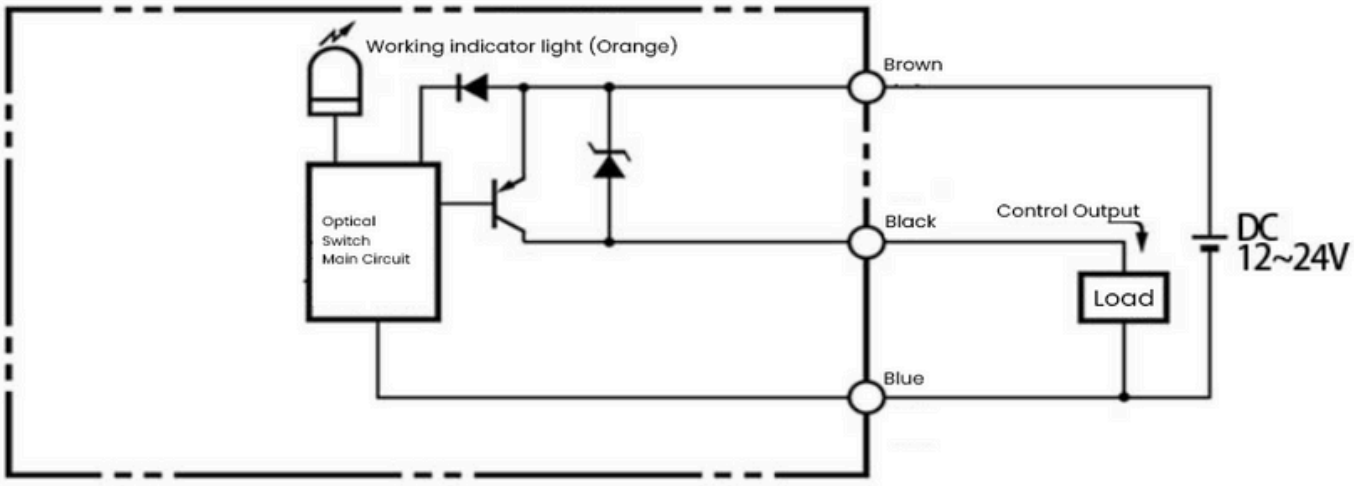
Model	BG3010 LED/GIO LASER	BG3010P LED/GIOP LASER
Type	1 output port, lead-out type	1 output port, lead-out type
Control Output	1 output port, equipped with short circuit protection and automatic anti-interference function	1 output port, equipped with short circuit protection and automatic anti-interference function
Light Source	630NM LED or laser red light 650NM	630NM LED or laser red light 650NM
Response Time	Within 1MS	Within 1MS
Output Selection	LIGHT-ON/DARK-ON is controlled by a white wire. When the white wire is connected to GND, it is DARK ON. When it is connected to the brown wire or left floating, it is L ON.	LIGHT-ON/DARK-ON is controlled by a white wire. When the white wire is connected to GND, it is DARK ON. When it is connected to the brown wire or left floating, it is L ON.
Display Indicator	Operation indicator: Green LED indicates power indicator, red LED indicates output	Operation indicator: Green LED indicates power indicator, red LED indicates output
Detection Distance	BG3010 BGS function: 40-1000MM, the furthest can reach more than 1500MM, at this time it is just a normal diffuse reflection function, without the BGS background suppression function	BG3010 BGS function: 40-1000MM, the furthest can reach more than 1500MM, at this time it is just a normal diffuse reflection function, without the BGS background suppression function
Control Output	NPN/PNP open collector 24V, maximum 100mA (main component only) Residual voltage: IV	NPN/PNP open collector 24V, maximum 100mA (main component only) Residual voltage: IV
Power Supply	12 and 24VDC ±10%, floating ratio (P-P): 10% maximum level	12 and 24VDC ±10%, floating ratio (P-P): 10% maximum level
Working Environment	Incandescent: Maximum: 20,000lx, Daylight: Maximum: 30,000lx	Incandescent: Maximum: 20,000lx, Daylight: Maximum: 30,000lx
Power Consumption	Standard mode: Max 300mW Maximum voltage: 24V	Standard mode: Max 300mW Maximum voltage: 24V
Vibration Resistance	10 to 55Hz, dual amplitude: 1.5mm, X, Y, Z axes are 2 hours each	10 to 55Hz, dual amplitude: 1.5mm, X, Y, Z axes are 2 hours each
Ambient Temperature	-10 to +55°C, no freezing	-10 to +55°C, no freezing

Output circuit:

BG3010 LED/LASER model



BG3010PLED/LASER model



Set sensitivity

By adjusting the multi-turn adjustment screw, adjust the distance clockwise and the distance counterclockwise.

Product warranty

When ordering our products by referring to product samples, when there are no special instructions mentioned in quotations, contracts, specifications, etc., the following warranty contents, disclaimers, fitness for purpose conditions, etc. shall apply.

Please be sure to confirm the following before placing your order.

1. Shelf life

The shelf life is one year, starting from the date the product is shipped to the location designated by the purchaser.

2. Guarantee scope

If the purchased product fails due to our company's responsibility within the above warranty period, our company will be responsible for repairing the product free of charge.

However, when the failure is caused by the following reasons, it is not covered by the guarantee:

1) Failure caused by use under conditions, environments, and usage methods other than those specified in the company's product manuals.

2) Failure not caused by our company

3) Failures caused by modifications and repairs not performed by our company

4) Usage other than the usage methods described by our company

5) After the goods are shipped, problems may arise due to unforeseen scientific issues.

6) Other failures caused by natural disasters, disasters and other factors for which the company is not responsible

At the same time, the above guarantee only refers to the company's product itself, and damage caused by the failure of the company's product is excluded from the scope of the guarantee.

3. Limitation of liability

1) Our company does not assume any responsibility for special losses, indirect losses, and other related losses (equipment damage, loss of opportunities, loss of profits) caused by our products.
2) When using programmable equipment, our company does not assume any responsibility due to programming performed by non-company personnel or the consequences thereof.
4. Suitable for use and conditions
1) Our company's products are designed and produced for general products in general industries. Therefore, our company's products must not be used in the following applications and are not suitable for their use. If you need to use it in the following situations, please discuss with our sales staff, confirm the product specifications, and choose a product with a certain margin in rating and performance. At the same time, you should consider various safety measures so that even if a malfunction occurs, the danger can be eliminated. Reduce safety loops to a minimum, etc.
a. Facilities that have a serious impact on life and property, such as atomic energy control equipment, incineration equipment, railway, aviation, and vehicle equipment, medical equipment, entertainment equipment, safety devices, and equipment that must comply with special regulations of administrative agencies and individual industries.

b. Public utilities such as gas, tap water, electricity supply systems, 24-hour continuous operation systems and other equipment that require high reliability.
c. Systems, equipment, and devices that may endanger people and property.
d. Outdoor use under similar or similar conditions.
2) When users use our company's products in situations closely related to personal and property safety, they should clearly understand the dangers of the entire system, adopt special redundant designs to ensure safety, and follow the instructions of our company's products in the system. The applicable purpose is to achieve matching power distribution and installation.
3) Please be sure to comply with all usage precautions and usage prohibitions to avoid incorrect use and damage caused by third parties.
5. Service scope
Our company's product prices do not include service fees such as technician dispatch fees. If you have any needs in this regard, please contact us for negotiation.



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