

GX-U/FU

SPECIFICATIONS

Standard type

Item	Model No.	Type	Shielded type					Non-shielded type			
			Non-threaded type		Threaded type			Threaded type			
			Normally open	Normally closed	GX-5SU	GX-8MU	GX-12MU	GX-18MU	GX-30MU	GX-8MLU	GX-12MLU
Max. operation distance (Note 1)			1.5 mm 0.059 in ±10%	2 mm 0.079 in ±10%	3 mm 0.118 in ±10%	7 mm 0.276 in ±10%	10 mm 0.394 in ±10%	4 mm 0.157 in ±10%	8 mm 0.315 in ±10%	15 mm 0.591 in ±10%	22 mm 0.866 in ±10%
Stable sensing range (Note 1)			0 to 1.2 mm 0 to 0.047 in	0 to 1.6 mm 0 to 0.063 in	0 to 2.4 mm 0 to 0.094 in	0 to 5.6 mm 0 to 0.220 in	0 to 8 mm 0 to 0.315 in	0 to 3.2 mm 0 to 0.126 in	0 to 6.4 mm 0 to 0.252 in	0 to 12 mm 0 to 0.472 in	0 to 17.6 mm 0 to 0.693 in
Standard sensing object			Iron sheet 6 X 6 X t 1 mm 0.236 X 0.236 X t 0.039 in	Iron sheet 8 X 8 X t 1 mm 0.315 X 0.315 X t 0.039 in	Iron sheet 12 X 12 X t 1 mm 0.472 X 0.472 X t 0.039 in	Iron sheet 18 X 18 X t 1 mm 0.709 X 0.709 X t 0.039 in	Iron sheet 30 X 30 X t 1 mm 1.181 X 1.181 X t 0.039 in	Iron sheet 20 X 20 X t 1 mm 0.787 X 0.787 X t 0.039 in	Iron sheet 30 X 30 X t 1 mm 1.181 X 1.181 X t 0.039 in	Iron sheet 50 X 50 X t 1 mm 1.969 X 1.969 X t 0.039 in	Iron sheet 70 X 70 X t 1 mm 2.756 X 2.756 X t 0.039 in
Hysteresis			20 % or less of operation distance								
Supply voltage			12 to 24 V DC $\pm\frac{10}{15}\%$ Ripple P-P 10 % or less								
Current consumption (Note 2)			0.8 mA or less								
Output			Non-contact DC 2-wire type • Load current: 3 to 70 mA (Note 3) • Residual voltage: 3 V or less (Note 4)								
		Utilization category	DC-12 or DC-13								
		Short-circuit protection	Incorporated								
Max. response frequency			1.7 kHz	1.2 kHz	1.2 kHz	500 Hz	350 Hz	1 kHz	650 Hz	350 Hz	220 Hz
Operation indicator			Normally closed type: Orange LED (lights up when the output is ON)								
2-color indicator			Normally open type: Lights up in green under stable sensing condition, lights up in orange under unstable sensing condition								
Environmental resistance		Pollution degree	3 (Industrial environment)								
		Protection	IP67 (IEC), IP67g (JEM)								
		Ambient temperature	- 25 to + 70 °C - 13 to + 158 °F, Storage: - 30 to + 80 °C - 22 to + 176 °F								
		Ambient humidity	45 to 85 % RH, Storage: 35 to 95 % RH								
		EMC	EN 50081-2, EN 50082-2, EN 60947-5-2								
		Voltage withstandability	1,000 V AC for one min. between all supply terminals connected together and enclosure								
		Insulation resistance	50 MΩ, or more, with 250 V DC megger between all supply terminals connected together and enclosure								
		Vibration resistance	10 to 55 Hz frequency, 1.5 mm 0.059 in amplitude in X, Y and Z directions for two hours each								
	Shock resistance	1,000 m/s ² acceleration (100 G approx.) in X, Y and Z directions for three times each									
Sensing range variation		Temperature characteristics	Over ambient temperature range - 25 to + 70°C - 13 to + 158 °F: within ± 10 % of sensing range at + 20 °C + 68°F								
		Voltage characteristics	Within ± 2 % for ± 10 % fluctuation of the supply voltage								
Material			Enclosure: Brass (Nickel plated) [However, Stainless steel (SUS303) for GX-5SU(B), GX-8MU(B) and GX-8MLU(B)] Sensing part: Nylon [However, polyalylate for GX-5SU(B)], Indicator part: Nylon [excluding GX-5SU(B)]								
Cable			0.3 mm ² [0.15 mm ² for GX-5SU(B), GX-8MU(B) and GX-8MLU(B)] 2-core oil, heat and cold resistant cabtyre cable, 2 m 6.562 ft long								
Cable extension			Extension up to total 50 m 164.042 ft is possible with 0.3 mm ² , or more, cable.								
Weight (Note 5)			20 g approx.	30 g approx.	55 g approx.	95 g approx.	220 g approx.	30 g approx.	55 g approx.	95 g approx.	220 g approx.
Accessories			Nut: 2 pcs., Toothed lock washer: 1 pc.								

- Notes: 1) 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) It is the leakage current when the output is in the OFF state.
3) The maximum load current varies depending on the ambient temperature. Refer to 'I/O CIRCUIT AND WIRING DIAGRAMS' on p.727~ for more details.
4) When the cable is extended, the residual voltage becomes larger.
5) The weight of the threaded type includes the weight of two nuts and one toothed lock washer.

Spatter-resistant type

Item	Model No.	Type	Shielded type		
			Threaded type		
		Normally open	GX-F12MU-J	GX-F18MU-J	GX-F30MU-J
Material			Enclosure: Brass (Fluorine resin coated), Sensing part: Polyalylate (Fluorine resin coated), Indicator part: Polyalylate		
Cable			0.3 mm ² 2-core spatter-resistant cable, 0.3 m 0.984 ft long with round type connector		
Cable extension			Extension up to total 50 m 164.042 ft is possible with 0.3 mm ² , or more, cable.		
Weight (Note)			35 g approx.	75 g approx.	200 g approx.
Accessories			Nut: 2 pcs. (Fluorine resin coated), Toothed lock washer: 1 pc. (Fluorine resin coated)		

The specifications other than the above-mentioned are identical to that of the standard type (GX-12MU, GX-18MU, GX-30MU).

Note: The given weight includes the weight of two nuts and one toothed lock washer.