

NEW

Cylindrical Proximity Sensor

GX-200 SERIES



Improved Technology & Enhanced Performance & Rich Lineup



Cylindrical proximity sensor

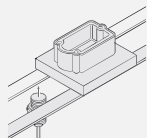
GX-200 Series



Product Features

- **Dedicated IC realizes long-distance detection and has excellent anti-interference performance**

Due to the long-distance detection, metal pallets can be reliably detected.



- **Power polarity reversal, short circuit protection, and overload protection prevent product damage in the event of incorrect wiring.**

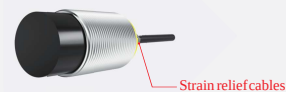
- **360° ring visible indicator light (yellow)**



- **Simple operation, reliable performance, high durability**

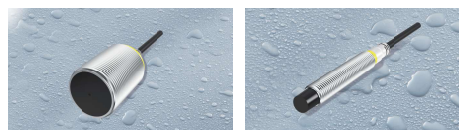
- **Strong Cable**

Improve the bending strength of cable connection parts

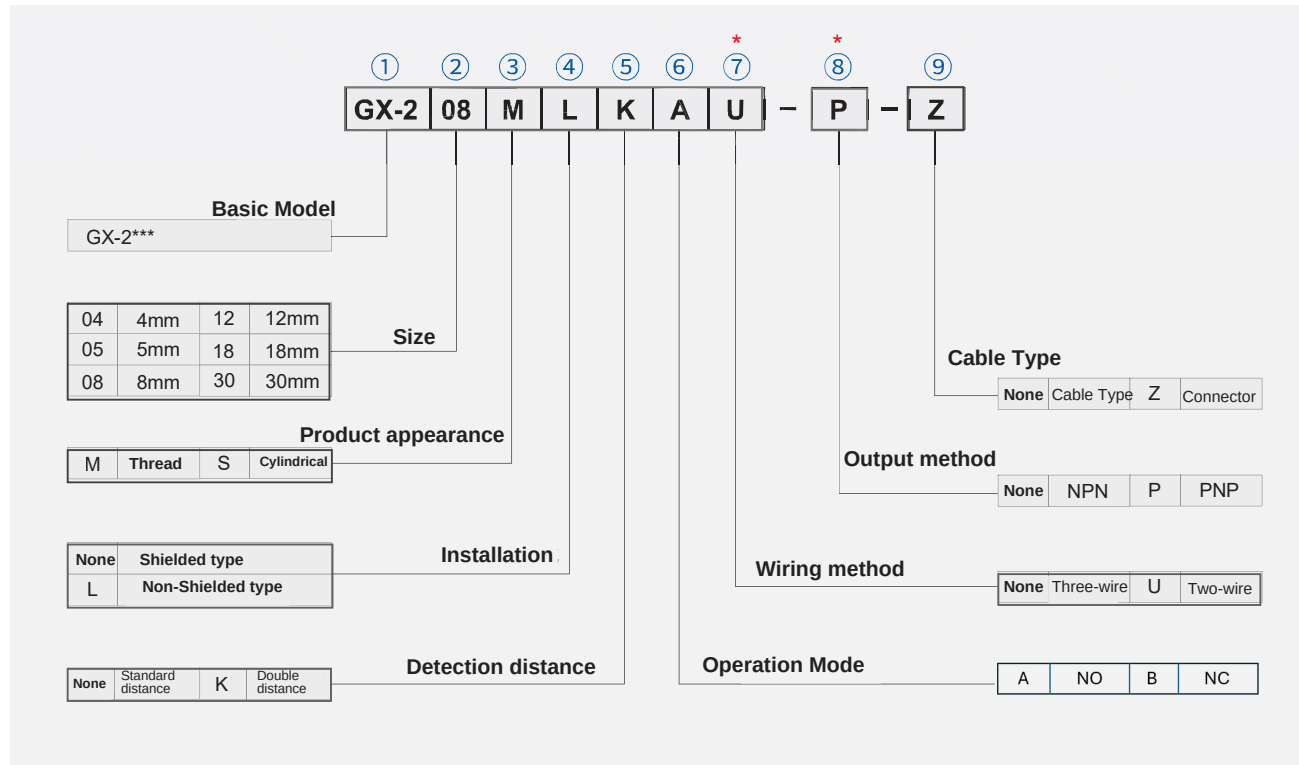


- **IP67/IP67G protection level**

Some models have a protection level of up to IP67G, and can be selected according to the actual use environment.



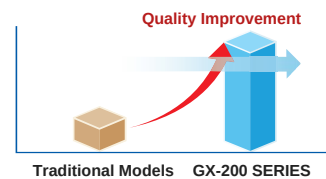
- **Widely used, can replace small photoelectric switches and limit switches**
- **Cable resistant to oil mist**



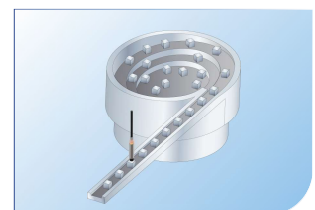
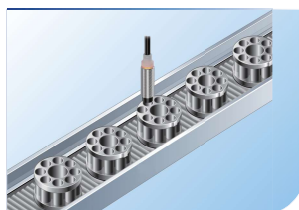
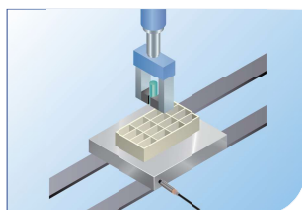
NEW TECHNOLOGY

Reliable process

- The vacuum degassing process is used to ensure that the resin inside the product is fully filled;
- The tail plug adopts injection molding technology to ensure the tail is firm and prevent liquid leakage;
- Add high and low temperature testing before shipment to ensure performance.



