proSense™

Area Sensor
FLG-H&A Series
Instruction Sheet

⚠ Warning

↗ This product is designed to use under IEC 61508-5 standard "no safety requirements" and "no special safety requirements" applications
↗ DO NOT connect AC power to any terminals of the sensor to avoid serious damage. Please check all wiring again before powering up the sensor.
↗ This device has been certified to use in a workplace or an office. If it is used in a house, it may cause electromagnetic field interference.
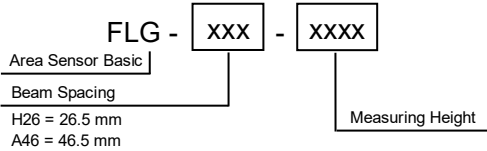
CAUTION

※ Keep high current density cables or motor cables away from the sensor; Avoid high noise interfering with the sensor functions.
※ Do not disassemble the sensor by yourself.

■ Ordering Information

Cables, Brackets are ordered separately.
The detail of operation in all models and the dimension of bracket, please check Automation Directs website: www.automationdirect.com
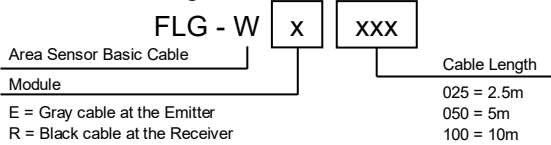
● Model Ordering Information

FLG - xxx - xxxx

Area Sensor Basic

Beam Spacing
H26 = 26.5 mm
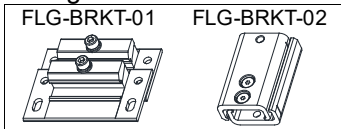A46 = 46.5 mm

Measuring Height

WHAT'S IN THE BOX
1. FLG-xxx-xxxx-EX Emitter with 200mm cable (Gray)
2. FLG-xxx-xxxx-RX Receiver with 200mm cable (Black)
3. Instruction Sheet
4. Bracket (FLG-BRKT-01): The number of brackets depends on Measuring height
220mm or longer and up to 300mm : 2 pcs (One set)
440mm or longer and up to 1,580mm : 4 pcs (Two set)

● Cable Ordering Information

FLG - W x xxx

Area Sensor Basic Cable

Module
E = Gray cable at the Emitter
R = Black cable at the Receiver

Cable Length
025 = 2.5m
050 = 5m
100 = 10m

● Bracket Ordering Information

FLG-BRKT-01   FLG-BRKT-02

Each set of bracket contains 2pcs
* The number of brackets depends on Measuring Height, suggestion in each Emitter / Receiver.
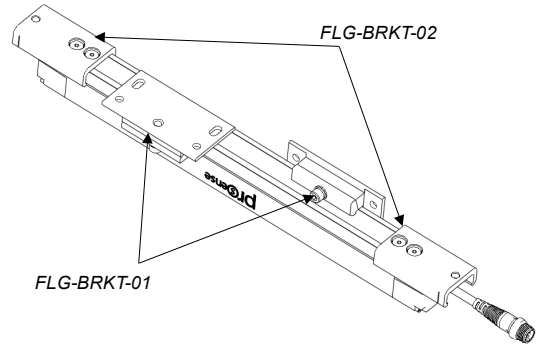220mm to 300mm : 1 pcs; 440mm to 1,580mm : 2 pcs

■ Model Information

Detection	Model	Beams	Measuring Height	Detection Distance
Hand	FLG-H26-0220 ~ 1580	12 ~ 80	220 ~ 1580mm	0.1 ~ 10m
Arm	FLG-A46-0280 ~ 1400	8 ~ 36	280 ~ 1400mm	

