

# INSTRUCTION MANUAL

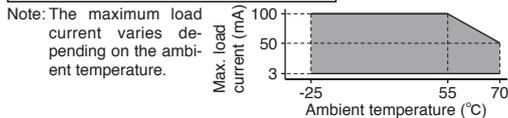
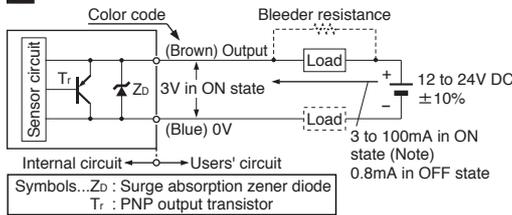
Inductive Proximity Sensor DC 2-wire Type

Front sensing

Top sensing

GXL-15FU□/15FLU□ GXL-15HU□/15HLU□

## 1 I/O CIRCUIT DIAGRAMS



### Conditions for the load

- The load should not be actuated by the leakage current (0.8mA) in the OFF state.
- The load should be actuated by (supply voltage - 3V) in the ON state.
- The current in the ON state should be between 3 to 100mA DC. (In case the current is less than 3mA, connect a bleeder resistance in parallel to the load so that a current of 3mA, or more, flows.)

## 2 CAUTIONS

- 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.
- Do not use during the initial transient time (50ms) after the power supply is switched on.
- Extension up to total 50m is possible with a 0.3mm<sup>2</sup>, or more, cable. However, in order to reduce noise, make the wiring as short as possible.

## 3 SENSING RANGE

- Please use it by 4mm (GXL-15FLU□/15HLU□: 6.4mm) or less. However, this value is a value over a standard detection object (iron 20×20×11mm, GXL-15FLU□/15HLU□: iron 30×30×11mm). With a non-ferrous metal, the sensing range is obtained by multiplying with the correction coefficient specified on the right.

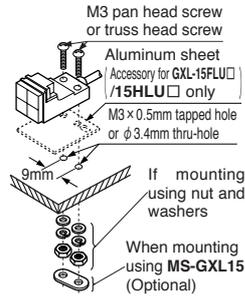
### Correction coefficient

Sensing object	Correction coefficient	
	GXL-15FU□	GXL-15FLU□ GXL-15HU□ GXL-15HLU□
Iron	1	1
Stainless steel (SUS304)	0.74 approx.	0.75 approx.
Brass	0.53 approx.	0.53 approx.
Aluminum	0.52 approx.	0.51 approx.

- Keep in mind that detection distance becomes short when a detection object is small.
- Further, the sensing range also changes if the sensing object is plated.

## 4 MOUNTING

- Do not use a washer between the sensor and the mounting screw.
- The tightening torque should be 1N·m or less.
- To mount the sensor with the optional sensor mounting bracket MS-GXL15, the thru-hole diameter should be φ3.4mm.
- Screw, nut or washers are not supplied. Please arrange them separately.
- To mount the GXL-15FLU□/15HLU□ on a magnetic body, such as iron, the enclosed aluminum sheet, or any other aluminum sheet having a minimum size of 30×39.5×t0.3mm (GXL-15FLU□/15HLU□: 30×30×t0.3mm), should be inserted between the sensor and the magnetic body.



### Influence of surrounding metal

- When there is a metal near the sensor, keep the minimum separation distance specified below. Refer to the figures shown on the reverse side.

	A	B	C	D	E	F	G
GXL-15FU□	8mm	20mm	7mm	—	—	—	—
GXL-15FLU□	8mm (Note)	30mm	10mm	—	—	—	—
GXL-15HU□	—	—	—	6mm	20mm	0mm	3mm
GXL-15HLU□	—	—	—	12mm	30mm	10mm (Note)	10mm

Note: When GXL-15FLU□/15HLU□ is mounted on an insulator or a non-magnetic body, or seated on the enclosed aluminum sheet, the distance 'F' can be zero.

### Mutual interference prevention

- When two or more sensors are installed in parallel or face to face, keep the minimum separation distance specified below to avoid mutual interference. Refer to the figures shown on the reverse side.

	GXL-15FU□/15HU□		GXL-15FLU□/15HLU□	
	Between 'I' type and non 'I' type	Between two 'I' types or two non 'I' types	Between 'I' type and non 'I' type	Between two 'I' types or two non 'I' types
H	0mm (Note)	30mm	0mm (Note)	75mm
J	25mm	60mm	25mm	90mm

Note: Close mounting is possible for up to two sensors. When mounting three sensors or more, at an equal spacing, in a row, the minimum value of dimension 'H' should be 7.5mm (GXL-15FLU□/15HLU□: 30mm).

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This bag is a product made from polyethylene. Even if it burns, harmful gas is not generated.

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