Application



GX-200 Series Specifications

Items	Model No	Type	Double Distance Shielded type				Double Distance non-shielded type				
		Normal Open	NPN Output	GX-208MKA	GX-212MKA	GX-218MKA	GX-230MKA	GX-208MLKA	GX-212MLKA	GX-218MLKA	GX-230MLKA
			PNP Output	GX-208MKA-P	GX-212MKA-P	GX-218MKA-P	GX-230MKA-P	GX-208MLKA-P	GX-212MLKA-P	GX-218MLKA-P	GX-230MLKA-P
Items	Model No	Normal closed	NPN Output	GX-208MKB	GX-212MKB	GX-218MKB	GX-230MKB	GX-208MLKB	GX-212MLKB	GX-218MLKB	GX-230MLKB
			PNP Output	GX-208MKB-P	GX-212MKB-P	GX-218MKB-P	GX-230MKB-P	GX-208MLKB-P	GX-212MLKB-P	GX-218MLKB-P	GX-230MLKB-P
Max. operation distance			2mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%	4mm ± 10%	8mm ± 10%	16mm ± 10%	30mm ± 10%	
Stable sensing range			0mm ~ 1.6mm	0mm ~ 3.2mm	0mm ~ 6.4mm	0mm ~ 12mm	0mm ~ 3.2mm	0mm ~ 6.4mm	0mm ~ 12.8mm	0mm ~ 24mm	
Standard sensing object			Iron sheet 8mm × 8mm × t1mm	Iron sheet 12mm × 12mm × t1mm	Iron sheet 24mm × 24mm × t1mm	Iron sheet 45mm × 45mm × t1mm	Iron sheet 12mm × 12mm × t1mm	Iron sheet 24mm × 24mm × t1mm	Iron sheet 48mm × 48mm × t1mm	Iron sheet 90mm × 90mm × t1mm	
Max. response frequency			1.5kHz	1kHz	0.5kHz	0.25kHz	1kHz	0.8kHz	0.4kHz	0.1kHz	
Hysteresis			20% or less of operation distance (standard sensing object)								
Repeatability			5% or less of operation distance								
Supply voltage			10V to 30V DC ± 10% Ripple P-P 10% or less								
Current consumption			10mA or less								
Output			<NPN Output> NPN open-collector transistor · Max. inrush current: 100mA (GX-208□) 200mA (besides GX-108□) · Residual voltage: <2V (load current 100mA and wire length 2m) <2.5V (load current 200mA and wire length 2m)□				<PNP Output> PNP open-collector transistor · Max. source current: 100mA (GX-108□) 200mA (besides GX-108□) · Residual voltage: <2V (load current 100mA and wire length 2m) <2.5V (load current 200mA and wire length 2m)□				
Operation indicator			Yellow LED								
Temperature Effect			Within the temperature range of -25°C to +70°C, within 0% of the detection distance at +23°C								
Environmental resistance	IP protection	IP67/IP67G (IEC)									
	Circuit protection	Power polarity protection, short circuit protection, overload protection, surge absorption									
	Ambient temperature	-25°C ~ +70°C (no condensation or frost)									
	Ambient humidity	35% RH ~ 85% RH									
	Voltage withstandability	1000V AC for one min. between all supply terminals connected together and enclosure									
	Insulation resistance	Above 500MΩ between all power connection terminals and housing, mega meter based on DC500V									
	Vibration resistance	Withstands vibrations of 10Hz to 55Hz and double amplitude of 1.5mm for 2 hours in the X, Y and Z directions									
	Shock resistance	500m/s ² acceleration (50 G approx.) in X, Y and Z directions for three times each									
Material			Housing: nickel-plated brass, GX-208 series housing is stainless steel Sensing surface: PBT								
Cable			3-core oil-resistant PVC cable with a cross-sectional area of 0.2 mm ² , length 2 m								
Cable extension			Extension up to total 100m is possible with 0.3mm ² , or more, cable								
Net weight			58g Approx.	93.5g Approx.	108g Approx.	177g Approx.	58g Approx.	189g Approx.	109g Approx.	190g Approx.	