■ Specifications (All models)
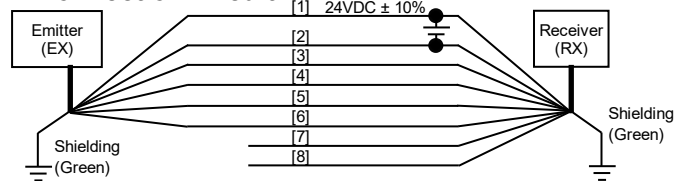
Voltage Range	24VDC ± 10%
Current Consumption	EX <105mA, RX <110mA
Light Source	Infrared LED (850nm)
Indicator	Blue Light: the terminals in the end are aligned Green Light: All beams are aligned Red Light: Any beam is misaligned or blocked Orange Light: the SYNC signal is missing
Protection Circuit	Protection against reverse power connection, Power supply surge, Output overcurrent, Output surge
Response Time	FLG-H26: 3.4~23.4ms, FLG-A46: 2.6~9.8ms
Operating Temperature	-10°C ~ 55°C, No freezing
Storage Temperature	-25°C ~ 60°C, No freezing
Ambient Humidity	30 ~ 85%
Enclosure Rating	IP 67
Ambient Light Resistance	20,000 lx or less
Vibration Resistance	10~55 Hz, 1.5mm, 3 axes for 2 hours
Shock Resistance	Max. 100 m/s², 3 axes, 6 directions and 3 times in each.
Insulating Resistance	20 MΩ or more(500VDC)
Withstand Voltage	1000 VAC 50/60 Hz 1min
Material	Housing: Aluminum, Lens: PMMA, Terminal: Zinc alloy
Cable	M12 Connector with 200mm PVC Cable The color of cable: Emitter: gray, Receiver: black

FOR TECHNICAL ASSISTANCE CALL 770-844-4200

■ Bracket Installation

FLG-BRKT-02
FLG-BRKT-01

FLG-BRKT-01: Bracket's direction base on the customer's frame position.
FLG-BRKT-02: Suggest attaching brackets with fastener at both ends of the grating.

■ Connection Circuit

Number	FLG-xxx-xxxx-EX	FLG-xxx-xxxx-RX
1	VCC (Brown)	
2	GND (Blue)	
3	SYNC+ (Orange)	
4	SYNC- (Orange/ White)	
5	FB- (Pink/ White)	
6	FB+ (Pink)	
7	-	NPN (Black)
8	-	PNP (White)

◆ First step: Power on the Emitter then the Receiver.
◆ Second step: If the Emitter and Receiver indicator is blue, then slightly rotate the Emitter or Receiver until green led illuminates.
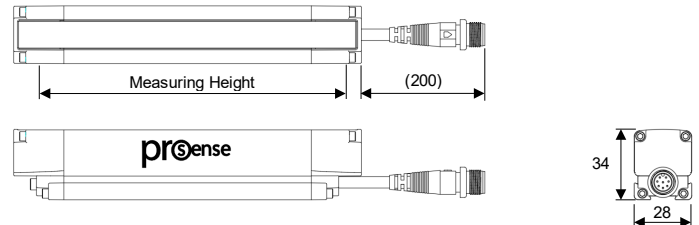
■ Output Status

In the Detection Area	NPN/PNP Output	Red Light	Green Light
Object	OFF	ON	OFF
No Object	ON	OFF	ON

■ Troubleshooting

Indicator	Cause	Solution
All are off	Poor power contact	✓ Please check if the power connection or the pin of the connector is bent.
Red and green lights flash irregularly	Poor optical axis alignment	✓ Check if it shows green light when align in short distance. ✓ Check the module and bracket installed flat. ✓ Check if the fixing method is susceptible to vibration.
	Electrical interference	✓ Check if the shield is connected to a clean ground. ✓ Whether External high power machine shutdown is improved?
	light source interference	✓ Is there any external glare that affects? ✓ Adjacent light curtain installation, using Emitter/Receiver interleaving.
Red/Green/blue lights are on	Over current	✓ Check output load
Orange light is on	Connection Failed Out of the power range	✓ Check the connection and supply voltage
	Internal Beam or Voltage Failed	✓ Contact Automation Direct Tech support

※ All situation happens will make the output become the OFF state.

■ Dimension (Unit: mm)

Measuring Height   (200)

proSense

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Part Name	Hazardous Substances					
	(Pb)	(Hg)	(Cd)	(Cr(VI))	(PBB)	(PBDE)
Metal parts	✕	○	○	○	○	○
Plastic parts	○	○	○	○	○	○
Electronic	✕	○	○	○	○	○
Contacts	○	○	✕	○	○	○
Cables & cabling accessories	○	○	○	○	○	○

This table is made according to SJ/T 11364
○: Indicates that the concentration of hazardous substance in all of the homogeneous materials for this part is below the limit as stipulate in GB/T 26572
✕: Indicates that the concentration of hazardous substance in at least one of the homogeneous materials used for this part is above the limit as stipulated in GB/T 26572