



INSTRUCTION MANUAL

Inductive Proximity Sensor

Low Price
GL-12F × 10

1 SPECIFICATIONS

Item	Model No.	GL-12F × 10 (Front sensing)
Max. operation distance (Note)		4 ± 0.5mm
Stable sensing range (Note)		0 to 3mm
Supply voltage		12 to 24V DC ± 10% 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: 1V or less (at 100mA sink current) 0.4V or less (at 16mA sink current)
	Output operation	Normally open
	Max. response frequency	500Hz

Note: The maximum operation distance stands for the maximum distance for which the sensor can detect the standard sensing object. The stable sensing range stands for the sensing range for which the sensor can stably detect the standard sensing object even if there is an ambient temperature drift and / or supply voltage fluctuation.

2 CAUTIONS

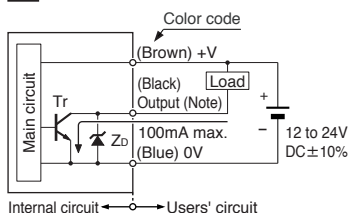
- This product has been developed / produced for industrial use only.
- Verify that the supply voltage variation is within the rating.
- If power is supplied from a commercial switching regulator, ensure that the frame ground (F.G.) terminal of the power supply is connected to an actual ground.
- Do 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.
- Extension up to total 100m is possible with a 0.3mm², or more, cable.
- Do not use during the initial transient time (10ms) after the power supply is switched on.
- Take care that the product does not come in contact with oil, grease, organic solvents, such as, thinner etc., or strong acid, and alkaline.
- Make sure that the sensing end is not covered with metal dust, scrap or spatter. It will result in malfunction.

Thank you very much for using SUNX 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.



- 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.

3 I/O CIRCUIT DIAGRAM



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

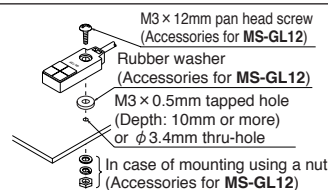
Symbols... Z_D: Surge absorption zener diode
Tr: NPN output transistor

4 MOUNTING

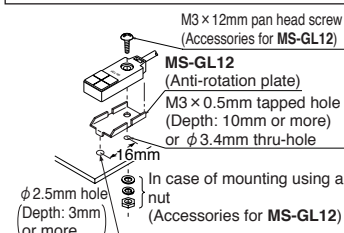
● Mounting

- The tightening torque should be 0.5N·m or less.

Rubber washer fixing (one point fixing)



Anti-rotation board fixing (two point fixing)



● Sensing range

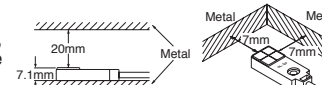
- The sensing range is 3mm or less. With a non-ferrous metal, the sensing range is obtained by multiplying with the correction coefficient specified on the right. Further, the sensing range also changes if the sensing object is smaller than the standard sensing object (iron sheet 20 × 20 × 1mm) of if the sensing object is plated.

Correction coefficient

Metal	Correction coefficient
Iron	1
Stainless steel (SUS304)	0.78 approx.
Brass	0.55 approx.
Aluminum	0.53 approx.

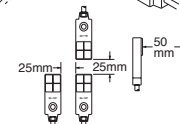
● Influence of surrounding metal

- When there is a metal near the sensor, keep the minimum separation distance shown on the right.



● Mutual interference prevention

- When two or more sensors are installed in parallel or face to face, keep the minimum separation distance shown on the right to avoid mutual interference.



5 INTENDED PRODUCTS FOR CE MARKING

- The models listed under '1 SPECIFICATIONS' come with CE Marking. As for all other models, please contact our office.



SUNX Limited

URL : sunx.jp

Overseas Sales Dept. (Head Office)

2431-1 Ushiyama-cho, Kasugai-shi, Aichi, 486-0901, Japan
Phone: +81-(0)568-33-7861 FAX: +81-(0)568-33-8591

Europe Headquarter: Panasonic Electric Works Europe AG

Rudolf-Diesel-Ring 2, D-83607 Holzkirchen, Germany Phone: +49-8024-648-0

US Headquarter: Panasonic Electric Works Corporation of America

629 Central Avenue New Providence, New Jersey 07974 USA Phone: +1-908-464-3550

PRINTED IN JAPAN