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DC three-wire - Connector type

Item	Model No	Type		Double distance shielded type				Double Distance non-shielded type			
		Normal Open	NPN Output	GX-208MKA-Z	GX-212MKA-Z	GX-218MKA-Z	GX-230MKA-Z	GX-208MLKA-Z	GX-212MLKA-Z	GX-218MLKA-Z	GX-230MLKA-Z
			PNP Output	GX-208MKA-P-Z	GX-212MKA-P-Z	GX-218MKA-P-Z	GX-230MKA-P-Z	GX-208MLKA-P-Z	GX-212MLKA-P-Z	GX-218MLKA-P-Z	GX-230MLKA-P-Z
		Normal Closed	NPN Output	GX-208MKB-Z	GX-212MKB-Z	GX-218MKB-Z	GX-230MKB-Z	GX-208MLKB-Z	GX-212MLKB-Z	GX-218MLKB-Z	GX-230MLKB-Z
			PNP Output	GX-208MKB-P-Z	GX-212MKB-P-Z	GX-218MKB-P-Z	GX-230MKB-P-Z	GX-208MLKB-P-Z	GX-212MLKB-P-Z	GX-218MLKB-P-Z	GX-230MLKB-P-Z
Max. operation distance				2mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%	4mm ± 10%	8mm ± 10%	16mm ± 10%	30mm ± 10%
Standard sensing object				0mm ~ 1.6mm	0mm ~ 3.2mm	0mm ~ 6.4mm	0mm ~ 12mm	0mm ~ 3.2mm	0mm ~ 6.4mm	0mm ~ 12.8mm	0mm ~ 24mm
Standard sensing object				Iron sheet 8mm × 8mm × t1mm	Iron sheet 12mm × 12mm × t1mm	Iron sheet 24mm × 24mm × t1mm	Iron sheet 45mm × 45mm × t1mm	Iron sheet 12mm × 12mm × t1mm	Iron sheet 24mm × 24mm × t1mm	Iron sheet 48mm × 48mm × t1mm	Iron sheet 90mm × 90mm × t1mm
Max. response frequency				1.5kHz	1kHz	0.5kHz	0.25kHz	1kHz	0.8kHz	0.4kHz	0.1kHz
Hysteresis				15% or less of operation distance (standard sensing object)							
Repeatability				5% or less of operation distance							
Supply voltage				10V to 30V DC±10% Ripple P-P 10% or less							
Current consumption				10mA or less							
Output				<NPN Output> NPN open-collector transistor ·Max. inrush current100mA (GX-208□) 200mA (besides GX-108□) ·Residual voltage: <2V (load current100mA and wire length 2m) <2.5V (load current200mA and wire length 2m)□				<PNP Output> PNP open-collector transistor ·Max. inrush current100mA (GX-208□) 200mA (besides GX-108□) ·Residual voltage: <2V (load current100mA and wire length 2m) <2.5V (load current200mA and wire length 2m)□			
Operation indicator				YellowLED							
Temperature Effect				Within the temperature range of -25°Cto +70°C, within 10% of the detection distance at +23°C							
Environmental resistance	IP protection		IP67/IP67G (IEC)								
	Circuit protection		Power polarity protection, short circuit protection, overload protection, surge absorption								
	Ambient temperature		-25°C~+70°C (no condensation or frost)								
	Ambient humidity		35%RH ~ 85%RH								
	Voltage withstandability		1000V AC for one min. between all supply terminals connected together and enclosure								
	Insulation resistance		Above 20MΩ between all power connection terminals and housing, mega meter based on DC500V								
	Vibration resistance		Withstands vibrations of 10Hz to 55Hz and double amplitude of 1.5mm for 2 hours in the X, Y and Z directions								
Shock resistance		500m/s2 acceleration (50 G approx.) in X, Y and Z directions for three times each									
Material				Housing: nickel-plated brass, GX-208 series housing is stainless steel Sensing surface: PBT							
Connector				M8 - 3Pin connector; M12/18/30 - 4Pin connector							
Netweight				Approx13g	Approx35g	Approx59.7g	Approx90g	Approx16g	Approx40g	Approx65.8g	Approx100.5g

