



High-sensitivity industrial sensors

Product Selection Catalog

SHENZHEN TIANYI INTELLIGENT TECHNOLOGY CO., LTD

Website: www.wodtop.com

Phone: 0755-23732760

Address: Tianyi Intelligent Industrial Park, Zhongkai High-tech Zone,
Huizhou City, Guangdong Province

WODTOP

ABOUT US



Corporate Vision

To become a leading domestic and world-class industrial sensor manufacturer



Corporate Mission

Perceiving the world, intelligently creating the future



Corporate Values

Customer-centric, dedicated to achievers, united and trustworthy, pragmatic and progressive

98

98% customer satisfaction rate

18

18 national invention patents

Shenzhen Tianyi Intelligent Technology Co., Ltd. is a high-tech enterprise specializing in the research, development, manufacturing, and sales of industrial sensors.

The company's sensor products cover areas such as high-precision position detection, precision measurement, and safety recognition. Main series include magnetic switches, Optical fiber sensors, photoelectric sensors, proximity sensors, Safety Gratings, laser displacement sensors, color recognition sensors, pipeline liquid level sensors, 3D profilometers, barcode scanners, and more. The company's products are widely used in fields such as electronics and semiconductors, CNC machine tools, automobile manufacturing, food and medical, packaging and printing, warehousing and logistics, new energy, and robotics.

8000

Covering an area of over 8,000 square meters

1000

The group has over 1,000 employees

200

Products are exported to more than 200 overseas regions worldwide

50

Established good cooperative relationships with distributors in over 50 countries











OUR STORY

Shenzhen Tianyi Intelligent Technology Co., Ltd. is located in Tianyi Intelligent Industrial Park, Zhongkai High-tech Zone, Huizhou City, Guangdong Province. The company's factory area covers over 8,000 square meters and is equipped with a complete R&D center, testing center, laboratory, and intelligent production workshops.




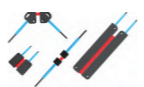



The company strictly follows the ISO9001 quality management system to strengthen internal management. With strong R&D capabilities, the company's R&D personnel come from first-class sensor companies in the industry, focusing on industrial sensor research for over ten years. They have a thorough understanding of industry technology development and product applications, accumulating rich innovation and practical experience. The optical technology, control systems, and digital algorithms are completely independently designed. At the same time, the company has gathered many overseas returnees, laying a solid foundation for the company's products to enter the international market.

The company adheres to the philosophy of "customer-centric, dedicated to strivers, united and trustworthy, pragmatic and progressive," continuously developing cutting-edge technology products to provide users with considerate services and more high-quality, precise, and rapid sensor solutions.




Photoelectric Sensor

<p>007</p>  <p>Slot Photoelectric Sensor 25 Series</p>	<p>011</p>  <p>Slot Photoelectric Sensor 45 Series</p>	<p>015</p>  <p>Slot Photoelectric Sensor 65 Series</p>	<p>019</p>  <p>Slot Photoelectric Sensor 67 WR Series</p>
<p>023</p>  <p>Slot Photoelectric Sensor 67 Series</p>	<p>027</p>  <p>Photoelectric Sensor Standard Square Type Series</p>	<p>051</p>  <p>Photoelectric Sensor Cylindrical Type Series</p>	<p>069</p>  <p>Photoelectric Sensor Ultra-thin Series</p>
<p>075</p>  <p>Photoelectric Sensor Flat Type Series</p>	<p>079</p>  <p>Photoelectric Sensor Mini Square Type Series</p>		





Fiber Optic Unit

<p>083</p>  <p>Economy Fiber Optic Threadless & M Series</p>	<p>101</p>  <p>Right-angle Fiber Optic M Series</p>	<p>105</p>  <p>Side-view Fiber Optic R/T Series</p>	<p>109</p>  <p>Area Fiber Optic R/T Series</p>
<p>119</p>  <p>Flat Mount Fiber Optic R/T Series</p>	<p>123</p>  <p>Medium-high Temperature Resistant Fiber Optic R/T Series</p>	<p>127</p>  <p>Fiber Optic Focusing Lens Through-beam/Reflective Series</p>	





Fiber Amplifier

<p>131</p>  <p>Fiber Amplifier FOS-N41 Series</p>	<p>135</p>  <p>Fiber Amplifier FOS-N21 Series</p>	<p>139</p>  <p>Fiber Amplifier FOS-N11 Series</p>
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Laser Displacement Sensor

<p>143</p>  <p>Laser Displacement Sensor LD-A Series</p>	<p>147</p>  <p>Laser Displacement Sensor LD-B Series</p>	<p>151</p>  <p>Laser Displacement Sensor LD-C Series</p>	<p>155</p>  <p>Laser Displacement Sensor LD-G Series</p>
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Color Sensor

<p>159</p>  <p>Multi-light Source Color Sensor LC-M10 Series</p>	<p>163</p>  <p>Intelligent White Light Color Sensor LC-W Series</p>	<p>167</p>  <p>4-channel Output Color Sensor LC-F410 Series</p>	<p>171</p>  <p>Single-channel Output Color Sensor LC-F110 Series</p>
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Safety Sensor

<p>175</p>  <p>Level 4 Safety Light Curtain GTA Series</p>	<p>179</p>  <p>Safety Light Curtain GTQ Series</p>	<p>183</p>  <p>Safety Light Curtain GTF Series</p>	<p>187</p>  <p>Safety Light Curtain GTL Series</p>
<p>191</p>  <p>Safety Light Curtain GTS Series</p>	<p>195</p>  <p>Safety Light Curtain GTR Series</p>	<p>199</p>  <p>Safety Light Curtain GTW Series</p>	<p>205</p>  <p>Safety Light Curtain GTM Series</p>
<p>211</p>  <p>Safety Door Lock D3-M05 Series</p>	<p>219</p>  <p>Safety Door Lock D3-M06 Series</p>	<p>225</p>  <p>Safety Door Switch GTR10 Series</p>	<p>229</p>  <p>Safety Door Switch GTR13 Series</p>
<p>237</p>  <p>Safety Door Switch GLSA Series</p>	<p>239</p>  <p>Safety Relay Module SR60 Series</p>		

Proximity Sensor

<p>243</p>  <p>Ultra-mini Cylindrical Proximity Sensor GS Series</p>	<p>253</p>  <p>Cylindrical Proximity Sensor GR Series</p>	<p>299</p>  <p>2-wire Cylindrical Proximity Sensor GR Series</p>	<p>307</p>  <p>Mini Square Proximity Sensor GQ Series</p>
<p>315</p>  <p>Square Proximity Sensor GQ Series</p>	<p>323</p>  <p>Ring Proximity Sensor GRH Series</p>	<p>327</p>  <p>High Temperature Resistant Proximity Sensor GT Series</p>	<p>337</p>  <p>Capacitive Sensor GR Series</p>


Label/Pipeline Liquid Level Sensor

347



Label Sensor
GUF Series


351



Pipeline Level Sensor
YW Series

Digital Pressure Gauge


357



Digital Pressure Gauge
PG Series


Magnetic Sensor

369




General Type Electronic Sensor
DMS Series

371



Water and Oil Resistant Electronic Sensor
CMS Series

377



Strong Magnetic Field Resistant Sensor
QMS Series

Intelligent Code Reader

381



Intelligent Code Reader
GVS600 Series

385



Intelligent Code Reader
GVS800 Series

389



Intelligent Code Reader
GVS1000 Series

393



Intelligent Code Reader
GVS2000 Series

Intelligent Vision Sensor

397

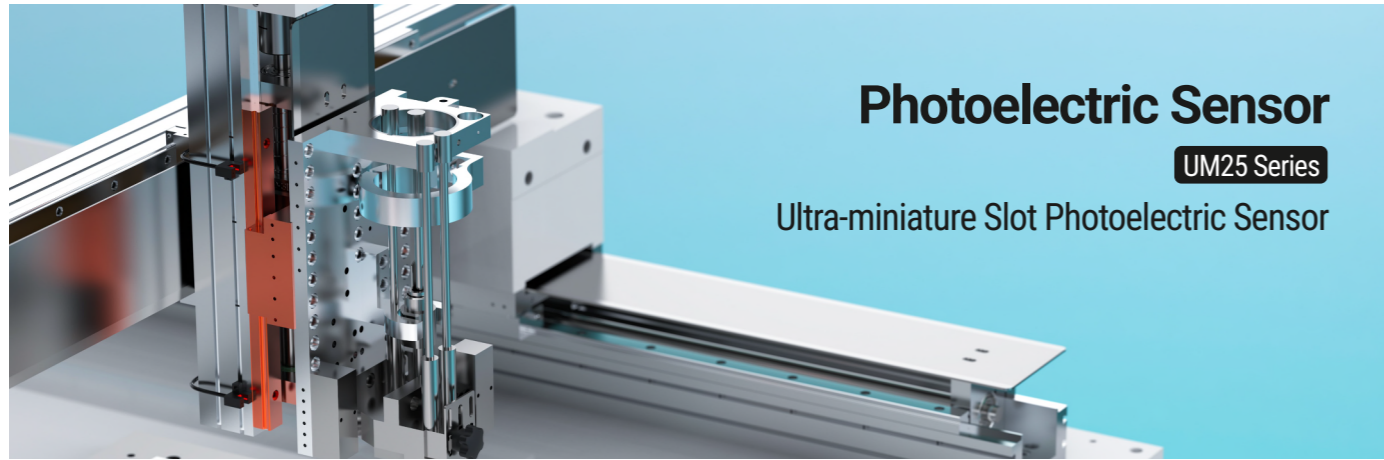


Intelligent Vision Sensor
GVN2000 Series

401



Intelligent Vision Sensor
GVN4000 Series

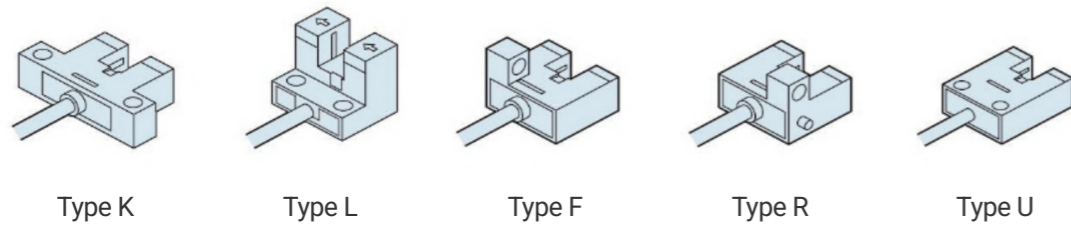


Photoelectric Sensor

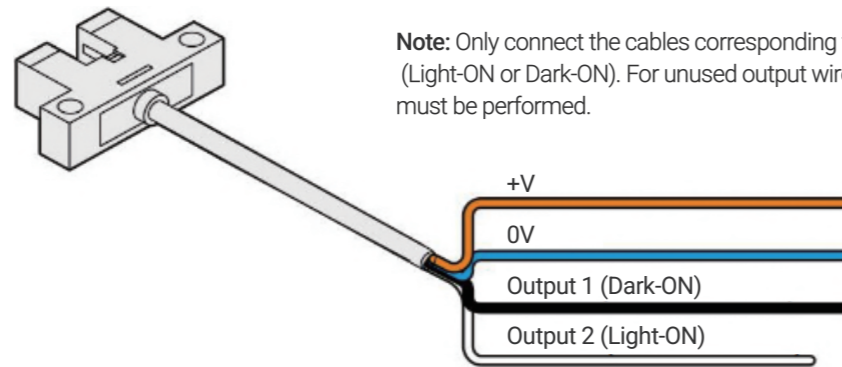
UM25 Series

Ultra-miniature Slot Photoelectric Sensor

Simple Connection, Eliminates troublesome procedures such as soldering and insulation treatment required in the past, enabling quick and convenient connection.



All models are equipped with two independent outputs: Light-ON (ON when light is received) / Dark-ON (ON when light is blocked), allowing adaptation to different output requirements based on application scenarios.

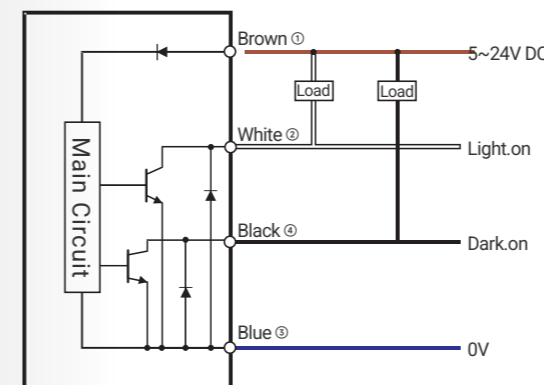


Note: Only connect the cables corresponding to the used output mode (Light-ON or Dark-ON). For unused output wires, proper insulation treatment must be performed.

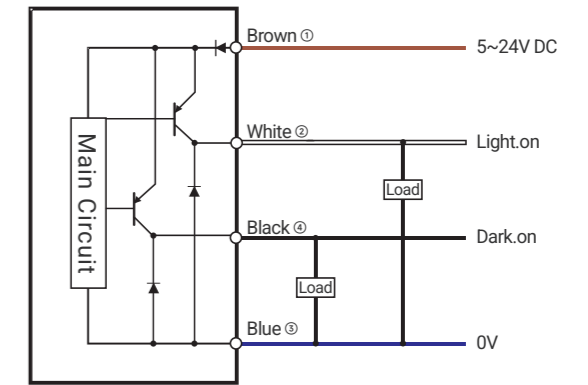
- Standard with 2M flexible cable (customizable length available)
- Optional bend-resistant drag chain cable (-R option)
- Optional white NO (normally open) / black NC (normally closed) configuration (-SX option)
- Power supply voltage range: 5-24 VDC
- High-speed response with 3 kHz response frequency

Appearance					
Type	Type K	Type L	Type F	Type R	Type U
Detection Distance	5mm (Slot Width)				
Standard Detection Object	Opaque objects of 0.8×1.2mm or larger				
Repeatability	0.03mm or less				
Output Mode	NPN or PNP open collector				
Switching Mode	Selectable L.on (light-on)/D.on (dark-on)				
Status Indicator	Indicator light off when object detected, on when no object present				
Response Frequency	3kHz				
Light Source	Infrared light				
Operating Voltage	5~24V DC				
Residual Voltage	1V or less (at load current of 100mA)				
Current Consumption	≤8mA				
Protection Circuit	Surge protection, reverse polarity protection				
Ambient Light	Illuminance on light-receiving surface: Incandescent lamp: 1000 lux or less				
Ambient Temperature	Operating: -25°C~+55°C Storage: -30°C~+80°C No freezing				
Ambient Humidity	Operating: 5%~85% RH Storage: 5%~95% RH No condensation				
Dielectric Strength	AC, 1000V for 1 minute, between all power terminals and housing				
Vibration Resistance	Frequency 10Hz~2000Hz, double amplitude 1.5mm (max acceleration 196m/s²), 2 hours in each XYZ direction				
Insulation Resistance	Between all power terminals and housing: 20MΩ or more (DC250V)				
Protection Rating (IP Rating)	IP50				
Housing Material	ABS+PC				
Cable Outlet Style	2m 4-core cable				
Model NPN	UM-K25	UM-L25	UM-F25	UM-R25	UM-U25
Model PNP	UM-K25P	UM-L25P	UM-F25P	UM-R25P	UM-U25P

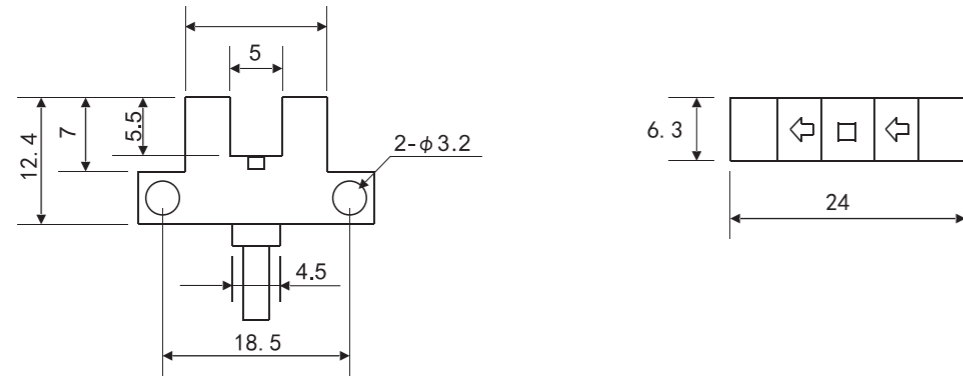
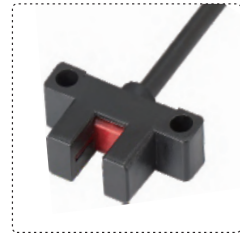
DC 4-wire NPN Output



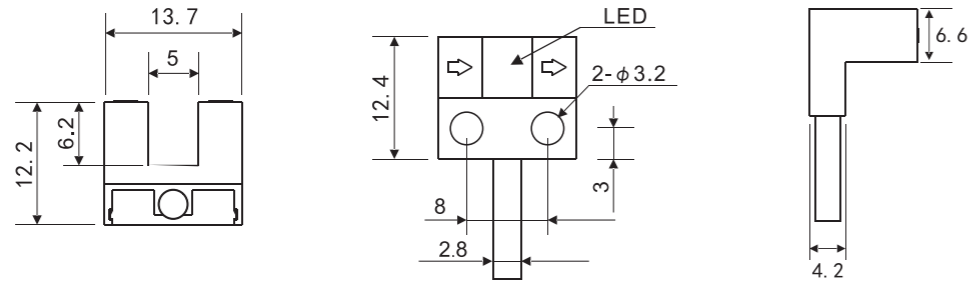
DC 4-wire PNP Output



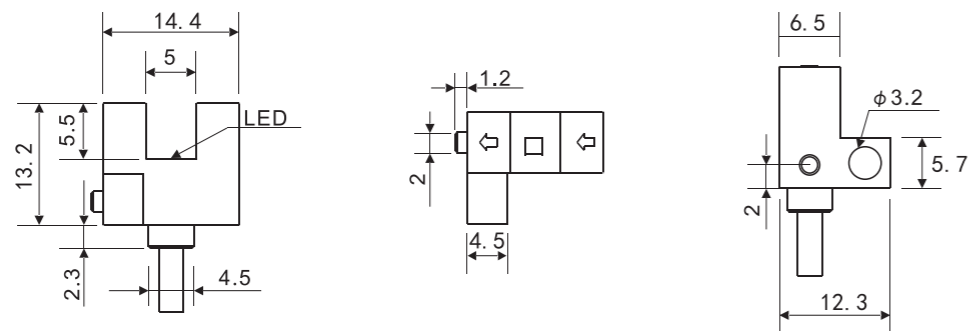
UM-K25



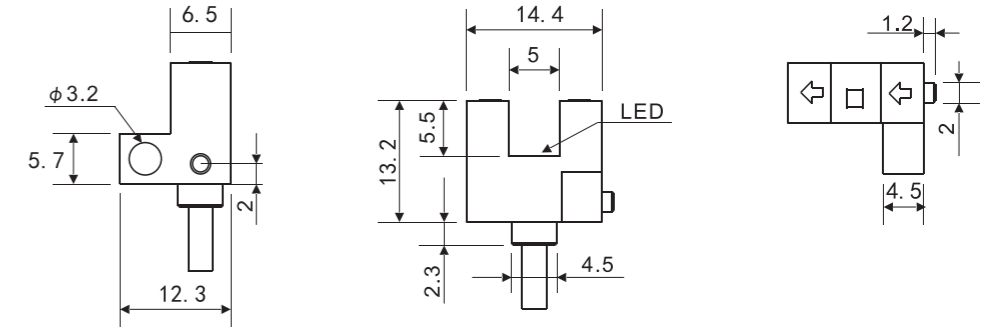
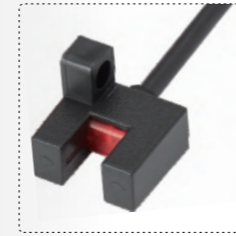
UM-L25



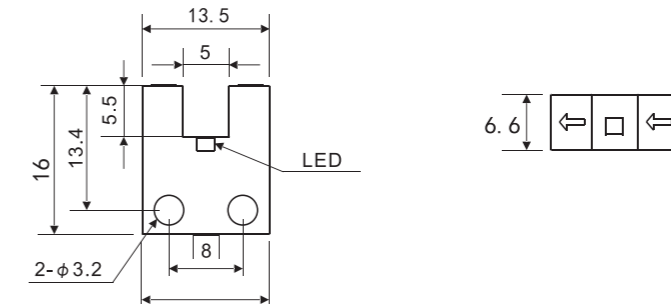
UM-F25

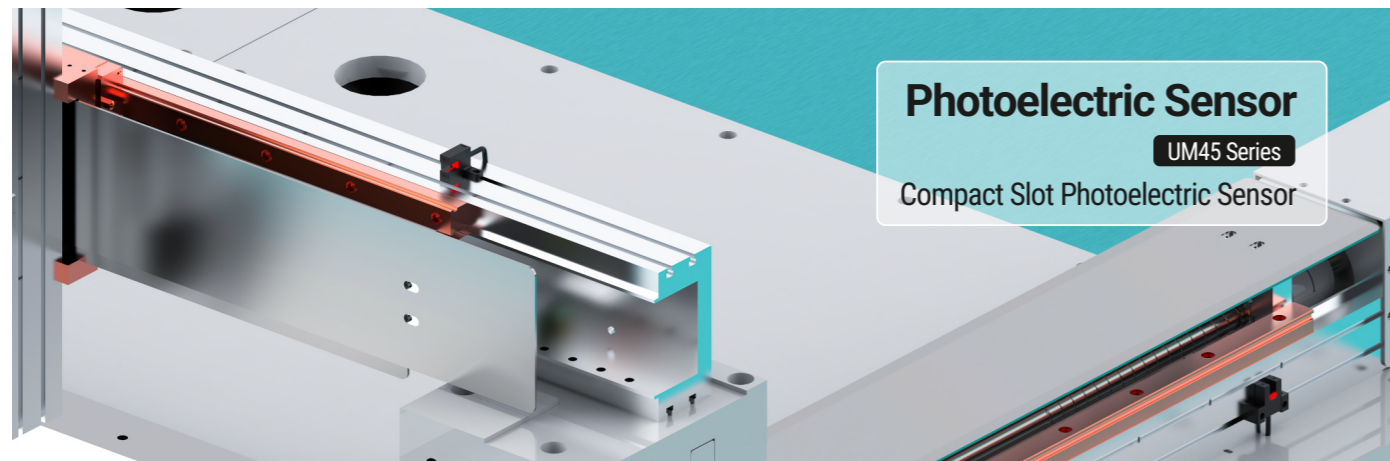


UM-R25

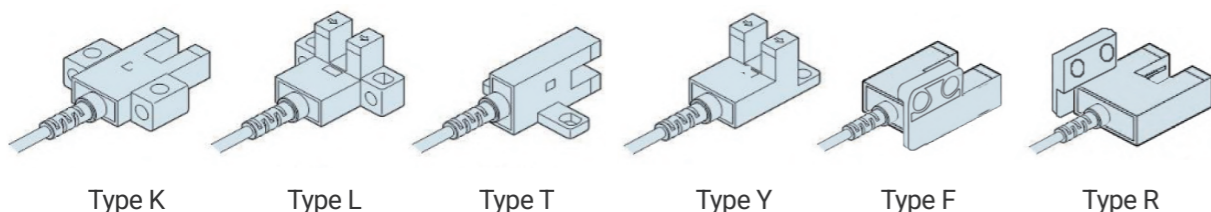


UM-U25

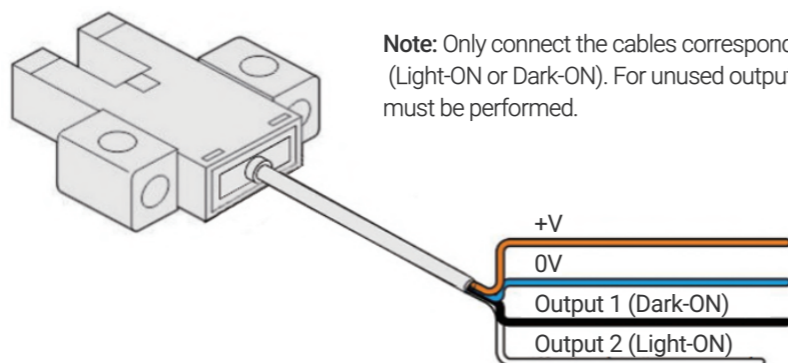




Wide range of models available in 6 different shapes, enabling selection of the type that best meets your installation requirements.



All models are equipped with two independent outputs: Light-ON (ON when light is received) / Dark-ON (ON when light is blocked), allowing adaptation to different output requirements based on application scenarios.

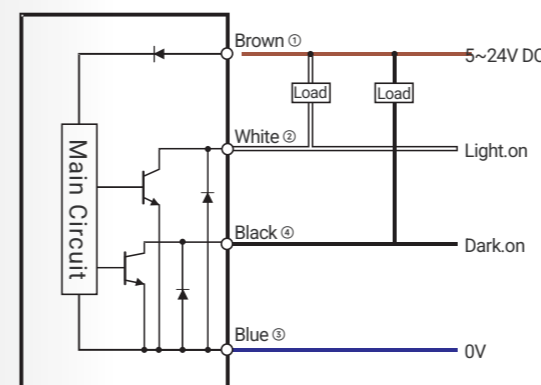


Note: Only connect the cables corresponding to the used output mode (Light-ON or Dark-ON). For unused output wires, proper insulation treatment must be performed.

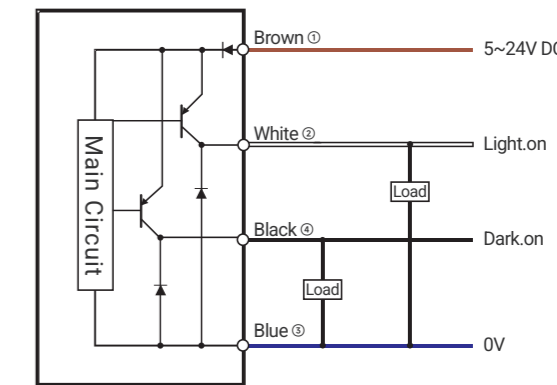
- Standard with 2M flexible cable (customizable length available)
- Optional bend-resistant drag chain cable (-R option)
- Optional white NO (normally open) / black NC (normally closed) configuration (-SX option)
- Power supply voltage range: 5-24 VDC
- High-speed response with 3 kHz response frequency

Appearance						
Type	Type K	Type L	Type T	Type Y	Type F	Type R
Detection Distance	5mm (Slot Width)					
Standard Detection Object	Opaque objects larger than 0.8×1.2mm					
Repeatability	0.03mm or less					
Output Mode	NPN or PNP open collector					
Switching Mode	Switchable L.on (Light-on)/D.on (Dark-on)					
Status Indicator	Light off when object detected, light on when no object present					
Response Frequency	3kHz					
Light Source	Infrared light					
Operating Voltage	5~24V DC					
Residual Voltage	1V or less (at load current 100mA)					
Current Consumption	≤8mA					
Protection Circuit	Surge protection, reverse polarity protection					
Ambient Light	Illuminance on light-receiving surface: Incandescent lamp: 1,000 lux or less					
Ambient Temperature	Operating: -25°C~+55°C Storage: -30°C~+80°C No freezing					
Ambient Humidity	Operating: 5%~85% RH Storage: 5%~95% RH No condensation					
Dielectric Strength	AC, 1000V for 1 minute, between all power terminals and housing					
Vibration Resistance	Frequency 10Hz~2000Hz, double amplitude 1.5mm (max acceleration 196m/s²), 2 hours in each XYZ direction					
Insulation Resistance	Between all power terminals and housing: 20MΩ or more (at DC250V)					
Protection Rating (IP Rating)	IP50					
Housing Material	ABS+PC					
Cable Outlet Style	2m 4-core cable					
Model NPN	UM-K45	UM-L45	UM-T45	UM-Y45	UM-F45	UM-R45
Model PNP	UM-K45P	UM-L45P	UM-T45P	UM-Y45P	UM-F45P	UM-R45P

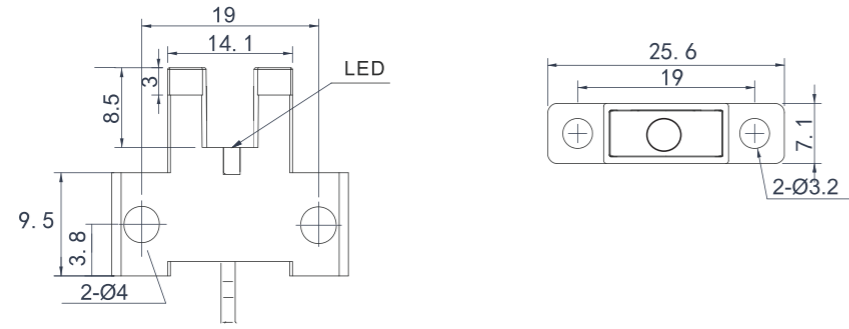
DC 4-wire NPN Output



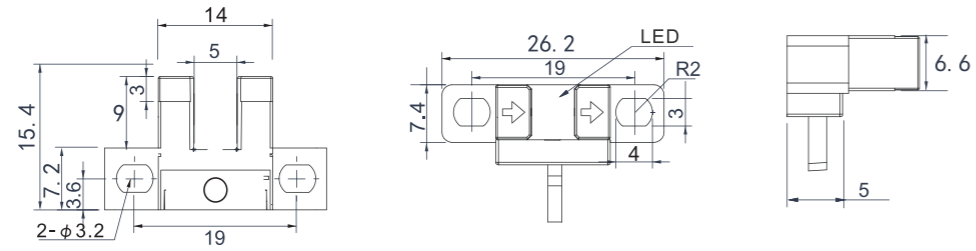
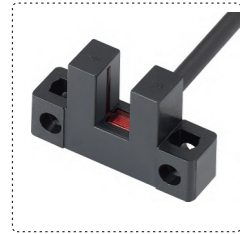
DC 4-wire PNP Output



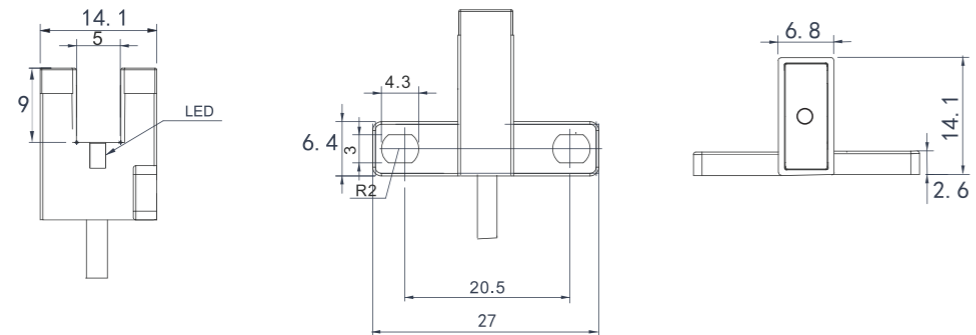
UM-K45



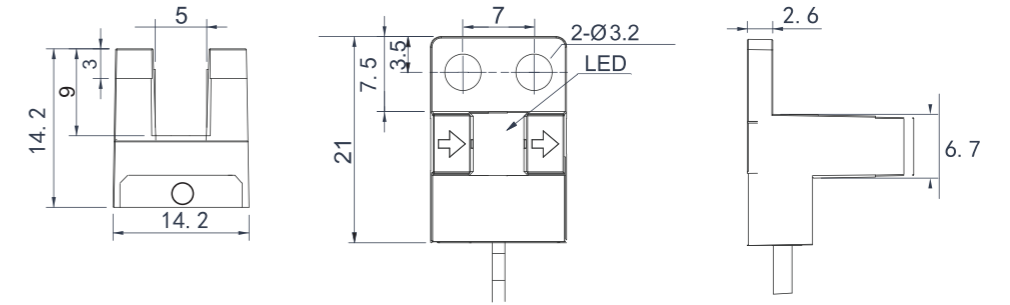
UM-L45



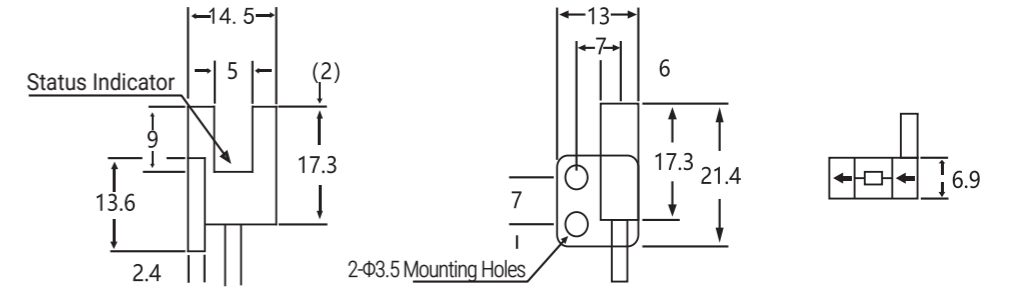
UM-T45



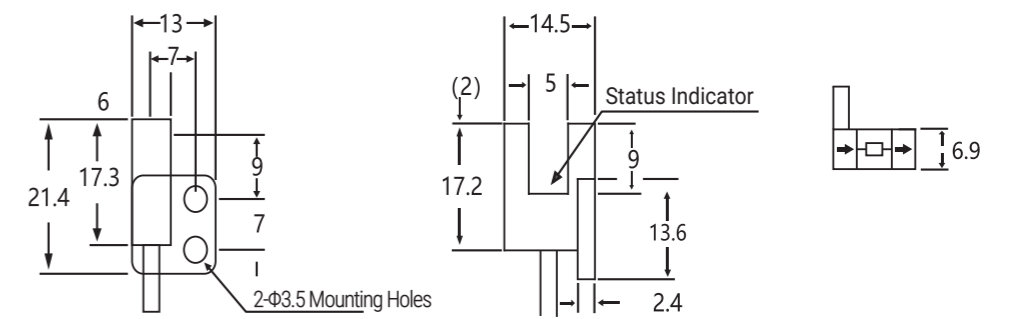
UM-Y45

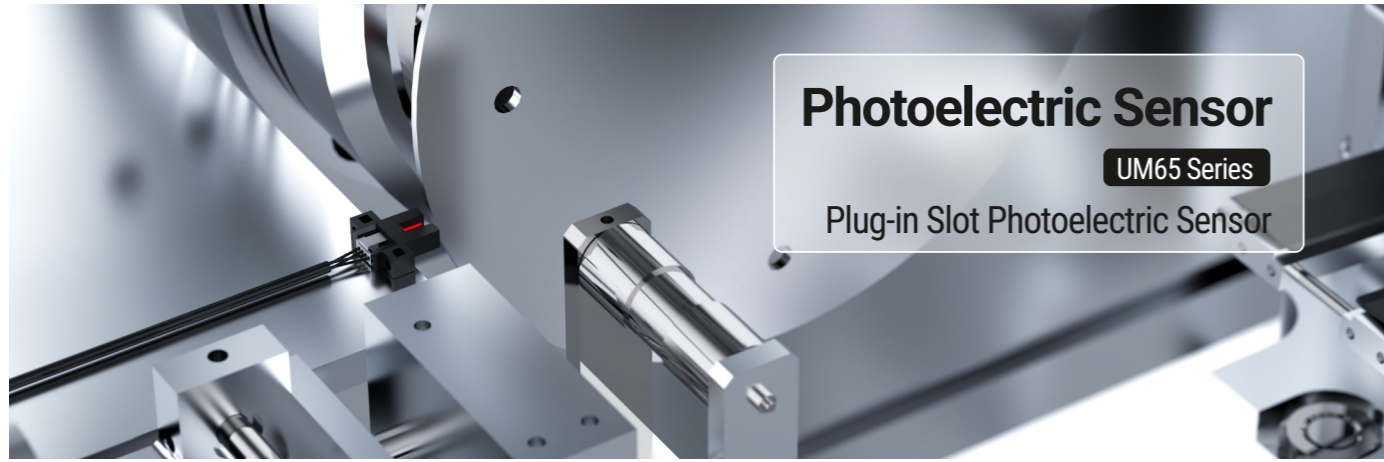


UM-F45



UM-R45



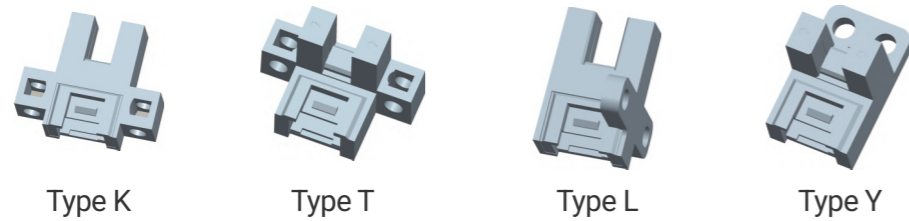


Photoelectric Sensor

UM65 Series

Plug-in Slot Photoelectric Sensor

Wide range of models available in 6 different shapes, enabling selection of the type that best meets your installation requirements.



