

- FIBER SENSORS
- LASER SENSORS
- PHOTO-ELECTRIC SENSORS
- MICRO PHOTO-ELECTRIC SENSORS
- AREA SENSORS
- LIGHT CURTAINS/SAFETY COMPONENTS
- PRESSURE / FLOW SENSORS
- INDUCTIVE PROXIMITY SENSORS
- PARTICULAR USE SENSORS
- SENSOR OPTIONS
- SIMPLE WIRE-SAVING UNITS
- WIRE-SAVING SYSTEMS
- MEASURE-MENT SENSORS
- STATIC ELECTRICITY PREVENTION DEVICES
- LASER MARKERS
- PLC
- HUMAN MACHINE INTERFACES
- ENERGY CONSUMPTION VISUALIZATION COMPONENTS
- FA COMPONENTS
- MACHINE VISION SYSTEMS
- UV CURING SYSTEMS

## ORDER GUIDE

### Flexible cable type

Flexible cable type is also available for shielded type.  
When ordering this type, suffix "-R" to the model No.  
(e.g.) Flexible cable type of **GX-3S** is "**GX-3S-R**".

### 5 m 16.404 ft cable length type

5 m **16.404 ft** cable length type (standard: 3 m **9.843 ft**) is also available. (excluding **GX-4SB**)  
When ordering this type, suffix "-C5" to the model No.  
(e.g.) 5 m **16.404 ft** cable length type of **GX-3S** is "**GX-3S-C5**".

Refer to table below for 5 m **16.404 ft** cable length type of flexible cable type sensor.

#### • Table of model Nos.

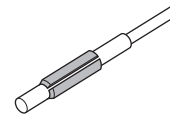
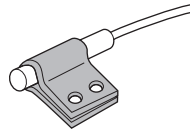
Type		Standard	Flexible cable of 5 m 16.404 ft cable length type
Shielded type	Non-threaded type	<b>GX-3S</b>	<b>GX-3S-R-C5</b>
		<b>GX-3SB</b>	<b>GX-3SB-R-C5</b>
		<b>GX-4S</b>	<b>GX-4S-R-C5</b>
		<b>GX-4SB</b>	—————
		<b>GX-5S</b>	<b>GX-5S-R-C5</b>
	Threaded type	<b>GX-5SB</b>	—————
		<b>GX-5M</b>	<b>GX-5M-R-C5</b>
		<b>GX-5MB</b>	—————
		<b>GX-8M</b>	<b>GX-8M-R-C5</b>
		<b>GX-8MB</b>	<b>GX-8MB-R-C5</b>

### Accessories

- **MS-SS3** (Sensor mounting bracket for **GX-3S** type)
- **MS-SS3-2** (C bracket for **GX-3S** type)
- **MS-SS5** (Sensor mounting bracket for **GX-5S** type)

- **MS-SS3**
- **MS-SS5**

- **MS-SS3-2**



By using the C bracket, the applicable tightening force can be doubled.

- Selection Guide
- Amplifier Built-in
- Amplifier-separated
- GX-F/H**
- GXL**
- GL**
- GX-M**
- GX-U/GX-FU/GX-N
- GX**