DC Two-wire Type

Item	Model No	Type		Double distance shielded type				Double distance non-shielded type			
		Normal Open	NPN Output	GX-208MKAU	GX-212MKAU	GX-218MKAU	GX-230MKAU	GX-208MLKAU	GX-212MLKAU	GX-218MLKAU	GX-230MLKAU
			PNP Output								
		Normal Closed	NPN Output	GX-208MKBU	GX-212MKBU	GX-218MKBU	GX-230MKBU	GX-208MLKBU	GX-212MLKBU	GX-218MLKBU	GX-230MLKBU
			PNP Output								
Max. operation distance				2mm ± 10%	4mm ± 10%	8mm ± 10%	15mm ± 10%	4mm ± 10%	8mm ± 10%	16mm ± 10%	30mm ± 10%
Standard sensing object				0mm ~ 1.6mm	0mm ~ 3.2mm	0mm ~ 6.4mm	0mm ~ 12mm	0mm ~ 3.2mm	0mm ~ 6.4mm	0mm ~ 12.8mm	0mm ~ 24mm
Standard sensing object				Ironsheet 8mm × 8mm × t1mm	Ironsheet 12mm × 12mm × t1mm	Ironsheet 24mm × 24mm × t1mm	Ironsheet 45mm × 45mm × t1mm	Ironsheet 12mm × 12mm × t1mm	Ironsheet 24mm × 24mm × t1mm	Ironsheet 48mm × 48mm × t1mm	Ironsheet 90mm × 90mm × t1mm
Max. response frequency				1.5kHz	1kHz	0.5kHz	0.25kHz	1kHz	0.8kHz	0.4kHz	0.1kHz
Hysteresis				15% or less of operation distance (standard sensing object)							
Repeatability				5% or less of operation distance							
Supply voltage				10V to 30V DC ±10% Ripple P-P 10% or less							
Current consumption				10mA or less							
Output				·Load current: <100mA ·Residual voltage: <4V (load current 100mA and wire length 2m)							
Indicator Light				Yellow Indicator							
Temperature Effect				Within the temperature range of -25°C to +70°C, within 10% of the detection distance at +23°C							
Environmental resistance	IP protection		IP67/IP67G(IEC)								
	Circuit protection		Power polarity protection, short circuit protection, overload protection, surge absorption								
	Ambient temperature		-25°C ~ +70°C (no condensation or frost)								
	Ambient humidity		35%RH ~ 85%RH								
	Voltage withstandability		1000V AC for one min.between all supply terminals connected together and enclosure								
	Insulation resistance		Above 20MΩ between all power connection terminals and housing, mega meter based on DC500V								
	Vibration resistance		Withstands vibrations of 10Hz to 55Hz and double amplitude of 1.5mm for 2 hours in the X, Y and Z directions								
	Shock resistance		500m/s2 acceleration (50 G approx.) in X, Y and Z directions for three times each								
Material				Housing: nickel-plated brass, GX-208 series housing is stainless steel Sensing surface: PBT							
Cable				3-core oil-resistant PVC cable with a cross-sectional area of 0.2 mm2, length 2 m							
Cable extension				Extension up to total 100m is possible with 0.3mm2, or more, cable							
Net Weight				55gApprox.	86gApprox.	105gApprox.	170gApprox.	56gApprox.	88gApprox.	107gApprox.	185gApprox.

■ DC three-wire Type - Small diameter Type

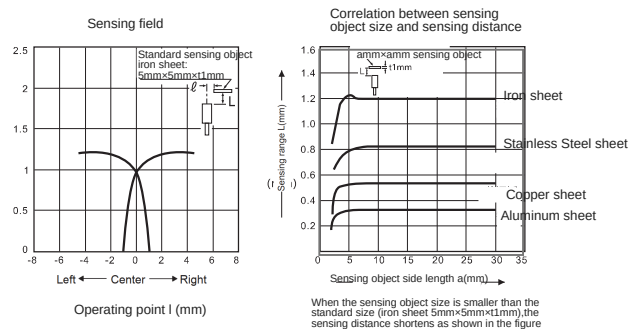
Items			Double distance shielded type				
			Normal Open	NPN Output	GX-204SKA	GX-205SKA	GX-205MKA
				PNP Output	GX-204SKA-P	GX-205SKA-P	GX-205MKA-P
			Normal Closed	NPN Output	GX-204SKB	GX-205SKB	GX-205MKB
PNP Output	GX-204SKB-P	GX-205SKB-P		GX-205MKB-P			
Max. operation distance			1.2mm ± 10%				
Stable detection range			0mm ~ 0.84mm				
Standard detection object			Iron sheet 5mm × 5mm × t1mm				
Max. response frequency			2kHz				
Hysteresis			10% or less of operation distance (standard sensing object)				
Repeatability			3% or less of operation distance				
Supply voltage			10V to 30V DC±10% Ripple P-P 10% or less				
Current consumption			10mA or less				
Output			<NPN Output> NPN open-collector transistor ·Load current: <100mA ·Residual voltage: <2V (load current 100mA and wire length 2m)		<PNP Output> PNP open-collector transistor ·Load current: <100mA ·Residual voltage: <2V (load current 100mA and wire length 2m)		
Indicator			Yellow Indicator				
Temperature Effect			Within the temperature range of -25°C to +70°C, within 10% of the detection distance at +23°C				
Environmental resistance	IP protection		IP67/IP67G(IEC)				
	Circuit protection		Power polarity protection, short circuit protection, overload protection, surge absorption				
	Ambient temperature		-25°C ~ +70°C (no condensation or frost)				
	Ambient humidity		35%RH ~ 85%RH				
	Voltage withstandability		500V AC for one min.between all supply terminals connected together and enclosure				
	Insulation resistance		Above 20MΩ between all power connection terminals and housing, mega meter based on DC500V				
	Vibration resistance		Withstands vibrations of 10Hz to 55Hz and double amplitude of 1.5mm for 2 hours in the X, Y and Z directions				
	Shock resistance		500m/s2 acceleration (50 G approx.) in X, Y and Z directions for three times each				
Material			Housing: Stainless steel Sensing surface: PBT				
Cable			3-core oil-resistant and bending-resistant PVC cable with a cross-sectional area of 0.12mm2, length 2m				
Net Weight			Approx 27g				