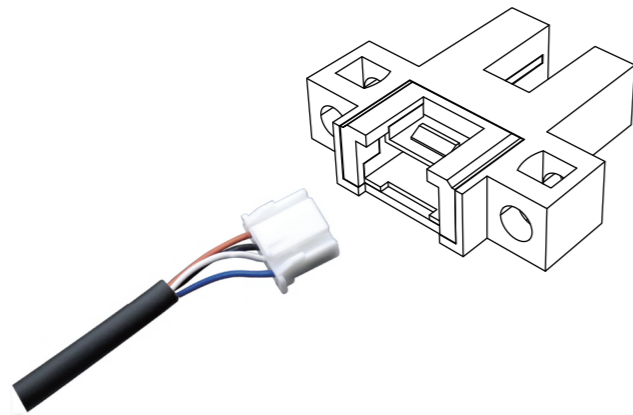
Type K

Type T

Type L

Type Y

Supplied with connector cable



• Optional UM1008 connection cable

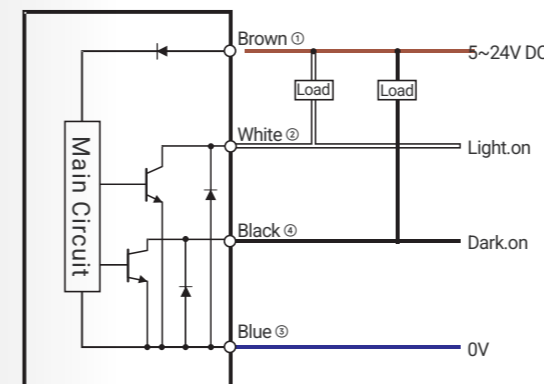
• Optional UM1008-R high-flexibility cable

• Power supply voltage range: 5-24 V DC

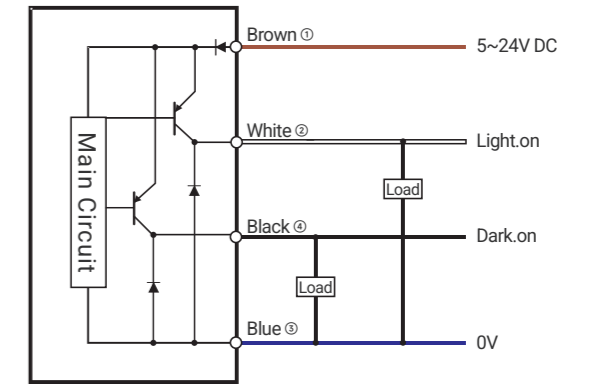
• High-speed response with 3 kHz response frequency

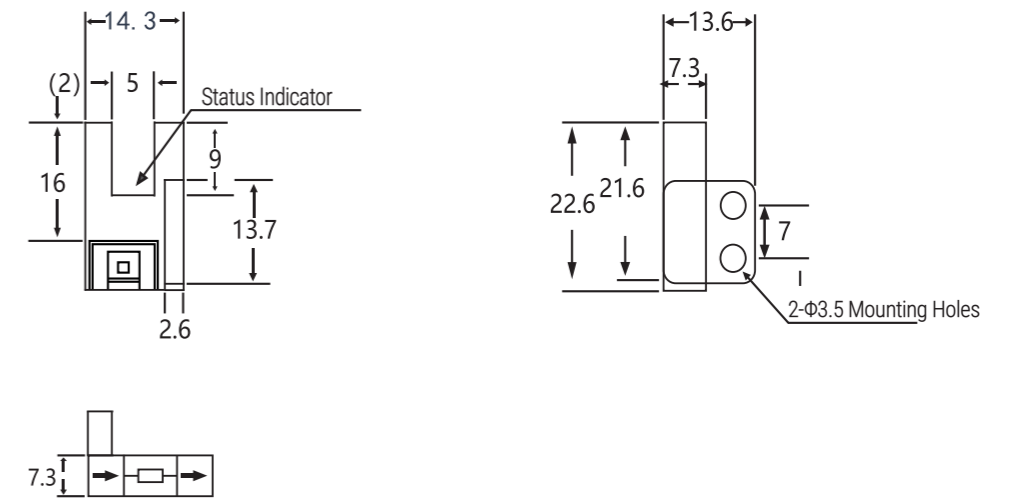
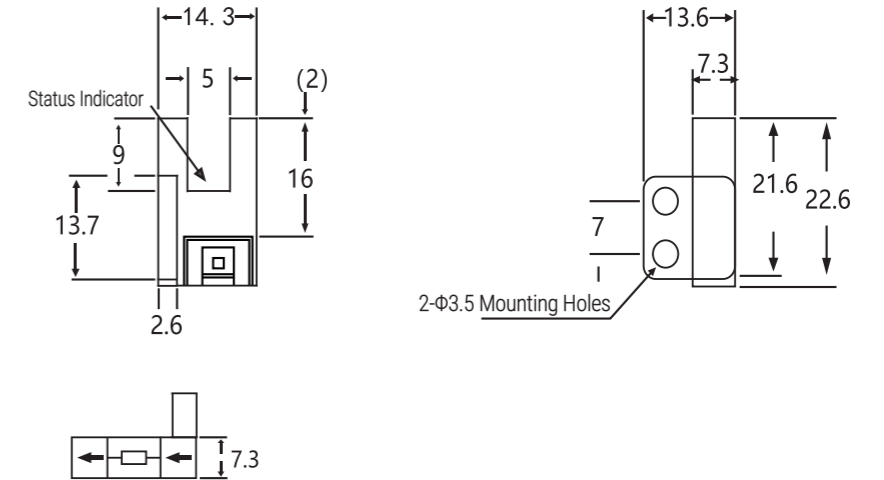
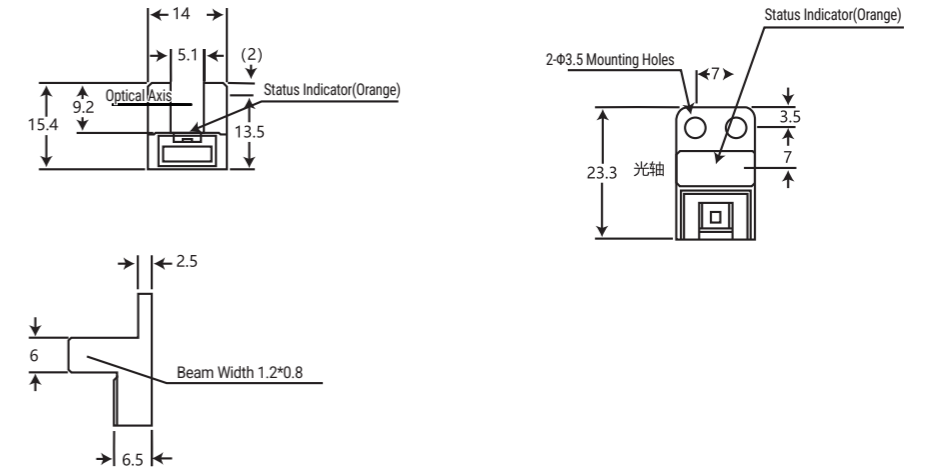
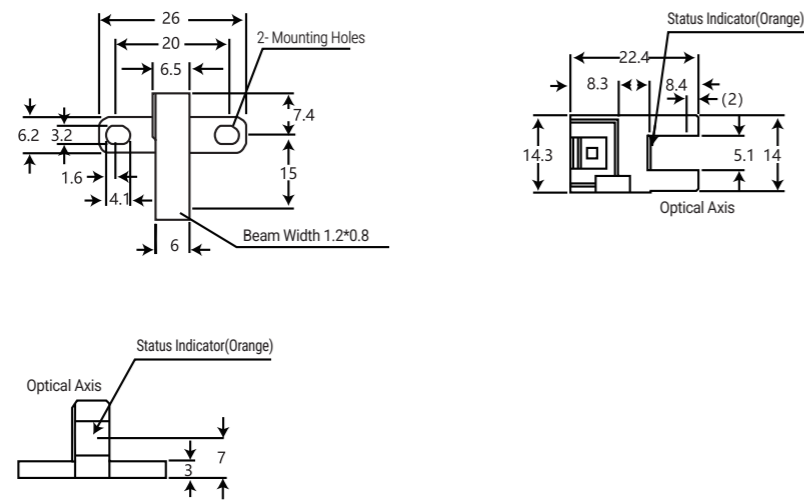
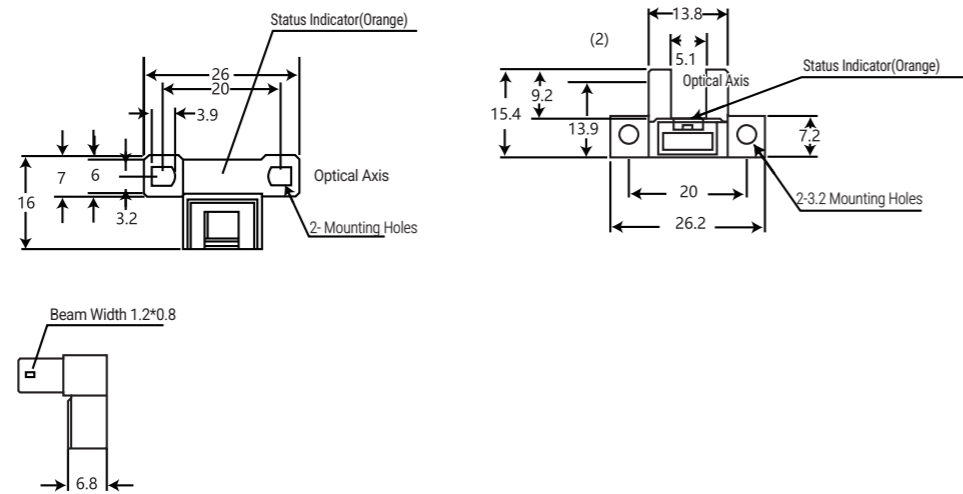
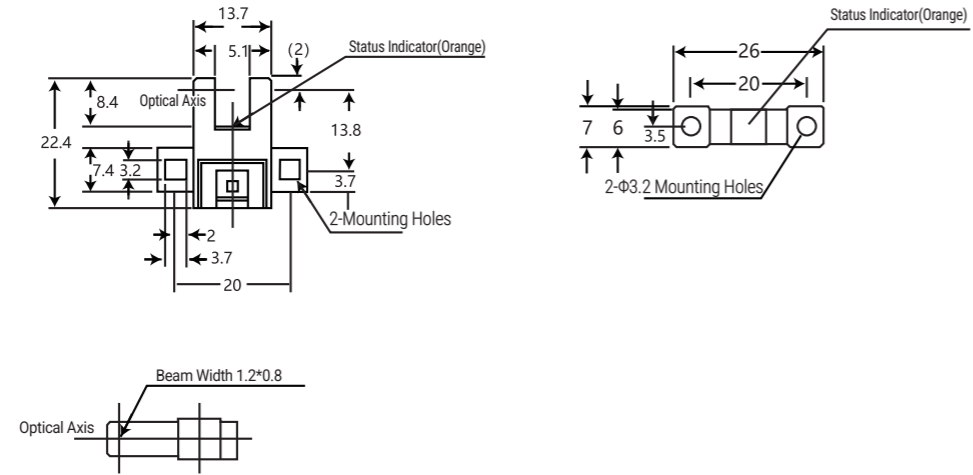
Appearance						
Type	Type K	Type L	Type T	Type Y	Type F	Type R
Detection Distance	5mm (Slot Width)					
Standard Detection Object	Opaque objects larger than 0.8×1.2mm					
Repeatability	0.03mm or less					
Output Mode	NPN or PNP open collector					
Switching Mode	Switchable L.on (Light-on)/D.on (Dark-on)					
Status Indicator	Light off when object detected, light on when no object present					
Response Frequency	3kHz					
Light Source	Infrared light					
Operating Voltage	5~24V DC					
Residual Voltage	1V or less (at load current 100mA)					
Current Consumption	≤8mA					
Protection Circuit	Surge protection, reverse polarity protection					
Ambient Light	Illuminance on light-receiving surface: Incandescent lamp: 1,000 lux or less					
Ambient Temperature	Operating: -25°C~+55°C Storage: -30°C~+80°C No freezing					
Ambient Humidity	Operating: 5%~85% RH Storage: 5%~95% RH No condensation					
Dielectric Strength	AC, 1000V for 1 minute, between all power terminals and housing					
Vibration Resistance	Frequency 10Hz~2000Hz, double amplitude 1.5mm (max acceleration 196m/s ²), 2 hours in each XYZ direction					
Insulation Resistance	Between all power terminals and housing: 20MΩ or more (at DC250V)					
Protection Rating (IP Rating)	IP50					
Housing Material	ABS+PC					
Cable Outlet Style	Connector type					
Model NPN	UM-K65	UM-L65	UM-T65	UM-Y65	UM-F65	UM-K65
Model PNP	UM-K65P	UM-L65P	UM-T65P	UM-Y65P	UM-F65P	UM-K65P

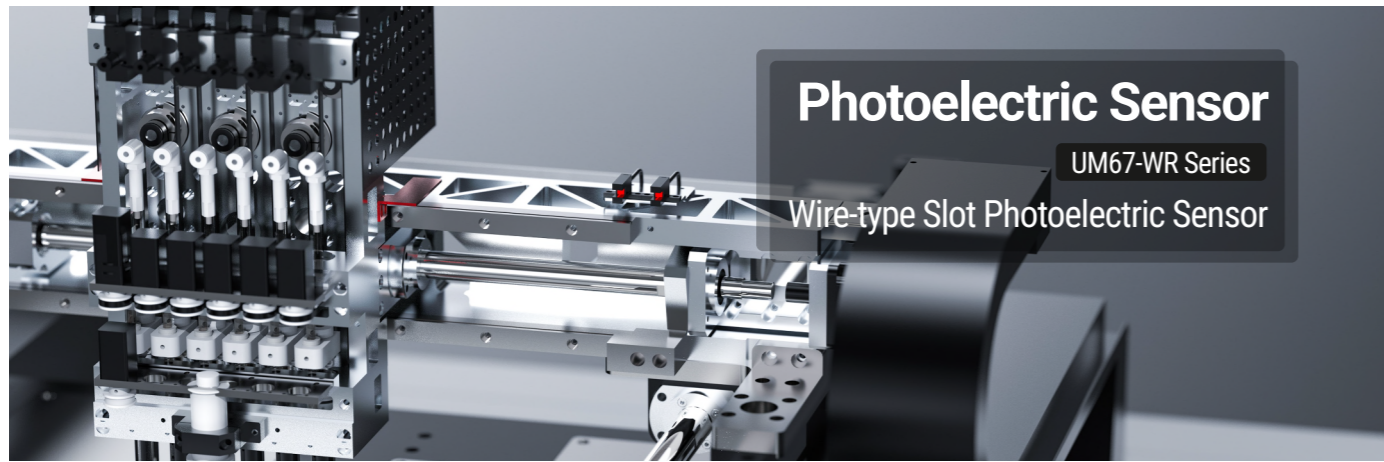
DC 4-wire NPN Output



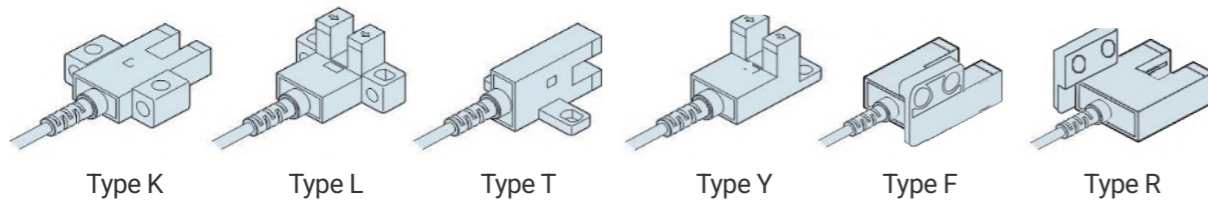
DC 4-wire PNP Output



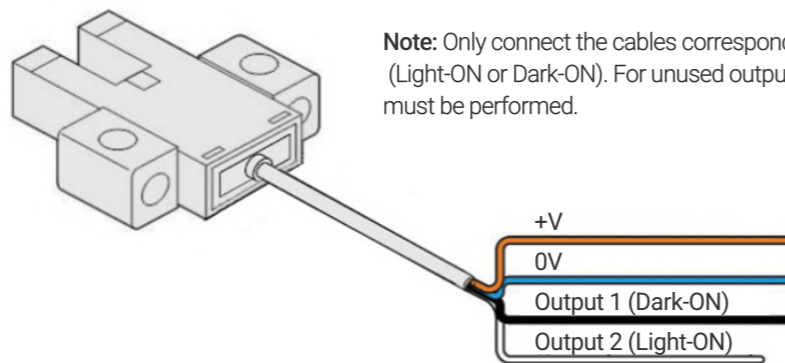




Wide range of models available in 6 different shapes, enabling selection of the type that best meets your installation requirements.



All models are equipped with two independent outputs: Light-ON (ON when light is received) / Dark-ON (ON when light is blocked), allowing adaptation to different output requirements based on application scenarios.

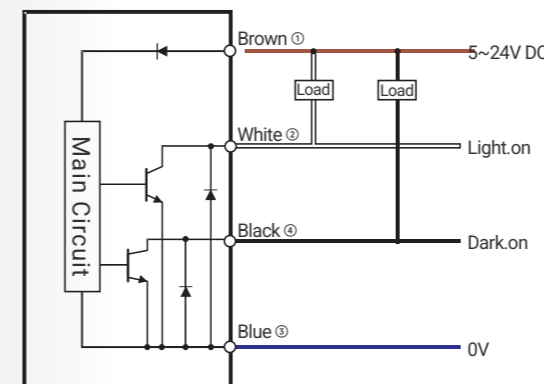


Note: Only connect the cables corresponding to the used output mode (Light-ON or Dark-ON). For unused output wires, proper insulation treatment must be performed.

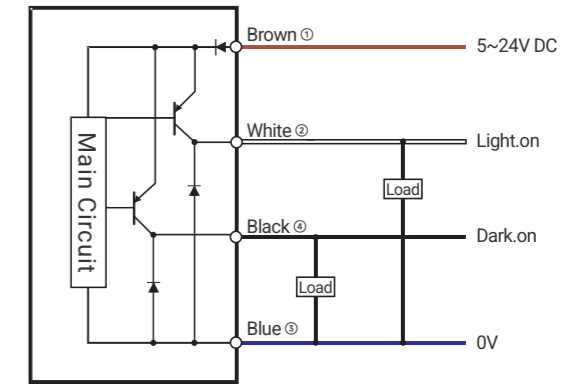
- Standard with 2M flexible cable (customizable length available)
- Optional bend-resistant drag chain cable (-R option)
- Optional white NO (normally open) / black NC (normally closed) configuration (-SX option)
- Power supply voltage range: 5-24 VDC
- High-speed response with 3 kHz response frequency

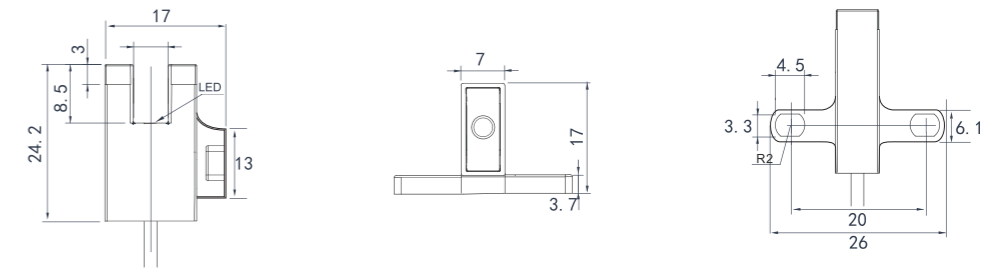
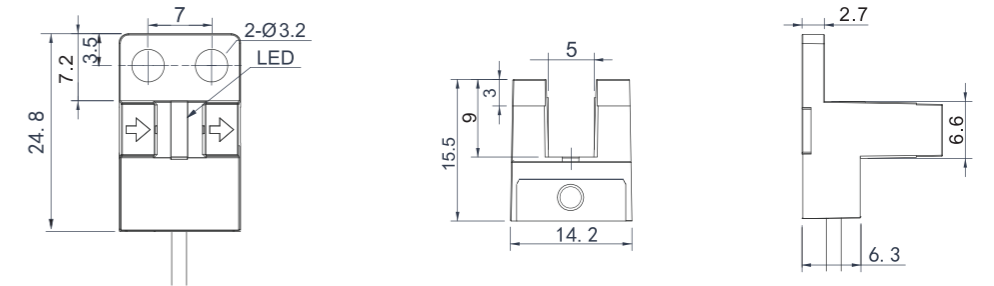
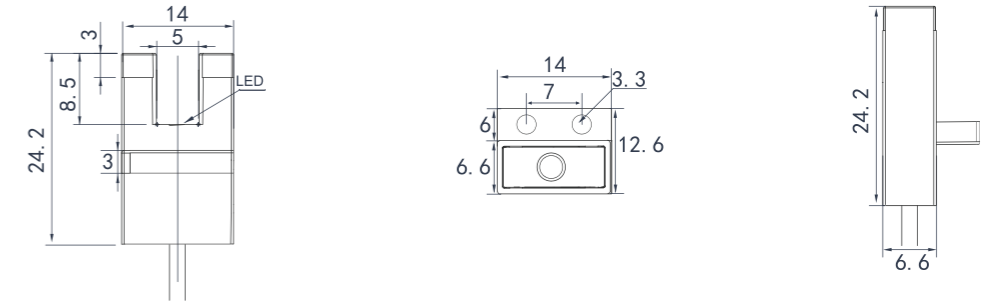
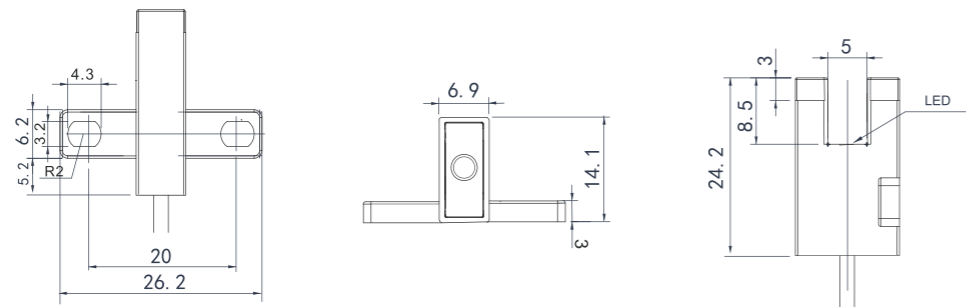
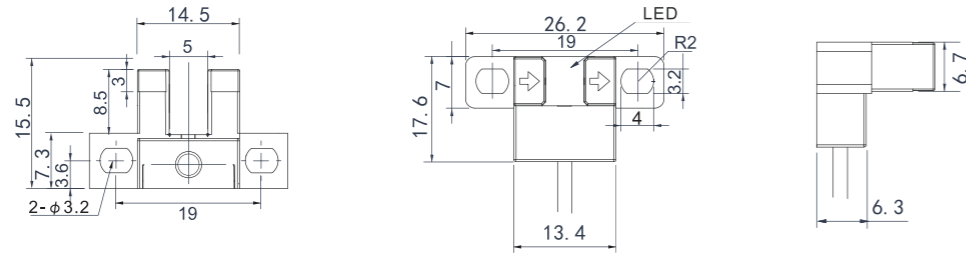
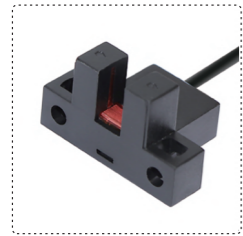
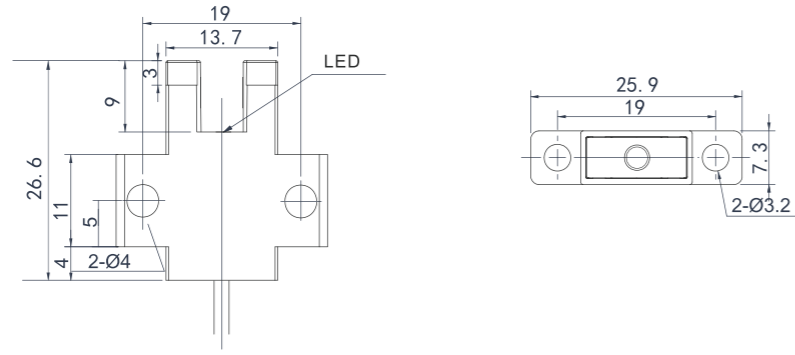
Appearance						
Type	Type K	Type L	Type T	Type U1	Type Y	Type T1
Detection Distance	5mm (Slot Width)					
Standard Detection Object	Opaque object of 0.8×1.2mm or larger					
Repeatability	0.03mm or less					
Output Mode	NPN or PNP open collector					
Switching Mode	Switchable L.on (Light-on)/D.on (Dark-on)					
Status Indicator	Light off when object detected, light on when no object present					
Response Frequency	3kHz					
Light Source	Infrared light					
Operating Voltage	5~24V DC					
Residual Voltage	1V or less (at load current of 100mA)					
Current Consumption	≤8mA					
Protection Circuit	Surge protection, reverse polarity protection					
Ambient Light	Illuminance on light-receiving surface: Incandescent lamp: 1000 lux or less					
Ambient Temperature	Operating: -25°C~+55°C Storage: -30°C~+80°C No freezing					
Ambient Humidity	Operating: 5%~85% RH Storage: 5%~95% RH No condensation					
Dielectric Strength	AC, 1000V 1 minute, between all power terminals and housing					
Vibration Resistance	Frequency 10Hz~2000Hz, double amplitude 1.5mm (max acceleration 196m/s ²), 2 hours in each XYZ direction					
Insulation Resistance	Between all power terminals and housing, 20MΩ or more (based on DC250V)					
Protection Rating (IP Rating)	IP50					
Housing Material	ABS+PC					
Cable Outlet Style	2m 4-core cable					
Model NPN	UM670-WR	UM671-WR	UM672-WR	UM673-WR	UM674-WR	UM675-WR
Model PNP	UM670P-WR	UM671P-WR	UM672P-WR	UM673P-WR	UM674P-WR	UM675P-WR

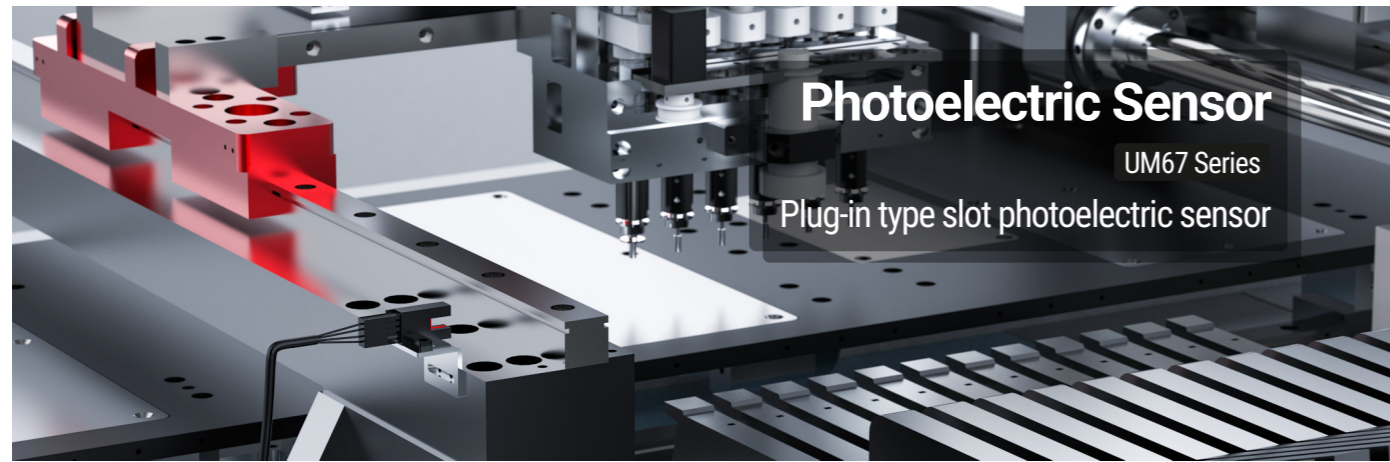
DC 4-wire NPN Output



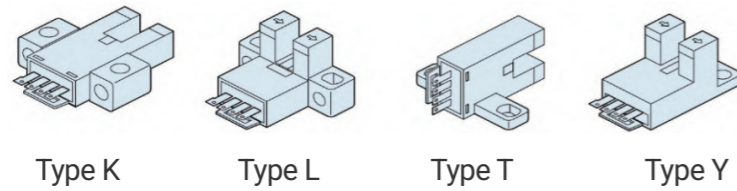
DC 4-wire PNP Output



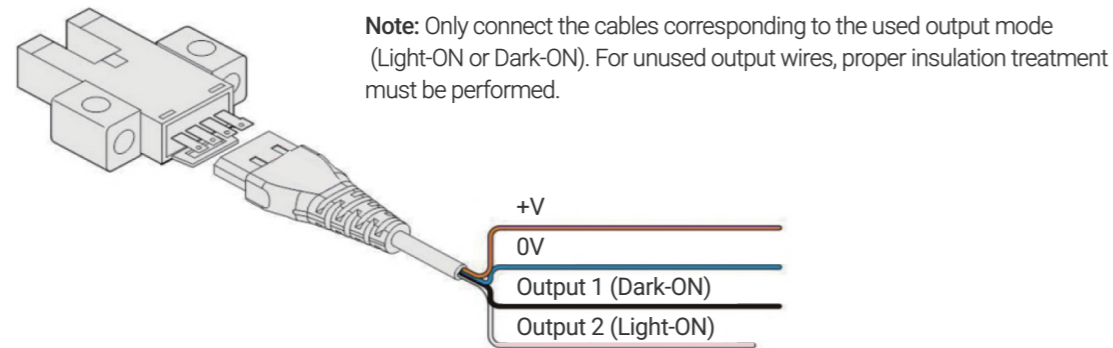




Wide range of models available in 4 different shapes, enabling selection of the type that best meets your installation requirements.



All models are equipped with two independent outputs: Light-ON (ON when light is received) / Dark-ON (ON when light is blocked), allowing adaptation to different output requirements based on application scenarios.



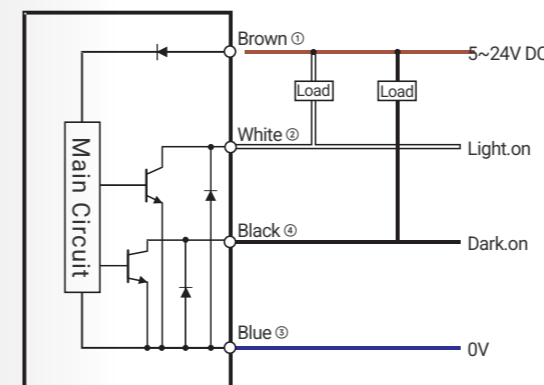
Simple connection type eliminates the need for soldering and insulation treatment required in conventional installations, enabling quick and convenient connection. Available with black output wire and pink switching wire options.



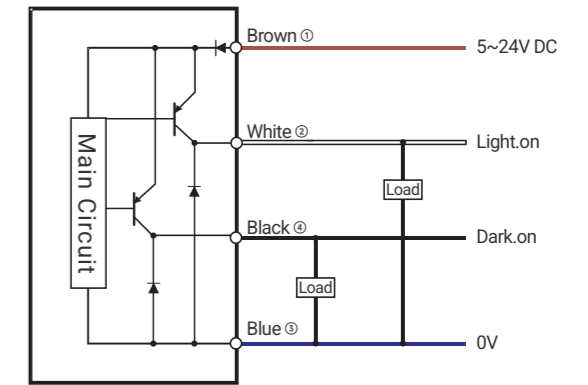
• High-speed response with 3 kHz response frequency

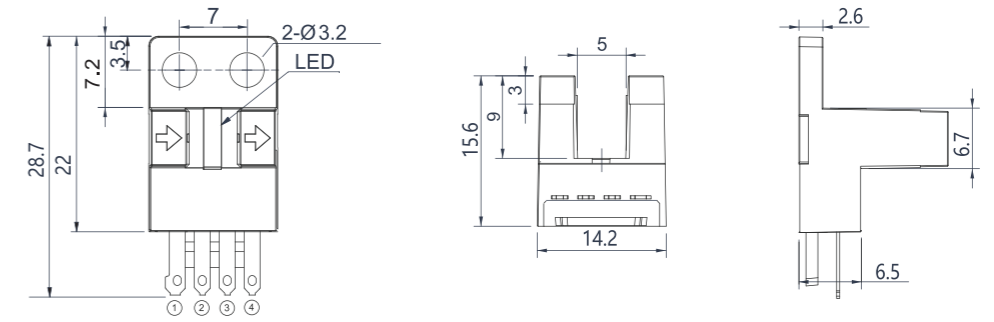
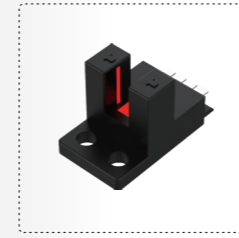
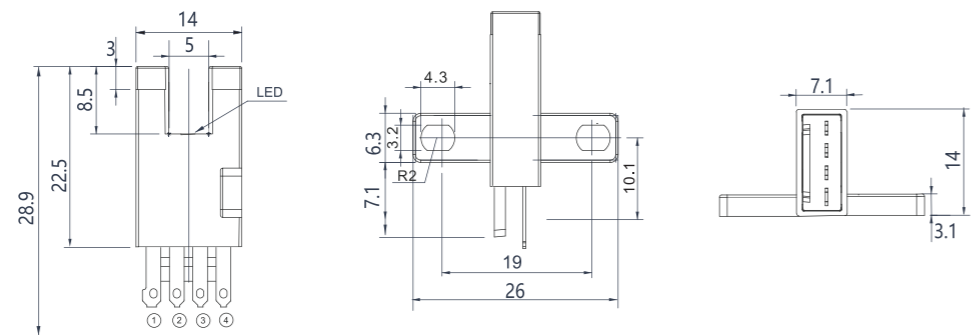
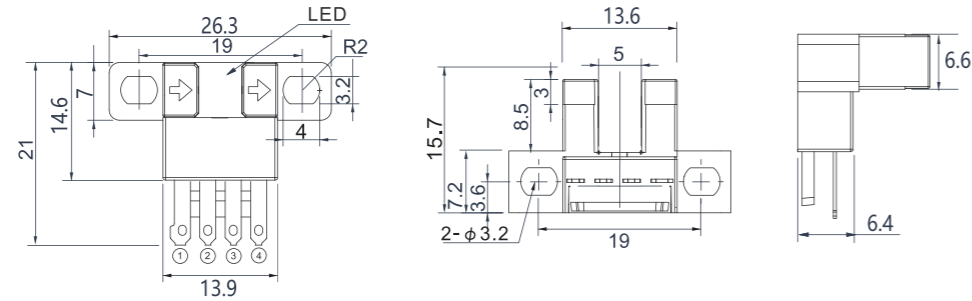
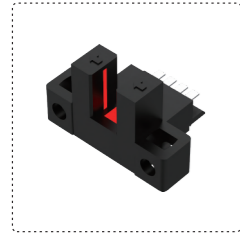
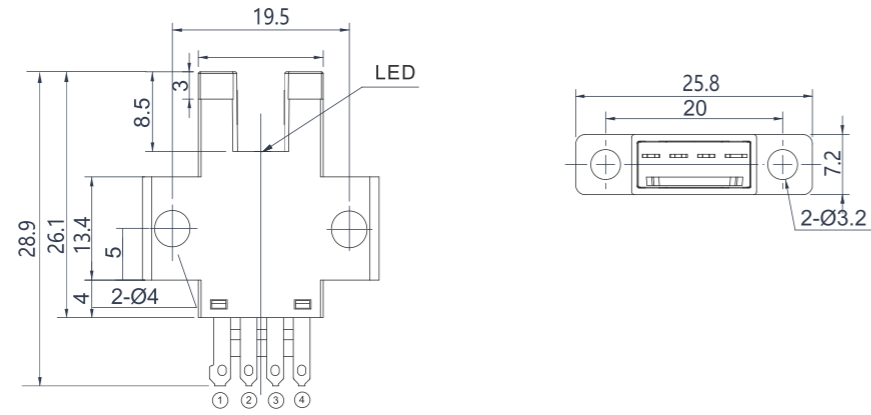
Appearance				
Type	Type K	Type L	Type T	Type Y
Detection Distance	5mm (Slot Width)			
Standard Detection Object	Opaque object larger than 0.8×1.2mm			
Repeatability	0.03mm or less			
Output Mode	NPN or PNP open collector			
Switching Mode	Switchable L.on (Light-on)/D.on (Dark-on)			
Status Indicator	Light off when object detected, light on when no object present			
Response Frequency	3kHz			
Light Source	Infrared light			
Operating Voltage	5~24V DC			
Residual Voltage	1V or less (at load current of 100mA)			
Current Consumption	≤8mA			
Protection Circuit	Surge protection, reverse polarity protection			
Ambient Light	Illuminance on light-receiving surface: Incandescent lamp: 1000 lux or less			
Ambient Temperature	Operating: -25°C~+55°C Storage: -30°C~+80°C No freezing			
Ambient Humidity	Operating: 5%~85% RH Storage: 5%~95% RH No condensation			
Dielectric Strength	AC, 1000V 1 minute, between all power terminals and housing			
Vibration Resistance	Frequency 10Hz~2000Hz, double amplitude 1.5mm (max acceleration 196m/s ²), 2 hours in each XYZ direction			
Insulation Resistance	Between all power terminals and housing: 20MΩ or more (DC250V)			
Protection Rating (IP Rating)	IP50			
Housing Material	ABS+PC			
Cable Outlet Style	Connector type			
Model NPN	UM670	UM671	UM672	UM674
Model PNP	UM670P	UM671P	UM672P	UM674P

DC 4-wire NPN Output

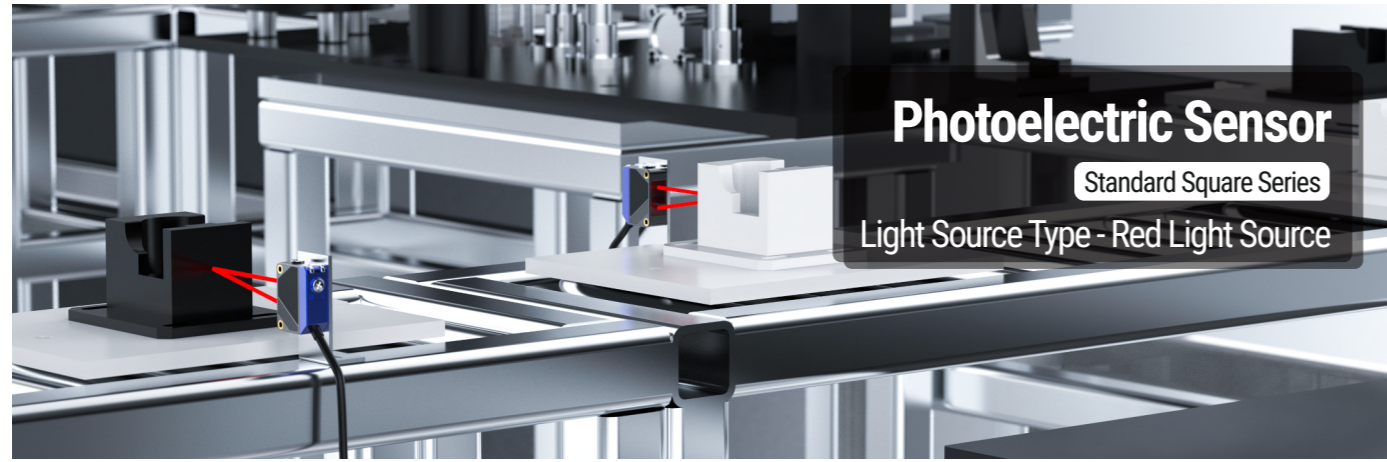


DC 4-wire PNP Output



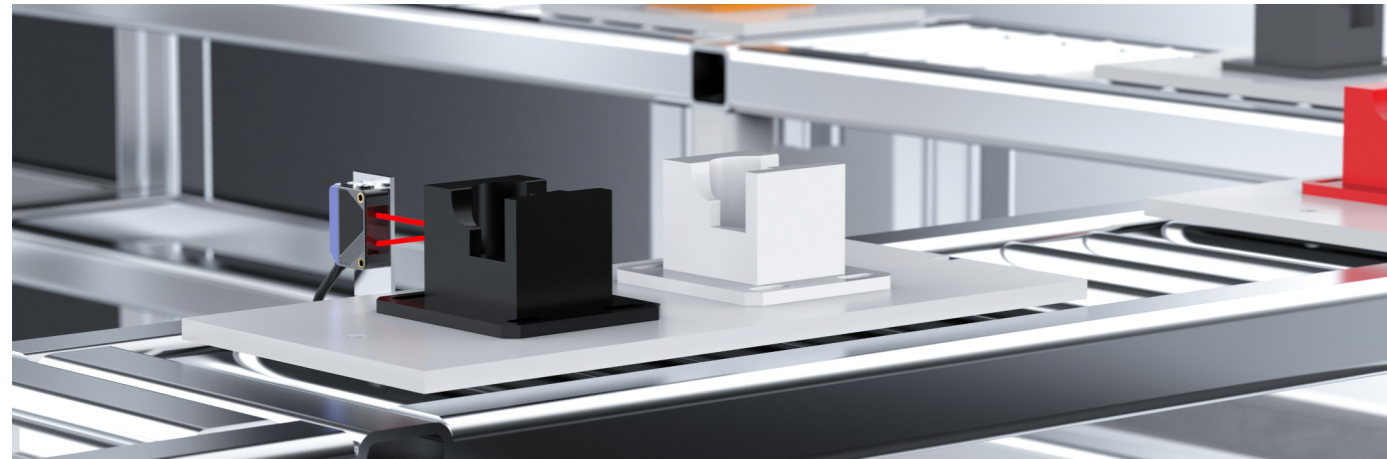


- UM1006 (Standard: 2m; Options: 1m, 3m, 5m, 7m, 10m)
- UM1010 (Standard: 2m; Options: 1m, 3m, 5m, 7m, 10m)

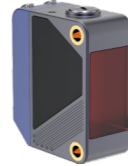




Background Suppression Application Examples

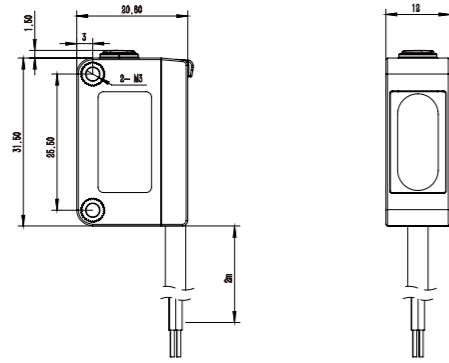
Background suppression ensures consistent detection distance for black and white objects regardless of color, angle, or surface properties. No detection distance adjustment is required when switching production for different colored objects on the same line.