**SPECIFICATIONS****Non-threaded type**

Item	Model No.	Shielded type											
		Flexible cable				Flexible cable				Flexible cable			
Type		GX-3S	GX-3SB	GX-3S-R	GX-3SB-R	GX-4S	GX-4SB	GX-4S-R	GX-4SB-R	GX-5S	GX-5SB	GX-5S-R	GX-5SB-R
Max. operation distance (Note 2)		0.8 mm <b>0.031 in</b> ±15 %								1 mm <b>0.039 in</b> ±15 %			
Stable sensing range (Note 2)		0 to 0.6 mm <b>0 to 0.024 in</b>								0 to 0.8 mm <b>0 to 0.031 in</b>			
Standard sensing object		Iron sheet 5 × 5 × t 1 mm <b>0.197 × 0.197 × t 0.039 in</b>								Iron sheet 6 × 6 × t 1 mm <b>0.236 × 0.236 × t 0.039 in</b>			
Hysteresis		15 % or less of operation distance (with standard sensing object)											
Repeatability		20 μm <b>0.787 mil</b> or less								8 μm <b>0.315 mil</b> or less			
Supply voltage		12 to 24 V DC ±10 % Ripple P-P 10 % or less								10 to 30 V DC Ripple P-P 10 % or less			
Current consumption		15 mA or less											
Output		NPN open-collector transistor • Maximum sink current: 50 mA • Applied voltage: 30 V DC or less (between output and 0 V) • Residual voltage: 0.4 V or less (at 50 mA sink current)								NPN open-collector transistor • Maximum sink current: 200 mA (Note 3) • Applied voltage: 30 V DC or less (between output and 0 V) • Residual voltage: 1.5 V or less (at 200 mA sink current) 0.4 V or less (at 50 mA sink current)			
	Utilization category	DC-12 or DC-13											
	Output operation	Normally open	Normally closed	Normally open	Normally closed	Normally open	Normally closed	Normally open	Normally closed	Normally open	Normally closed	Normally open	Normally closed
	Short-circuit protection	—								Incorporated			
Max. response frequency		1 kHz								1.5 kHz			
Operation indicator		Red LED (lights up when the output is ON)											
Environmental resistance	Pollution degree	3 (Industrial environment)											
	Protection	IP67 (IEC)											
	Ambient temperature	-25 to +70 °C <b>-13 to +158 °F</b> , Storage: -25 to +80 °C <b>-13 to +176 °F</b>											
	Ambient humidity	35 to 95 % RH, Storage: 35 to 95 % RH								35 to 85 % RH, Storage: 35 to 95 % RH			
	EMC	EN 60947-5-2											
	Voltage withstandability	500 V AC for one min. between all supply terminals connected together and enclosure											
	Insulation resistance	5 MΩ, or more, with 250 V DC megger between all supply terminals connected together and enclosure								50 MΩ, or more, with 500 V DC megger between all supply terminals connected together and enclosure			
	Vibration resistance	10 to 55 Hz frequency, 1.5 mm <b>0.059 in</b> amplitude in X, Y and Z directions for two hours each											
	Shock resistance	200 m/s <sup>2</sup> acceleration (20 G approx.) in X, Y and Z directions for ten times each								300 m/s <sup>2</sup> acceleration (30 G approx.) in X, Y and Z directions for ten times each			
Sensing range variation	Temperature characteristics	Over ambient temperature range -25 to +70 °C <b>-13 to +158 °F</b> : Within ±20 % of sensing range at +20 °C <b>+68 °F</b>								Over ambient temperature range -25 to +70 °C <b>-13 to +158 °F</b> : Within ±15 % of sensing range at +20 °C <b>+68 °F</b>			
	Voltage characteristics	Within ±2 % for ±10 % fluctuation of the supply voltage								Within ±2.5 % for ±15 % fluctuation of the supply voltage			
Material		Enclosure: Stainless steel (SUS304), Resin part: TPX								Enclosure: Brass (Nickel plated) Resin part: ABS			
Cable		0.08 mm <sup>2</sup> 3-core oil, heat and cold resistant cable, 3 m <b>9.843 ft</b> long	0.1 mm <sup>2</sup> 3-core flexible, oil and heat resistant cable, 3 m <b>9.843 ft</b> long	0.08 mm <sup>2</sup> 3-core oil, heat and cold resistant cable, 3 m <b>9.843 ft</b> long	0.1 mm <sup>2</sup> 3-core flexible, oil and heat resistant cable, 3 m <b>9.843 ft</b> long	0.14 mm <sup>2</sup> 3-core oil, heat and cold resistant cable, 3 m <b>9.843 ft</b> long	0.15 mm <sup>2</sup> 3-core flexible, oil and heat resistant cable, 3 m <b>9.843 ft</b> long	0.14 mm <sup>2</sup> 3-core oil, heat and cold resistant cable, 3 m <b>9.843 ft</b> long	0.15 mm <sup>2</sup> 3-core flexible, oil and heat resistant cable, 3 m <b>9.843 ft</b> long	0.14 mm <sup>2</sup> 3-core oil, heat and cold resistant cable, 3 m <b>9.843 ft</b> long	0.15 mm <sup>2</sup> 3-core flexible, oil and heat resistant cable, 3 m <b>9.843 ft</b> long	0.14 mm <sup>2</sup> 3-core oil, heat and cold resistant cable, 3 m <b>9.843 ft</b> long	0.15 mm <sup>2</sup> 3-core flexible, oil and heat resistant cable, 3 m <b>9.843 ft</b> long
Cable extension		Extension up to total 100 m <b>328.084 ft</b> is possible with 0.3 mm <sup>2</sup> , or more, cable.											
Weight		Net weight: 30 g approx.								Net weight: 55 g approx.			
Accessories		<b>MS-SS3</b> (Sensor mounting bracket): 1 pc. <b>MS-SS3-2</b> (C bracket): 1 pc.								<b>MS-SS5</b> (Sensor mounting bracket): 1 pc.			

Notes: 1) Where measurement conditions have not been specified precisely, the conditions used were an ambient temperature of +23 °C **+73.4 °F**.

2) 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.

3) The maximum sink current varies depending on the ambient temperature. Refer to "**I/O CIRCUIT AND WIRING DIAGRAMS** (p.870)" for details.

FIBER  
SENSORSLASER  
SENSORSPHOTO-  
ELECTRIC  
SENSORSMICRO  
PHOTO-  
ELECTRIC  
SENSORSAREA  
SENSORSLIGHT  
CURTAINS /  
SAFETY  
COMPONENTSPRESSURE /  
FLOW  
SENSORSINDUCTIVE  
PROXIMITY  
SENSORSPARTICULAR  
USE  
SENSORSSENSOR  
OPTIONSSIMPLE  
WIRE-SAVING  
UNITSWIRE-SAVING  
SYSTEMSMEASURE-  
MENT  
SENSORSSTATIC  
ELECTRICITY  
PREVENTION  
DEVICESLASER  
MARKERS

PLC

HUMAN  
MACHINE  
INTERFACESENERGY  
CONSUMPTION  
VISUALIZATION  
COMPONENTSFA  
COMPONENTSMACHINE  
VISION  
SYSTEMSUV  
CURING  
SYSTEMSSelection  
GuideAmplifier  
Built-inAmplifier-  
separated**GX-F/H****GXL****GL****GX-M**GX-UGX-FU/  
GX-N**GX**