■ Double distance Type

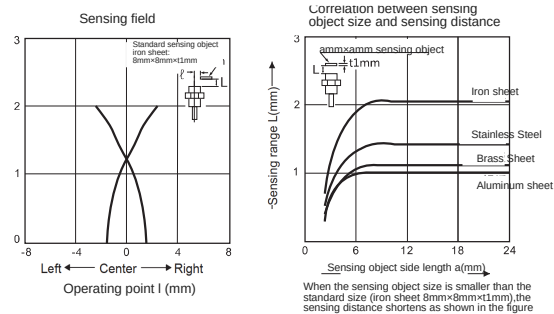
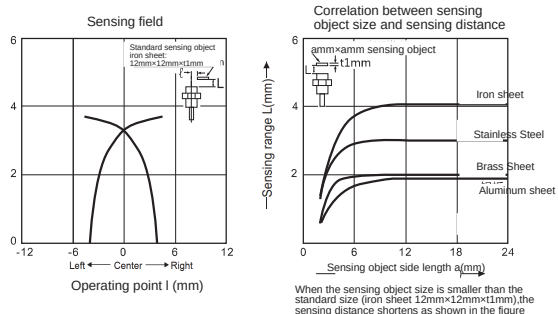
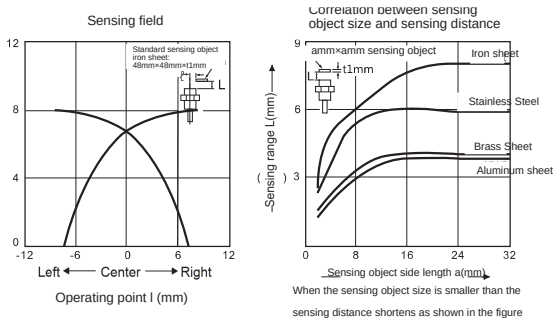
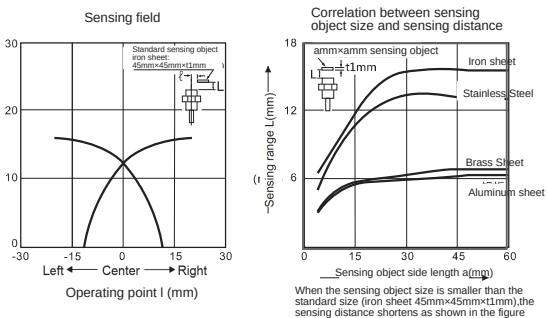
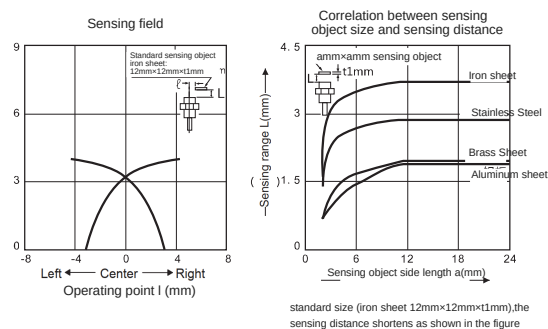
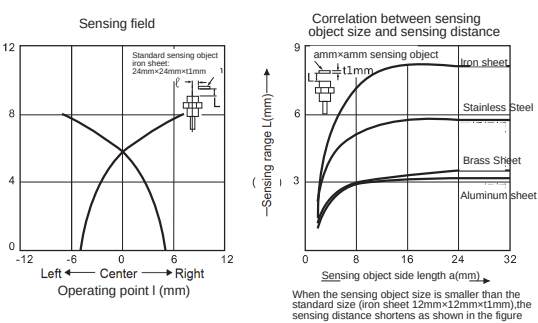
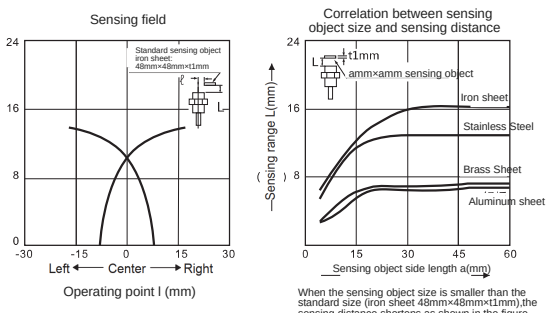
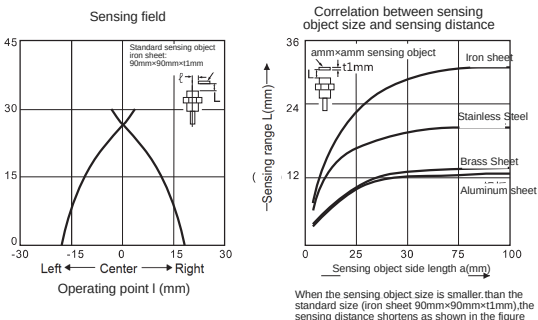
· Double distance Type

GX-204SKA/B-(P)
GX-205SKA/B-(P)
GX-205MKA/B-(P)