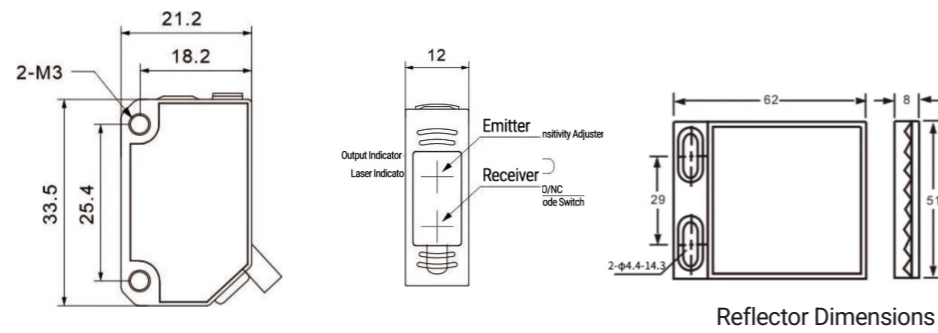
- Three detection modes: Background Suppression, Specular Reflection, Through-Beam
- Red light minimizes energy loss from medium absorption/scattering for medium-to-long-range detection
- Enhanced penetration maintains reliability in smoke/dust environments
- Maintains $\leq \pm 0.5\%$ radiant flux variation standard deviation after extended operation
- Compatible with existing optical systems
- Visible red spot with larger beam profile simplifies alignment during installation

Types		Standard Square					
Appearance							
Model Number	NPN N.O	BGS-C10	BGS-C30	BGS-C100N	PSR-N300	PSR-C200NO	PSR-C400NO
	NPN N.C					PSR-C200NC	PSR-C400NC
	PNP N.O	BGS-C10P	BGS-C30P	BGS-C100P	PSR-N300P	PSR-C200PO	PSR-C400PO
	PNP N.C					PSR-C200PC	PSR-C400PC
Detection Mode		Background Suppression		Diffuse Reflection	Retroreflective	Retroreflective	
Sensing Distance		5-100mm	25-300mm	20-1000mm	50-3000mm	2M	4M
Spot Size		100mm:Φ3mm	300mm:Φ7mm	300mm:φ7mm	Φ15mm/1000mm	/	
Hysteresis Range		<10%			<20%	/	
Standard Detection Object		Minimum $\geq \Phi 8\text{mm}$			Minimum $\geq \Phi 10\text{mm}$	/	
Response Time		<2ms			<1ms	<2ms	
Response Frequency		500Hz			1KHz	500Hz	
Light Source		650nm Red Light			700nm Red Light	650nm Red Light	
Consumption Current (No-Load)		<20mA			<15mA	/	
Maximum Load Current		100mA			100mA		
Repeatability		<3%			<5%	/	
Operating Voltage		DC 12~24V $\pm 10\%$				DC 10~30V	
Residual Voltage (Voltage Drop)		<1V			<1.5V	<1V	
Ambient Illuminance		Incandescent Light $\leq 1,000$ Lux; Sunlight $\leq 3,000$ Lux			/	<5000Lux	
Ambient Temperature		-25~+55°C, Freeze-Free					
Ambient Humidity		35%~85%, Condensation-Free					
Protection Circuit		Reverse Polarity/Surge/Short-Circuit Protection					
Protection Rating		IP65					
Vibration Resistance		10~55Hz, Double Amplitude 1.5mm, 2h per Axis (X/Y/Z)			10~55Hz, Double Amplitude 1.0mm, 30 min per Axis (X/Y/Z)	/	
Shock Resistance		500m/s ² , 10 Impacts per Axis (X/Y/Z)			500m/s ² , 3 Impacts per Axis (X/Y/Z)	/	
Insulation Resistance		Insulation Resistance: ≥ 50 MΩ				/	/
Indicator Light		Red LED Indicator			Orange LED Indicator	Output: Red LED/ Power: Yellow LED	
Connection Type		Cable Outlet Type (Standard Cable Length: 2m)					
Housing		ABS+PC			ABS+PC	ABS	

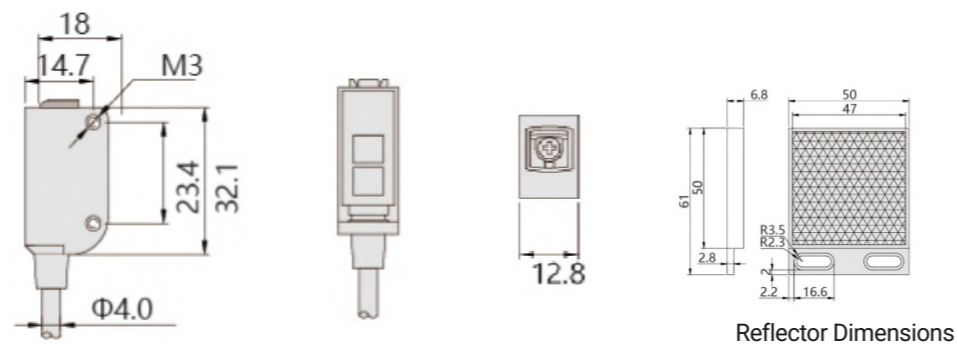
BGS-C10/C30/C100



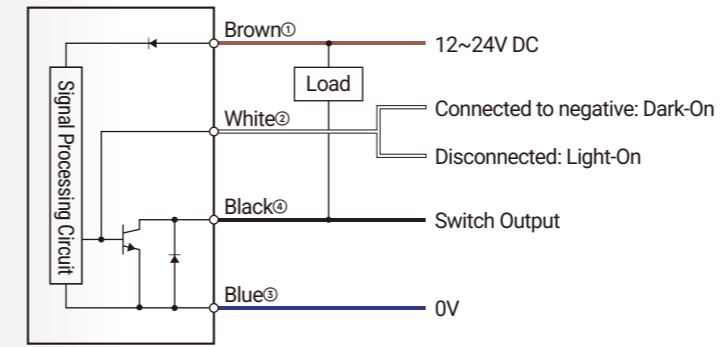
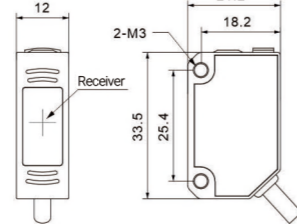
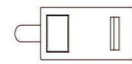
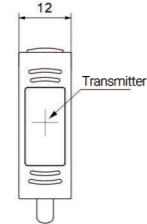
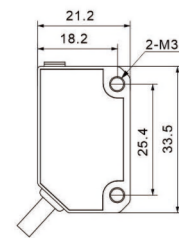
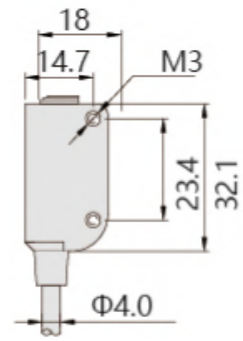
PSR-N300



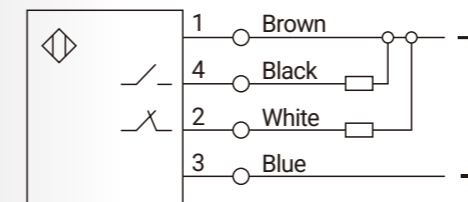
PSR-C200/C400



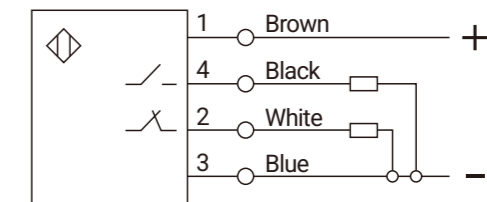
Types		Standard Square	
Appearance			
Model Number	NPN N.O	PT-C500NO	PT-N1000
	NPN N.C	PT-C500NC	
	PNP N.O	PT-C500PO	PT-N1000P
	PNP N.C	PT-C500PC	
Detection Mode		Through-Beam	
Sensing Distance		5M	15M
Spot Size		/	φ30mm/10M
Hysteresis Range		/	<20%
Standard Detection Object		/	Minimum φ12mm
Response Time		<2ms	<1ms
Response Frequency		500Hz	2KHz
Light Source		650nm Visible Red Light	640nm Visible Red Light
Consumption Current (No-Load)		/	<15mA
Maximum Load Current		100mA	
Repeatability		/	<5%
Operating Voltage		DC 10~30V±10%	DC 12~24V±10%
Residual Voltage (Voltage Drop)		/	<1.5V
Ambient Illuminance		<5000Lux	/
Ambient Temperature		-25°C~55°C Freeze-Free	
Ambient Humidity		5%~85%RH Condensation-Free	
Protection Circuit		Reverse Polarity/Surge/Short-Circuit Protection	
Protection Rating		IP65	
Vibration Resistance		/	10~55Hz, Double Amplitude 1.0mm, 30 Minutes per Axis (X/Y/Z)
Shock Resistance		/	300m/s ² , 3 Impacts per Axis (X/Y/Z)
Indicator Light		Output: Red LED Indicator / Power: Yellow LED Indicator	Orange
Connection Type		Cable Outlet Type (Standard Cable Length: 2m)	2.4m Conductor Cable
Housing		ABS	ABS+PC



NPN Output



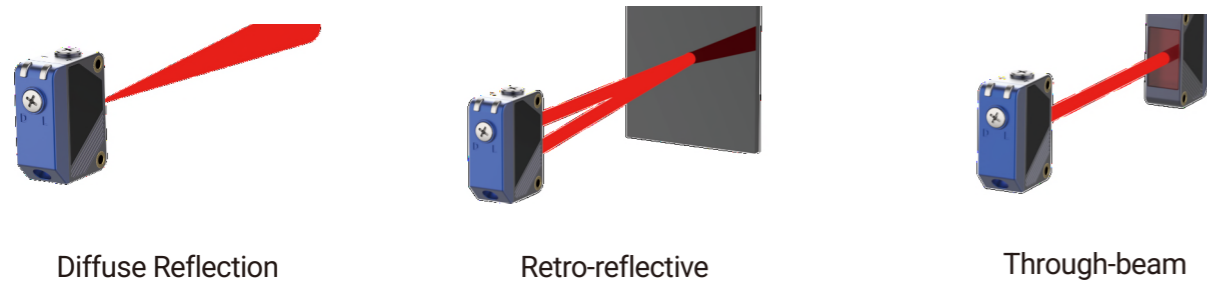
PNP Output







Multiple Detection Modes Available

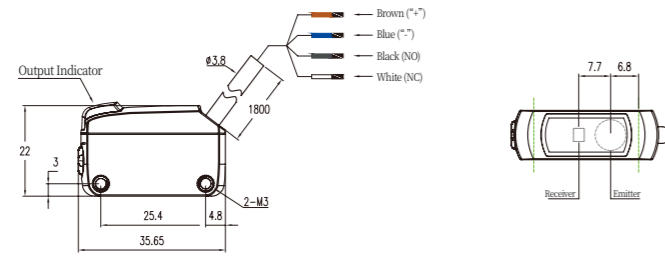
To meet diverse application requirements, our standard square-shaped infrared sensor series offers three distinct detection methods tailored for various operational scenarios



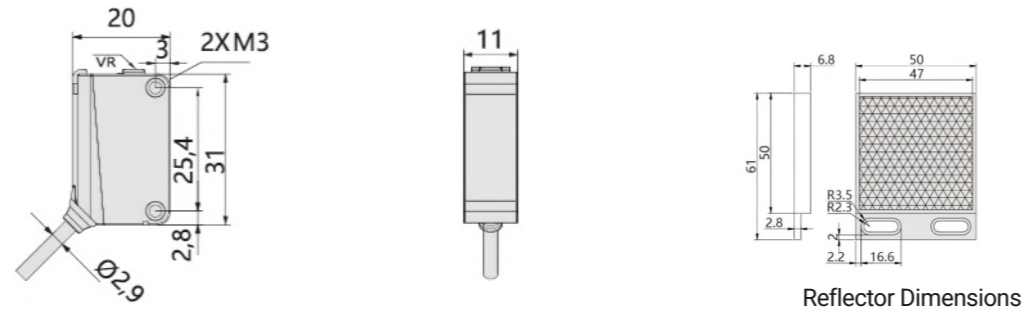
- Wide variety of detection modes available: Diffuse Reflection, Retro-reflective, and Through-beam.
- Infrared photoelectric sensors do not require direct contact with target objects, eliminating contamination and corrosion issues, making them suitable for complex and harsh environments.
- Highly sensitive to heat source detection, capable of instantly capturing temperature changes, suitable for fire warning, security monitoring, and non-destructive testing applications.
- Fast response speed enables detection of high-speed moving objects, suitable for automated production lines and applications requiring rapid response.
- Compared to other sensing technologies, infrared photoelectric sensors exhibit stronger resistance to ambient light and electromagnetic interference.
- Infrared photoelectric sensors are virtually unrestricted by target materials, capable of detecting various substances including glass, plastic, and wood.

Types		Standard Square		
Appearance				
Model Number	NPN N.O	PR-N30	PSR-N200NO	PSR-N400NO
	NPN N.C		PSR-N200NC	PSR-N400NC
	PNP N.O	PR-N30P	PSR-N200PO	PSR-N400PO
	PNP N.C		PSR-N200PC	PSR-N400PC
Detection Mode		Diffuse Reflection	Retroreflective	
Sensing Distance		30-350mm	2M	4M
Operating Mode		Light-on (Beam-Operated) / Dark-on (Blocked-Operated) Mode (Selectable)		/
Hysteresis Range		<20%	/	
Standard Detection Object		Minimum $\geq\Phi 10\text{mm}$	/	
Response Time		<500 μs	<2ms	
Response Frequency		700Hz	500Hz	
Light Source		850nm Infrared Light		850nm Infrared Light
Consumption Current (No-Load)		<15mA		/
Maximum Load Current		100mA		
Repeatability		<5%	/	
Operating Voltage		DC 12~24V $\pm 10\%$		DC 10~30V
Residual Voltage (Voltage Drop)		<1.5V		/
Ambient Illuminance		/		<5000Lux
Ambient Temperature		Operating Temperature: -25°C to 55°C Storage Temperature: -40°C to 85°C; Freeze-Free		-25~ +55°C, Freeze-Free
Ambient Humidity		Operating Humidity: 5% to 85% RH Storage Humidity: 5% to 95% RH; Condensation-Free		35%~85%RH, Condensation-Free
Protection Circuit		Reverse Polarity/Surge/Short-Circuit Protection		
Protection Rating		IP65		
Vibration Resistance		10~55Hz, Double Amplitude 1.0mm, 30 Minutes per Axis (X/Y/Z)	/	
Shock Resistance		300m/s ² , 3 Impacts per Axis (X/Y/Z)	/	
Insulation Resistance		/		Output: Red / Power: Yellow
Indicator Light		Red: Black Wire / Green: White Wire		/
Connection Type		Cable Outlet Type (Standard Cable Length: 2m)		
Housing		ABS	ABS+PC	

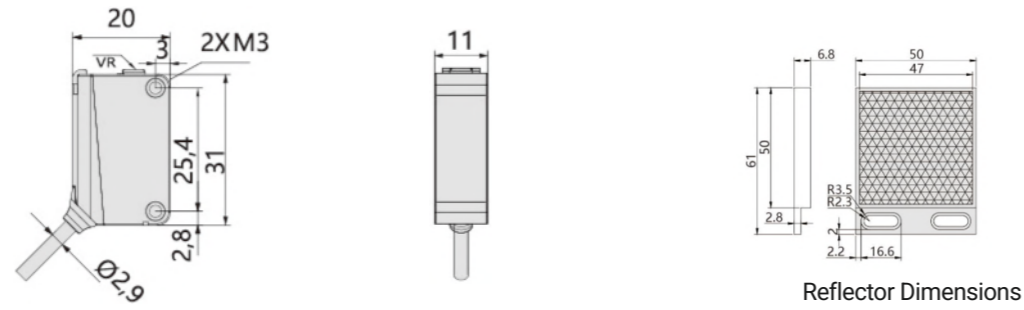
PR-N30



PSR-N200

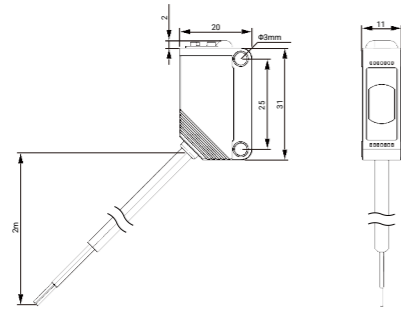
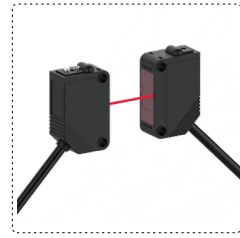


PSR-N400



Types		Standard Square	
Appearance			
Model Number	NPN N.O	PT-N500	PT-N1500NO
	NPN N.C		PT-N1500NC
	PNP N.O	PT-N500P	PT-N1500PO
	PNP N.C		PT-N1500PC
Detection Mode		Through-Beam	
Sensing Distance		1~5M	15M
Response Time		<2ms	
Response Frequency		500Hz	
Light Source		Invisible Laser	850nm Infrared Light
Maximum Load Current		100mA	
Operating Voltage		DC 10~24V±10%	DC 10~30V±10%
Ambient Illuminance		Incandescent Light <3,000 Lux; Sunlight <10,000 Lux	<5000Lux
Ambient Temperature		-20°C to +55°C; Freeze-Free	-25~ +55°C Freeze-Free
Ambient Humidity		35%~85%, Condensation-Free	
Protection Circuit		Reverse Polarity/Surge/Short-Circuit Protection	
Protection Rating		IP65	
Indicator Light		Red	Output: Yellow / Power: Green
Connection Type		Cable Outlet Type (Standard Cable Length: 2m)	
Housing		ABS+PC	

PT-N500

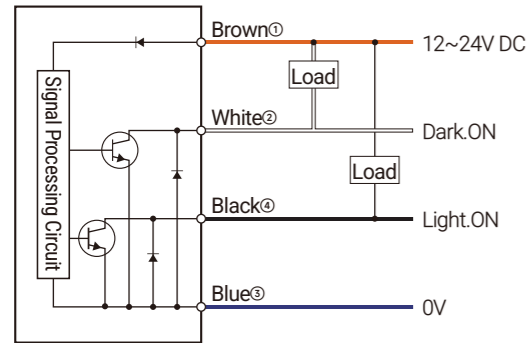


PT-N1500



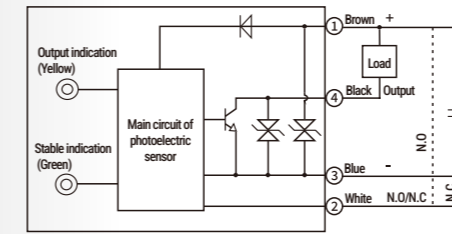
PR-N30 Wiring Diagram

NPN Output

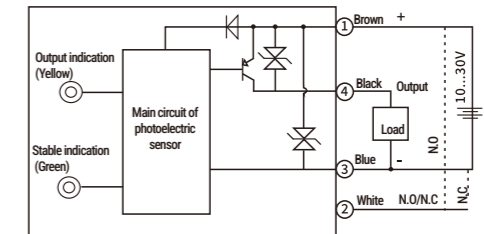


PT-N500 Wiring Diagram

NPN output

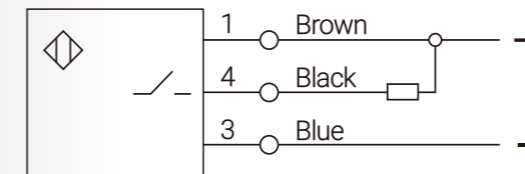


PNP output

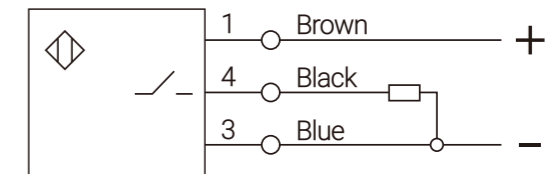


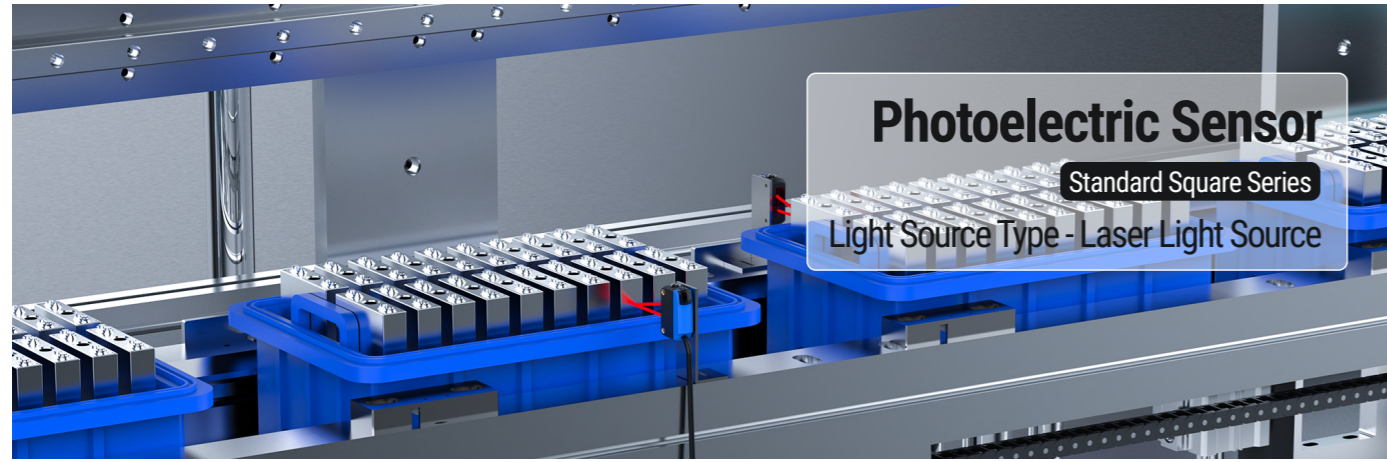
PT-N1500 Wiring Diagram

NPN Output



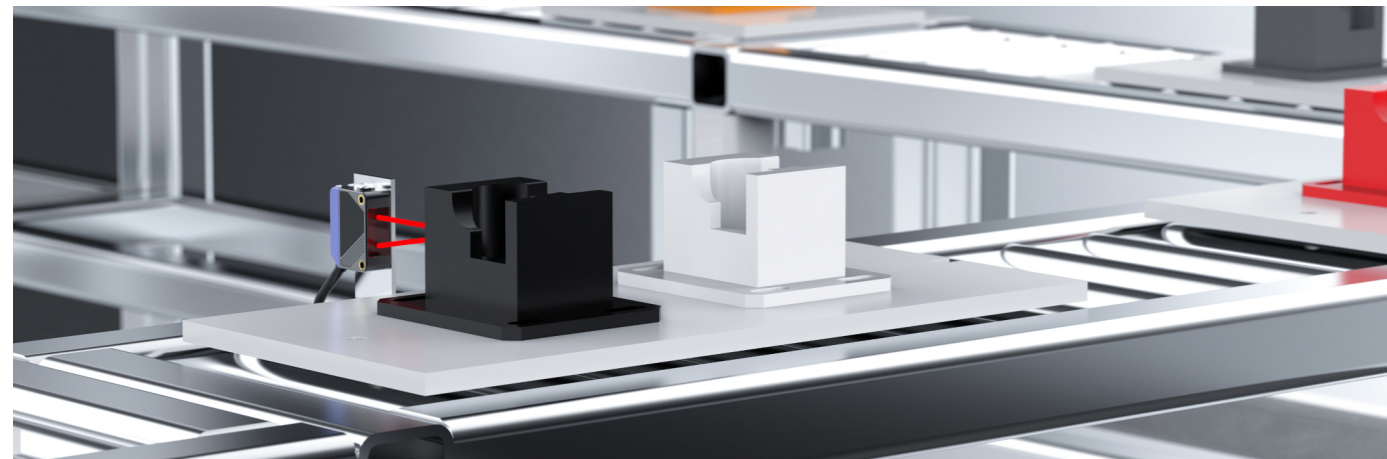
PNP Output





Background Suppression Application Examples

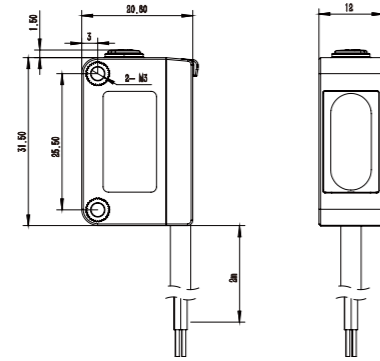
Background shielding, unaffected by color, angle, and surface conditions, capable of detecting black and white workpieces at nearly identical distances, even during product changeovers on production lines handling mixed-color workpieces without the need to adjust detection distance.



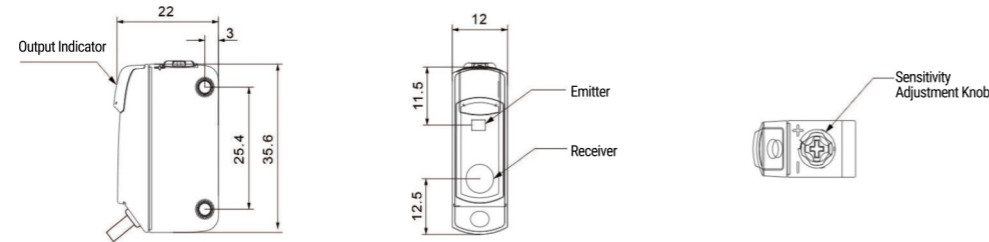
- Wide variety of detection modes available: Background Suppression, Diffuse Reflection, Retro-reflective, and Through-beam.
- Laser photoelectric sensors provide extremely high measurement accuracy, typically at the micron level or higher.
- Laser photoelectric sensors feature very fast response times suitable for high-speed dynamic measurements.
- Wide measurement range from a few millimeters to several kilometers.
- Strong resistance to ambient light and electromagnetic interference, enabling reliable operation in harsh environments.
- Easily integrated into various automation systems to improve production efficiency.

Types		Standard Square			
Appearance					
Model Number	NPN N.O	BGS-L30	PR-L30	PSR-L200NO	PSR-L400NO
	NPN N.C			PSR-L200NC	PSR-L400NC
	PNP N.O	BGS-L30P	PR-L30P	PSR-L200PO	PSR-L400PO
	PNP N.C			PSR-L200PC	PSR-L400PC
Detection Mode		Background Suppression	Diffuse Reflection	Retroreflective	
Sensing Distance		30-400mm	60-400mm	2M	4M
Spot Size		1*2mm (300mm)	1*2mm (400mm)	/	
Hysteresis Range		<20%		/	
Standard Detection Object		≥Φ5mm		/	
Response Time		<500μs		<2ms	
Response Frequency		700Hz		500Hz	
Light Source		660nm Red Laser		650nm Red Laser	
Consumption Current (No-Load)		15mA		/	
Maximum Load Current		100mA		100mA	
Repeatability		<5%		/	
Operating Voltage		DC 12~24V±10%		DC 10~30V	
Residual Voltage (Voltage Drop)		<1.5V		/	
Environmental Limits		/		<5000Lux	
Ambient Temperature		Operating Temperature: -25°C to 55°C Storage Temperature: -40°C to 85°C; Freeze-Free		-25~ +55°C Freeze-Free	
Ambient Humidity		Operating Humidity: 5% to 85% RH Storage Humidity: 5% to 95% RH; Condensation-Free		35%~85%RH; Condensation-Free	
Protection Circuit		Reverse Polarity/Surge/Short-Circuit Protection			
Protection Rating		IP65			
Vibration Resistance		10-55Hz, Double Amplitude 1.0mm, 30 Minutes per Axis (X/Y/Z)		/	
Shock Resistance		300m/s², 3 Impacts per Axis (X/Y/Z)		/	
Indicator Light		Black Wire: Red / White Wire: Green		Output: Yellow / Power: Green	
Connection Type		Cable Outlet Type (Standard Cable Length: 2m)			
Housing		ABS			

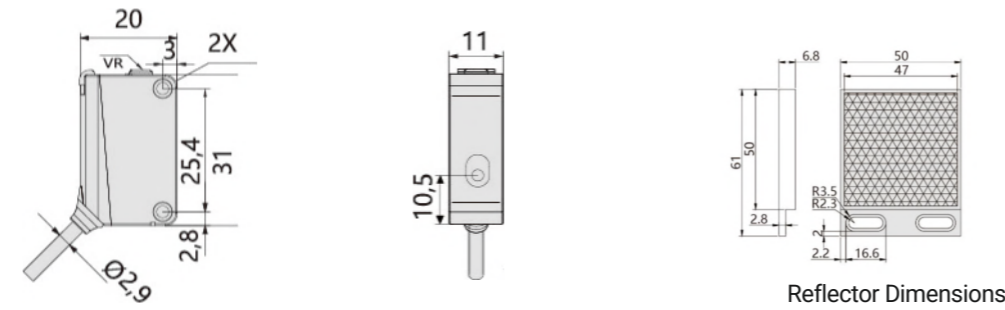
BGS-L30



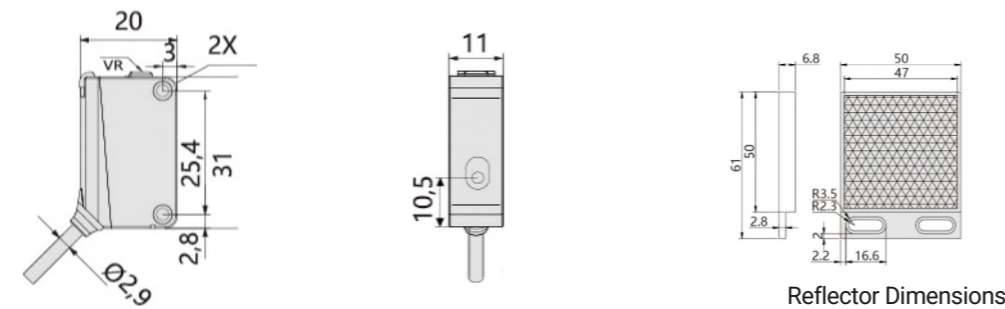
PR-L30



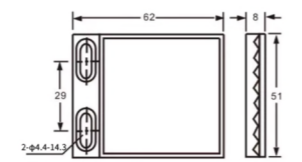
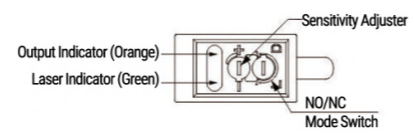
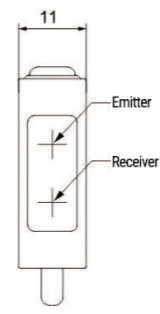
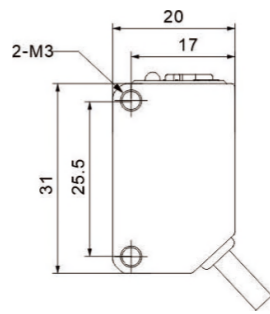
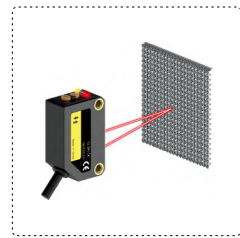
PSR-L200



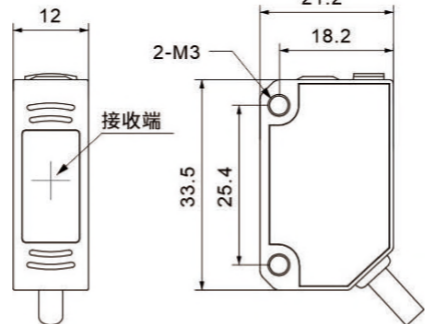
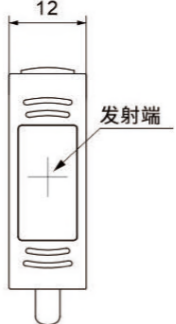
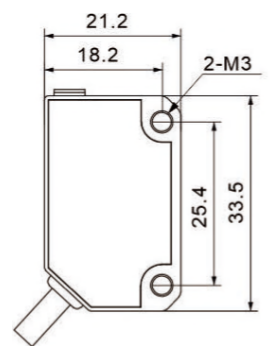
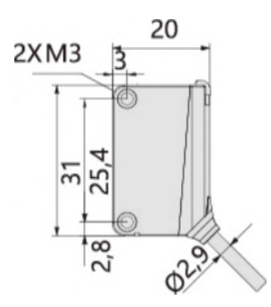
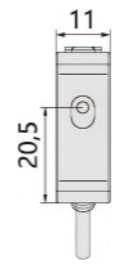
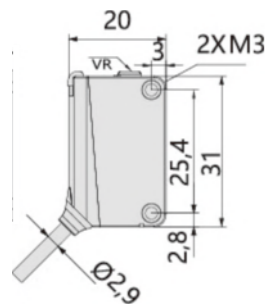
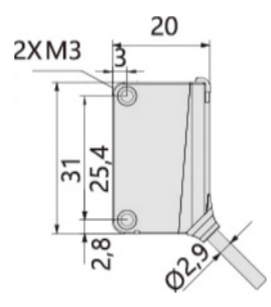
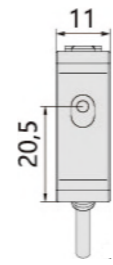
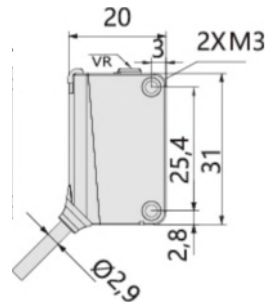
PSR-L400



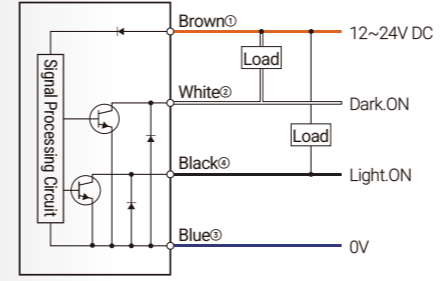
Types		Standard Square			
Appearance					
Model Number	NPN N.O	PSR-L1000	PT-L500NO	PT-L1500NO	PT-L3000
	NPN N.C		PT-L500NC	PT-L1500NC	
	PNP N.O	PSR-L1000P	PT-L500PO	PT-L1500PO	PT-L3000P
	PNP N.C		PT-L500PC	PT-L1500PC	
Detection Mode		Retroreflective	Through-Beam		Through-Beam
Sensing Distance		10M	5M	15M	30M
Spot Size		Φ15mm/10M	/		Φ30mm/30M
Hysteresis Range		<20%	/		<20%
Standard Detection Object		≥Φ75mm	/		≥Φ12mm
Response Time		<1ms	<2ms		<1ms
Response Frequency		1KHz	500Hz		1KHz
Light Source		650nm Laser			
Consumption Current (No-Load)		<15mA	/		<15mA
Maximum Load Current		100mA			
Repeatability		<5%	/		<5%
Operating Voltage		DC 12~24V±10%	DC 10~30V		DC 12~24V±10%
Residual Voltage (Voltage Drop)		<1.5V	/		<1.5V
Ambient Illuminance		/	<5000Lux		/
Ambient Temperature		Operating Temperature: -25°C to 55°C Storage Temperature: -40°C to 85°C; Freeze-Free	-25~ +55°C Freeze-Free		Operating Temperature: -25°C to 55°C Storage Temperature: -40°C to 85°C; Freeze-Free
Ambient Humidity		Operating Humidity: 5% to 85% RH Storage Humidity: 5% to 95% RH; Condensation-Free	35%~85%RH; Condensation-Free		Operating Humidity: 5% to 85% RH Storage Humidity: 5% to 95% RH; Condensation-Free
Protection Circuit		Reverse Polarity/Surge/Short-Circuit Protection			
Protection Rating		IP65			
Vibration Resistance		10-55Hz, Double Amplitude 1.0mm, 30 Minutes per Axis (X/Y/Z)	/		10-55Hz, Double Amplitude 1.0mm, 30 Minutes per Axis (X/Y/Z)
Shock Resistance		300m/s ² , 3 Impacts per Axis (X/Y/Z)	/		300m/s ² , 3 Impacts per Axis (X/Y/Z)
Indicator Light		Orange	Output: Yellow / Power: Green		Orange
Connection Type		Cable Outlet Type (Standard Cable Length: 2m)			
Housing		ABS+PC			



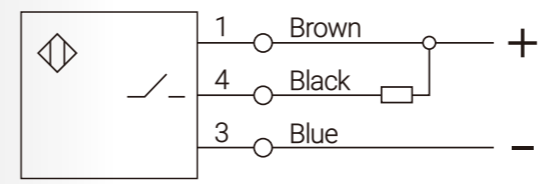
Reflector Dimensions



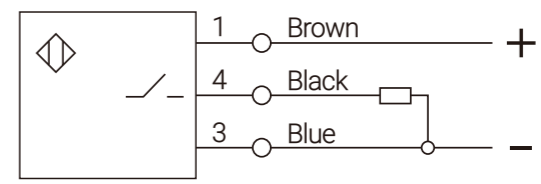
NPN Output



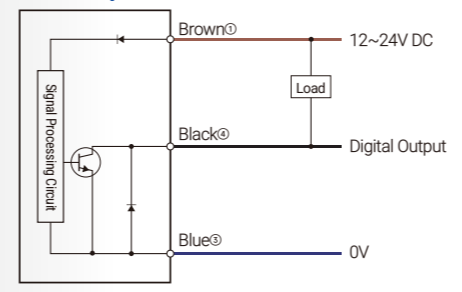
NPN Output



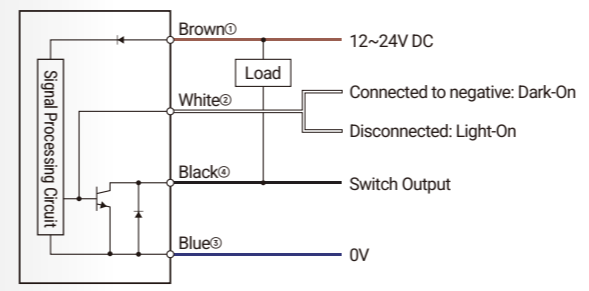
PNP Output

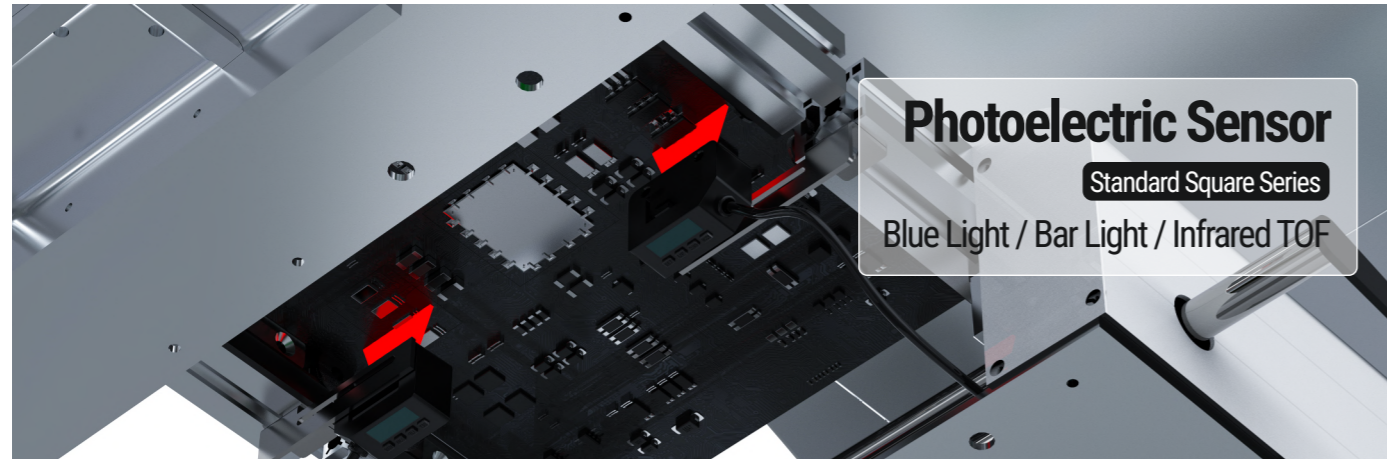


NPN Output



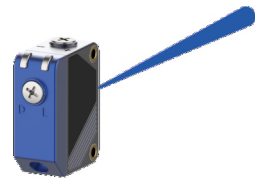
NPN Output



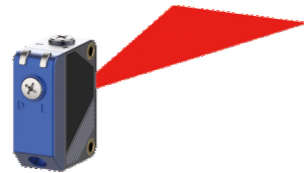


Multiple Light Source Types

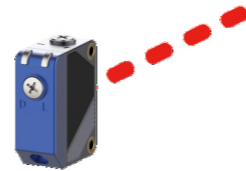
This product series offers three types of photoelectric sensors with blue light, bar light, and infrared TOF light sources



Blue Light



Bar Light

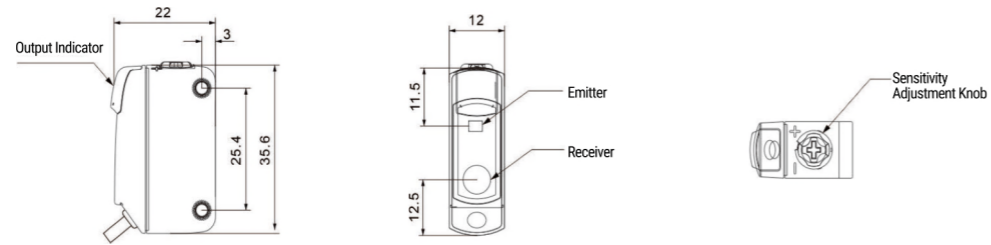


Infrared TOF

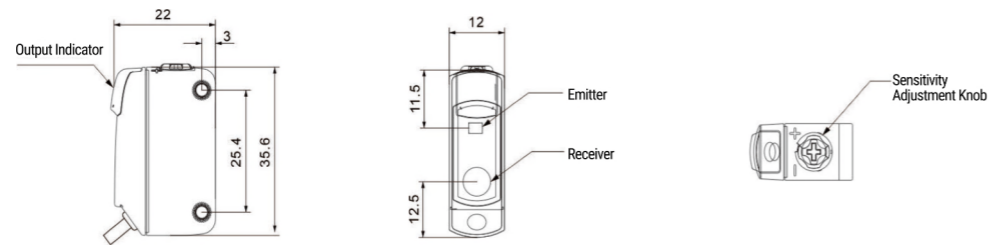
- Blue light photoelectric sensors utilize blue light sources for object detection, demonstrating significant advantages in specific applications.
- Blue light is suitable for detecting objects with high reflectivity or specific colors, commonly used in photovoltaic wafer inspection and the medical industry.
- Bar light spot photoelectric sensors can detect light intensity, position, as well as object temperature, light transmittance, displacement, and surface conditions.
- In practical applications, bar light spot photoelectric sensors are often used for detecting mesh objects, perforated PCB boards, etc.
- Infrared TOF photoelectric sensors are a technology that uses the time of flight of light to measure distance.
- TOF sensors, due to their unique advantages, are widely applied in autonomous driving, gesture recognition, augmented reality (AR), robotics, and other fields.

