

Ultra-small Laser Sensor Manual



GFS Series

Product Features

- Unaffected by the target color and background color, objects can be detected accurately;
- The perfect application of BGS function, no need to adjust the detection distance even when changing production on a production line with different-color workpieces;
- Small size, space-saving;
- Easy to install, using standard M3 screws;
- Using a unique stable detection algorithm;
- Stainless steel SUS316L housing.



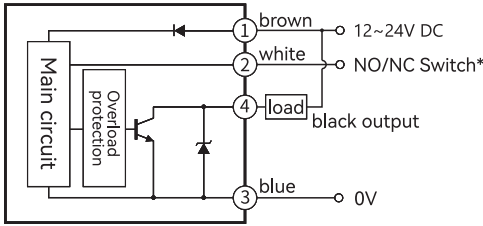
Product Specifications

Type		Diffuse	Through-beam
Model	NPN output	GFS-51N-ZAA	GFS-51N-ZBA
	PNP output	GFS-51P-ZAA	GFS-51P-ZBA
Appearance			
Detection distance		2-50mm	2000mm
No-load current		≤15mA	30mA max
Light spot size		φ4mm	φ3.5mm (Distance is 500mm), φ7mm (Distance is 1000mm)
Hysteresis		Less than 20% of the detection distance	
Light source (wavelength)		Red LED (650nm)	Laser
Power supply voltage		DC 12~24V	
Response frequency		1ms	
Ambient temperature		-20~+60°C	
Ambient humidity		30~95%	
Temperature/humidity		-20~+60°C/30%~95%	
Vibration (durability)		10~55Hz, 1.5mm double amplitude, up to 1h in X, Y, Z directions	
Impact (durability)		500m/s ² double amplitude, 3 times in X, Y, Z directions	
Protection level		IP65	
Protection circuit		Positive and negative reverse connection protection, load short circuit protection	
Output indicator		Red LED	
Power indicator		Green LED	
NO / NC mode		Normally open (light-incoming action)/normally closed (light-shielding action) mode optional	
Connection method		Wire lead type (standard wire length 2m)	
Casing material		SUS316L	

Input/Output Circuit

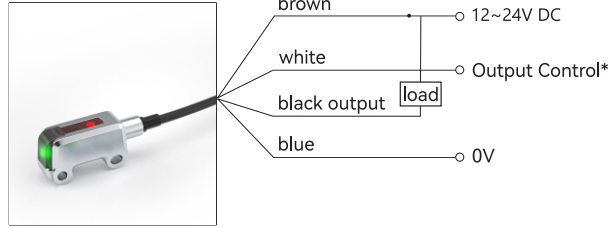
● Diffuse

NPN output

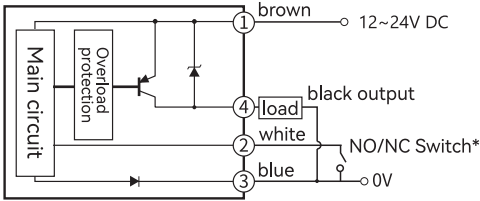


*NO white --- suspended, NC white --- 0V

Connection Diagram

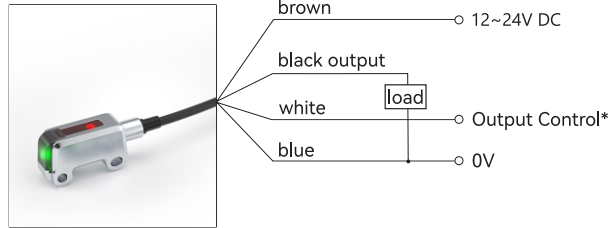


PNP output



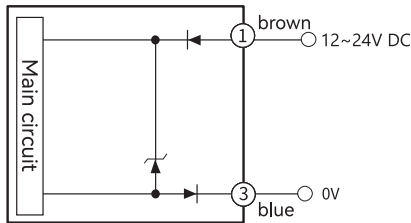
*NO white --- suspended, NC white --- 0V

Connection Diagram

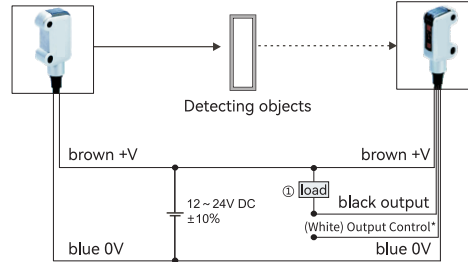


● Through-beam

Transmitter

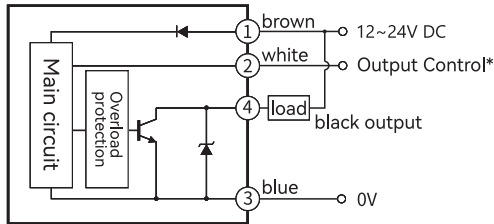


Transmitter



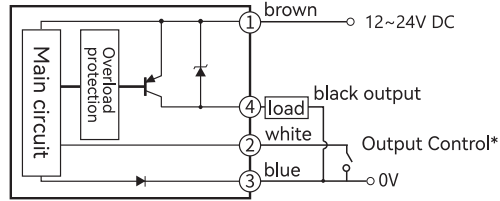
Receiver

NPN type



*NO white --- 0V, NC white --- NC suspended

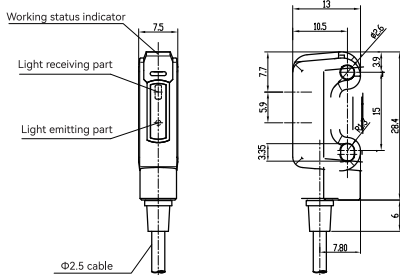
PNP type



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Product Specifications

GFS-51N-ZAA



GFS-51N-ZBA