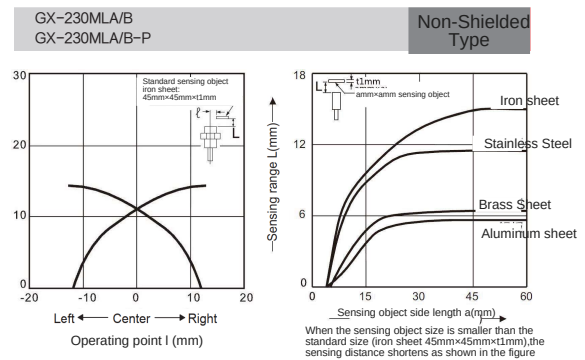
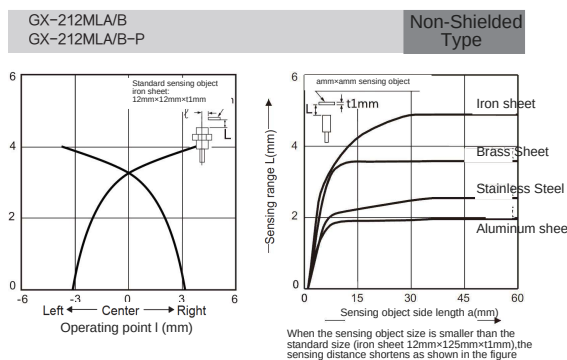
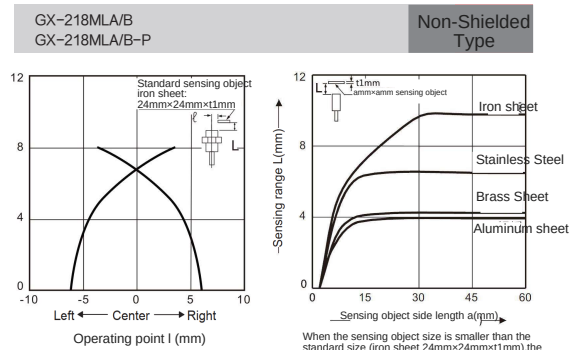
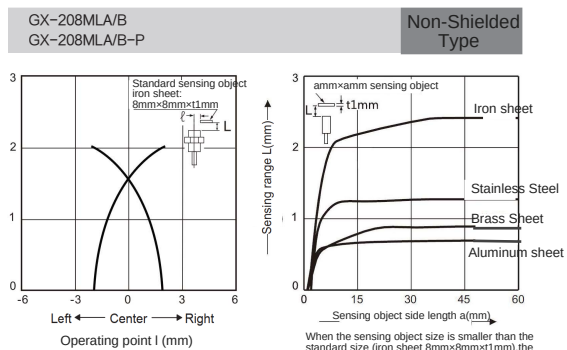
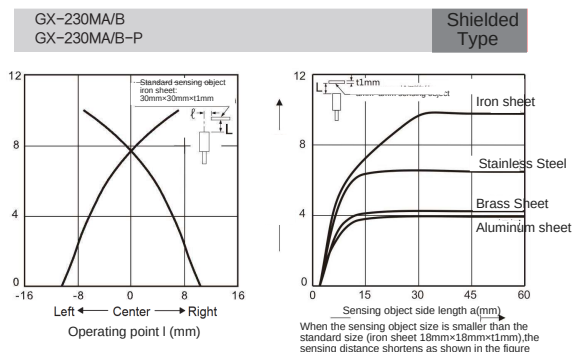
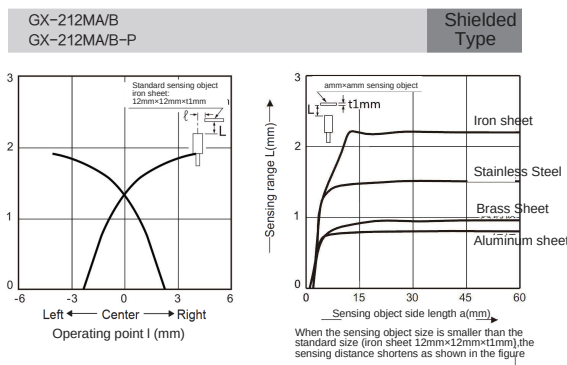
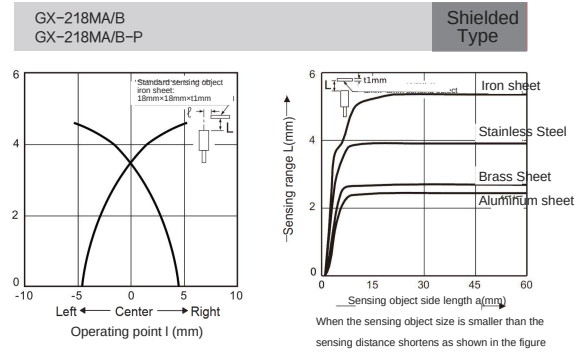
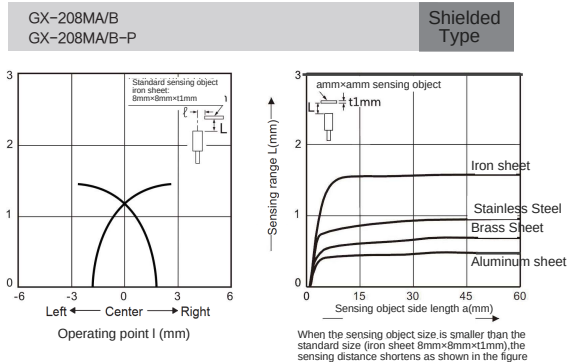
Shielded Type