Types		Standard Square			
Appearance					
Model Number	NPN N.O	BGS-B22N	PR-CX40N	BGS-CX20N	BGS-BX20N
	NPN N.C				
	PNP N.O	BGS-B22P	PR-CX40P	BGS-CX20P	BGS-BX20P
	PNP N.C				
Detection Mode		Background Suppression (Blue Light)	Diffuse Reflection (Red Light)	Background Suppression (Red Light)5-200mm	Background Suppression (Blue Light)
Sensing Distance		30-400mm			10-200mm
Spot Size		Φ5mm/200mm	6*70mm(100mm)	4*60mm(100mm)	Min. Sensing Distance 10mm (10*5mm Object) / Max. 200mm (130*10mm Object)
Hysteresis Range		<20%		/	
Standard Detection Object		Opaque Objects	≥Φ10mm	Φ2mm	/
Response Time		<500μs		<500μs	<1ms
Response Frequency		700Hz		/	
Light Source		470nm Blue Light	650nm Bar Light	640nm Bar Light	470nm Blue Bar Light
Consumption Current (No-Load)		15mA		13mA	/
Maximum Load Current		100mA		50mA	100mA
Repeatability		<5%		<5%	/
Operating Voltage		DC 12~24V±10%		DC 10~30V±10%	DC 12~24V±10%
Residual Voltage (Voltage Drop)		<1.5V		<2V	<1V
Ambient Illuminance		/		Incandescent Light: ≤3,000 Lux	Incandescent Light ≤20,000 Lux Sunlight ≤30,000 Lux
Ambient Temperature		Operating Temperature: -25°C to 55°C Storage Temperature: -40°C to 85°C; Freeze-Free		Operating Temperature: -20°C to 55°C Storage Temperature: -30°C to 70°C; Freeze-Free	-10°C~+55°C; Freeze-Free
Ambient Humidity		Operating Humidity: 5% to 85% RH Storage Humidity: 5% to 95% RH; Condensation-Free		Operating Humidity: 35% to 85% RH Storage Humidity: 35% to 85% RH; Condensation-Free	/
Protection Circuit		Reverse Polarity/Surge/Short-Circuit Protection			
Protection Rating		IP65		IP67	/
Vibration Resistance		10-55Hz, Double Amplitude 1.0mm, 30 Minutes per Axis (X/Y/Z)		/	10-55Hz, Double Amplitude 1.5mm, 2h per Axis (X/Y/Z)
Shock Resistance		300m/s², 3 Impacts per Axis (X/Y/Z)		/	
Indicator Light		Black Wire: Red / White Wire: Green		Power: Green / Sensing: Orange	
Connection Type		Cable Outlet Type (Standard Cable Length: 2m)			
Housing		ABS		PC	/

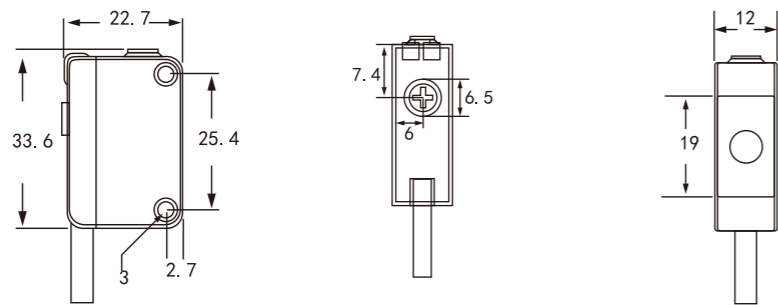
BGS-B22N



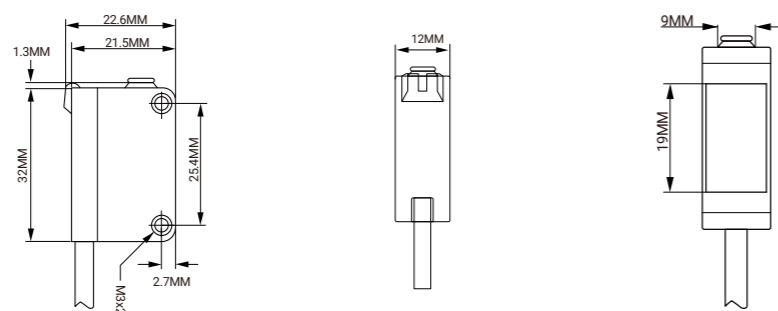
PR-CX40N



BGS-CX20N

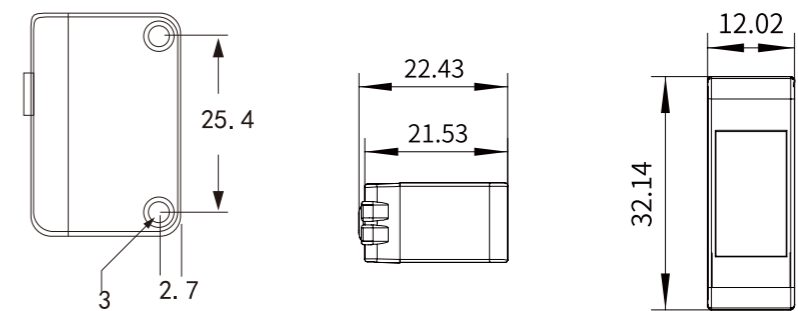


BGS-BX20N



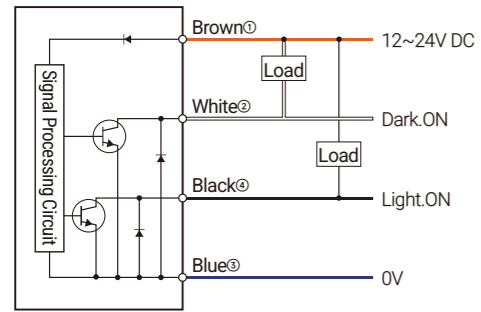
Types		Standard Square	
Appearance			
Model Number	NPN N.O	PRO-N150N	PRO-N400N
	NPN N.C		
	PNP N.O	PRO-N150P	PRO-N400P
	PNP N.C		
Detection Mode		Diffuse Reflection	
Sensing Distance		50-1500mm	50-4000mm
Operating Mode		One-Touch TOF Configuration	
Standard Detection Object		100*100mm White Paper	
Response Time		<100ms	
Light Source		940nm Infrared LED	
Consumption Current (No-Load)		20mA	
Maximum Load Current		80mA	
Operating Voltage		DC 12~24V±10%	
Residual Voltage (Voltage Drop)		<2V	
Ambient Illuminance		Ambient Light ≤10,000 Lux	
Ambient Temperature		Operating Temperature: -20°C to 50°C Storage Temperature: -40°C to 70°C; Freeze-Free	
Ambient Humidity		Operating Humidity: 35% to 85% RH Storage Humidity: 35% to 95% RH; Condensation-Free	
Protection Circuit		Reverse Polarity/Surge/Short-Circuit Protection	
Protection Rating		IP65	
Connection Type		Cable Outlet Type (Standard Cable Length: 2m)	
Housing		ABS	

PRO-N150 & PRO-N400



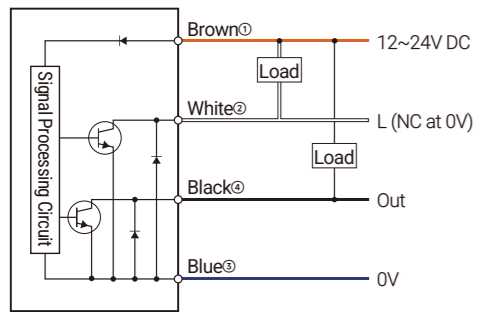
BGS-B22N & PR-CX40N Wiring Diagram

NPN Output



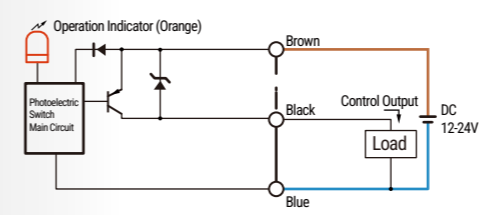
BGS-CX20N Wiring Diagram

NPN Output

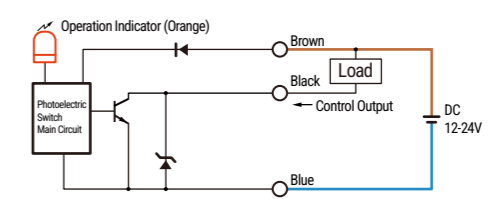


BGS-BX20N Wiring Diagram

NPN Output

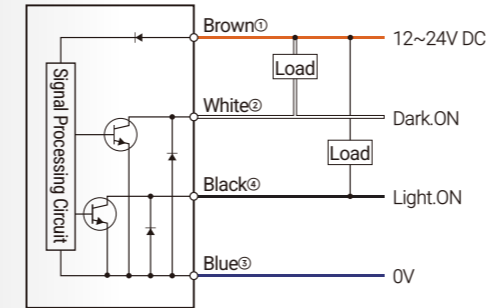


PNP Output



PRO-N150 & PRO-N400 Wiring Diagram

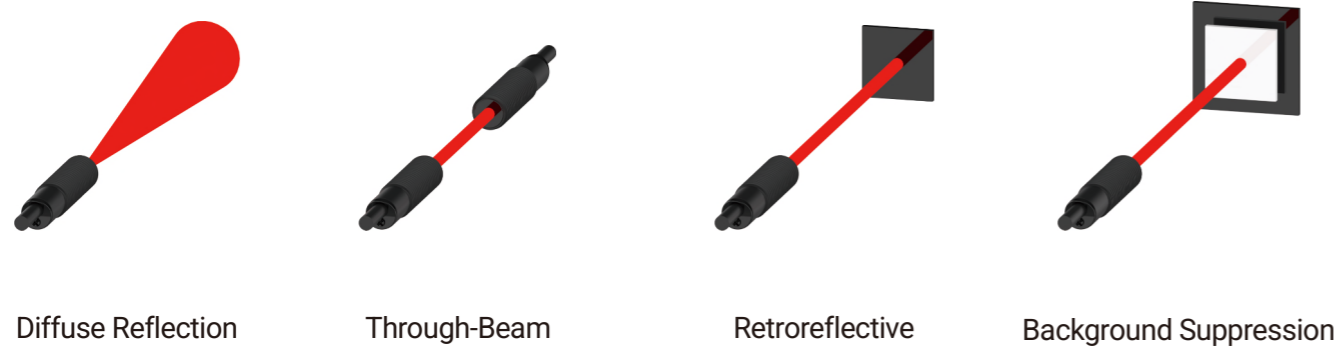
NPN Output





Multiple Detection Modes

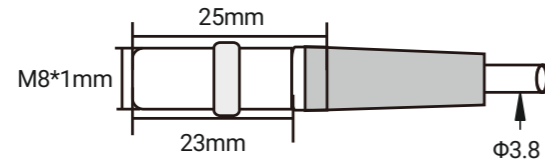
This series offers four detection modes: Diffuse Reflection, Through-Beam, Retroreflective, and Background Suppression



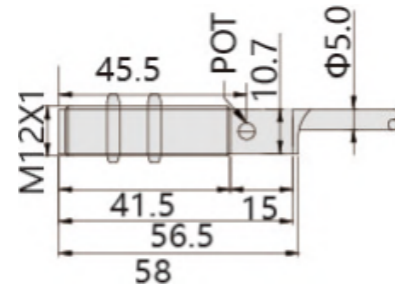
- Cylindrical design facilitates installation, typically requiring only a single mounting hole, suitable for various installation environments
- Depending on the detection mode, Cylindrical Photoelectric Sensors offer varying sensing distances
- High response frequency meets high-speed detection requirements
- Flexible adjustment of detection sensitivity with selectable Light-on or Dark-on mode
- Robust protection with IP67-rated models capable of operating in harsh environments 7
- Widely applicable across various industries including food and beverage, textile, ceramics, and logistics

Types		Cylindrical Profile				
Appearance						
	Model Number	NPN N.O	PM08R-N20NO	PM12T-N520NO	PM12R-N20N	PM12SR-N200N
		NPN N.C	PM08R-N20NC	PM12T-N520NC		
		PNP N.O	PM08R-N20PO	PM12T-N520PO	PM12R-N20P	PM12SR-N200P
		PNP N.C	PM08R-N20PC	PM12T-N520PC		
Detection Mode		Diffuse Reflection	Through-Beam	Diffuse Reflection	Retroreflective	
Sensing Distance		20-200mm	5.2m	200mm	0.3-2m	
Hysteresis Range		<15%		/		
Standard Detection Object		200*200mm White Cardboard		/		
Response Time		5ms		<2ms		
Response Frequency		100Hz		500Hz		
Light Source		940nm Infrared Light		880nm Infrared Light		
Consumption Current (No-Load)		≤30mA		/		
Maximum Load Current		120mA		≤150mA		
Repeatability		<5%		/		
Operating Voltage		DC 10~30V		DC 10~30V		
Residual Voltage (Voltage Drop)		<1.5V		/		
Ambient Illuminance		/		<5000Lux		
Ambient Temperature		Operating Temperature: 0°C to 55°C		-25°C~+55°C		
Ambient Humidity		/		35%~85%RH		
Protection Circuit		Short-Circuit Protection		Short-Circuit Protection		
Protection Rating		IP65		IP66		
Indicator Light		Yellow		Yellow		
Connection Type		Cable Outlet Type (Standard Cable Length: 1.5m)		Cable Outlet Type (Standard Cable Length: 2m)		
Housing		Copper Plated with Nickel		PBT		

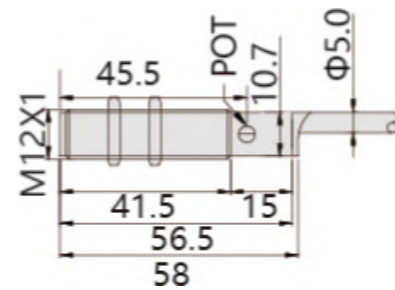
PM08R-N20



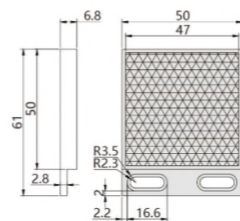
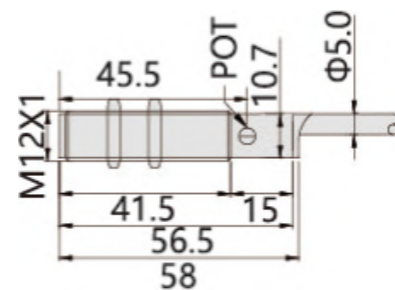
PM12T-N520



PM12R-N20

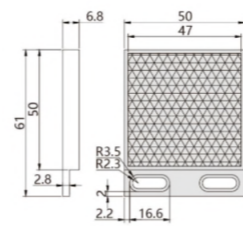
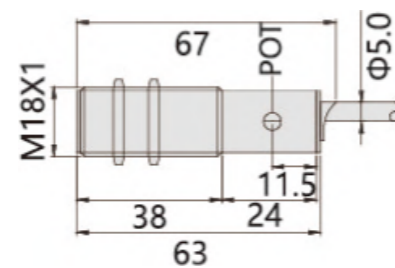
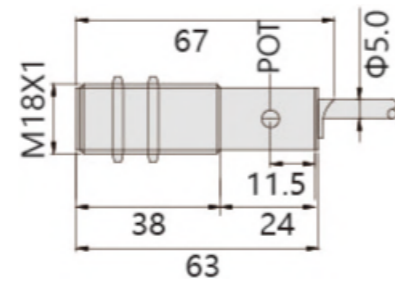
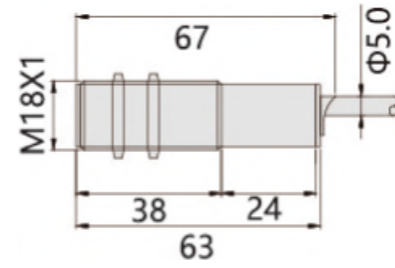


PM12SR-N200

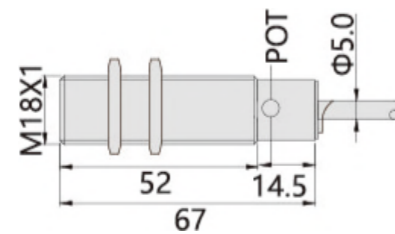


Reflector Dimensions

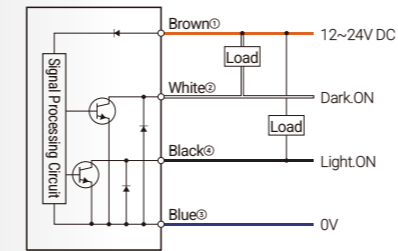
Types		Cylindrical Profile				
Appearance						
Model Number	NPN N.O	PM18T-N1500N	PM18R-N15N	PM18R-N50N	PM18SR-N300N	BGSM18-C10N
	NPN N.C					
	PNP N.O	PM18T-N1500P	PM18R-N15P	PM18R-N50P	PM18SR-N300P	BGSM18-C10P
	PNP N.C					
Detection Mode		Through-Beam	Diffuse Reflection	Diffuse Reflection	Retroreflective	Background Suppression
Sensing Distance		15m	150mm	500mm	0.1-3m	10-100mm
Power-On Delay		<300ms				
Response Time		<2ms				
Response Frequency		500Hz				1000Hz
Light Source		880nm Infrared Light				624nm Red Light
Maximum Load Current		≤200mA				
Operating Voltage		DC 10~30V				
Ambient Illuminance		<5000Lux				
Ambient Temperature		-25°C~+55°C				
Ambient Humidity		35%~85%RH				
Protection Circuit		Short-Circuit Protection				
Protection Rating		IP66				
Indicator Light		Yellow				
Connection Type		Cable Outlet Type (Standard Cable Length: 2m)	2m PVC Cable, 4x0.25mm ²		Cable Outlet Type (Standard Cable Length: 2m)	
Housing		PBT				



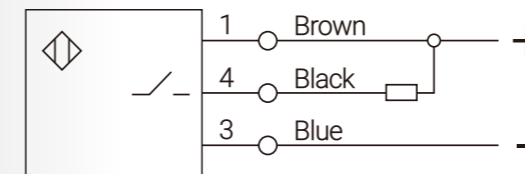
Reflector Dimensions



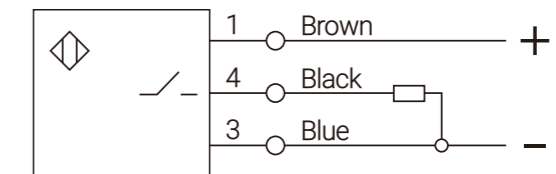
NPN Output



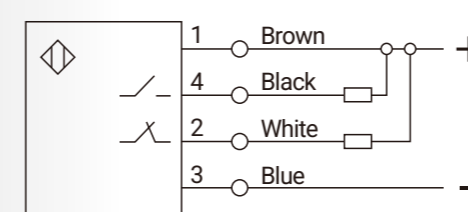
NPN Output



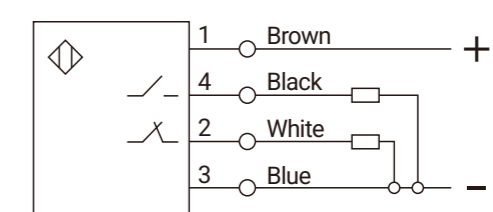
PNP Output



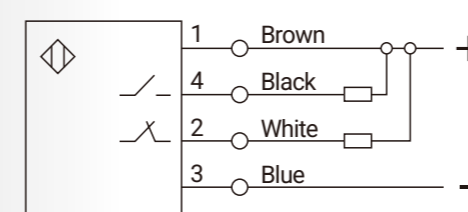
NPN Output



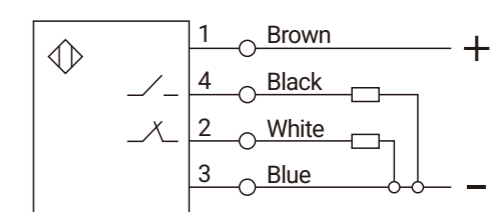
PNP Output



NPN Output

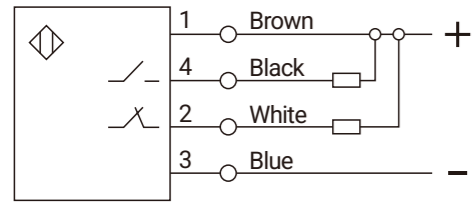


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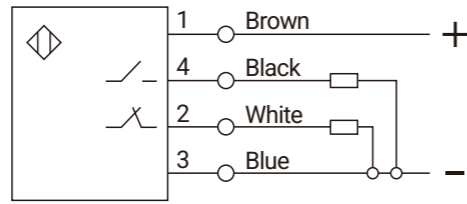


PM18T-N1500 Wiring Diagram

NPN Output

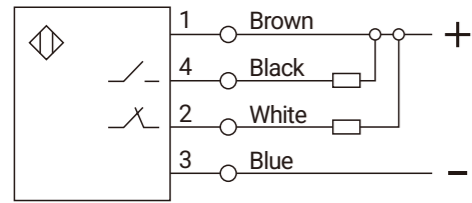


PNP Output

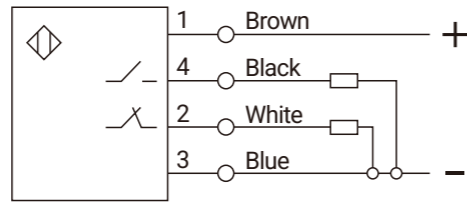


PM18R-N15 & PM18R-N50 Wiring Diagram

NPN Output

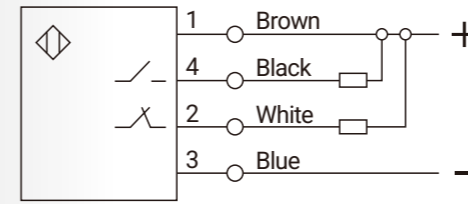


PNP Output

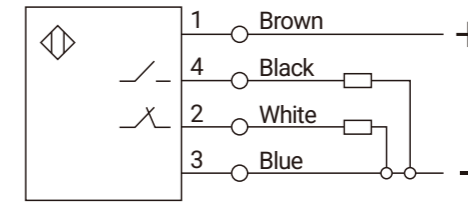


PM18SR-N300 Wiring Diagram

NPN Output

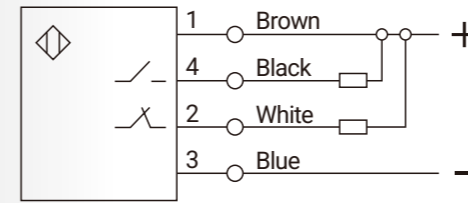


PNP Output

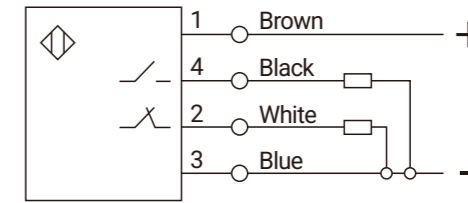


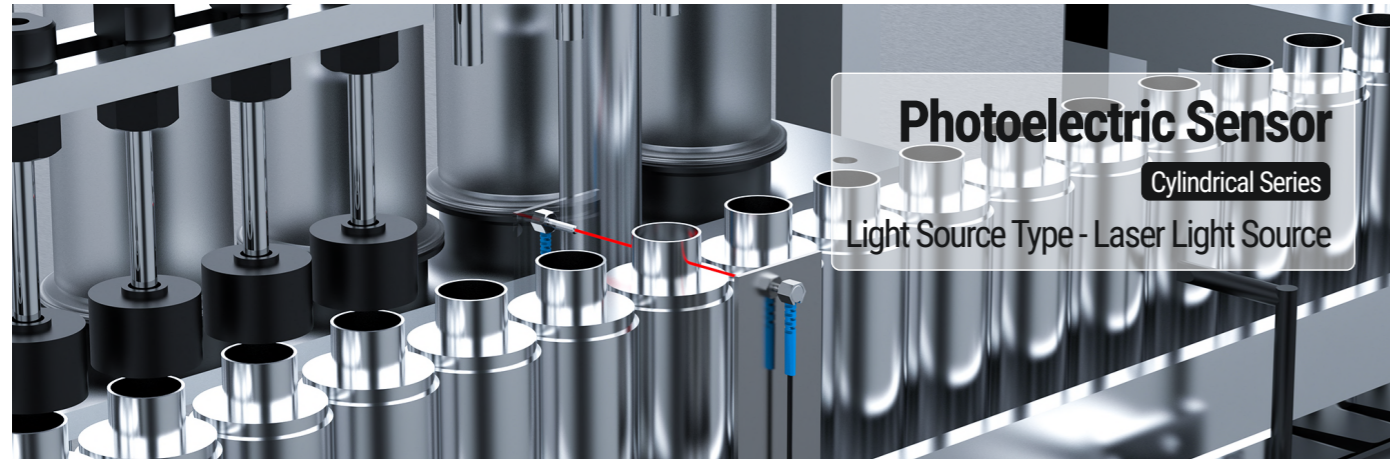
BGSM18-C10 Wiring Diagram

NPN Output



PNP Output





Multiple Detection Modes

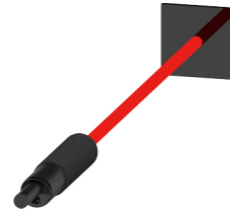
This series offers three detection modes: Diffuse Reflection, Through-Beam, and Retroreflective



Diffuse Reflection



Through-Beam



Retroreflective

• Cylindrical design facilitates installation, typically requiring only a single mounting hole, suitable for various installation environments

• Depending on the detection mode, Cylindrical Photoelectric Sensors offer varying sensing distances

• High response frequency meets high-speed detection requirements

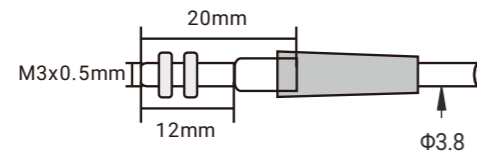
• Flexible adjustment of detection sensitivity with selectable Light-on or Dark-on mode

• Robust protection with IP67-rated models capable of operating in harsh environments

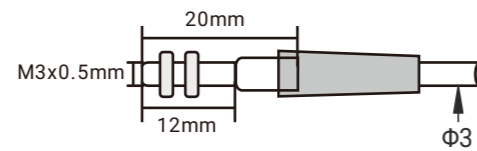
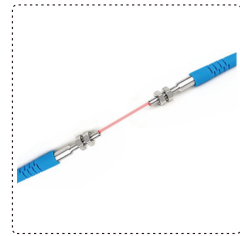
• Widely applicable across various industries including food and beverage, textile, ceramics, and logistics

Types		Cylindrical Profile			
Appearance					
Model Number	NPN N.O	PM03R-L04NO	PM03T-L2000NO	PM04R-L07NO	PM04R-L05NO-TZ
	NPN N.C	PM03R-L04NC	PM03T-L2000NC	PM04R-L07NC	PM04R-L05NC-TZ
	PNP N.O	PM03R-L04PO	PM03T-L2000PO	PM04R-L07PO	PM04R-L05PO-TZ
	PNP N.C	PM03R-L04PC	PM03T-L2000PC	PM04R-L07PC	PM04R-L05PC-TZ
Product Dimensions		M3		M4	
Detection Mode		Diffuse Reflection	Through-Beam	Diffuse Reflection	
Sensing Distance		5-40mm	20M	10-70mm	10-50mm
Spot Size		1.5mm		2mm	
Hysteresis Range		<15%			
Standard Detection Object		100*100mm			
Response Time		5ms			
Response Frequency		100Hz			
Light Source		650nm Laser			
Consumption Current (No-Load)		<10mA			
Maximum Load Current		120mA	150mA	120mA	
Leakage Current		<0.01mA			
Overload Current Protection Point		150mA	180mA	150mA	
Repeatability		<5%			
Operating Voltage		DC 10~30V			
Residual Voltage (Voltage Drop)		<1.5V			
Ambient Temperature		Operating Temperature: 0°C to 55°C			
Overtemperature Protection Point		Short-Circuit Protection			
Protection Rating		IP65			
Indicator Light		Yellow	Emitter: Green / Receiver: Yellow	Yellow	
Connection Type		Cable Outlet Type (Standard Cable Length: 1.5m)			
Housing		Stainless Steel			
Weight		Approx. 43.0g	Approx. 27.0*2g	Approx. 42.4g	Approx. 45.1g
Certifications		CE RoHS			

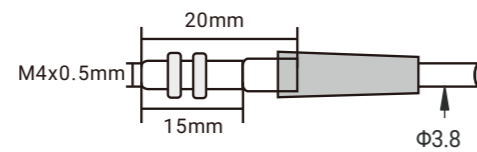
PM03R-L04



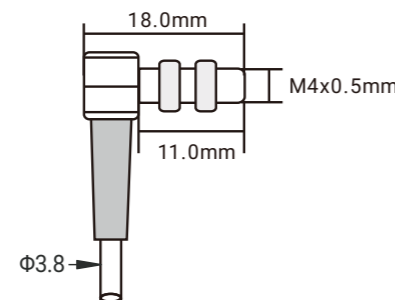
PM03T-L2000



PM04R-L07

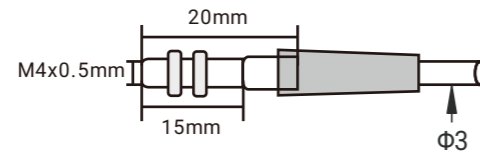
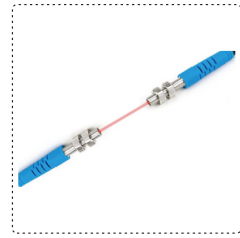


PM04R-L05-TZ

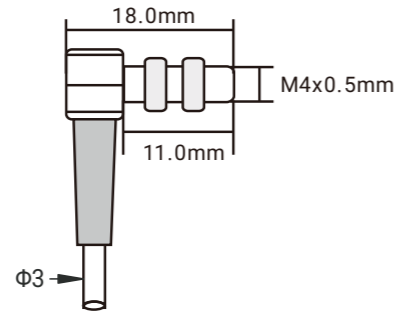


Types		Cylindrical Profile			
Appearance					
Model Number	NPN N.O	PM04T-L2000NO	PM04T-L2000NO-TZ	PM05R-L13NO	PM05T-L2000NO
	NPN N.C	PM04T-L2000NC	PM04T-L2000NC-TZ	PM05R-L13NC	PM05T-L2000NC
	PNP N.O	PM04T-L2000PO	PM04T-L2000PO-TZ	PM05R-L13PO	PM05T-L2000PO
	PNP N.C	PM04T-L2000PC	PM04T-L2000PC-TZ	PM05R-L13PC	PM05T-L2000PC
Product Dimensions		M4		M5	
Detection Mode		Through-Beam		Diffuse Reflection	Through-Beam
Sensing Distance		20M		15-130mm	20M
Spot Size		1.5mm		2mm	1.5mm
Hysteresis Range		<15%			
Standard Detection Object		100*100mm			
Response Time		5ms			
Response Frequency		100Hz			
Light Source		650nm Laser			
Consumption Current (No-Load)		<10mA			
Maximum Load Current		150mA		120mA	150mA
Leakage Current		<0.01mA			
Overload Current Protection Point		180mA		150mA	180mA
Repeatability		<5%			
Operating Voltage		DC 10~30V			
Residual Voltage (Voltage Drop)		<1.5V			
Ambient Temperature		Operating Temperature: 0°C to 55°C			
Overtemperature Protection Point		Short-Circuit Protection			
Protection Rating		IP65			
Indicator Light		Emitter: Green / Receiver: Yellow		Yellow	Emitter: Green / Receiver: Yellow
Connection Type		Cable Outlet Type (Standard Cable Length: 1.5m)			
Housing		Stainless Steel			
Weight		Approx. 27.0*2g	Approx. 56.8g	Approx. 44.4g	Approx. 56g
Certifications		CE RoHS			

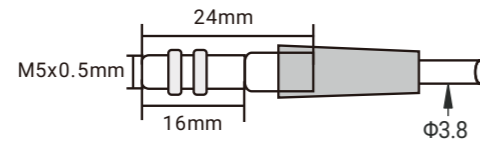
PM04T-L2000



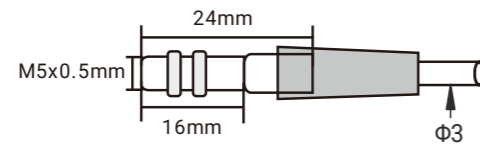
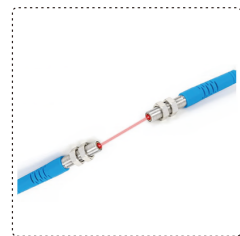
PM04T-L2000-TZ



PM05R-L13

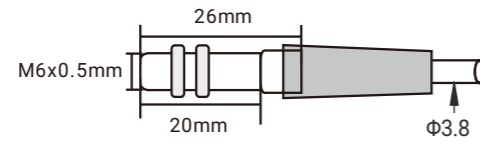


PM05T-L2000

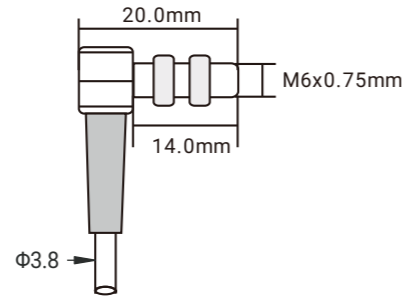


Types		Cylindrical Profile			
Appearance					
Model Number	NPN N.O	PM06R-L20NO	PM06R-L10NO-TZ	PM06T-L2000NO	PM06T-L2000NO-TZ
	NPN N.C	PM06R-L20NC	PM06R-L10NC-TZ	PM06T-L2000NC	PM06T-L2000NC-TZ
	PNP N.O	PM06R-L20PO	PM06R-L10PO-TZ	PM06T-L2000PO	PM06T-L2000PO-TZ
	PNP N.C	PM06R-L20PC	PM06R-L10PC-TZ	PM06T-L2000PC	PM06T-L2000PC-TZ
Product Dimensions		M6			
Detection Mode		Diffuse Reflection		Through-Beam	
Sensing Distance		20-200mm	15-100mm	20M	
Spot Size		2mm		2mm	
Hysteresis Range		<15%			
Standard Detection Object		100*100mm			
Response Time		5ms			
Response Frequency		100Hz			
Light Source		650nm Laser			
Consumption Current (No-Load)		<10mA			
Maximum Load Current		120mA	150mA		
Leakage Current		<0.01mA			
Overload Current Protection Point		150mA	180mA		
Repeatability		<5%			
Operating Voltage		DC 10~30V			
Residual Voltage (Voltage Drop)		<1.5V			
Ambient Temperature		Operating Temperature: 0°C to 55°C			
Overtemperature Protection Point		Short-Circuit Protection			
Protection Rating		IP65			
Indicator Light		Yellow	Emitter: Green / Receiver: Yellow		
Connection Type		Cable Outlet Type (Standard Cable Length: 1.5m)			
Housing		Stainless Steel			
Weight		Approx. 47.3g	Approx. 47.1g	Approx. 56.4g	Approx. 65g
Certifications		CE RoHS			

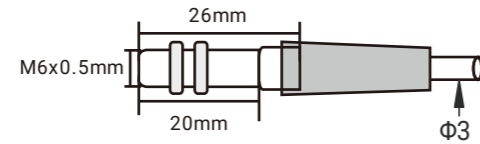
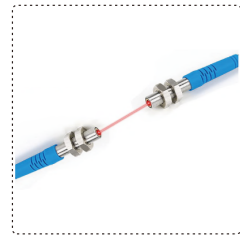
PM06R-L20



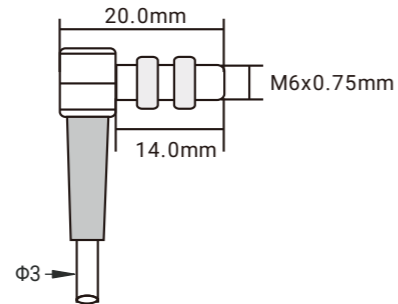
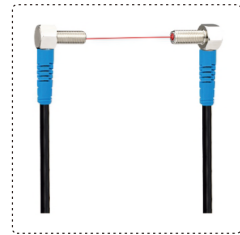
PM06R-L10-TZ




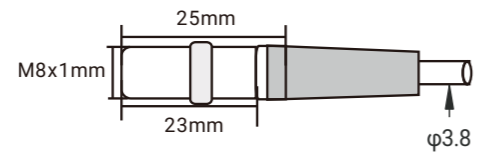
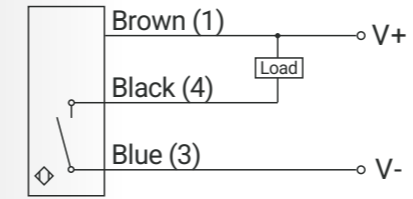
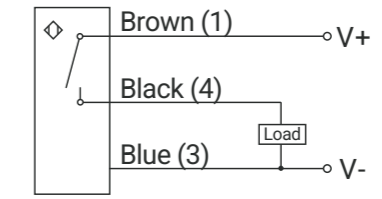
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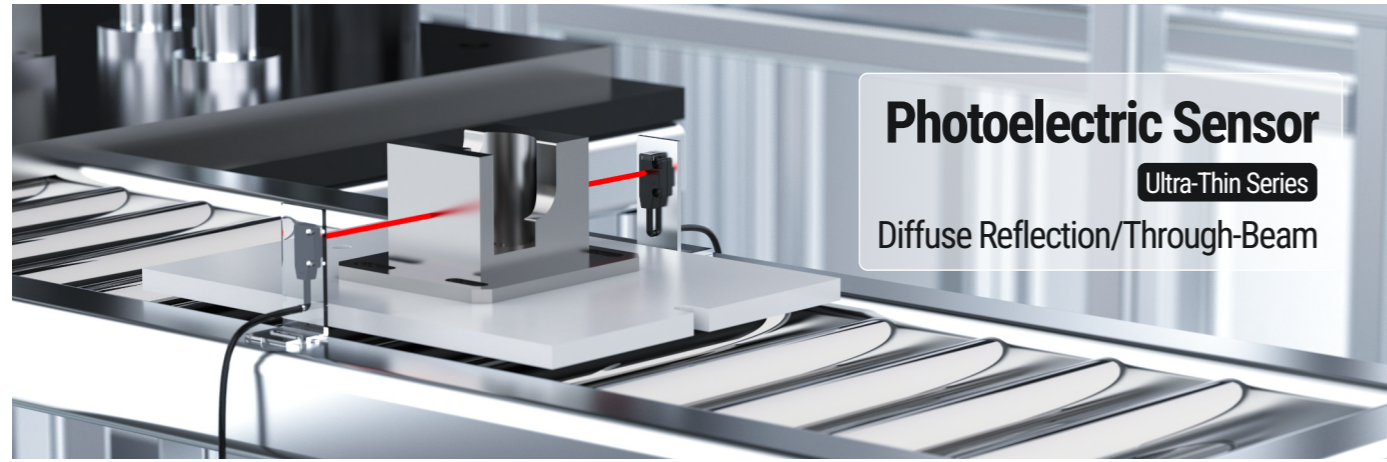


PM06T-L2000-TZ

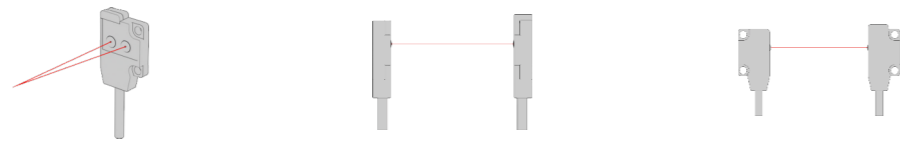


Types	Cylindrical Profile	
Appearance		
Model Number	NPN N.O	PM08R-L20NO
	NPN N.C	PM08R-L20NC
	PNP N.O	PM08R-L20PO
	PNP N.C	PM08R-L20PC
Product Dimensions	M8	
Detection Mode	Diffuse Reflection	
Sensing Distance	20-200mm	
Spot Size	2mm	
Hysteresis Range	<15%	
Standard Detection Object	100*100mm	
Response Time	5ms	
Response Frequency	100Hz	
Light Source	650nm Laser	
Consumption Current (No-Load)	<10mA	
Maximum Load Current	120mA	
Leakage Current	<0.01mA	
Overload Current Protection Point	150mA	
Repeatability	<5%	
Operating Voltage	DC 10~30V	
Residual Voltage (Voltage Drop)	<1.5V	
Ambient Temperature	Operating Temperature: 0°C to 55°C	
Protection Circuit	Short-Circuit Protection	
Protection Rating	IP65	
Indicator Light	Yellow	
Connection Type	Cable Outlet Type (Standard Cable Length: 1.5m)	
Housing	Copper Plated with Nickel	
Weight	Approx. 49.8g	
Certifications	CE RoHS	

**NPN Output****PNP Output**

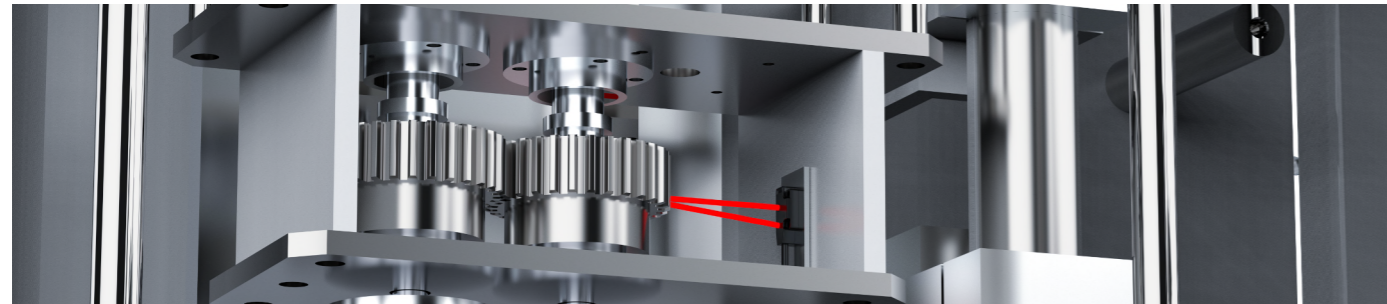


Extremely slim profile with diverse variants to meet broader application scenarios



Diffuse Reflection Type Frontal Through-Beam Type Side Through-Beam Type

Ultra-Thin Photoelectric Switch Application Examples

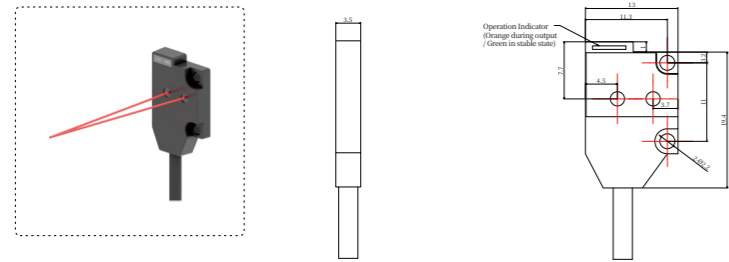


Compact and lightweight design ideal for confined spaces

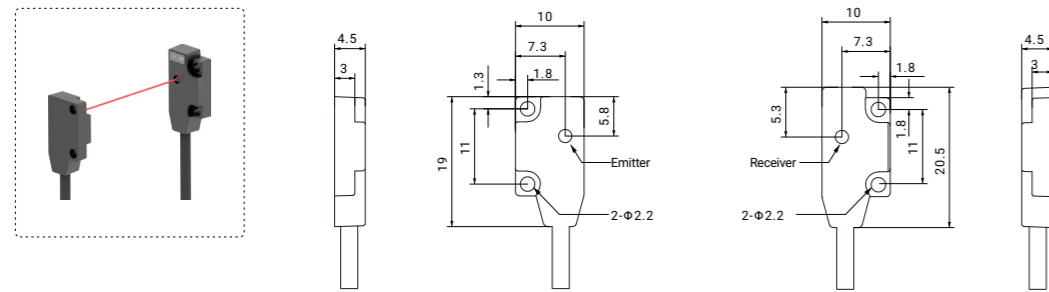
- Ultra-slim profile with a thickness of 4.5mm
- Available in Frontal Diffuse Reflection, Frontal Through-Beam, and Side Through-Beam mounting configurations
- High-visibility LED status indicators
- Optimized for installation in tight or spatially constrained environments

Types		Ultra-Thin Profile				
Appearance						
Model Number	NPN N.O	FR-14A	FT-13A	FT-15A	FT-13LA	FT-15LA
	NPN N.C	FR-14B	FT-13B	FT-15B	FT-13LB	FT-15LB
	PNP N.O	FR-14AP	FT-13AP	FT-15AP	FT-13LAP	FT-15LAP
	PNP N.C	FR-14BP	FT-13BP	FT-15BP	FT-13LBP	FT-15LBP
Detection Mode		Diffuse Reflection	Through-Beam			
Sensing Distance		30mm	500mm	800mm	500mm	800mm
Spot Size		/	Φ50mm/500mm			
Hysteresis Range		<5%	/			
Standard Detection Object		A/B: 10mm: Φ1.5mm AP/BP: 5mm: Φ0.6mm	Opaque Objects ≥Φ2mm			
Response Time		<500μs	<1ms			
Response Frequency		700Hz	300Hz			
Light Source		700nm Visible Red Light	660nm Visible Red Light			
Consumption Current (No-Load)		<10mA	Receiver: <10mA; Emitter: <15mA			
Maximum Load Current		100mA				
Repeatability		<5%				
Operating Voltage		DC 12~24V±10%				
Residual Voltage (Voltage Drop)		<1.5V				
Ambient Temperature		Operating Temperature: -10°C to 55°C Storage Temperature: -25°C to 70°C; Freeze-Free				
Ambient Humidity		Operating Humidity: 35% to 85% RH Storage Humidity: 35% to 95% RH; Condensation-Free				
Protection Circuit		Reverse Polarity/Surge/Short-Circuit Protection				
Protection Rating		IP64				
Vibration Resistance		10~55Hz, Double Amplitude 1.0mm, 30 Minutes per Axis (X/Y/Z)				
Shock Resistance		300m/s ² , 3 Impacts per Axis (X/Y/Z)				
Indicator Light		Orange				
Connection Type		Cable Outlet Type (Standard Cable Length: 2m)				
Housing		ABS				

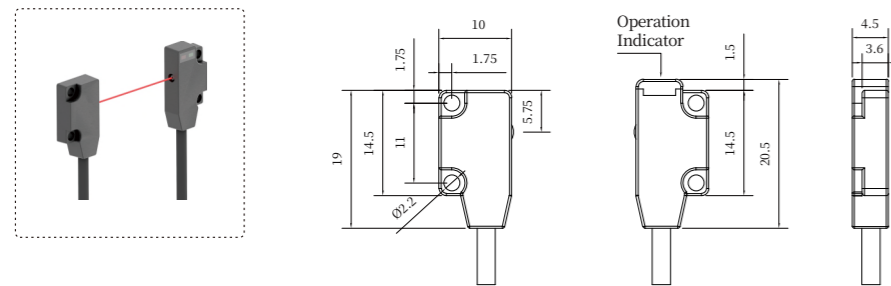
FR-14



FT-13

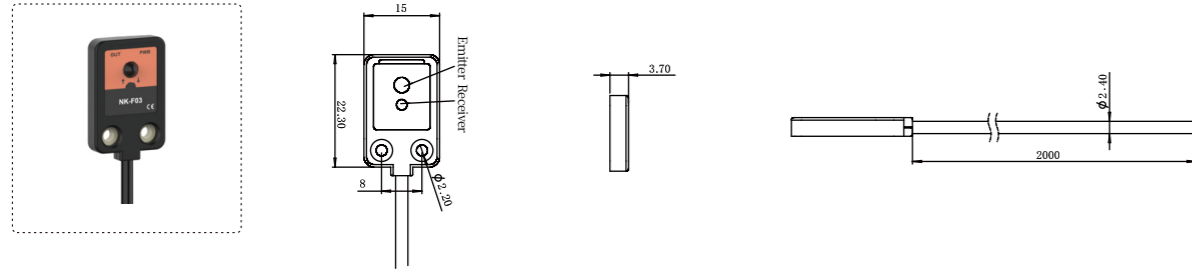


FT-13L

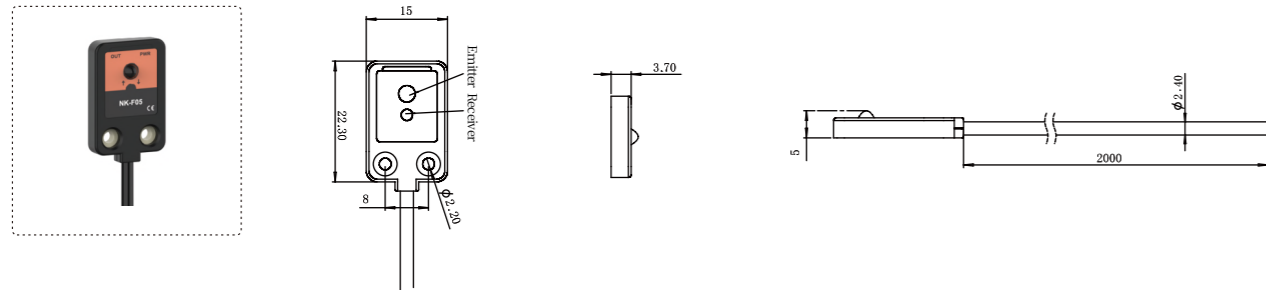


Types		Ultra-Thin Profile		
Appearance				
Model Number	NPN N.O	NK-F03N	NK-F05N	NK-T1N
	NPN N.C	NK-F03N2	NK-F05N2	NK-T1N2
	PNP N.O	NK-F03P	NK-F05P	NK-T1P
	PNP N.C	NK-F03P2	NK-F05P2	NK-T1P2
Detection Mode		Diffuse Reflection		Through-Beam
Sensing Distance		30mm	50mm	1000mm
Response Time		0.5ms		
Light Source		Red LED		Infrared Light
Consumption Current (No-Load)		<15mA		
Maximum Load Current		100mA		
Operating Voltage		DC 12~24V±10%		
Ambient Illuminance		Incandescent Light: ≤3,000 Lux		
Ambient Temperature		Operating Temperature: -15°C to 55°C Storage Temperature: -30°C to 70°C; Freeze-Free		
Ambient Humidity		Operating Humidity: 35% to 85% RH; Condensation-Free		
Protection Circuit		Reverse Polarity/Short-Circuit Protection		
Protection Rating		IP64		
Vibration Resistance		10~55Hz, Double Amplitude 3.0mm, 2h per Axis (X/Y/Z)		
Shock Resistance		500m/s², 3 Impacts per Axis (X/Y/Z)		
Insulation Resistance		20MΩ		
Connection Type		Cable Outlet Type		
Housing		ABS+PMMA		

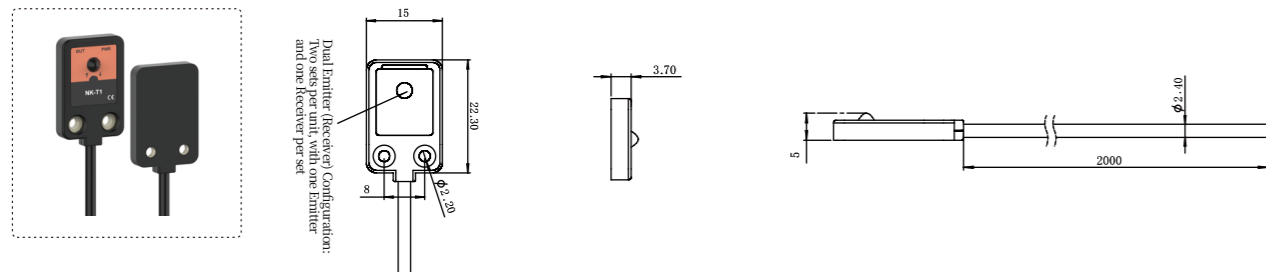
NK-F03



NK-F05



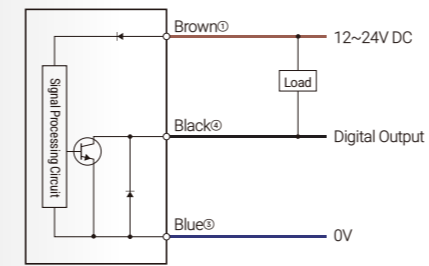
NK-T1



Dual Emitter / Receiver Configuration:
Two sets per unit, with one Emitter
and one Receiver per set.

