

Panasonic INSTRUCTION MANUAL

Rectangular-shaped Inductive Proximity Sensor Top Sensing GL-18H□

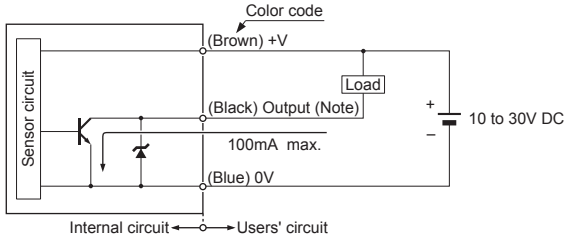
1 CAUTIONS

- This product has been developed / produced for industrial use only.
- Make sure that the power supply is off while wiring.
- Verify that the supply voltage variation is within the rating.
- If power is supplied from a commercial switching regulator, ensure that the frame ground (F.G.) terminal of the power supply is connected to an actual ground.
- In case noise generating equipment (switching regulator, inverter motor, etc.) is used in the vicinity of this product, connect the frame ground (F.G.) terminal of the equipment to an actual ground.
- Do not use during the initial transient time (50ms) after the power supply is switched on.
- Extension up to total 100m is possible with a 0.3mm², or more, cable.
- Take care that the sensor does not come in contact with organic solvents, such as, thinner etc.
- Do not run the wires together with high-voltage lines or power lines or put them in the same raceway. This can cause malfunction due to induction.
- Make sure that the sensing end is not covered with metal dust, scrap or spatter. It will result in malfunction.
- Make sure that stress by forcible bend or pulling is not applied directly to the sensor cable joint.

2 SPECIFICATIONS

Type	Rectangular-shaped top sensing inductive proximity sensor		
Item	Model No.	GL-18H	GL-18HB GL-18HI
Max. operation distance		5mm±10%	
Stable sensing range		0 to 4mm	
Standard sensing object		Iron sheet 25×25×1mm	
Supply voltage		10 to 30V DC Ripple P-P 10% or less	
Current consumption		10mA or less	
Output		NPN open-collector transistor • Maximum sink current: 100mA • Applied voltage: 30V DC or less (between output and 0V) • Residual voltage: 1.5V or less (at 100mA sink current) 0.4V or less (at 16mA sink current)	
Output operation		Normally open	Normally closed Normally open
Max. response frequency		1kHz	
Operation indicator		Red LED (lights up when the output is ON)	
Ambient temperature		-25 to +70°C, Storage: -25 to +70°C	
Cable		0.3mm ² 3-core oil resistant cabtyre cable, 1m long	
Weight		45g approx.	

3 I/O CIRCUIT DIAGRAM



Note: The output does not incorporate a short-circuit protection circuit. Do not connect it directly to a power supply or a capacitive load.

Thank you very much for purchasing Panasonic products. Please read this Instruction Manual carefully and thoroughly for the correct and optimum use of this product. Kindly keep this manual in a convenient place for quick reference.

WARNING

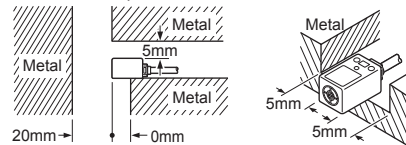
- Never use this product as a sensing device for personnel protection.
- In case of using sensing devices for personnel protection, use products which meet laws and standards, such as OSHA, ANSI or IEC etc., for personnel protection applicable in each region or country.

4 MOUNTING

- **Mounting**
 - The tightening torque should be 0.5N·m or less.
 - To mount the sensor with a nut, the thru-hole diameter should be ø3.4mm.
 - Screws, nuts or washers are not supplied. Please arrange them separately.
- **Sensing range**
 - The sensing range is specified for the standard sensing object. With a non-ferrous metal, the sensing range is obtained by multiplying with the correction coefficient specified below. Further, the sensing range also changes if the sensing object is plated.

Sensing object	Correction coefficient
Iron	1
Stainless steel (SUS304)	0.68 approx.
Brass	0.45 approx.
Aluminum	0.43 approx.

- **Influence of surrounding metal**
 - When there is a metal near the sensor, keep the minimum separation distance specified below.

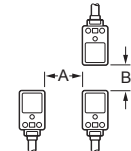


- **Mutual interference prevention**
 - When two or more sensors are installed in parallel of face to face, keep the minimum separation distance specified below to avoid mutual interference.

	Between 'I' type and non 'I' type	Between two 'I' types or two non 'I' types
A	0mm (Note 2)	40mm
B	20mm	70mm

Notes: 1) 'I' in the model No. specifies the different frequency type.

2) Close mounting is possible for up two sensors. When mounting three sensors or more, at an equal spacing, in a row, the minimum value of dimension 'A' should be 11mm.



5 INTENDED PRODUCTS FOR CE MARKING

- The models listed under '2 SPECIFICATIONS' come with CE Marking.
- As for all other models, please contact our office.



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