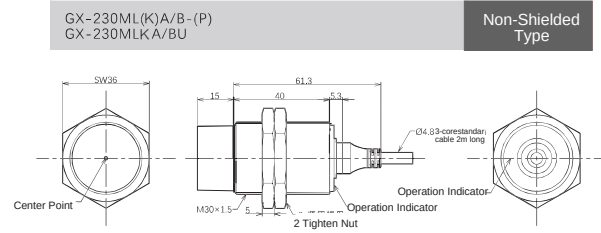
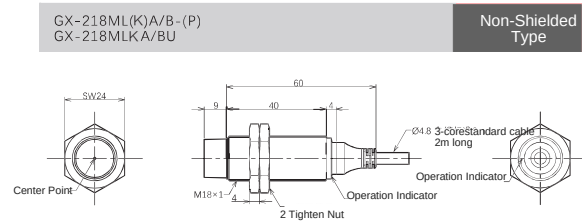
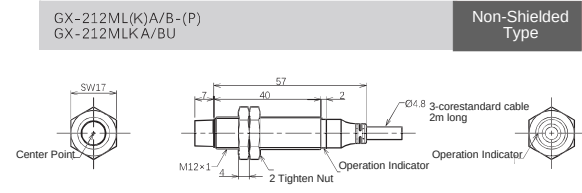
Double Distance Type

GX-208MKA/B-(P)
GX-208MKA/B-(P)-Z
GX-208MKA/BUShielded
TypeGX-212MKA/B-(P)
GX-212MKA/B-(P)-Z
GX-212MKA/BUShielded
TypeGX-218MKA/B-(P)
GX-218MKA/B-(P)-Z
GX-218MKA/BUShielded
TypeGX-230MKA/B-(P)
GX-230MKA/B-(P)-Z
GX-230MKA/BUShielded
TypeGX-208MLKA/B-(P)
GX-208MLKA/B-(P)-Z
GX-208MLKA/BUNon-Shielded
TypeGX-212MLKA/B-(P)
GX-212MLKA/B-(P)-Z
GX-212MLKA/BUNon-Shielded
TypeGX-218MLKA/B-(P)
GX-218MLKA/B-(P)-Z
GX-218MLKA/BUNon-Shielded
TypeGX-230MLKA/B-(P)
GX-230MLKA/B-(P)-Z
GX-230MLKA/BUNon-Shielded
Type

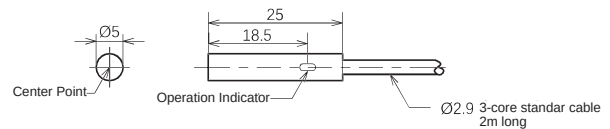
Standard Distance



GX-208M(K)A/B-(P) GX-208MKA/BU	Shielded Type
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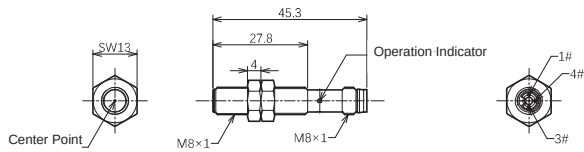
GX-204SKA/B-(P)	Shielded Type
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Connector Type