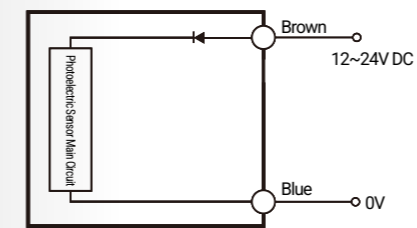
FR-14 & FT-13 & FT-13L Wiring Diagram

NPN Output

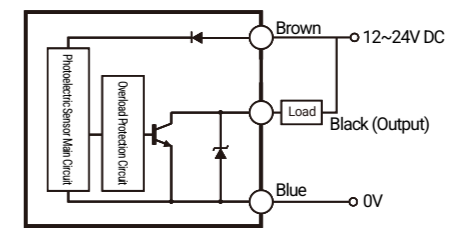


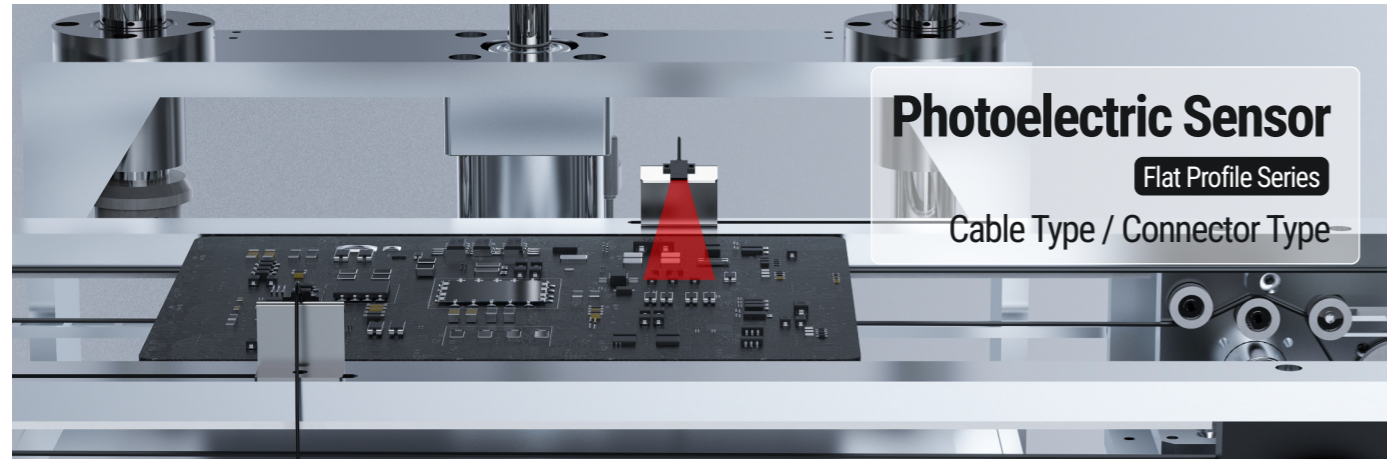
NK-F03 & NK-F05 & NK-T1 Wiring Diagram

Emitter Section



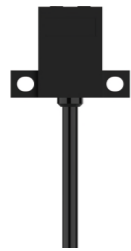
Receiver Section



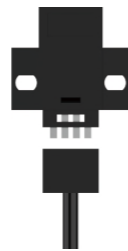


Dual Wiring Options

This series offers two wiring configurations: Cable Type and Connector Type







Cable Type

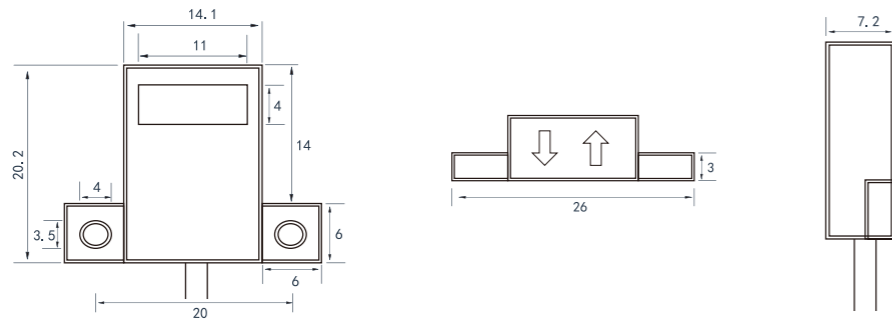
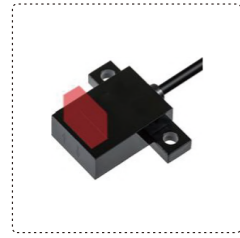


Connector Type

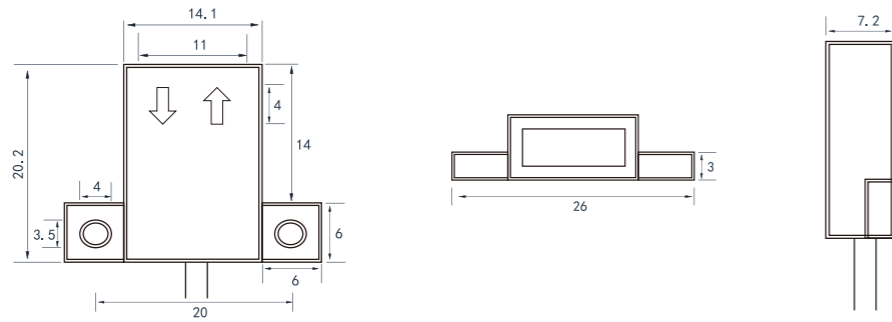
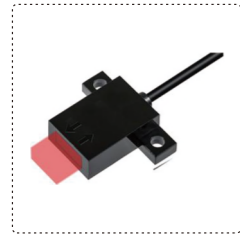
- Response time of Flat Profile Photoelectric Sensors is typically very fast, reaching millisecond level
- Output modes of Flat Profile Photoelectric Sensors are diverse to meet different circuit connection requirements
- High response frequency meets high-frequency detection needs
- Flat Profile Photoelectric Sensors have good environmental adaptability and can operate within a wide temperature and humidity range
- Flat design facilitates installation in narrow spaces; some models are equipped with connectors for quick connection and disassembly
- Widely applied in various automated production lines, such as detecting capacitors in trays and confirming pallet positioning

Types		Flat Profile			
Appearance					
Model Number	NPN N.O	MRF-N01N	MRH-N01N	MRF-N01N-E	MRH-N01N-E
	NPN N.C				
	PNP N.O	MRF-N01P	MRH-N01P	MRF-N01P-E	MRH-N01P-E
	PNP N.C				
Detection Mode		Diffuse Reflection			
Sensing Distance		Black: >5mm / White: >10mm			
Hysteresis Range		<20%			
Standard Detection Object		Opaque Objects ≥Φ4mm			
Response Time		<1 ms			
Light Source		940nm Infrared Light			
Consumption Current (No-Load)		≤25 mA			
Operating Voltage		DC 12~24V ±10%			
Ambient Illuminance		Sunlight: ≤10,000 Lux Incandescent Light: ≤3,000 Lux			
Ambient Temperature		Operating Temperature: -25°C to 70°C Storage Temperature: -40°C to 85°C; Freeze-Free			
Protection Circuit		Reverse Polarity/Surge/Short-Circuit Protection			
Protection Rating		IP65			
Indicator Light		Red			
Connection Type		Cable Outlet Type (Standard Cable Length: 2m)		Connectorized Cable	
Housing		PC			

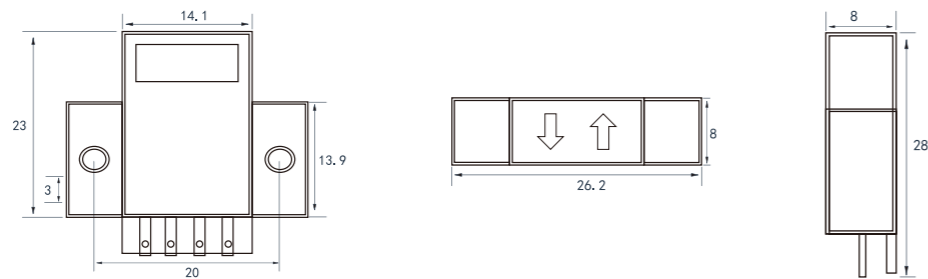
MRF-N01



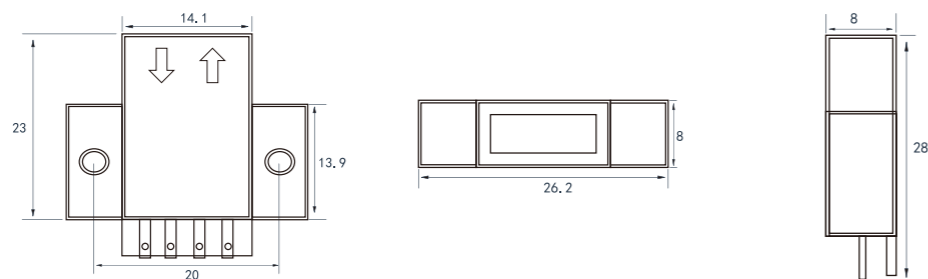
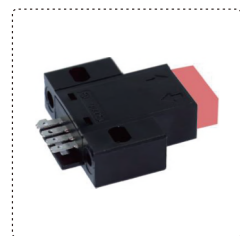
MRH-N01



MRF-N01-E

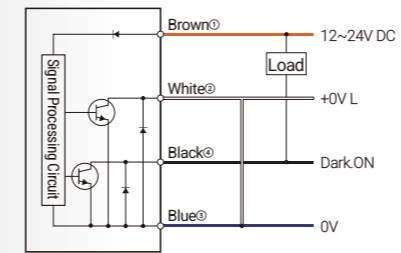


MRH-N01-E



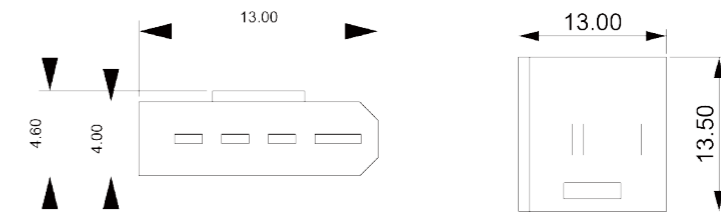
MRF-N01 & MRH-N01 & MRF-N01-E & MRH-N01-E Wiring Diagram

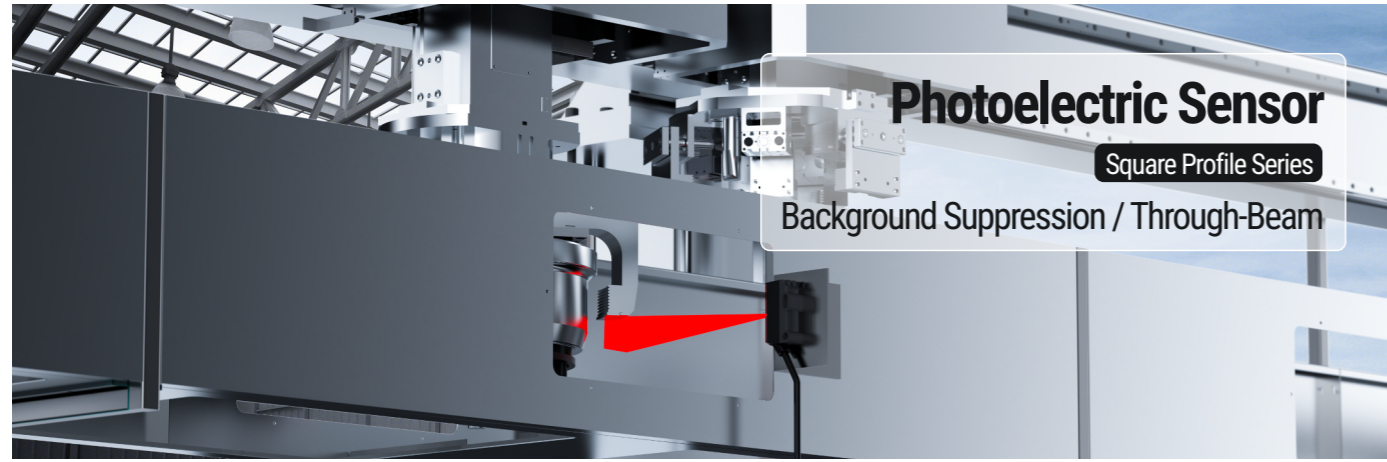
NPN Output



MRF-N01-E & MRH-N01-E Connection Cable

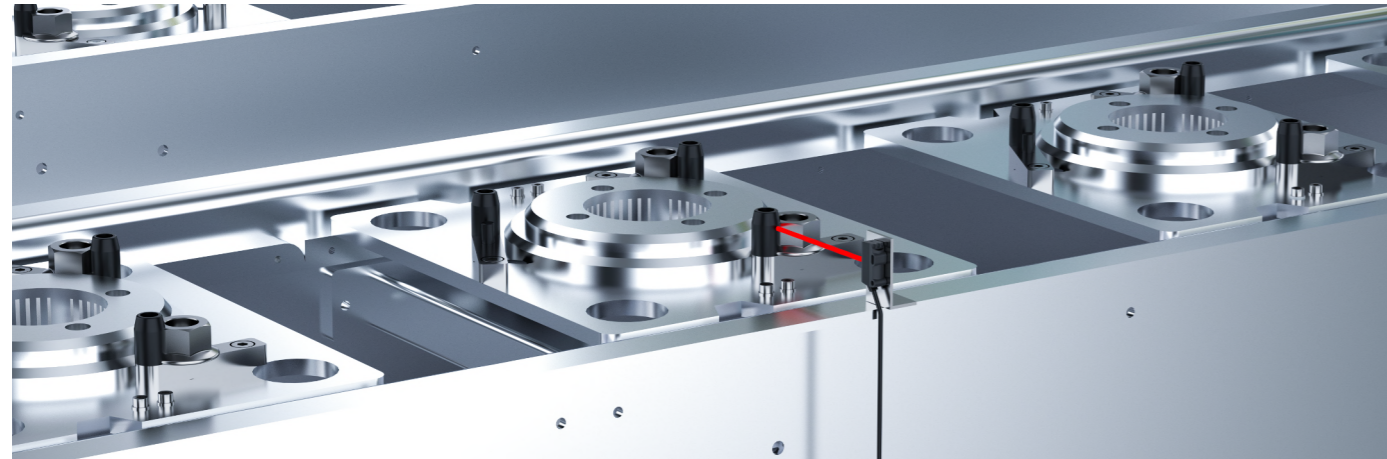
UM1010







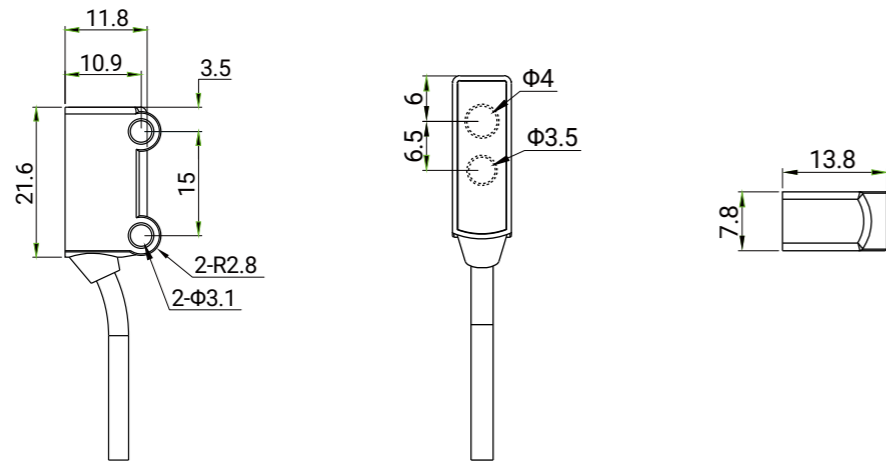
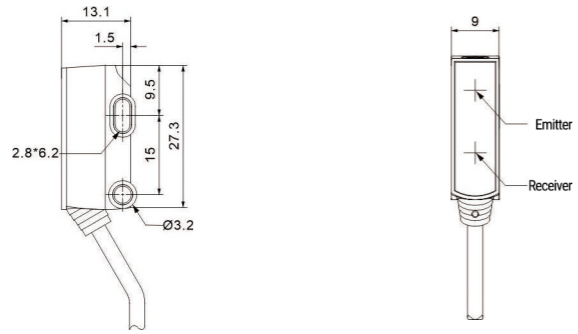
Background Suppression Application Examples

Achieves consistent detection distances for black and white workpieces regardless of color, angle, or surface properties; eliminates the need for detection distance adjustment during product changeovers on mixed-color production lines

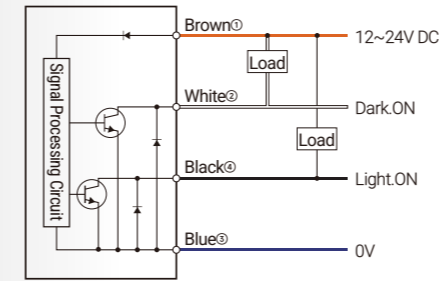


- Square Profile Photoelectric Sensors achieve extended detection ranges
- Maintain stable detection performance in all environments with ambient light immunity
- Enable precise positioning and detection of small components for high-accuracy applications
- Effectively detect objects with bright, dark, or tilted surfaces with excellent adaptability
- Compact and lightweight design allows simple installation and integration into various equipment
- Ultra-fast response based on light propagation principle for immediate object detection

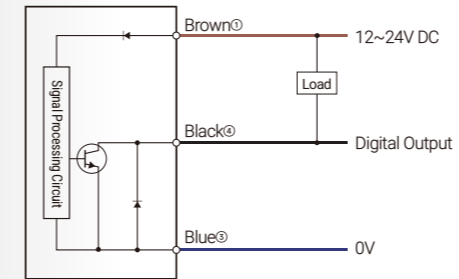
Types		Square Profile	
Appearance			
Model Number	NPN N.O	BGS-LM10	PT-T11
	NPN N.C		PT-T11C
	PNP N.O	BGS-LM10P	PT-T11P
	PNP N.C		PT-T11PC
Detection Mode		Diffuse Reflection	Through-Beam
Sensing Distance		2.5mm to 90mm adjustable	2M
Spot Size		Φ3mm	/
Hysteresis Range		<20%	/
Standard Detection Object		Opaque Objects ≥Φ10mm	Opaque Objects ≥Φ15mm
Response Time		<1ms	
Response Frequency		1KHz	/
Light Source		650nm Red Light	Infrared LED
Consumption Current (No-Target)		<25mA	Emitter: <45mA; Receiver: <45mA
Maximum Load Current		50mA	
Repeatability		<5%	/
Operating Voltage		DC 12~24V±10%	DC 10~30V
Residual Voltage (Voltage Drop)		<3V	<1V
Ambient Illuminance		Incandescent Light ≤3,000 Lux; Sunlight ≤10,000 Lux	
Ambient Temperature		Operating Temperature: -25°C to 55°C Storage Temperature: -25°C to 70°C; Freeze-Free	Operating Temperature: -25°C to 55°C Storage Temperature: -30°C to 70°C; Freeze-Free
Ambient Humidity		Operating Humidity: 35% to 85% RH Storage Humidity: 35% to 95% RH; Condensation-Free	Operating Humidity: 45% to 85% RH Storage Humidity: 35% to 95% RH; Condensation-Free
Protection Circuit		Reverse Polarity/Surge/Short-Circuit Protection	
Protection Rating		IP65	IP67
Vibration Resistance		10~55Hz, Double Amplitude 1.0mm, 30 Minutes per Axis (X/Y/Z)	0~55Hz, Double Amplitude 1.5mm, 1h per Axis (X/Y/Z)
Shock Resistance		300m/s ² , 3 Impacts per Axis (X/Y/Z)	500m/s ² , 3 Impacts per Axis (X/Y/Z)
Insulation Resistance		/	Insulation Resistance: ≥20 MΩ (DC 500V Megohmmeter)
Indicator Light		Orange	/
Connection Type		Cable Outlet Type (Standard Cable Length: 2m)	
Housing		ABS	PC+PMMA



NPN Output



NPN Output





Detection Type

This product series offers two detection types: diffuse reflective and through-beam models available for selection.

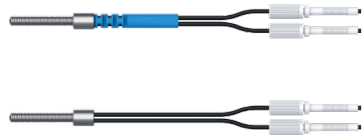


Diffuse Reflective

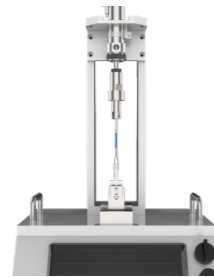


Through-Beam

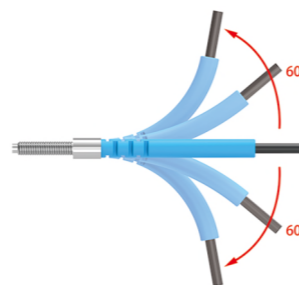
Product Advantages



Features an additional protective sleeve compared to traditional optical fibers



Provides 3 times higher tensile strength than conventional optical fibers

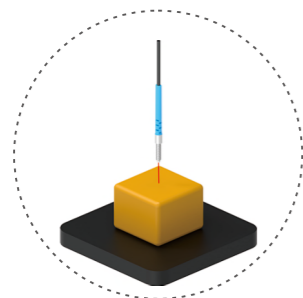


High flexibility with excellent protection, resistant to breaking at bending points

Operating Instructions

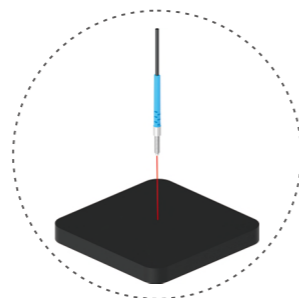
Step 1:

Perform teach-in setup on the target object

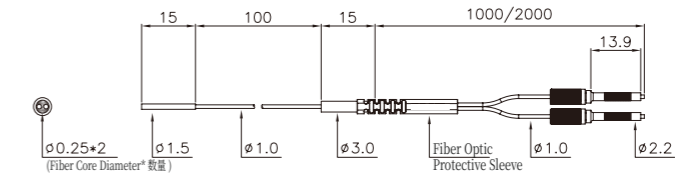


Step 2:

Remove the target object and perform teach-in setup once again

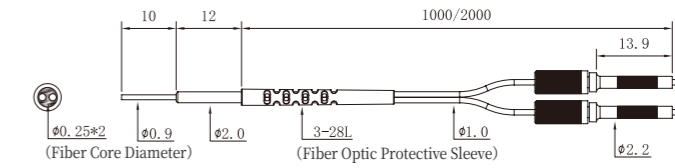


RE15H10Q $\phi 1.5$



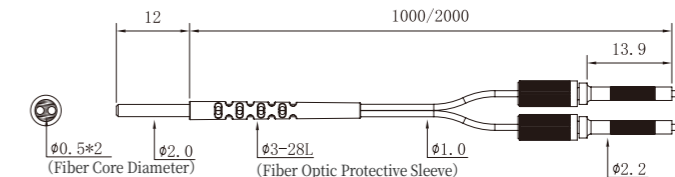
Fiber Outer Diameter= $\phi 1.0$
 Fiber Inner Diameter= $\phi 0.25 \times 2$
 Operating Temperature: $-50^{\circ}\text{C} \sim +70^{\circ}\text{C}$
 Detection Distance=10mm
 Bending Radius: R10

RE2H10Q-S1 $\phi 2.0$



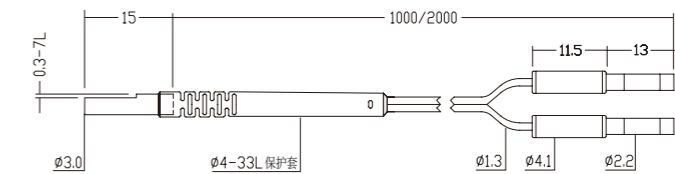
Fiber Outer Diameter= $\phi 1.0$
 Fiber Inner Diameter= $\phi 0.25 \times 2$
 Operating Temperature: $-50^{\circ}\text{C} \sim +70^{\circ}\text{C}$
 Detection Distance=10mm
 Bending Radius: R10
 S1:10mm S2:20mm S4:40mm S9:90mm

RS2H10Q



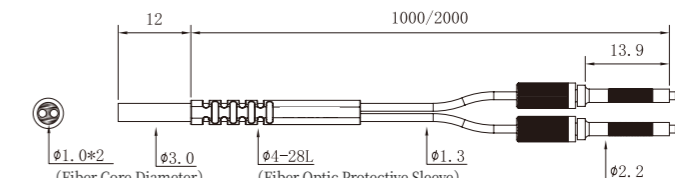
Fiber Outer Diameter= $\phi 1.0$
 Fiber Inner Diameter= $\phi 0.5 \times 2$
 Operating Temperature: $-50^{\circ}\text{C} \sim +70^{\circ}\text{C}$
 Detection Distance=50mm
 Bending Radius: R10

RA3H10QD $\phi 3.0$



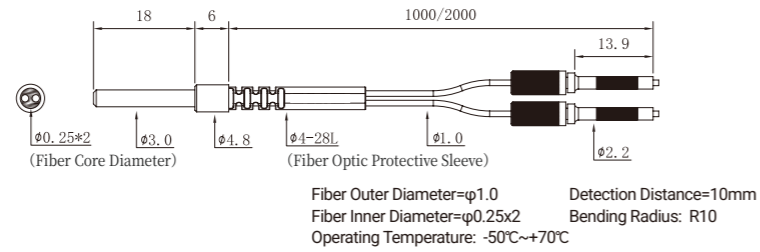
Fiber Outer Diameter= $\phi 1.3$
 Fiber Inner Diameter= $\phi 1.0 \times 2$
 Operating Temperature: $-50^{\circ}\text{C} \sim +70^{\circ}\text{C}$
 Detection Distance=160mm
 Bending Radius: R25

R3H10Q

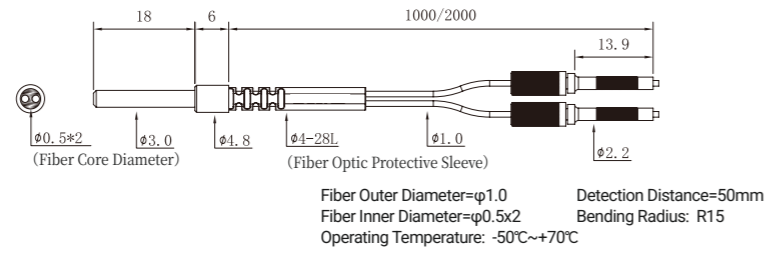


Fiber Outer Diameter= $\phi 1.3$
 Fiber Inner Diameter= $\phi 1.0 \times 2$
 Operating Temperature: $-50^{\circ}\text{C} \sim +70^{\circ}\text{C}$
 Detection Distance=160mm
 Bending Radius: R25

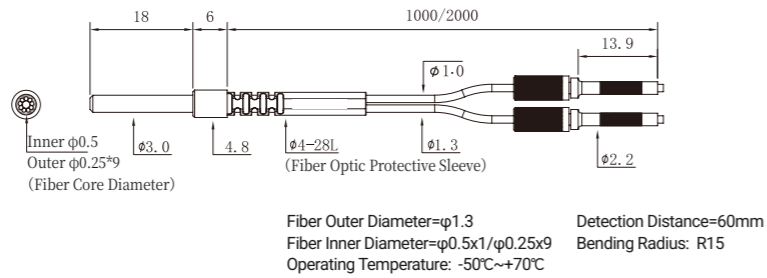
RE3H10Q



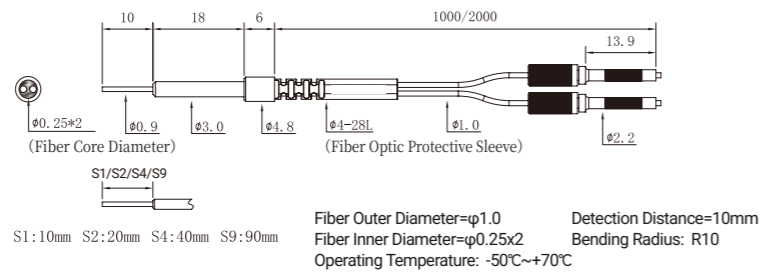
RS3H10Q



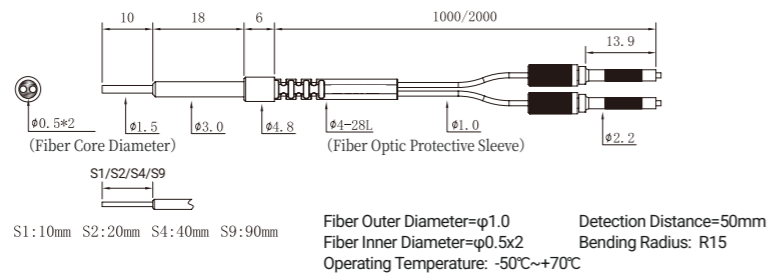
RC3H10Q



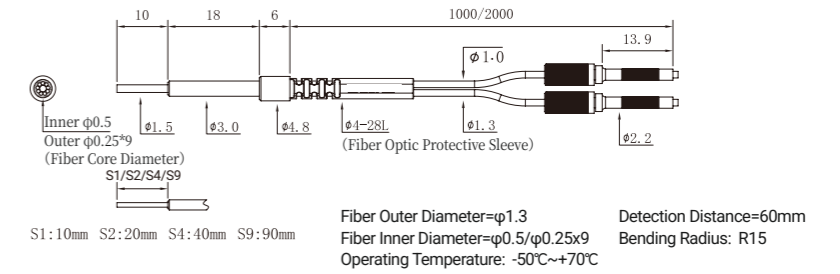
RE3H10Q-S1



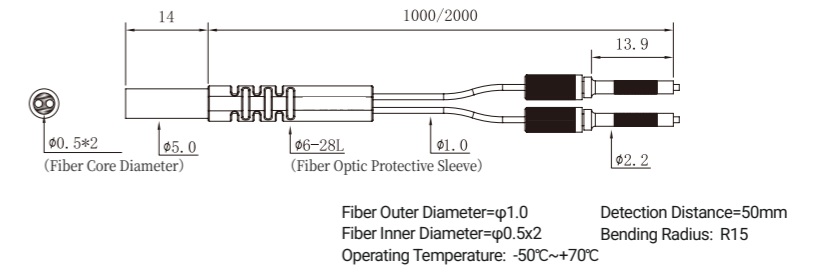
RS3H10Q-S1



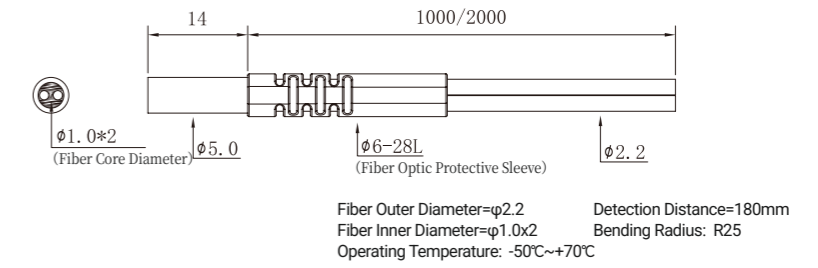
RC3H10Q-S1



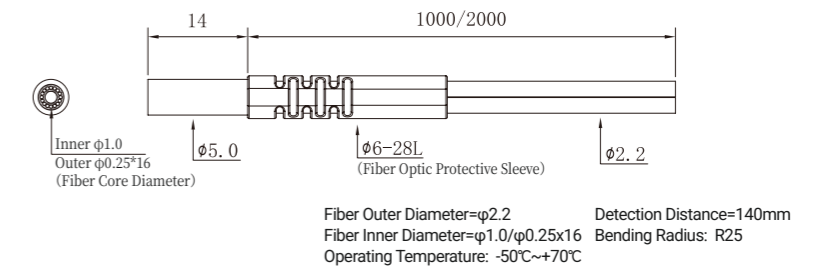
RS5H10Q φ5.0



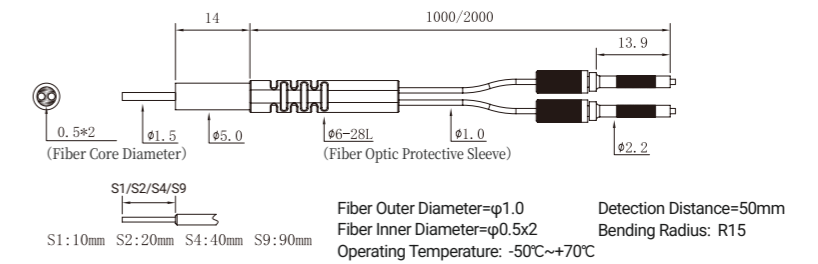
R5H10Q



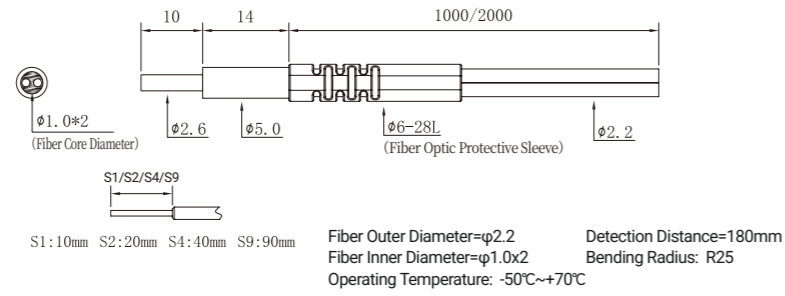
RC5H10Q



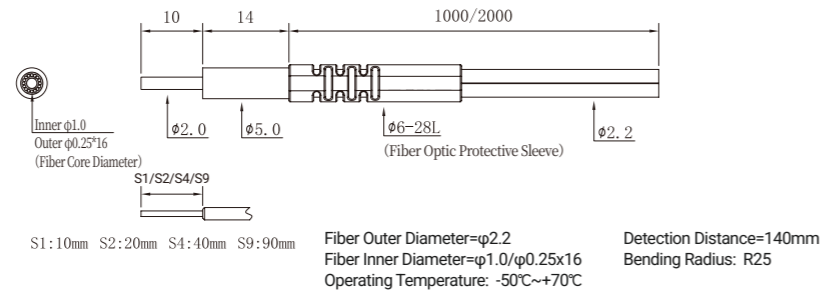
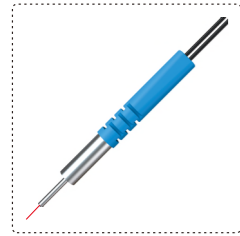
RS5H10Q-S1 φ5.0



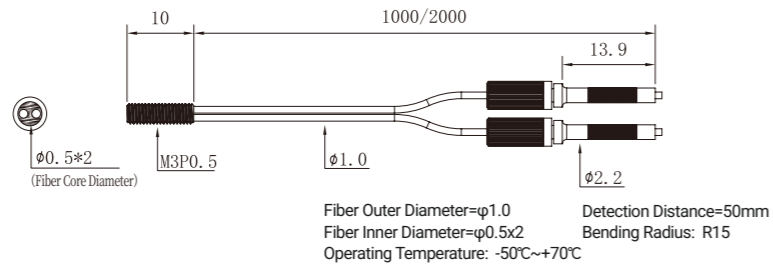
R5H10Q-S1



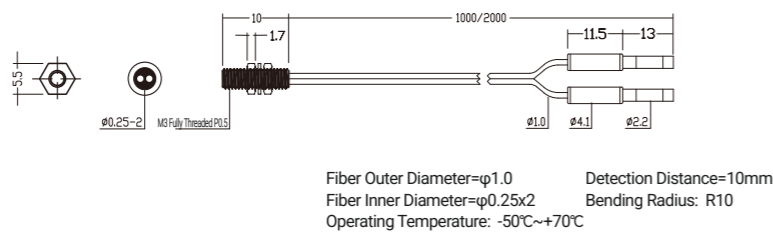
RC5H10Q-S1



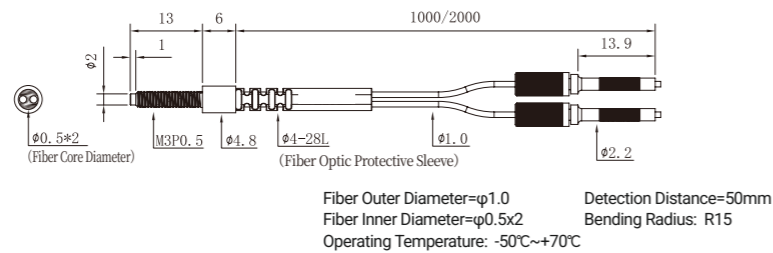
RS3H10D



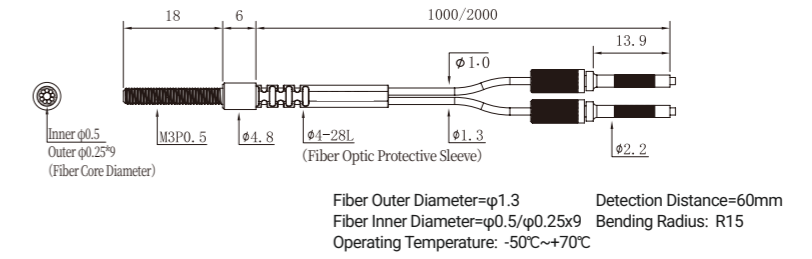
RE3H10D



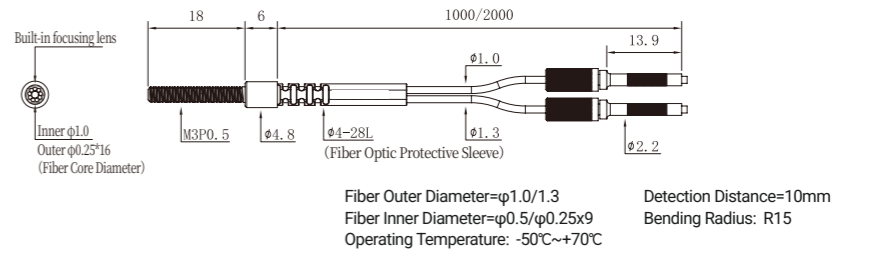
RS3H10



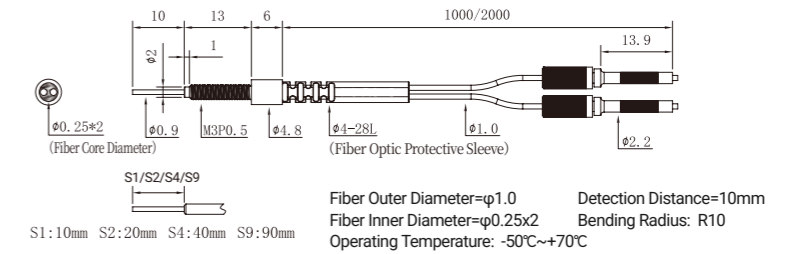
RC3H10



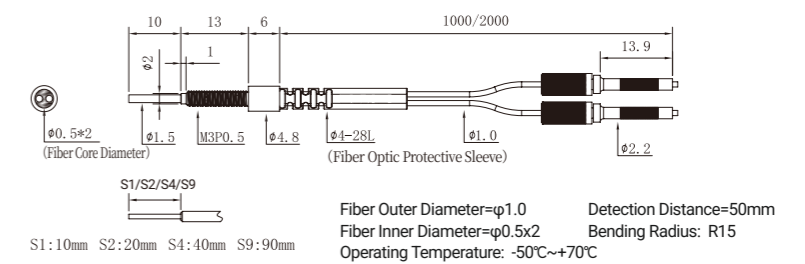
RC3H10FG



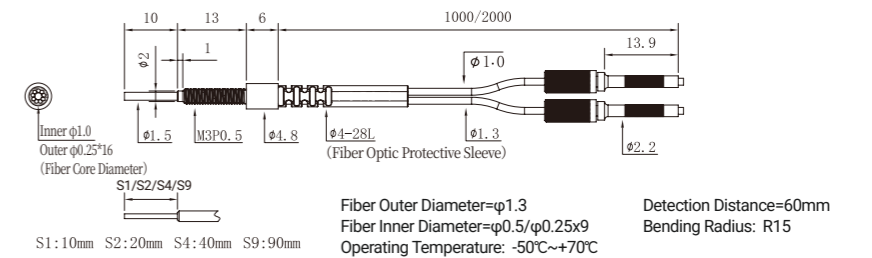
RE3H10-S1



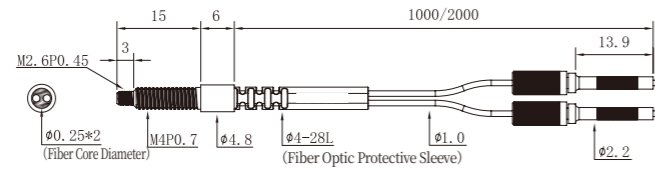
RS3H10-S1



RC3H10-S1

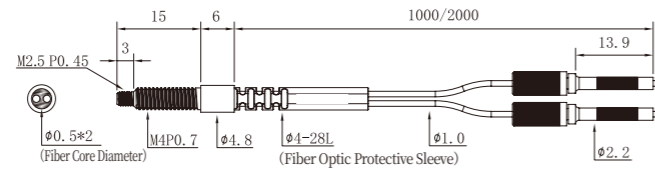


RE4H10



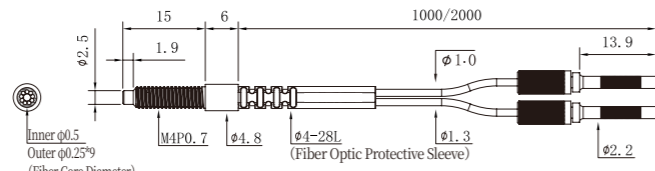
Fiber Outer Diameter= ϕ 1.0
 Fiber Inner Diameter= ϕ 0.25x2
 Operating Temperature: -50°C~+70°C
 Detection Distance=10mm
 Bending Radius: R15