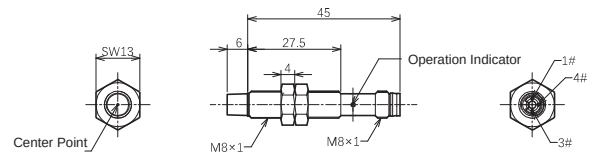
GX-208MKA/B-(P)-Z

Shielded Type



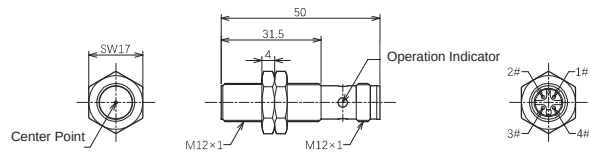
GX-208MLKA/B-(P)-Z

Non-Shielded Type



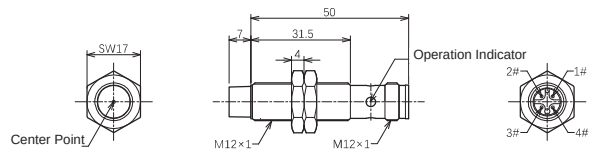
GX-212MKA/B-(P)-Z

Shielded Type



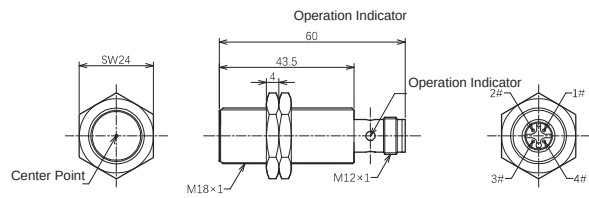
GX-212MLKA/B-(P)-Z

Non-Shielded Type



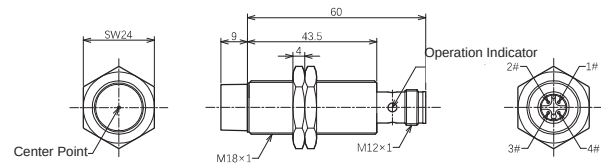
GX-218MKA/B-(P)-Z

Shielded Type



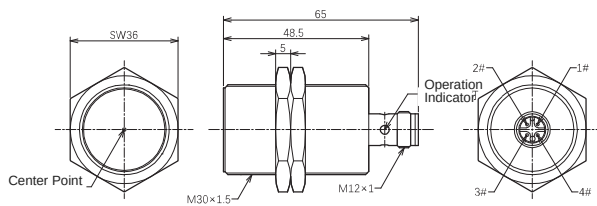
GX-218MLKA/B-(P)-Z

Non-Shielded Type



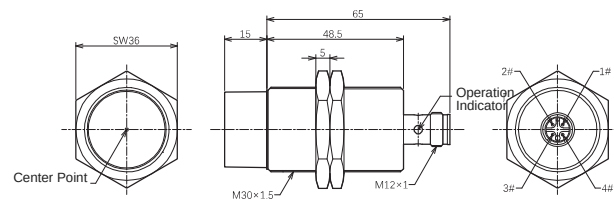
GX-230MKA/B-(P)-Z

Shielded Type

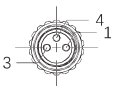
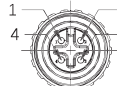


GX-230MLKA/B-(P)-Z

Non-Shielded Type

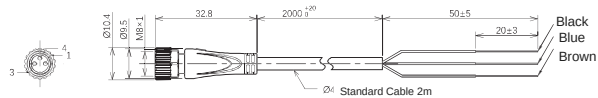


Specifications

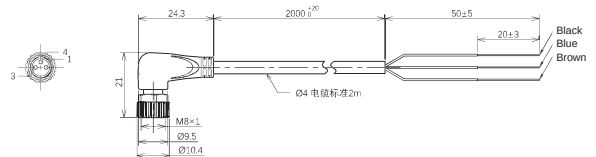
Product Picture					
Model Number		CN-23A-CC2	CN-23AL-CC2	CN-24-CC2	CN-24L-CC2
Number of Cores		3 cores		4 cores	
Rated Voltage		24V DC			
Rated Impact Voltage		1.5KV		2.5KV	
Rated Current		4A			
Port Covers		Thread (M8×1mm) Recommended torque: 0.4N·m, self-locking		Thread (M12×1mm) Recommended torque: 0.6N·m, self-locking	
Sealing nut		M8		M12	
Material	Body material	TPU			
	Wire sheath/conductor	TPU/Copper			
	Sealing ring material	Hydro genated Nitrile Rubber			
	Pin contacts	Phosphor Bronze			
	Nut material	Zinc Alloy			
Ambient temperature		When in use:-25℃~70℃,when in storage:-40℃~65℃			
Protection level(tightened state)		IP67			
Mechanical life cycle		Plug and unplug times more than 100 times			
Female connector code		1. Brown 3. Blue 4. Black		1. Brown 2. White 3. Blue 4. Black	
Outlet mode		Straight	Right angle	Straight	Right angle
Product Weight		45g	46g	66g	69g
Pin Arrangement		3Cores  1. Brown 3. Blue 4. Black		3Cores  1. Brown 2. White 3. Blue 4. Black	

Dimensions

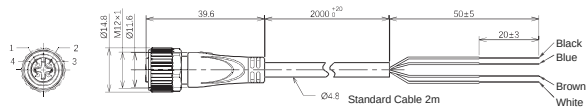
CN-23A-CC2



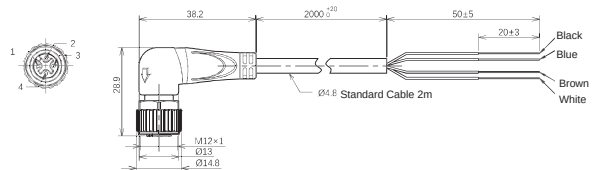
CN-23AL-CC2



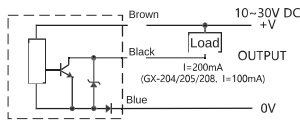
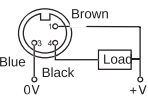
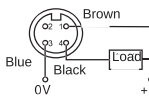
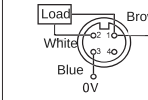
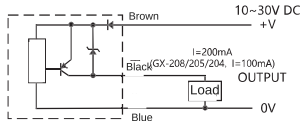
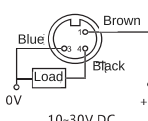
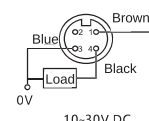
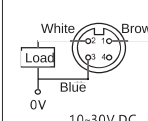
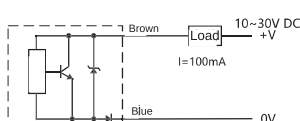
CN-24-CC2



CN-24L-CC2



Output Circuit Diagram

	Cable Type ON when approaching/ON when leaving	Pin Diagram	Connector Type Turn On when approaching	Connector Type Turn On when leaving	
NPN Three wire DC					NO: When Approaching Testing Object Yes ON No A:
PNP Three wire DC					NC: When leaving Testing Object Yes A: No ON
Two wire DC					

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