RS4H10



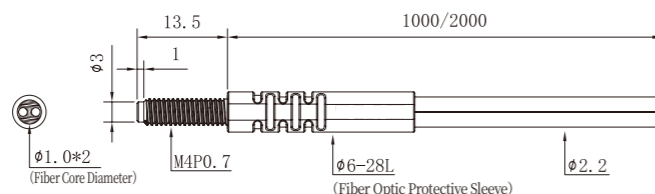
Fiber Outer Diameter= ϕ 1.0
 Fiber Inner Diameter= ϕ 0.5x2
 Operating Temperature: -50°C~+70°C
 Detection Distance=10mm
 Bending Radius: R15

RC4H10



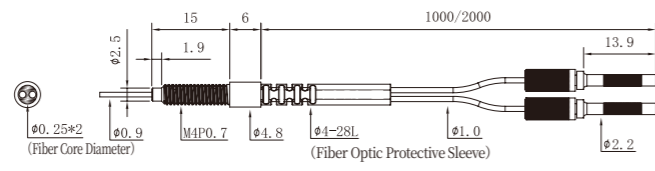
Fiber Outer Diameter= ϕ 1.3
 Fiber Inner Diameter= ϕ 0.5/ ϕ 0.25x9
 Operating Temperature: -50°C~+70°C
 Detection Distance=60mm
 Bending Radius: R15

R4H10



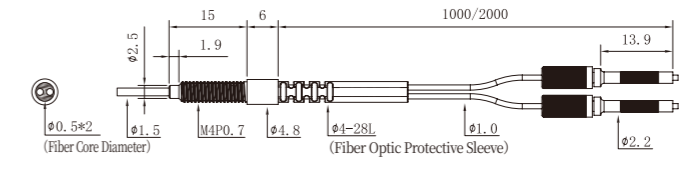
Fiber Outer Diameter= ϕ 2.2
 Fiber Inner Diameter= ϕ 1.0x2
 Operating Temperature: -50°C~+70°C
 Detection Distance=180mm
 Bending Radius: R25

RE4H10-S1



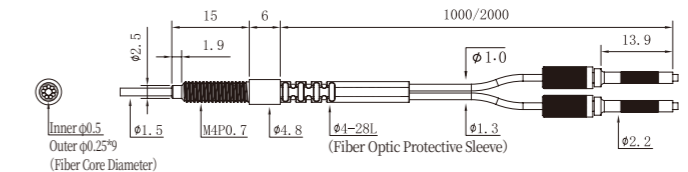
Fiber Outer Diameter= ϕ 1.0
 Fiber Inner Diameter= ϕ 0.25x2
 Operating Temperature: -50°C~+70°C
 Detection Distance=10mm
 Bending Radius: R10

RS4H10-S1



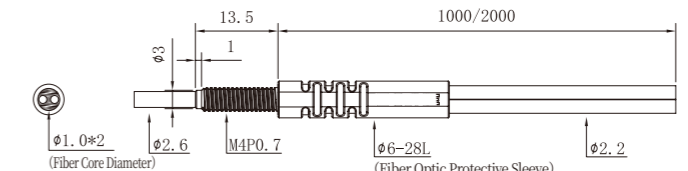
Fiber Outer Diameter= ϕ 1.0
 Fiber Inner Diameter= ϕ 0.5x2
 Operating Temperature: -50°C~+70°C
 Detection Distance=10mm
 Bending Radius: R10

RC4H10-S1



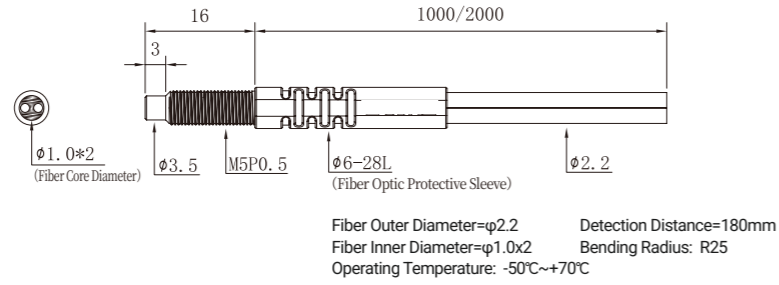
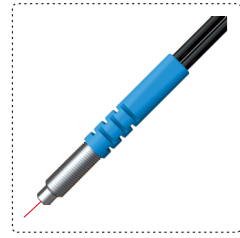
Fiber Outer Diameter= ϕ 1.3
 Fiber Inner Diameter= ϕ 0.5/ ϕ 0.25x9
 Operating Temperature: -50°C~+70°C
 Detection Distance=60mm
 Bending Radius: R15

R4H10-S1

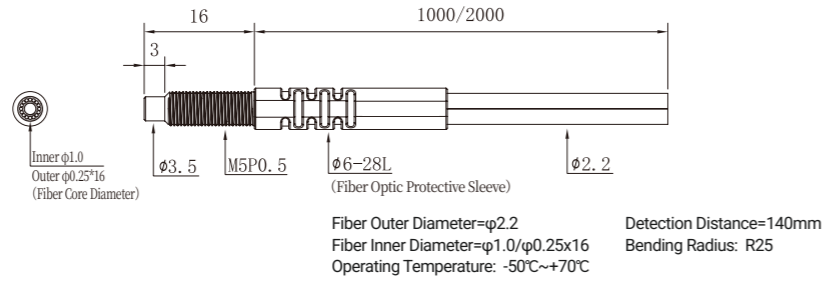


Fiber Outer Diameter= ϕ 2.2
 Fiber Inner Diameter= ϕ 1.0x2
 Operating Temperature: -50°C~+70°C
 Detection Distance=180mm
 Bending Radius: R25

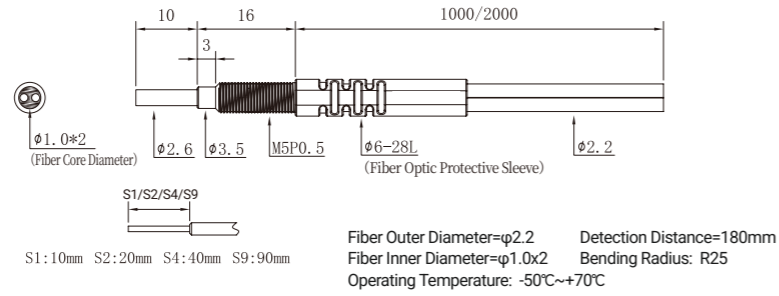
R5H10



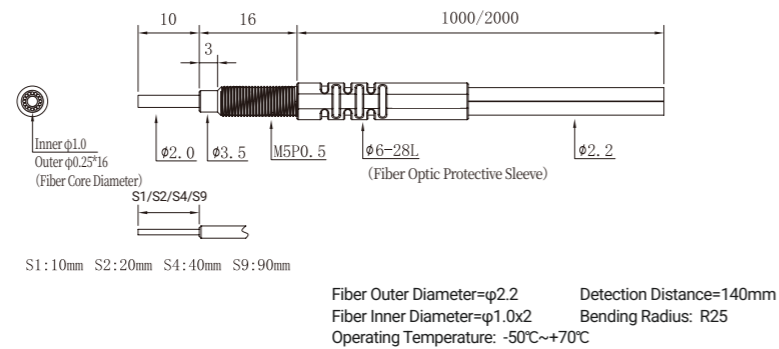
RC5H10



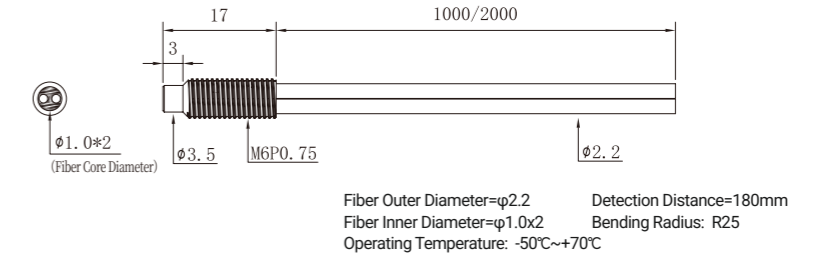
R5H10-S1



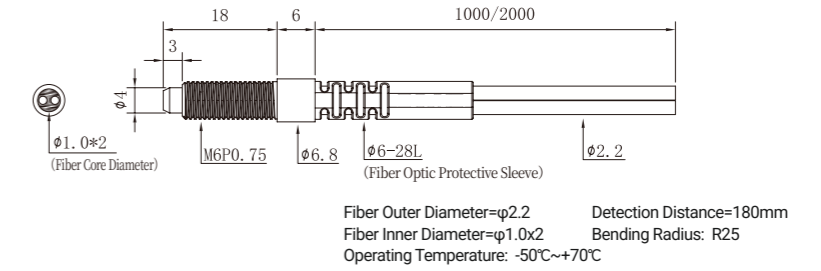
RC5H10-S1



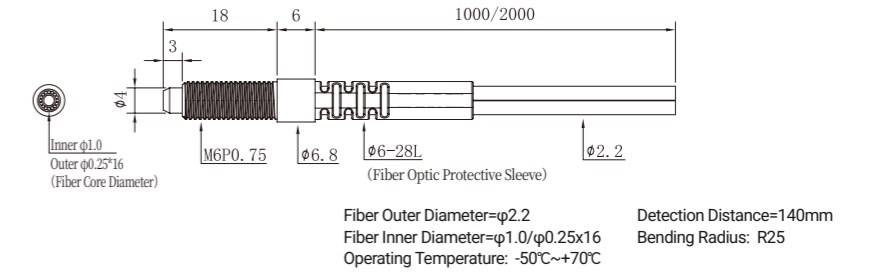
R6H10D



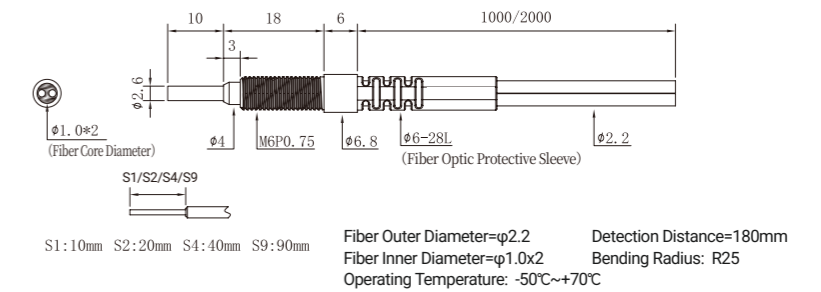
R6H10



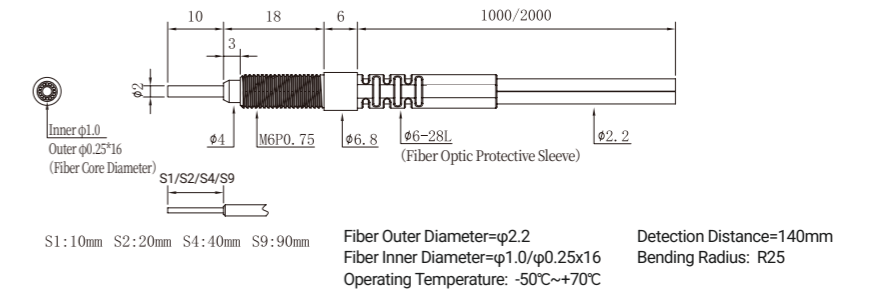
RC6H10



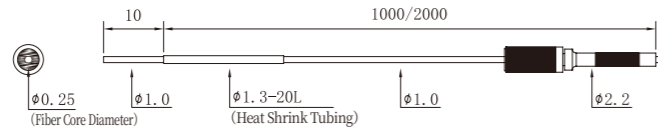
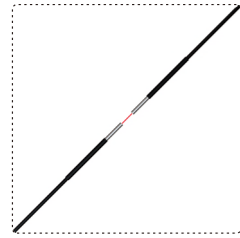
R6H10-S1



RC6H10-S1

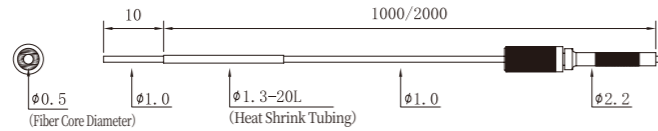
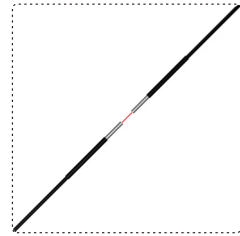


TE1H10Q φ1.0



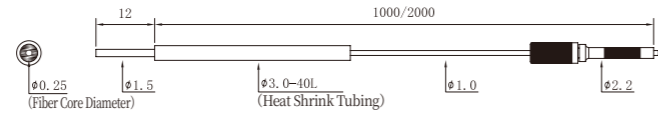
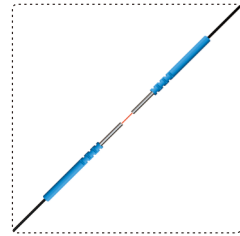
Fiber Outer Diameter=φ1.0 Detection Distance=60mm
 Fiber Inner Diameter=φ0.25 Bending Radius: R10
 Operating Temperature: -50°C~+70°C

TS1H10Q



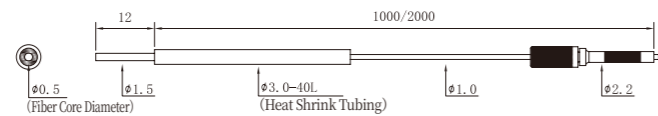
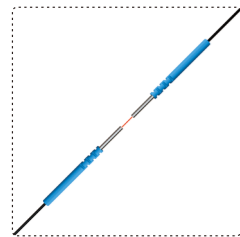
Fiber Outer Diameter=φ1.0 Detection Distance=260mm
 Fiber Inner Diameter=φ0.5 Bending Radius: R15
 Operating Temperature: -50°C~+70°C

TE15H10Q φ1.5



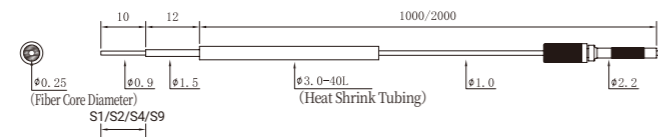
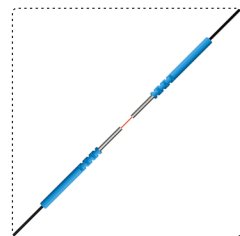
Fiber Outer Diameter=φ1.0 Detection Distance=60mm
 Fiber Inner Diameter=φ0.25 Bending Radius: R10
 Operating Temperature: -50°C~+70°C

TS15H10Q



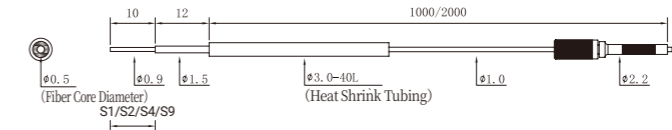
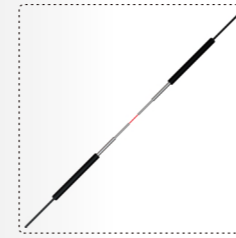
Fiber Outer Diameter=φ1.0 Detection Distance=60mm
 Fiber Inner Diameter=φ0.5 Bending Radius: R10
 Operating Temperature: -50°C~+70°C

TE15H10Q-S1



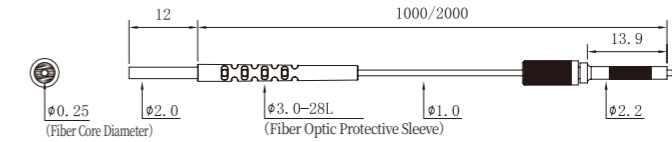
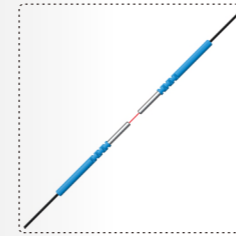
S1: 10mm S2: 20mm S4: 40mm S9: 90mm
 Fiber Outer Diameter=φ1.0 Detection Distance=60mm
 Fiber Inner Diameter=φ0.25 Bending Radius: R10
 Operating Temperature: -50°C~+70°C

TS15H10Q-S1



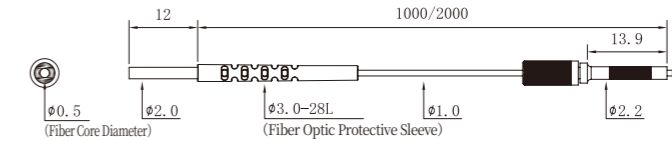
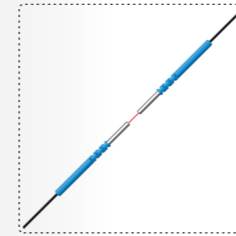
S1: 10mm S2: 20mm S4: 40mm S9: 90mm
 Fiber Outer Diameter=φ1.0 Detection Distance=260mm
 Fiber Inner Diameter=φ0.5 Bending Radius: R15
 Operating Temperature: -50°C~+70°C

TE2H10Q φ2.0



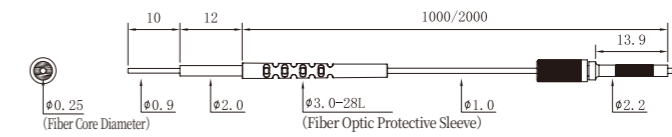
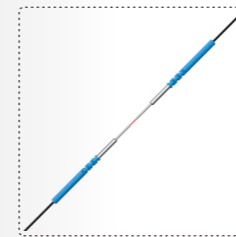
Fiber Outer Diameter=φ1.0 Detection Distance=60mm
 Fiber Inner Diameter=φ0.25 Bending Radius: R10
 Operating Temperature: -50°C~+70°C

TS2H10Q



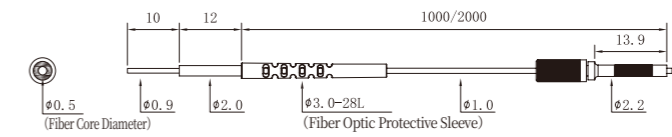
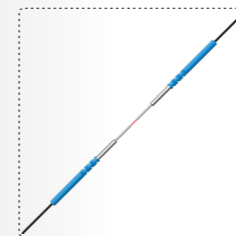
Fiber Outer Diameter=φ1.0 Detection Distance=260mm
 Fiber Inner Diameter=φ0.5 Bending Radius: R15
 Operating Temperature: -50°C~+70°C

TE2H10Q-S1



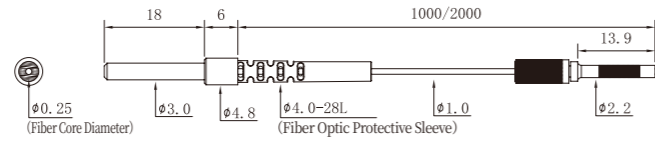
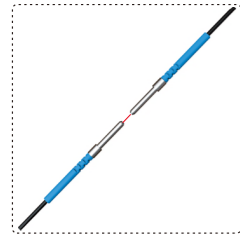
S1: 10mm S2: 20mm S4: 40mm S9: 90mm
 Fiber Outer Diameter=φ1.0 Detection Distance=60mm
 Fiber Inner Diameter=φ0.25 Bending Radius: R10
 Operating Temperature: -50°C~+70°C

TS2H10Q-S1



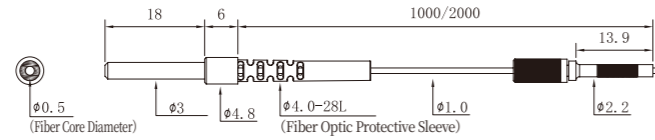
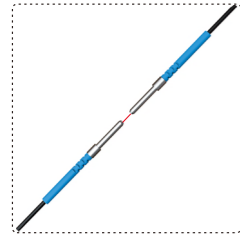
S1: 10mm S2: 20mm S4: 40mm S9: 90mm
 Fiber Outer Diameter=φ1.0 Detection Distance=260mm
 Fiber Inner Diameter=φ0.5 Bending Radius: R15
 Operating Temperature: -50°C~+70°C

TE3H10Q φ3.0



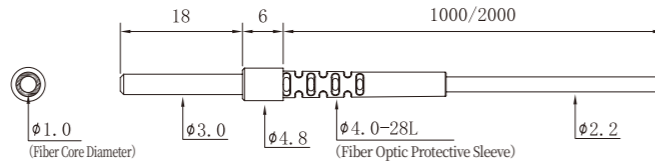
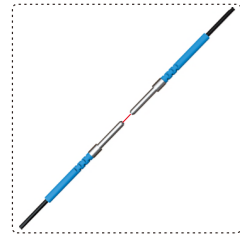
Fiber Outer Diameter=φ1.0 Detection Distance=60mm
 Fiber Inner Diameter=φ0.25 Bending Radius: R10
 Operating Temperature: -50°C~+70°C

TS3H10Q



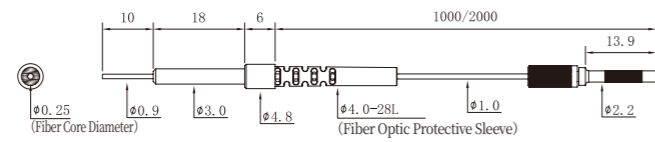
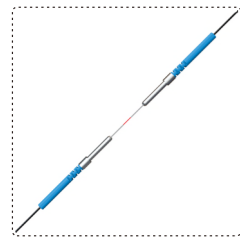
Fiber Outer Diameter=φ1.0 Detection Distance=260mm
 Fiber Inner Diameter=φ0.5 Bending Radius: R15
 Operating Temperature: -50°C~+70°C

T3H10Q



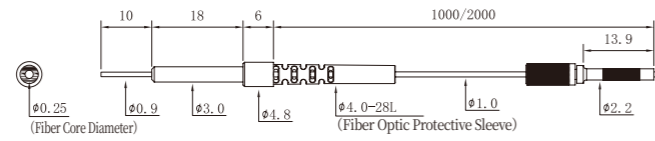
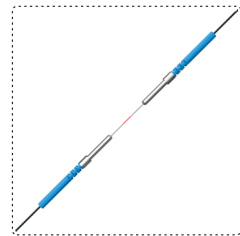
Fiber Outer Diameter=φ2.2 Detection Distance=1000mm
 Fiber Inner Diameter=φ1.0 Bending Radius: R25
 Operating Temperature: -50°C~+70°C

TE3H10Q-S1



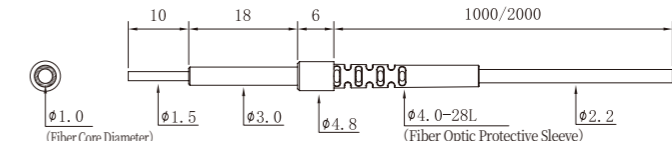
S1:10mm S2:20mm S4:40mm S9:90mm
 Fiber Outer Diameter=φ1.0 Detection Distance=60mm
 Fiber Inner Diameter=φ0.25 Bending Radius: R10
 Operating Temperature: -50°C~+70°C

TS3H10Q-S1



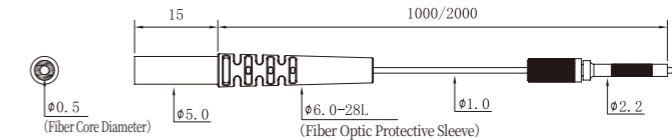
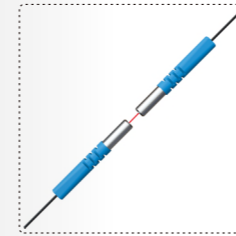
S1:10mm S2:20mm S4:40mm S9:90mm
 Fiber Outer Diameter=φ1.0 Detection Distance=260mm
 Fiber Inner Diameter=φ0.5 Bending Radius: R15
 Operating Temperature: -50°C~+70°C

T3H10Q-S1



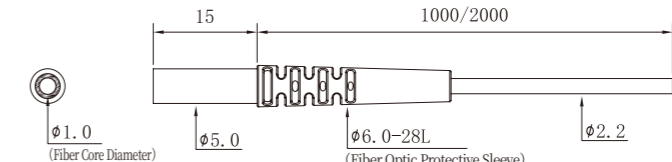
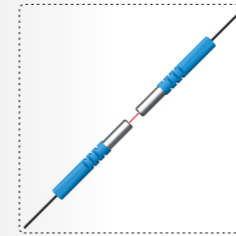
S1:10mm S2:20mm S4:40mm S9:90mm
 Fiber Outer Diameter=φ2.2 Detection Distance=1000mm
 Fiber Inner Diameter=φ1.0 Bending Radius: R25
 Operating Temperature: -50°C~+70°C

TS5H10Q φ5.0



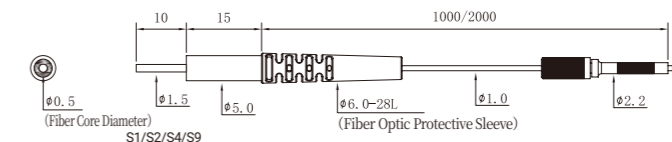
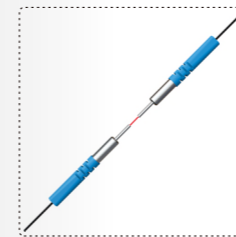
Fiber Outer Diameter=φ1.0 Detection Distance=260mm
 Fiber Inner Diameter=φ0.5 Bending Radius: R15
 Operating Temperature: -50°C~+70°C

T5H10Q



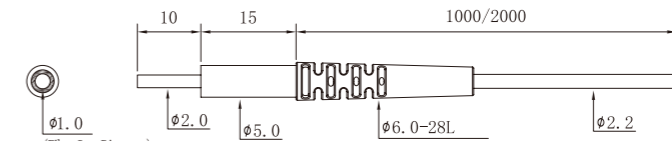
Fiber Outer Diameter=φ2.2 Detection Distance=1000mm
 Fiber Inner Diameter=φ1.0 Bending Radius: R25
 Operating Temperature: -50°C~+70°C

TS5H10Q-S1



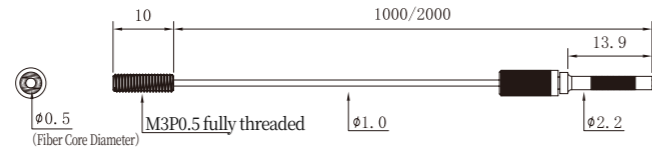
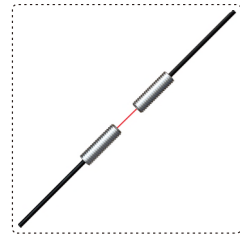
S1:10mm S2:20mm S4:40mm S9:90mm
 Fiber Outer Diameter=φ1.0 Detection Distance=260mm
 Fiber Inner Diameter=φ0.5 Bending Radius: R15
 Operating Temperature: -50°C~+70°C

T5H10Q-S1 φ5.0



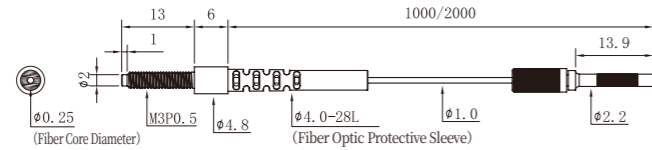
S1:10mm S2:20mm S4:40mm S9:90mm
 Fiber Outer Diameter=φ2.2 Detection Distance=1000mm
 Fiber Inner Diameter=φ1.0 Bending Radius: R25
 Operating Temperature: -50°C~+70°C

TS3H10D



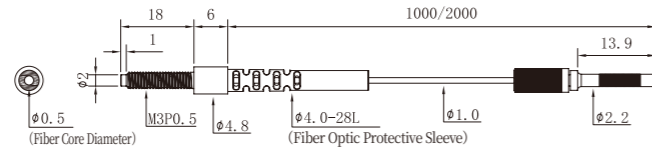
Fiber Outer Diameter=φ1.0
 Fiber Inner Diameter=φ0.5
 Operating Temperature: -50°C~+70°C
 Detection Distance=260mm
 Bending Radius: R15

TE3H10



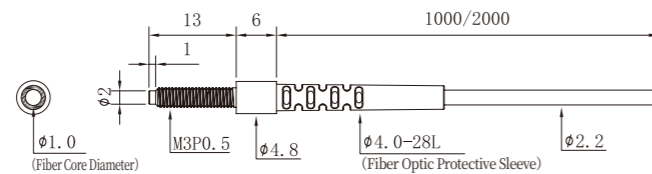
Fiber Outer Diameter=φ1.0
 Fiber Inner Diameter=φ0.5
 Operating Temperature: -50°C~+70°C
 Detection Distance=60mm
 Bending Radius: R15

TS3H10



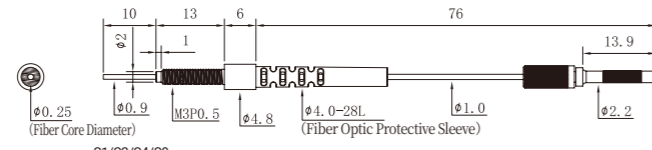
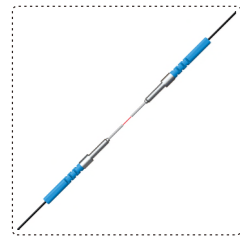
Fiber Outer Diameter=φ1.0
 Fiber Inner Diameter=φ0.5
 Operating Temperature: -50°C~+70°C
 Detection Distance=260mm
 Bending Radius: R15

T3H10



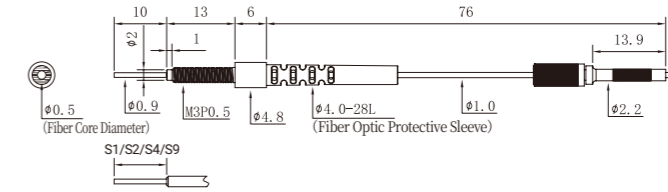
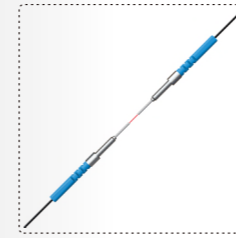
Fiber Outer Diameter=φ2.0
 Fiber Inner Diameter=φ1.0
 Operating Temperature: -50°C~+70°C
 Detection Distance=1000mm
 Bending Radius: R25

TE3H10-S1



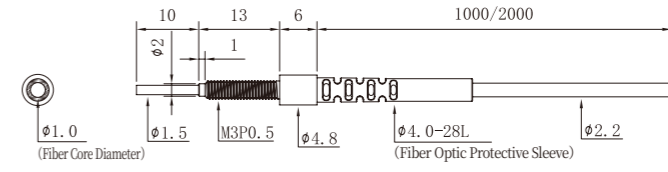
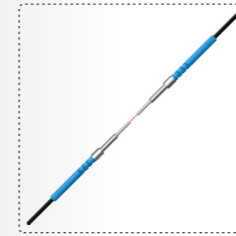
S1: 10mm S2: 20mm S4: 40mm S9: 90mm
 Fiber Outer Diameter=φ1.0
 Fiber Inner Diameter=φ0.5
 Operating Temperature: -50°C~+70°C
 Detection Distance=60mm
 Bending Radius: R10

TS3H10-S1



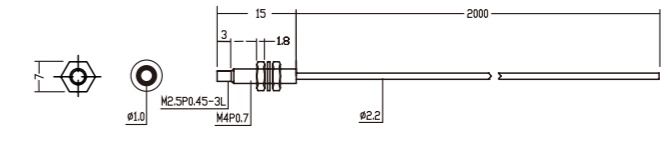
S1: 10mm S2: 20mm S4: 40mm S9: 90mm
 Fiber Outer Diameter=φ1.0
 Fiber Inner Diameter=φ0.5
 Operating Temperature: -50°C~+70°C
 Detection Distance=260mm
 Bending Radius: R15

T3H10-S1



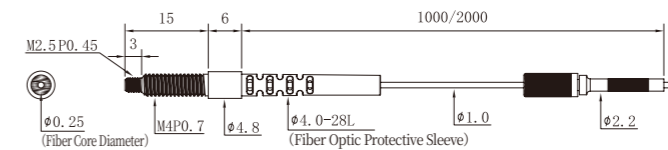
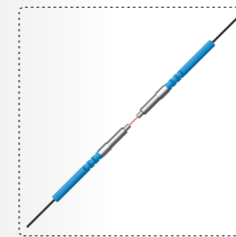
S1: 10mm S2: 20mm S4: 40mm S9: 90mm
 Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ1.0
 Operating Temperature: -50°C~+70°C
 Detection Distance=1000mm
 Bending Radius: R25

T4H10D



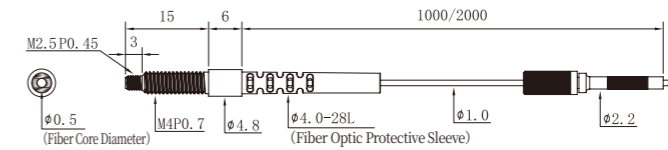
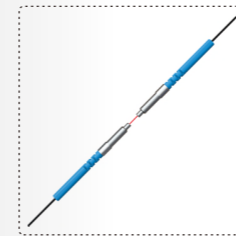
Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ1.0
 Operating Temperature: -50°C~+70°C
 Detection Distance=1000mm
 Bending Radius: R25

TE4H10



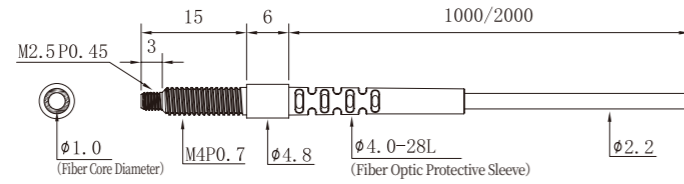
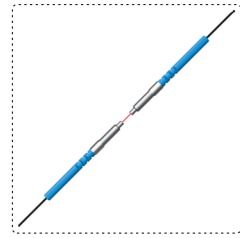
Fiber Outer Diameter=φ1.0
 Fiber Inner Diameter=φ0.25
 Operating Temperature: -50°C~+70°C
 Detection Distance=60mm
 Bending Radius: R10

TS4H10



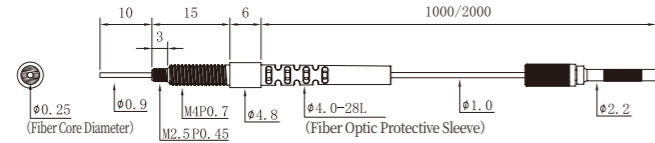
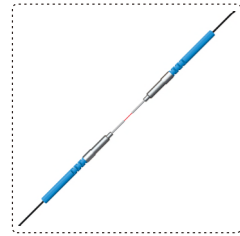
Fiber Outer Diameter=φ1.0
 Fiber Inner Diameter=φ0.5
 Operating Temperature: -50°C~+70°C
 Detection Distance=260mm
 Bending Radius: R15

T4H10



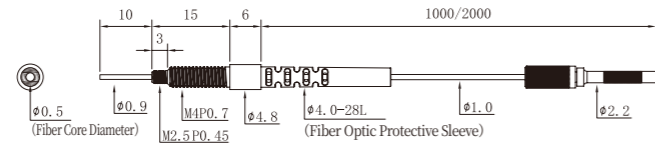
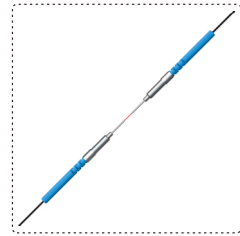
Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ1.0
 Operating Temperature: -50°C~+70°C
 Detection Distance=1000mm
 Bending Radius: R25

TE4H10-S1



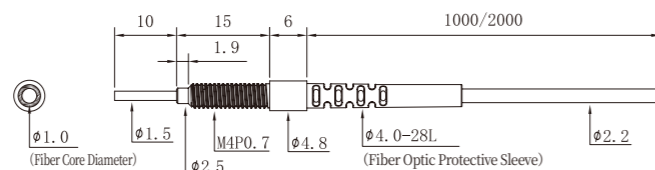
S1: 10mm S2: 20mm S4: 40mm S9: 90mm
 Fiber Outer Diameter=φ1.0
 Fiber Inner Diameter=φ0.25
 Operating Temperature: -50°C~+70°C
 Detection Distance=60mm
 Bending Radius: R10

TS4H10-S1



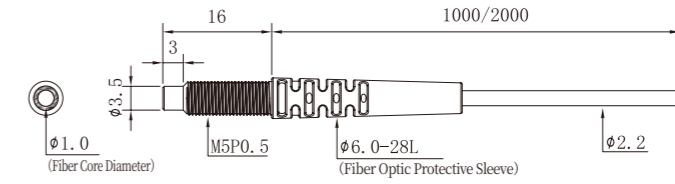
S1: 10mm S2: 20mm S4: 40mm S9: 90mm
 Fiber Outer Diameter=φ1.0
 Fiber Inner Diameter=φ0.5
 Operating Temperature: -50°C~+70°C
 Detection Distance=260mm
 Bending Radius: R15

T4H10-S1



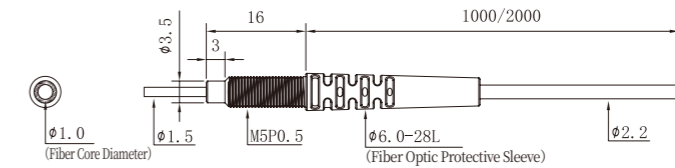
S1: 10mm S2: 20mm S4: 40mm S9: 90mm
 Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ1.0
 Operating Temperature: -50°C~+70°C
 Detection Distance=1000mm
 Bending Radius: R25

T5H10



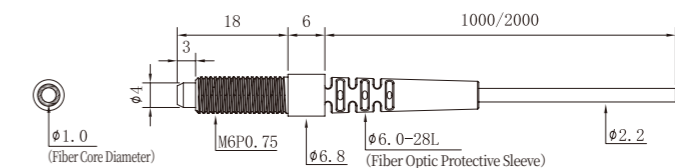
Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ1.0
 Operating Temperature: -50°C~+70°C
 Detection Distance=1000mm
 Bending Radius: R25

T5H10-S1



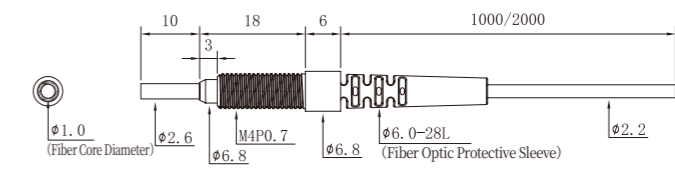
S1: 10mm S2: 20mm S4: 40mm S9: 90mm
 Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ1.0
 Operating Temperature: -50°C~+70°C
 Detection Distance=1000mm
 Bending Radius: R25

T6H10



Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ1.0
 Operating Temperature: -50°C~+70°C
 Detection Distance=1000mm
 Bending Radius: R25

T6H10-S1

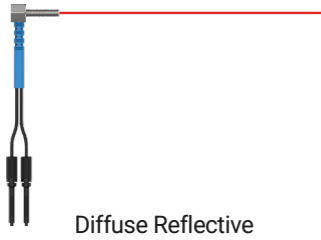


S1: 10mm S2: 20mm S4: 40mm S9: 90mm
 Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ1.0
 Operating Temperature: -50°C~+70°C
 Detection Distance=1000mm
 Bending Radius: R25

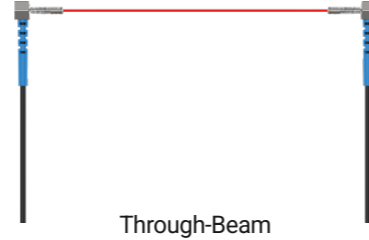


Detection Type

This product series offers two detection types: diffuse reflective and through-beam models available for selection.

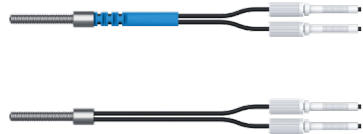


Diffuse Reflective

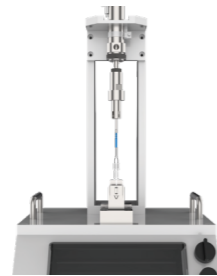


Through-Beam

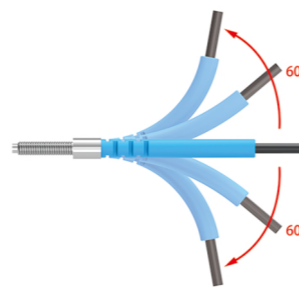
Product Advantages



Features an additional protective sleeve compared to traditional optical fibers



Provides 3 times higher tensile strength than conventional optical fibers

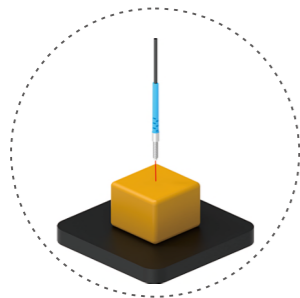


High flexibility with excellent protection, resistant to breaking at bending points

Operating Instructions

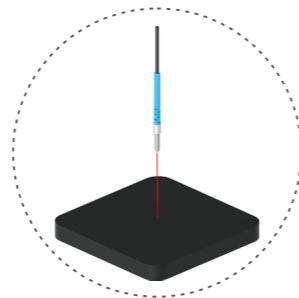
Step 1:

Perform teach-in setup on the target object

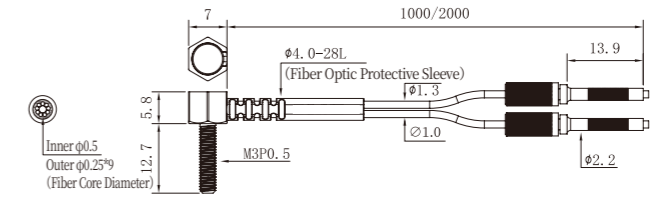
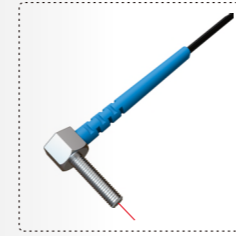


Step 2:

Remove the target object and perform teach-in setup once again

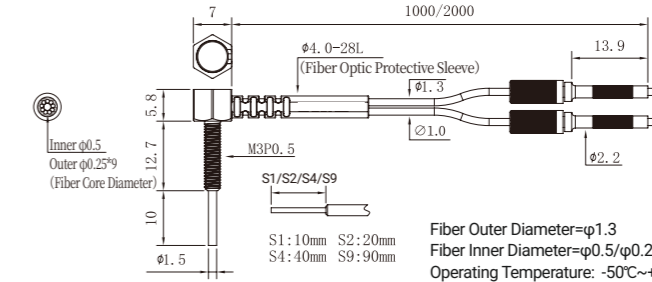
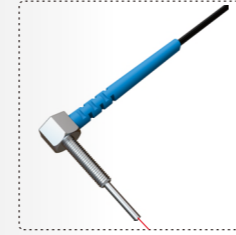


RC3H10TZ



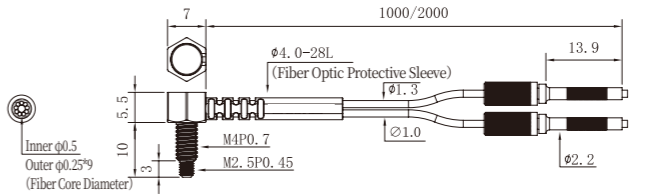
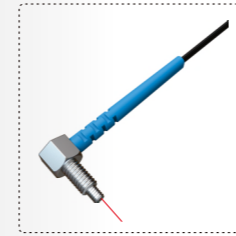
Fiber Outer Diameter=φ1.3
 Fiber Inner Diameter=φ0.5/φ0.25x9
 Operating Temperature: -50°C~+70°C
 Detection Distance=60mm
 Bending Radius: R15

RC3H10TZ-S1



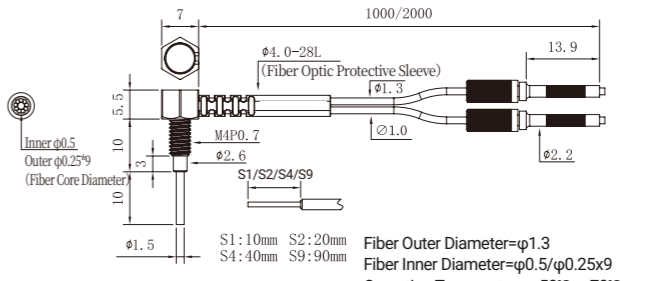
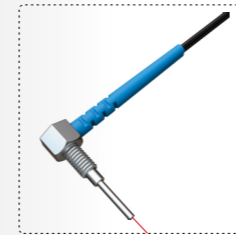
Fiber Outer Diameter=φ1.3
 Fiber Inner Diameter=φ0.5/φ0.25x9
 Operating Temperature: -50°C~+70°C
 Detection Distance=60mm
 Bending Radius: R15

RC4H10TZ



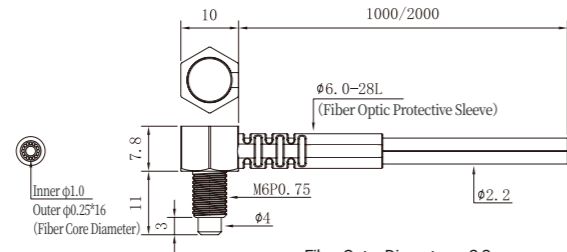
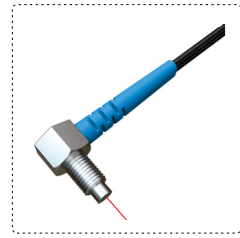
Fiber Outer Diameter=φ1.3
 Fiber Inner Diameter=φ0.5/φ0.25x9
 Operating Temperature: -50°C~+70°C
 Detection Distance=60mm
 Bending Radius: R15

RC4H10TZ-S1



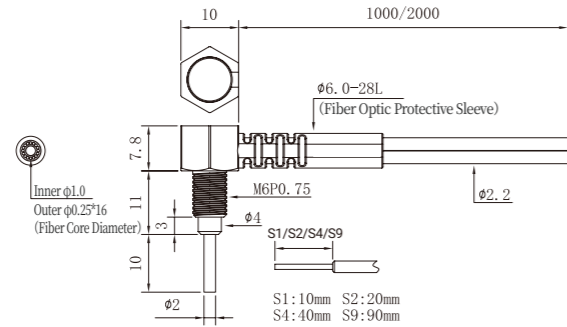
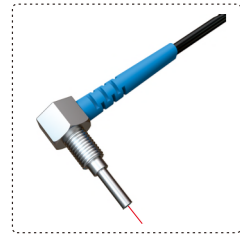
Fiber Outer Diameter=φ1.3
 Fiber Inner Diameter=φ0.5/φ0.25x9
 Operating Temperature: -50°C~+70°C
 Detection Distance=60mm
 Bending Radius: R15

RC6H10TZ



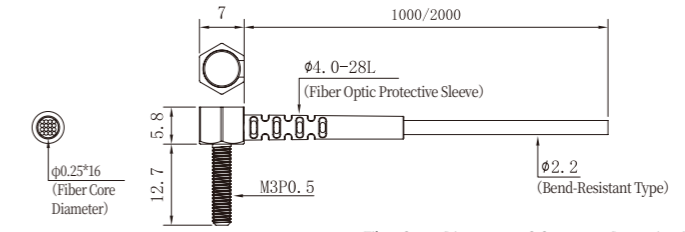
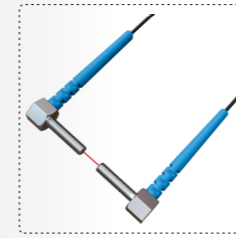
Fiber Outer Diameter= ϕ 2.2
 Fiber Inner Diameter= ϕ 1.0/ ϕ 0.25x16
 Operating Temperature: -50°C~+70°C
 Detection Distance=140mm
 Bending Radius: R25

RC6H10TZ-S1



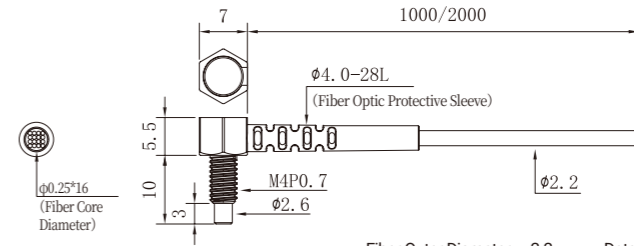
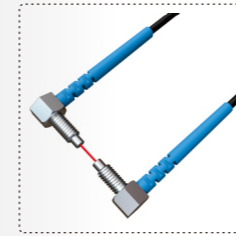
Fiber Outer Diameter= ϕ 2.2
 Fiber Inner Diameter= ϕ 1.0/ ϕ 0.25x16
 Operating Temperature: -50°C~+70°C
 Detection Distance=140mm
 Bending Radius: R25

TC3H10TZ



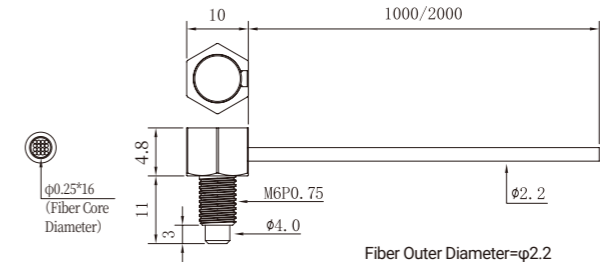
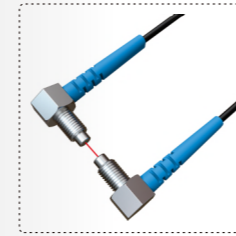
Fiber Outer Diameter= ϕ 2.2
 Fiber Inner Diameter= ϕ 0.25x16
 Operating Temperature: -50°C~+70°C
 Detection Distance=600mm
 Bending Radius: R15

TC4H10TZ



Fiber Outer Diameter= ϕ 2.2
 Fiber Inner Diameter= ϕ 0.25x16
 Operating Temperature: -50°C~+70°C
 Detection Distance=600mm
 Bending Radius: R5

TC6H10TZ

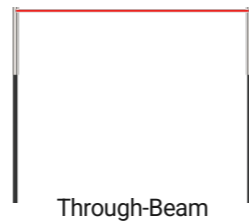
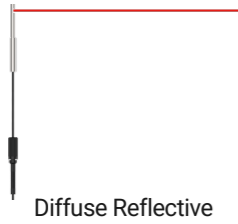


Fiber Outer Diameter= ϕ 2.2
 Fiber Inner Diameter= ϕ 0.25x16
 Operating Temperature: -50°C~+70°C
 Detection Distance=600mm
 Bending Radius: R5

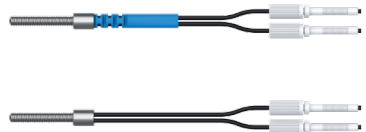


Detection Type

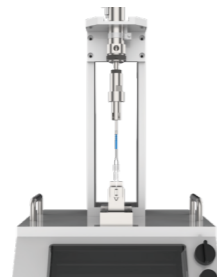
This product series offers two detection types: diffuse reflective and through-beam models available for selection.



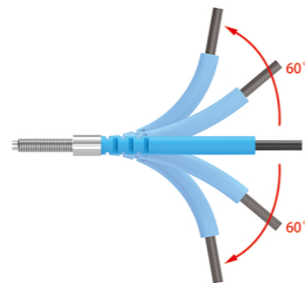
Product Advantages



Features an additional protective sleeve compared to traditional optical fibers



Provides 3 times higher tensile strength than conventional optical fibers

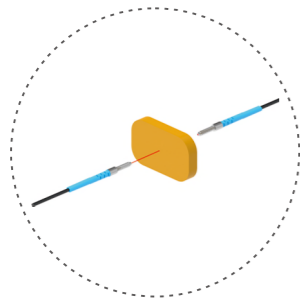


High flexibility with excellent protection, resistant to breaking at bending points

Operating Instructions

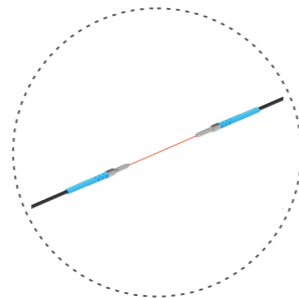
Step 1:

Perform teach-in setup on the target object

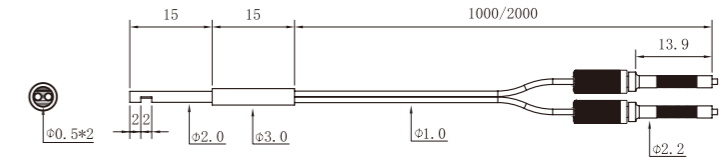


Step 2:

Remove the target object and perform teach-in setup once again

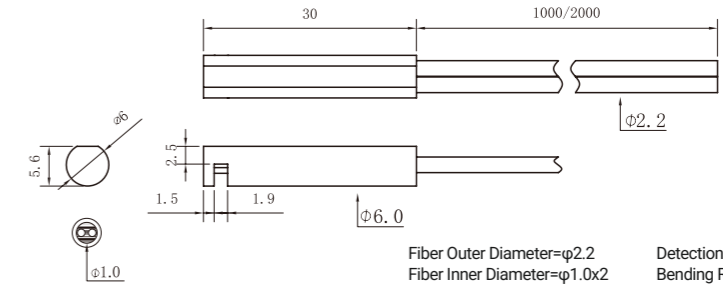
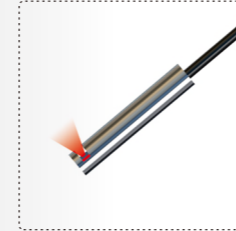


RS3H10L-SA



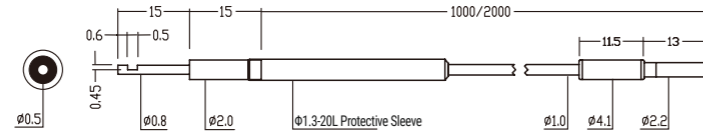
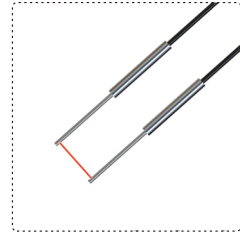
Fiber Outer Diameter=φ1.0
Fiber Inner Diameter=φ0.5x2
Operating Temperature: -50°C~+70°C
Detection Distance=20mm
Bending Radius: R15

R6H10L



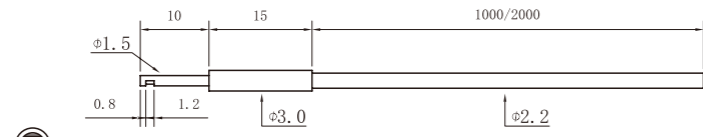
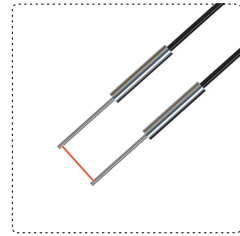
Fiber Outer Diameter=φ2.2
Fiber Inner Diameter=φ1.0x2
Operating Temperature: -50°C~+70°C
Detection Distance=30mm
Bending Radius: R25

TS2H10L-SA



Fiber Outer Diameter= ϕ 1.0
 Fiber Inner Diameter= ϕ 0.5
 Operating Temperature: $-50^{\circ}\text{C}\sim+70^{\circ}\text{C}$
 Detection Distance=50mm
 Bending Radius: R15

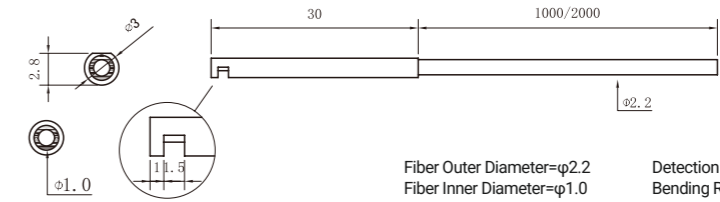
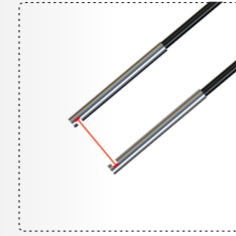
T3H10L-S1



S1/S2/S4/S9
 S1:10mm S2:20mm S4:40mm S9:90mm

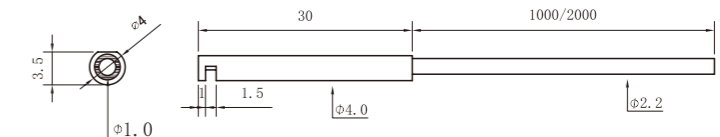
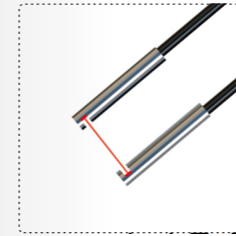
Fiber Outer Diameter= ϕ 2.2
 Fiber Inner Diameter= ϕ 1.0
 Operating Temperature: $-50^{\circ}\text{C}\sim+70^{\circ}\text{C}$
 Detection Distance=100mm
 Bending Radius: R25

T3H10L



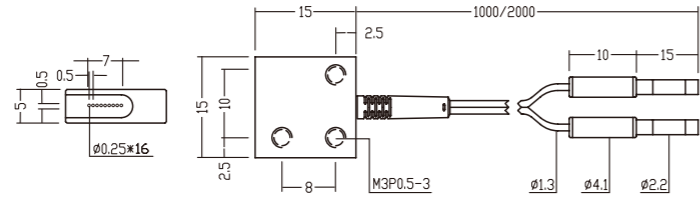
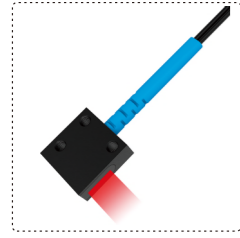
Fiber Outer Diameter= ϕ 2.2
 Fiber Inner Diameter= ϕ 1.0
 Operating Temperature: $-50^{\circ}\text{C}\sim+70^{\circ}\text{C}$
 Detection Distance=400mm
 Bending Radius: R25

T4H10L



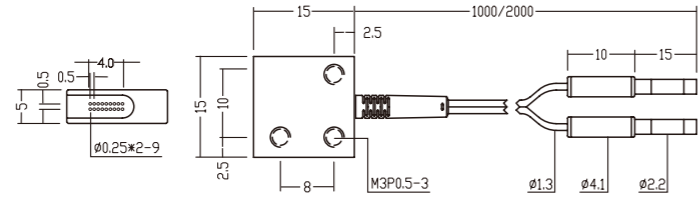
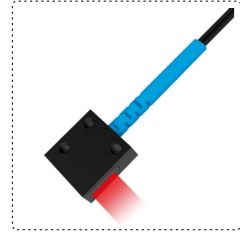
Fiber Outer Diameter= ϕ 2.2
 Fiber Inner Diameter= ϕ 1.0
 Operating Temperature: $-50^{\circ}\text{C}\sim+70^{\circ}\text{C}$
 Detection Distance=400mm
 Bending Radius: R25

R15H10A-TZ



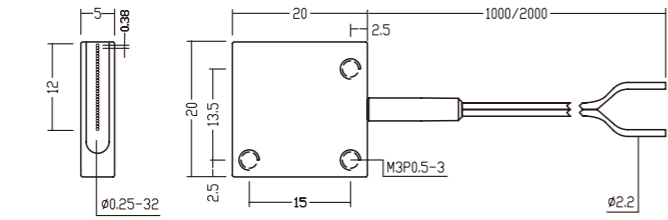
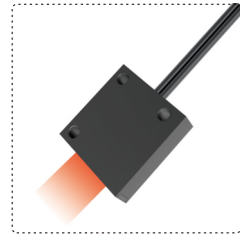
Fiber Outer Diameter=φ1.3 Detection Distance=50mm
Fiber Inner Diameter=φ0.25x8 φ0.25x8 Bending Radius: R15
Operating Temperature: -50°C~+70°C

R15H10A2-TZ



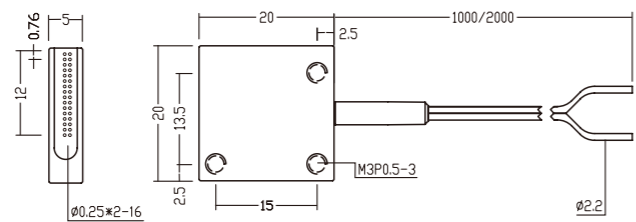
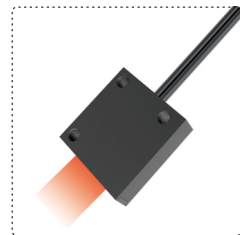
Fiber Outer Diameter=φ1.3 Detection Distance=50mm
Fiber Inner Diameter=φ0.25x9 φ0.25x9 Bending Radius: R15
Operating Temperature: -50°C~+70°C

R20H10A



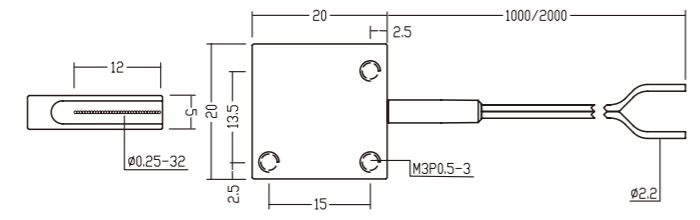
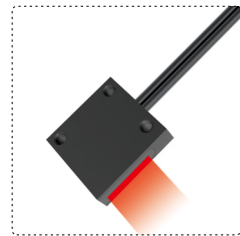
Fiber Outer Diameter=φ2.2 Detection Distance=120mm
Fiber Inner Diameter=φ0.25x16 φ0.25x16 Bending Radius: R15
Operating Temperature: -50°C~+70°C

R20H10A2



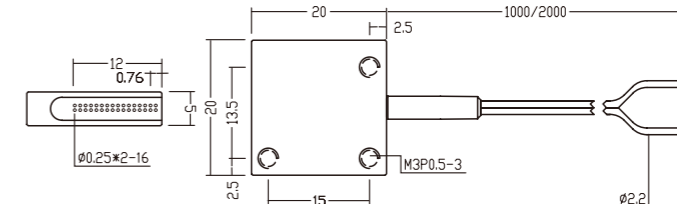
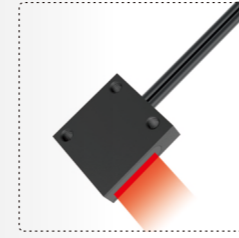
Fiber Outer Diameter=φ2.2 Detection Distance=120mm
Fiber Inner Diameter=φ0.25x16 φ0.25x16 Bending Radius: R15
Operating Temperature: -50°C~+70°C

R20H10A-TZ



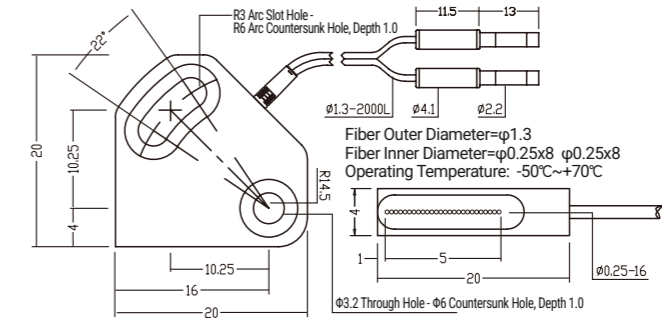
Fiber Outer Diameter=φ2.2 Detection Distance=120mm
Fiber Inner Diameter=φ0.25x16 φ0.25x16 Bending Radius: R15
Operating Temperature: -50°C~+70°C

R20H10A2-TZ



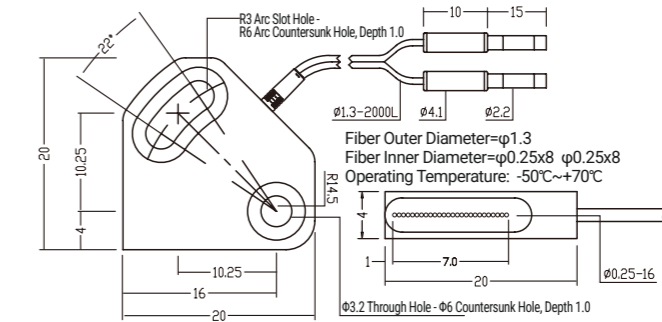
Fiber Outer Diameter=φ2.2 Detection Distance=120mm
Fiber Inner Diameter=φ0.25x16 φ0.25x16 Bending Radius: R15
Operating Temperature: -50°C~+70°C

R-A05



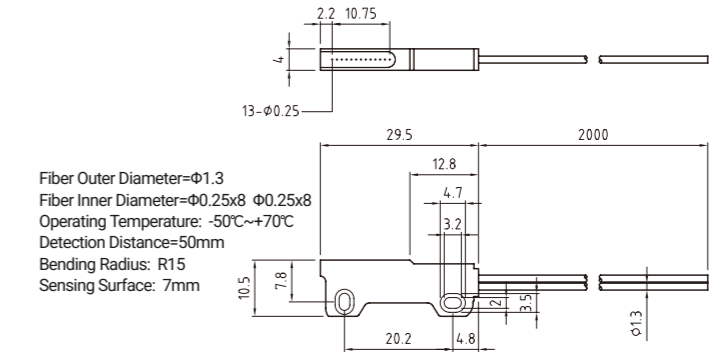
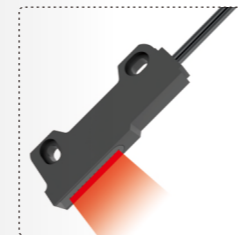
Fiber Outer Diameter=φ1.3 Detection Distance=50mm
Fiber Inner Diameter=φ0.25x8 φ0.25x8 Bending Radius: R15
Operating Temperature: -50°C~+70°C

R-A10



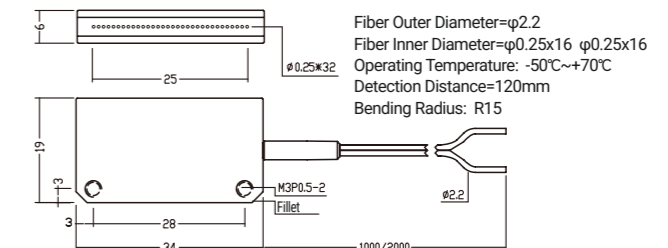
Fiber Outer Diameter=φ1.3 Detection Distance=50mm
Fiber Inner Diameter=φ0.25x8 φ0.25x8 Bending Radius: R15
Operating Temperature: -50°C~+70°C

U-E11



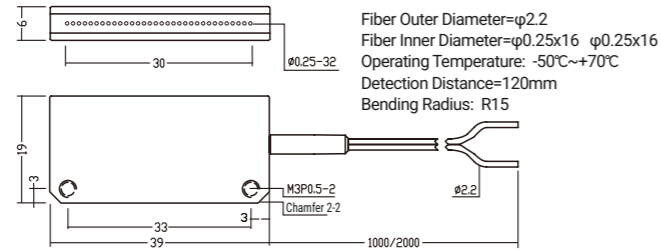
Fiber Outer Diameter=φ1.3
Fiber Inner Diameter=φ0.25x8 φ0.25x8
Operating Temperature: -50°C~+70°C
Detection Distance=50mm
Bending Radius: R15
Sensing Surface: 7mm

R30H10A-TZ

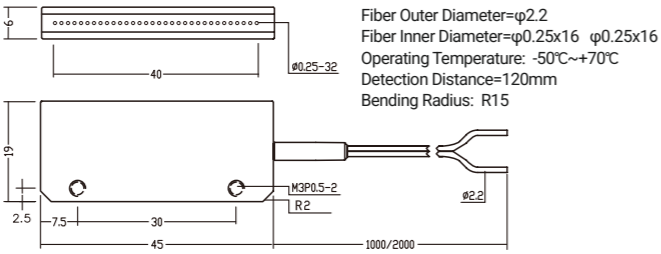
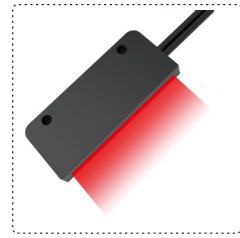


Fiber Outer Diameter=φ2.2
Fiber Inner Diameter=φ0.25x16 φ0.25x16
Operating Temperature: -50°C~+70°C
Detection Distance=120mm
Bending Radius: R15

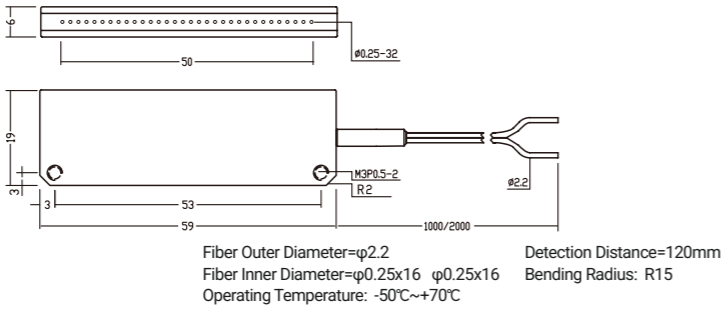
R40H10A-TZ



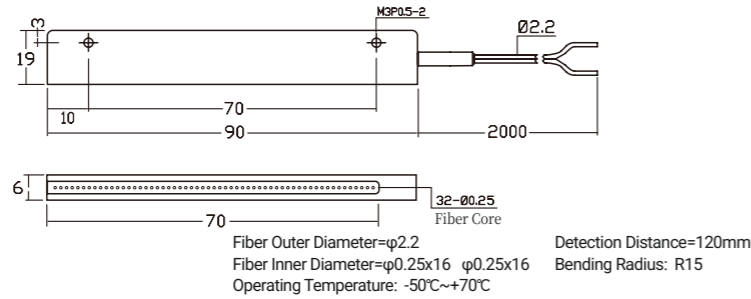
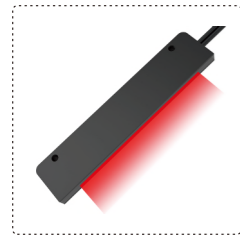
R50H10A-TZ



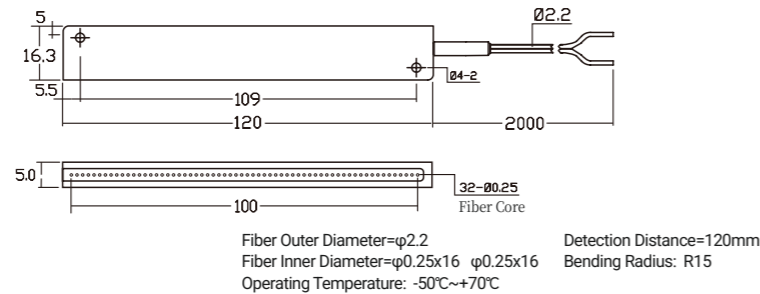
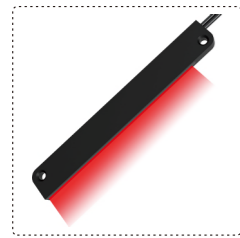
R60H10A-TZ



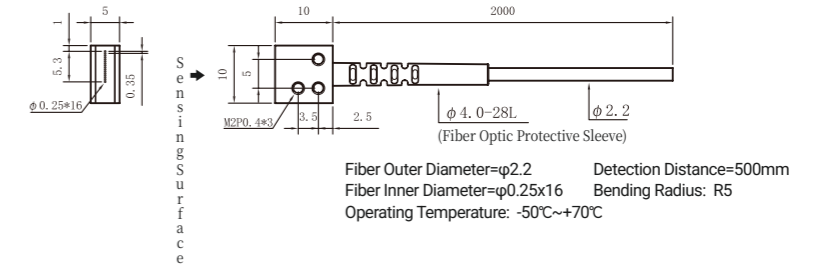
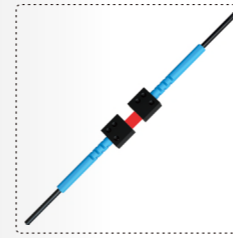
R90H10A-TZ



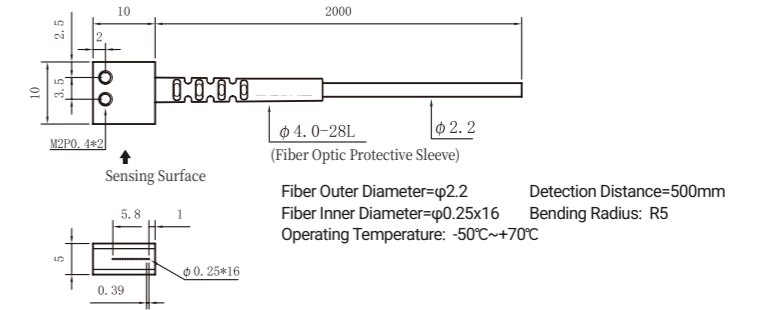
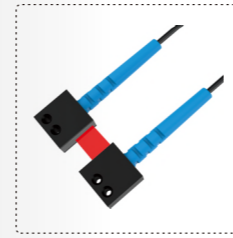
R120H10A-TZ



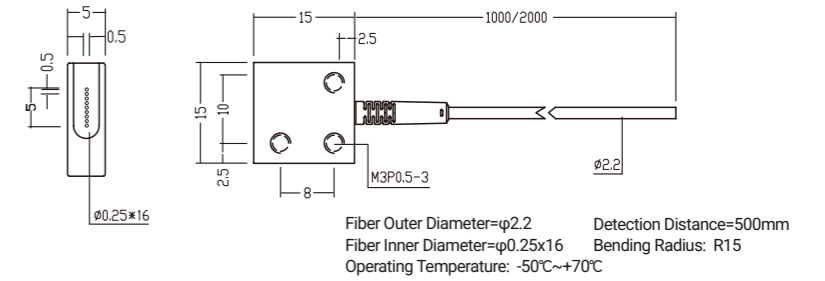
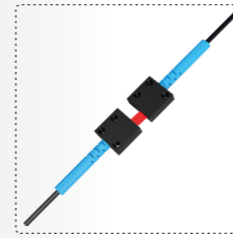
T10H10A



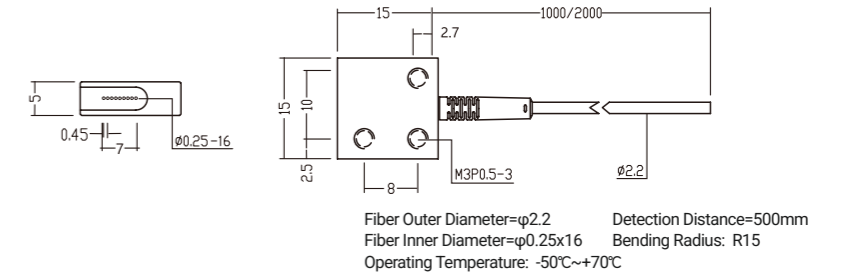
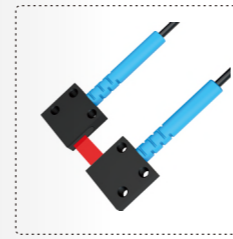
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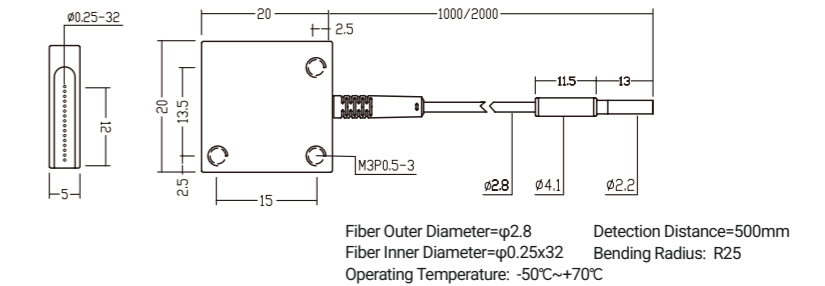
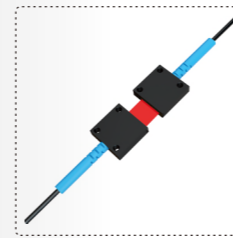
T15H10A



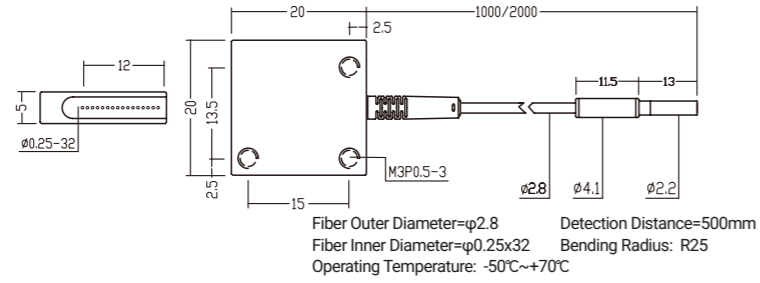
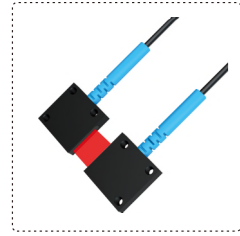
T15H10A-TZ



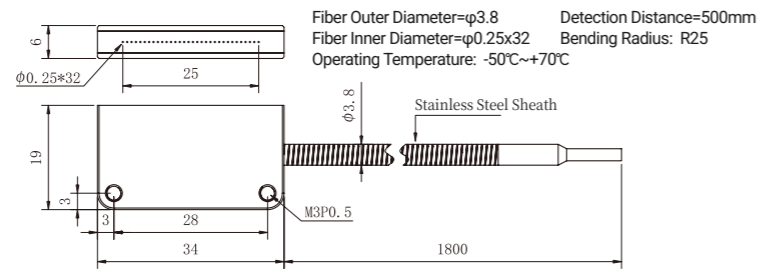
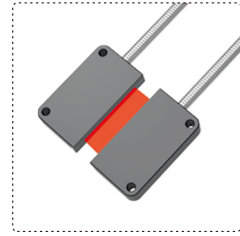
T20H10A



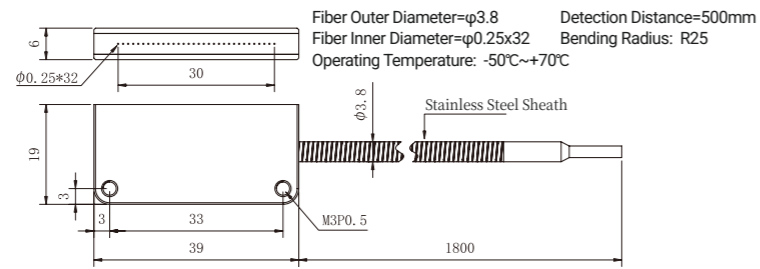
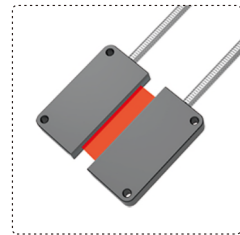
T20H10A-TZ



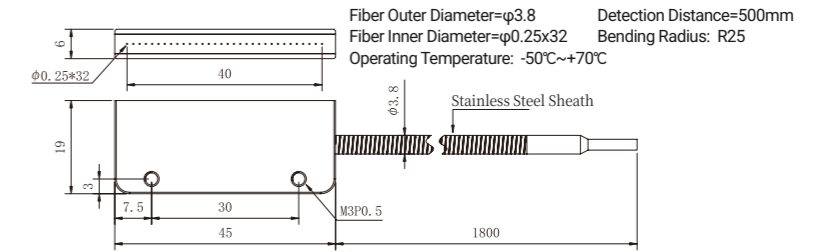
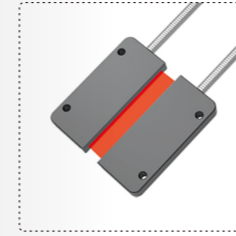
T30H10A-TZ



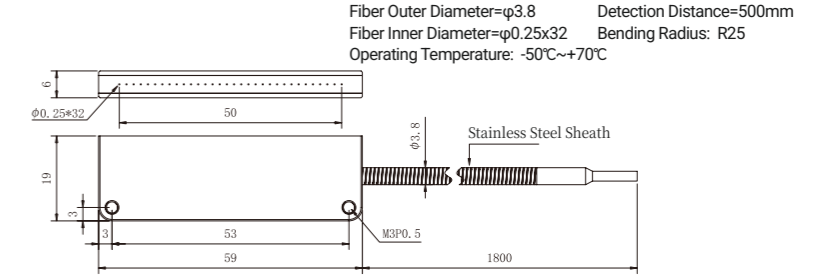
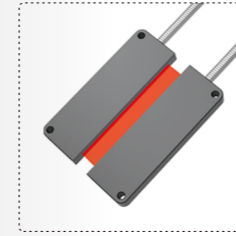
T40H10A-TZ



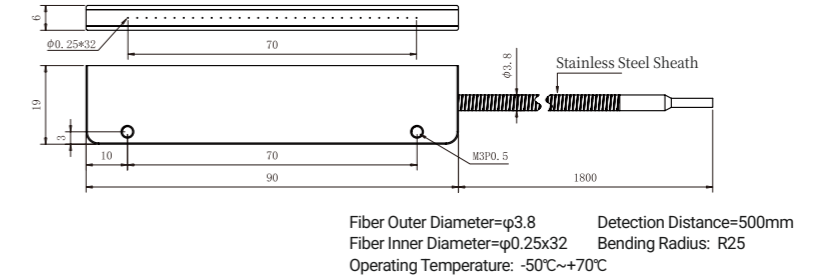
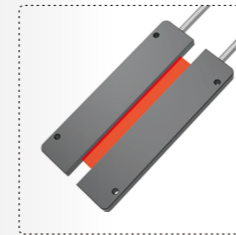
T50H10A-TZ



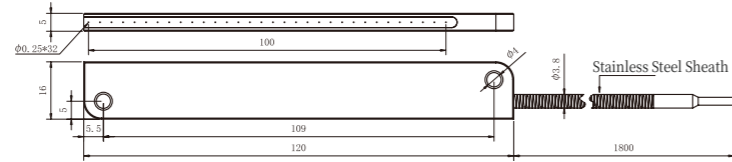
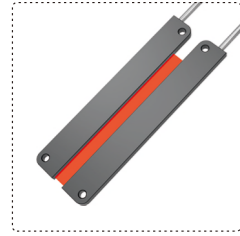
T60H10A-TZ



T90H10A-TZ

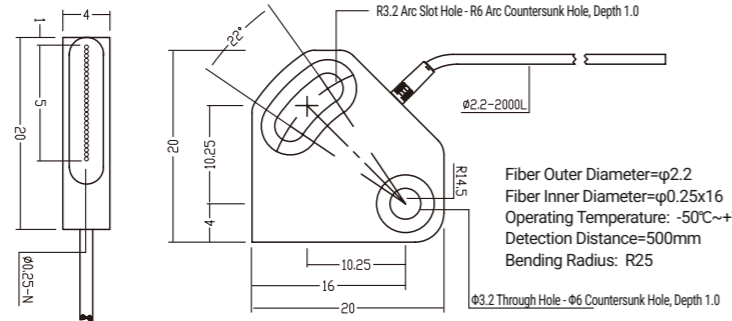
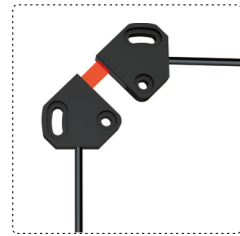


T120H10A-TZ



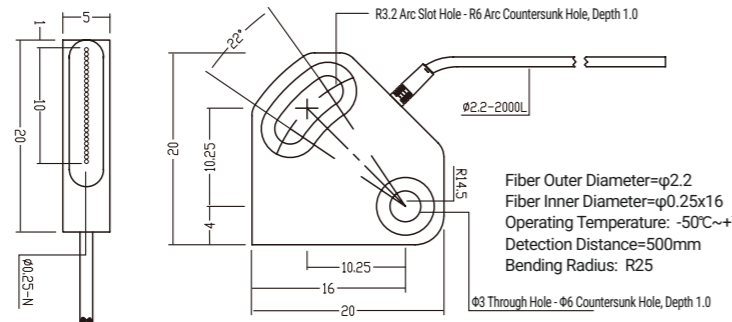
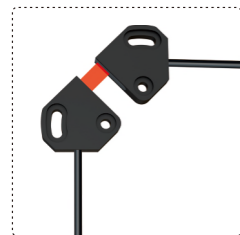
Fiber Outer Diameter=φ3.8 Detection Distance=500mm
 Fiber Inner Diameter=φ0.25x32 Bending Radius: R25
 Operating Temperature: -50°C~+70°C

T-A05



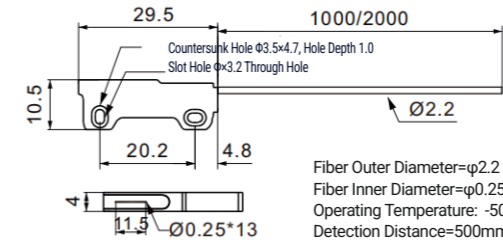
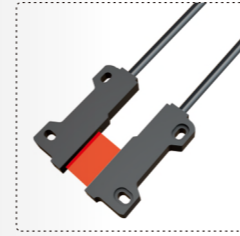
Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ0.25x16
 Operating Temperature: -50°C~+70°C
 Detection Distance=500mm
 Bending Radius: R25

T-A10



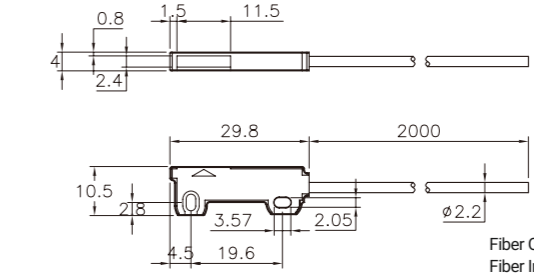
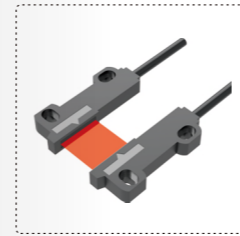
Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ0.25x16
 Operating Temperature: -50°C~+70°C
 Detection Distance=500mm
 Bending Radius: R25

T-E11



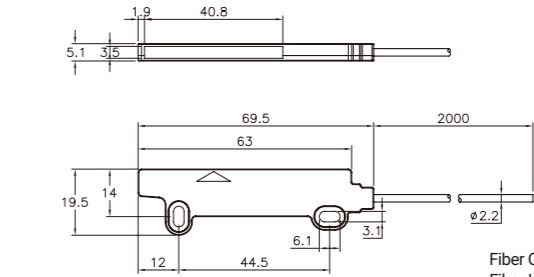
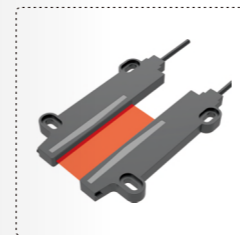
Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ0.25x16 φ0.25x16
 Operating Temperature: -50°C~+70°C
 Detection Distance=500mm
 Bending Radius: R15

T-E11JP

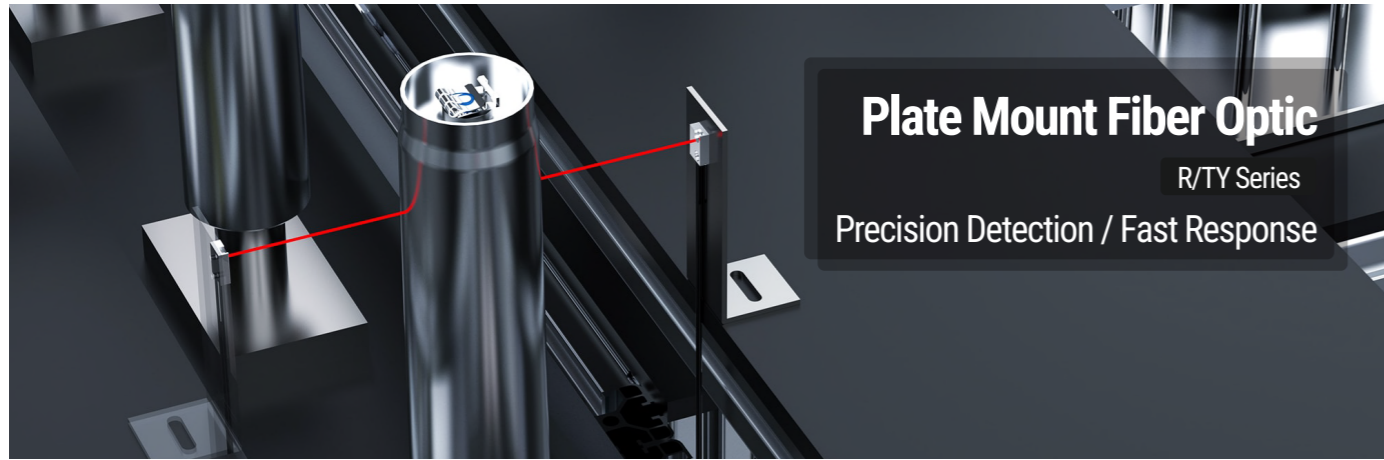


Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ1.0
 Operating Temperature: -50°C~+70°C
 Detection Distance=1000mm
 Bending Radius: R15

T-E40JP

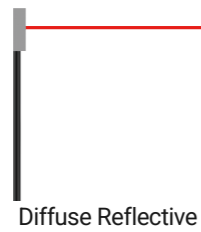


Fiber Outer Diameter=φ2.2
 Fiber Inner Diameter=φ1.0
 Operating Temperature: -50°C~+70°C
 Detection Distance=1000mm
 Bending Radius: R15

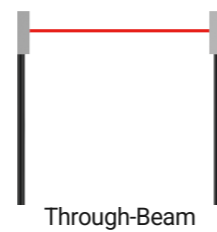


Detection Type

This product series offers two detection types: diffuse reflective and through-beam models available for selection.



Diffuse Reflective



Through-Beam

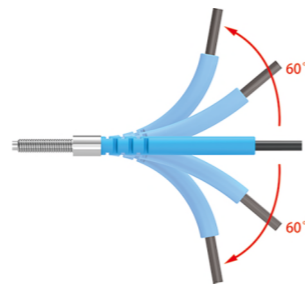
Product Advantages



High-strength metal head, corrosion-resistant and high-temperature resistant



Provides 3 times higher tensile strength than conventional optical fibers

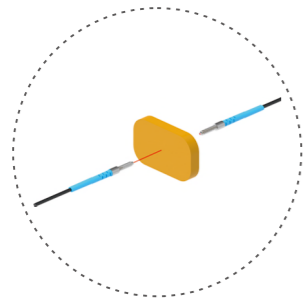


High flexibility with excellent protection, resistant to breaking at bending points

Operating Instructions

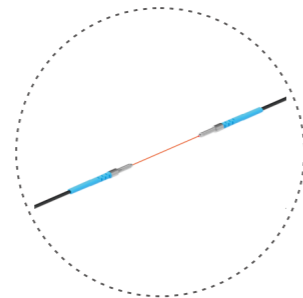
Step 1:

Perform teach-in setup on the target object

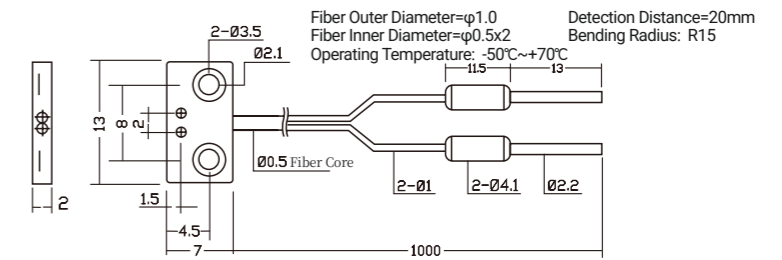
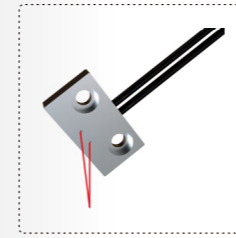


Step 2:

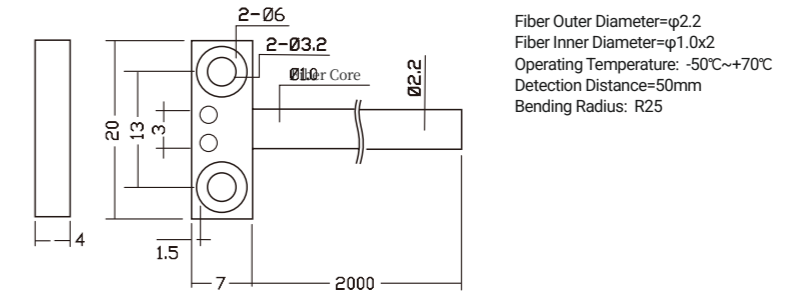
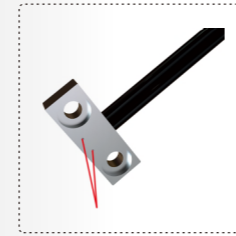
Remove the target object and perform teach-in setup once again



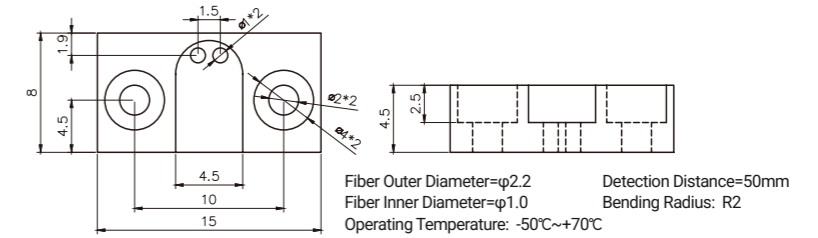
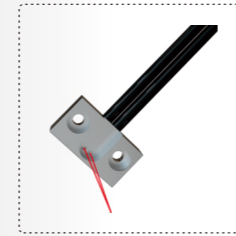
R13H10PF



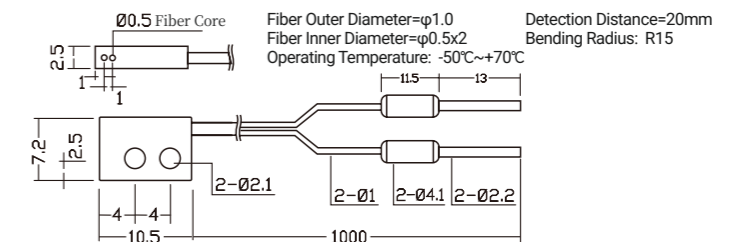
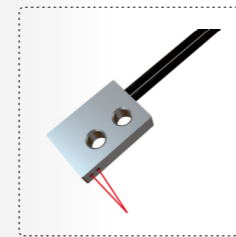
R20H10PF



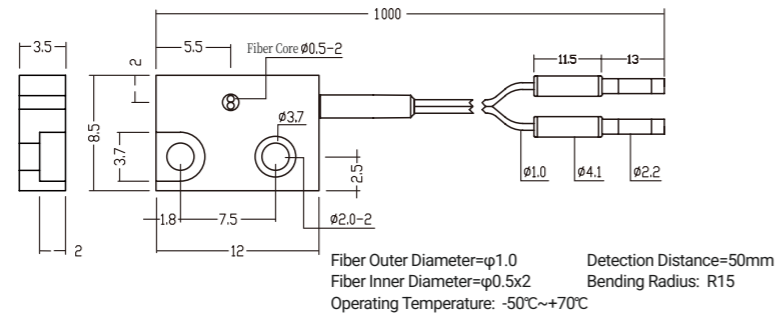
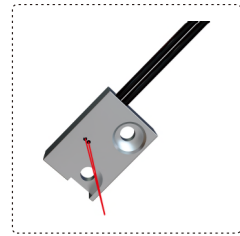
R15H10PF



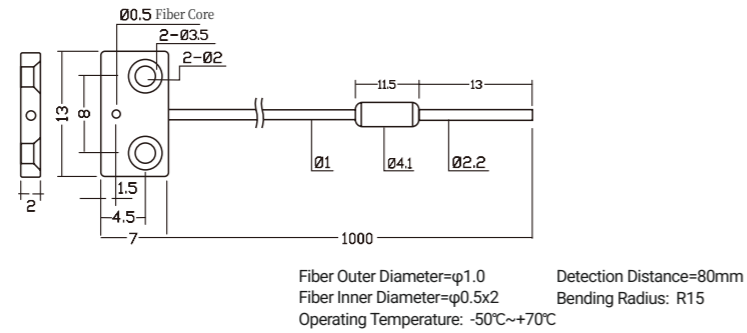
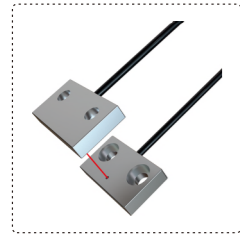
R10H10PU



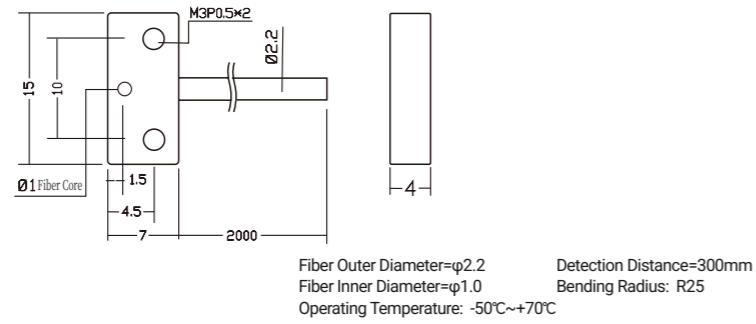
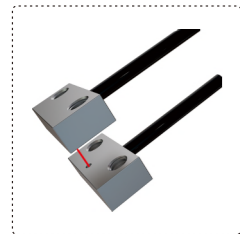
R12H10PF2



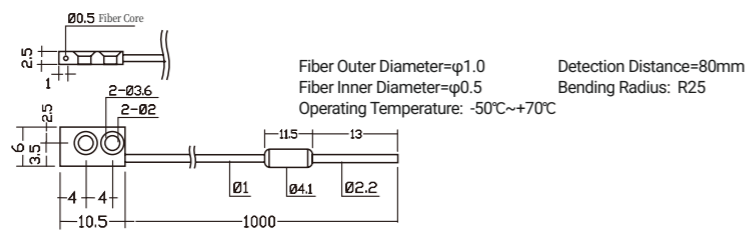
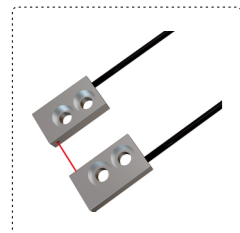
T13H10PF



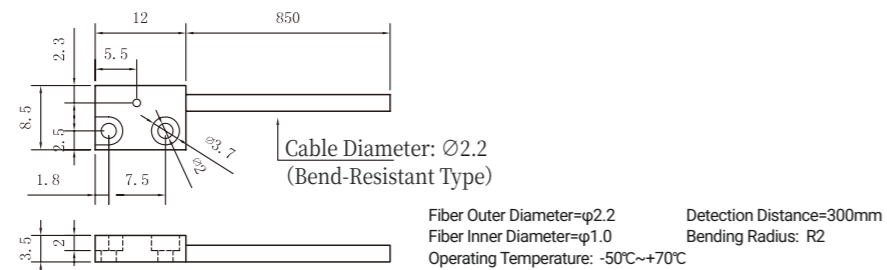
T15H10PF



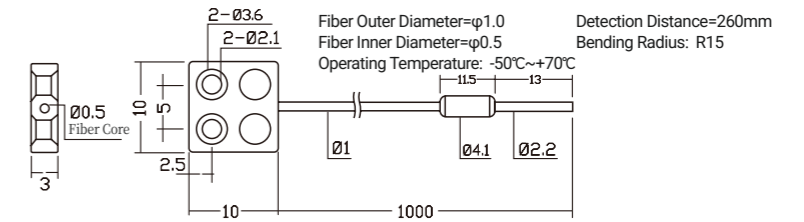
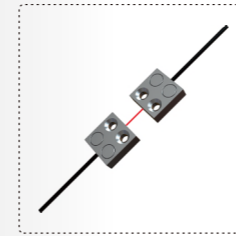
T10H10PU



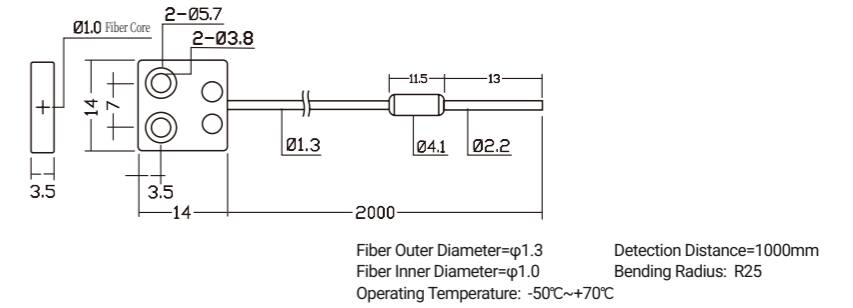
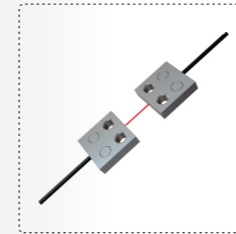
T12H10PF2

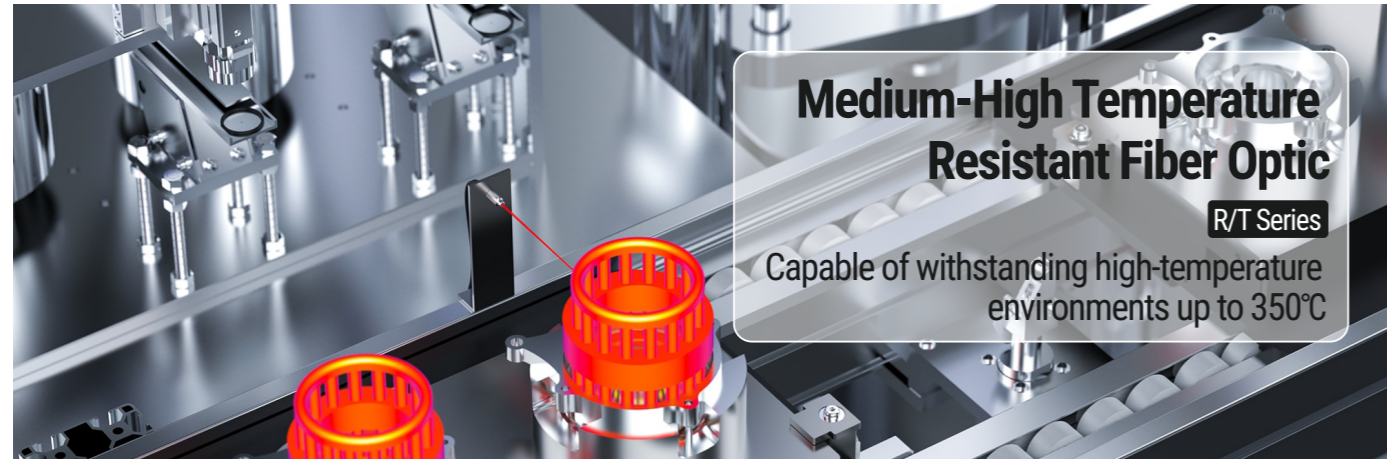


T10H10PH



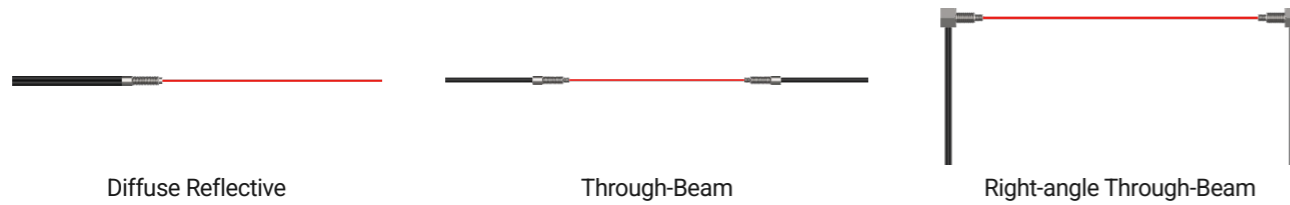
T14H10PH





Detection Type

This product series offers three detection types: diffuse reflection, thru-beam, and right-angle thru-beam



Product Advantages

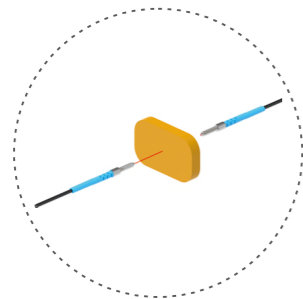
High-strength metal head, corrosion-resistant and high-temperature resistant

Provides 3 times higher tensile strength than conventional optical fibers

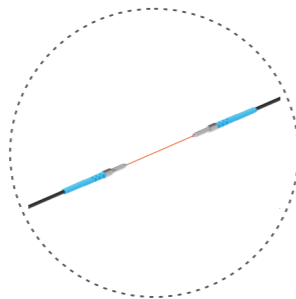
High flexibility with excellent protection, resistant to breaking at bending points

Operating Instructions

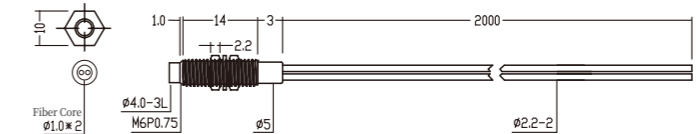
Step 1:
Perform teach-in setup on the target object



Step 2:
Remove the target object and perform teach-in setup once again



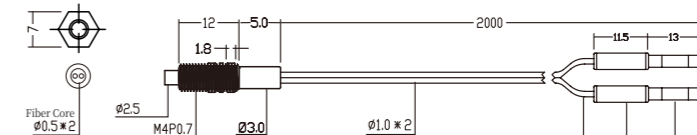
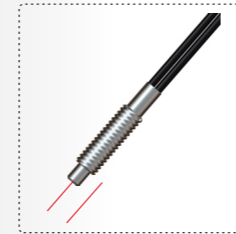
R6H20G1 (Temperature resistant 90°)



Fiber Outer Diameter=φ2.2
Fiber Inner Diameter=φ1.0x2
Operating Temperature: -50°C~+90°C

Detection Distance=180mm
Bending Radius: R25

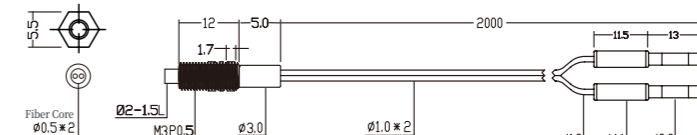
R4H20G1 (Temperature resistant 90°)



Fiber Outer Diameter=φ1.0
Fiber Inner Diameter=φ0.5x2
Operating Temperature: -50°C~+90°C

Detection Distance=50mm
Bending Radius: R15

R3H20G1 (Temperature resistant 90°)



Fiber Outer Diameter=φ1.0
Fiber Inner Diameter=φ0.5x2
Operating Temperature: -50°C~+90°C

Detection Distance=50mm
Bending Radius: R15

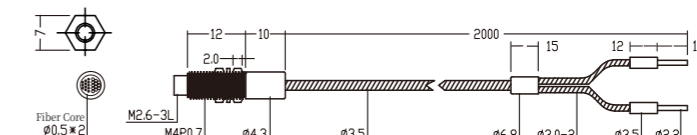
R3H20G2 (Temperature resistant 350°)



Fiber Outer Diameter=φ3.5
Fiber Inner Diameter=φ0.5x2
Operating Temperature: -50°C~+350°C

Detection Distance=50mm
Bending Radius: R25

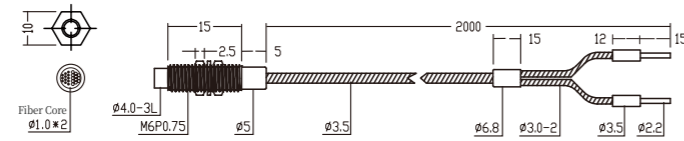
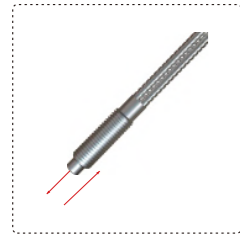
R4H20G2 (Temperature resistant 350°)



Fiber Outer Diameter=φ3.5
Fiber Inner Diameter=φ0.5x2
Operating Temperature: -50°C~+350°C

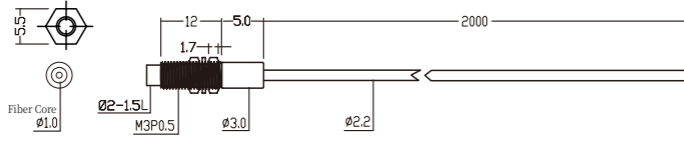
Detection Distance=50mm
Bending Radius: R25

R6H20G2(Temperature resistant 350°)



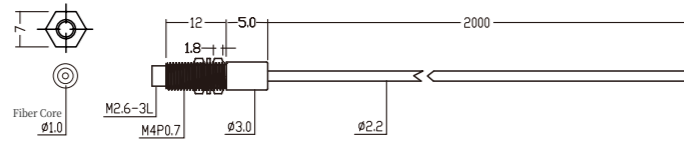
Fiber Outer Diameter=φ3.5 Detection Distance=150mm
 Fiber Inner Diameter=φ1.0x2 Bending Radius: R25
 Operating Temperature: -50°C~+350°C

T3H20G1(Temperature resistant 90°)



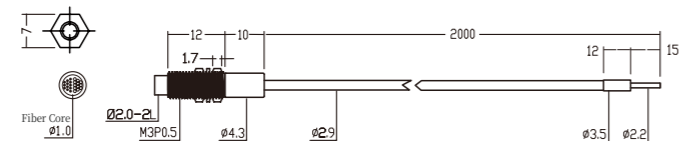
Fiber Outer Diameter=φ2.2 Detection Distance=1000mm
 Fiber Inner Diameter=φ1.0 Bending Radius: R25
 Operating Temperature: -50°C~+90°C

T4H20G1(Temperature resistant 90°)



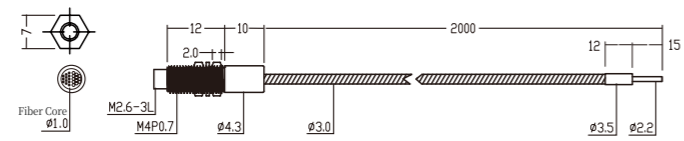
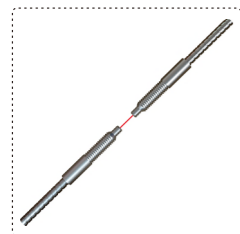
Fiber Outer Diameter=φ2.2 Detection Distance=1000mm
 Fiber Inner Diameter=φ1.0 Bending Radius: R25
 Operating Temperature: -50°C~+90°C

T3H20G2(Temperature resistant 350°)



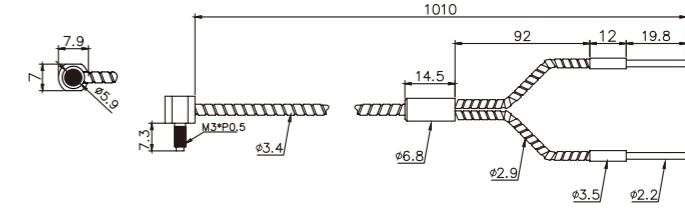
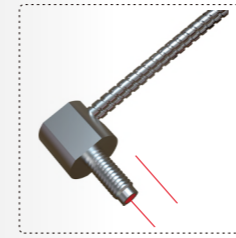
Fiber Outer Diameter=φ3.0 Detection Distance=1000mm
 Fiber Inner Diameter=φ1.0 Bending Radius: R25
 Operating Temperature: -50°C~+350°C

T4H20G2(Temperature resistant 350°)

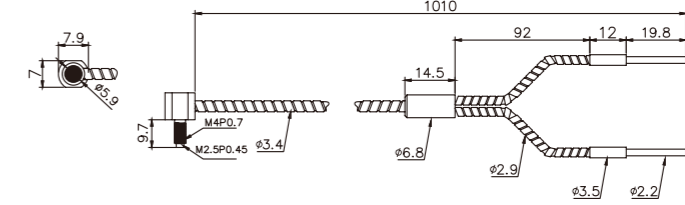
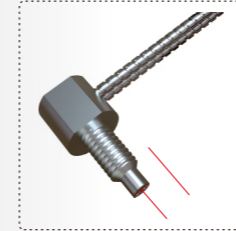


Fiber Outer Diameter=φ3.0 Detection Distance=1000mm
 Fiber Inner Diameter=φ1.0 Bending Radius: R25
 Operating Temperature: -50°C~+350°C

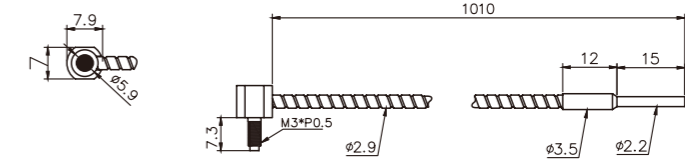
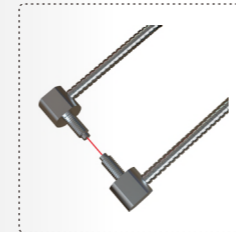
R3H20G2-TZ(Temperature resistant 350°)



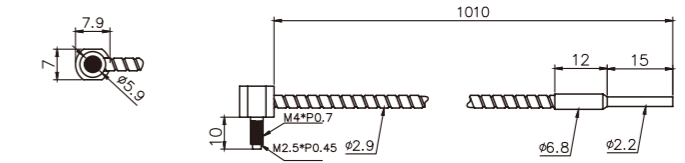
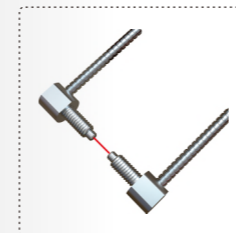
R4H20G2-TZ(Temperature resistant 350°)

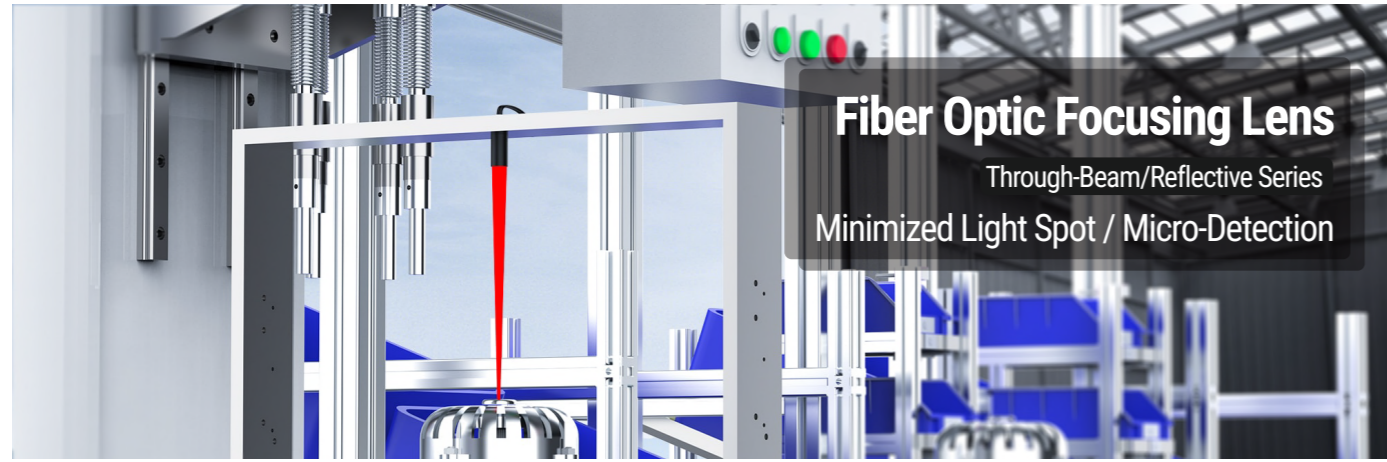


T3H20G2-TZ(Temperature resistant 350°)



T4H20G2-TZ(Temperature resistant 350°)





Detection Type

This product series offers two detection types: diffuse reflective and through-beam models available for selection.



Diffuse Reflective



Through-Beam

Product Advantages



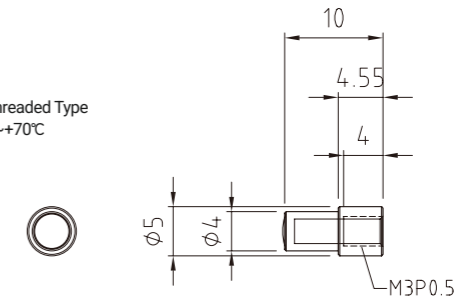
Quartz coated lens, high-temperature resistant, corrosion-resistant, and scratch-resistant

- Focused light beam for detecting even smaller objects
- Multiple model types and installation methods available for flexible selection
- Capable of detecting extremely fine copper wires, needles, small hardware components, electronic components, and small jewelry items
- Non-standard custom designs available according to customer requirements

R3H1J



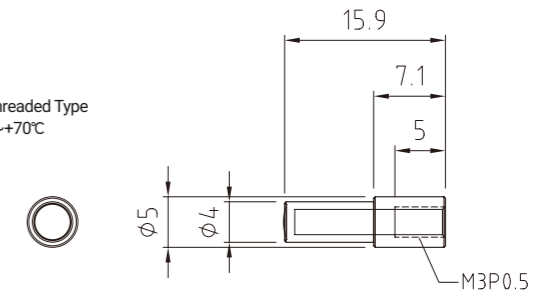
Detection Distance=20mm
Focal Spot=φ4.0
Compatible Fiber Optic: M3 Threaded Type
Operating Temperature: -50°C~+70°C



R3H2J



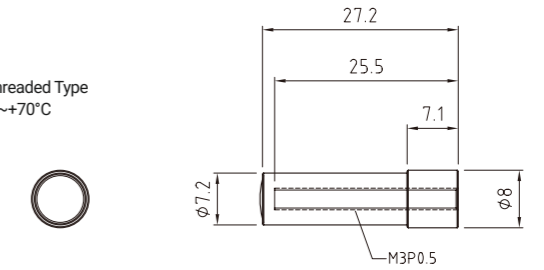
Detection Distance=10mm
Focal Spot=φ0.5
Compatible Fiber Optic: M3 Threaded Type
Operating Temperature: -50°C~+70°C



R3H3J



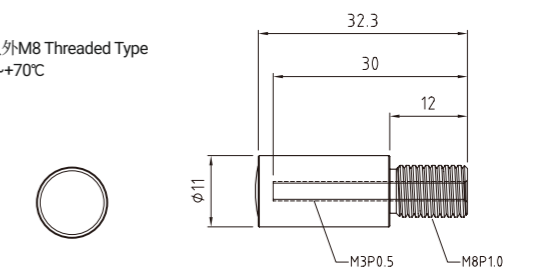
Detection Distance=20mm
Focal Spot=φ0.5
Compatible Fiber Optic: M3 Threaded Type
Operating Temperature: -50°C~+70°C



R3H4J



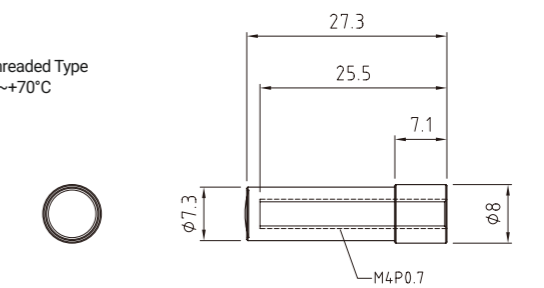
Detection Distance=30mm
Focal Spot=φ2.0
Compatible Fiber Optic: 内M3,外M8 Threaded Type
Operating Temperature: -50°C~+70°C



R4H1J



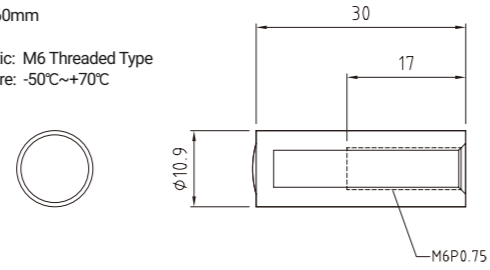
Detection Distance=20mm
Focal Spot=φ1.5
Compatible Fiber Optic: M4 Threaded Type
Operating Temperature: -50°C~+70°C



R6H1J



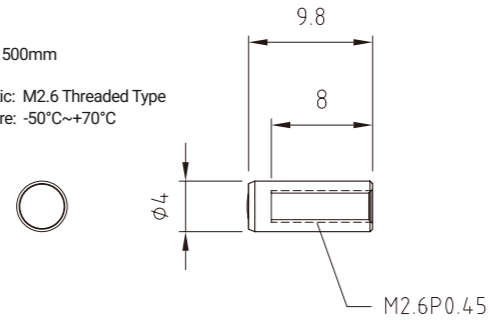
Detection Distance=60mm
Focal Spot=φ3.0
Compatible Fiber Optic: M6 Threaded Type
Operating Temperature: -50°C~+70°C



T4H1J



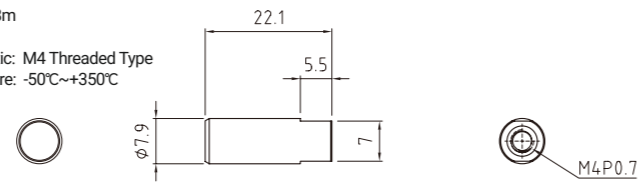
Detection Distance=1500mm
Focal Spot=φ8.0
Compatible Fiber Optic: M2.6 Threaded Type
Operating Temperature: -50°C~+70°C



T4H2J



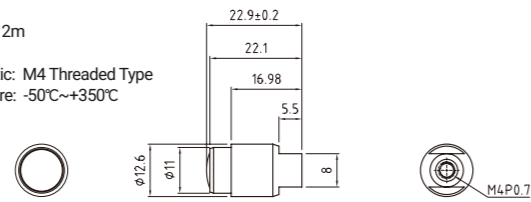
Detection Distance=8m
Focal Spot=φ20+
Compatible Fiber Optic: M4 Threaded Type
Operating Temperature: -50°C~+350°C



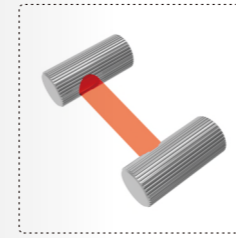
T4H3J



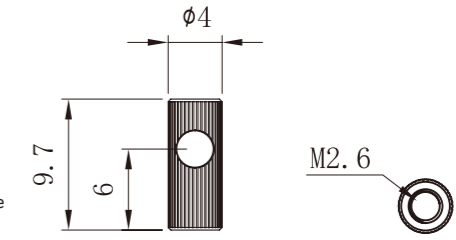
Detection Distance=12m
Focal Spot=φ20+
Compatible Fiber Optic: M4 Threaded Type
Operating Temperature: -50°C~+350°C



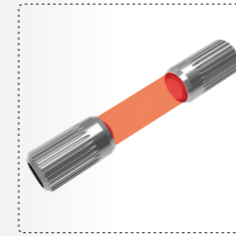
T4H4J



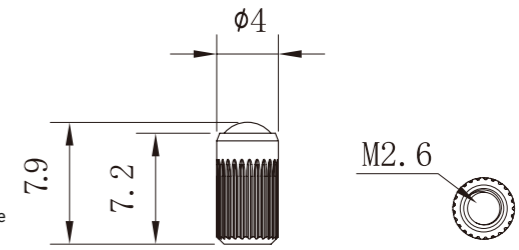
Detection Distance=1500mm
Focal Spot = φ8.0
Compatible Fiber Optic: M2.6 Threaded Type
Operating Temperature: -50°C~+70°C



T4H5J



Detection Distance=1500mm
Focal Spot = φ8.0
Compatible Fiber Optic: M2.6 Threaded Type
Operating Temperature: -50°C~+70°C

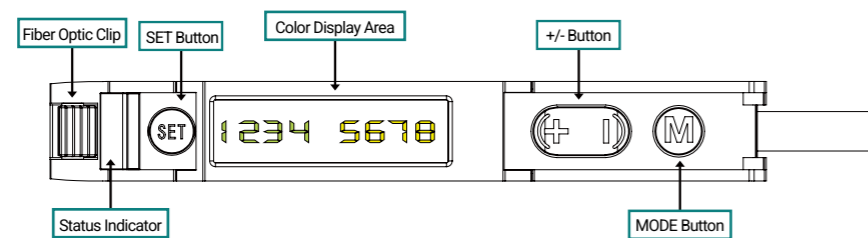





Product Specifications

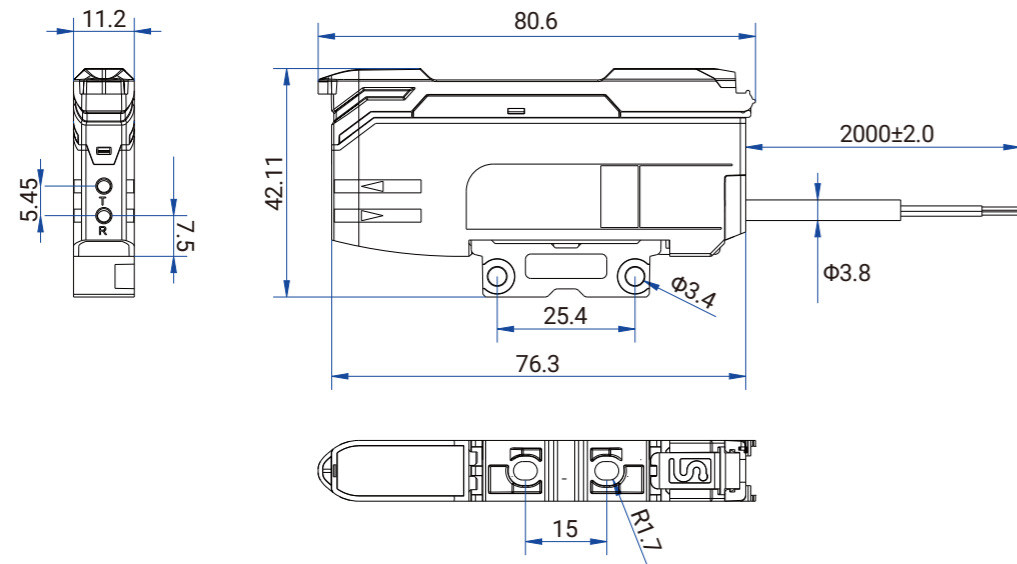


Operation Panel Instructions

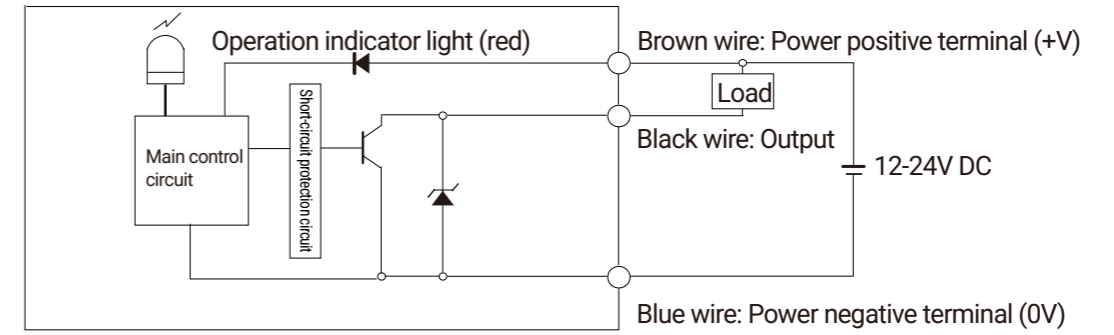


- Simple operation with one-touch setup
- Microsecond-level fast response
- Multi-level mode adjustment for high-power long-distance detection
- Adjustable light intensity
- Configurable anti-interference function
- Localized LCD display solution

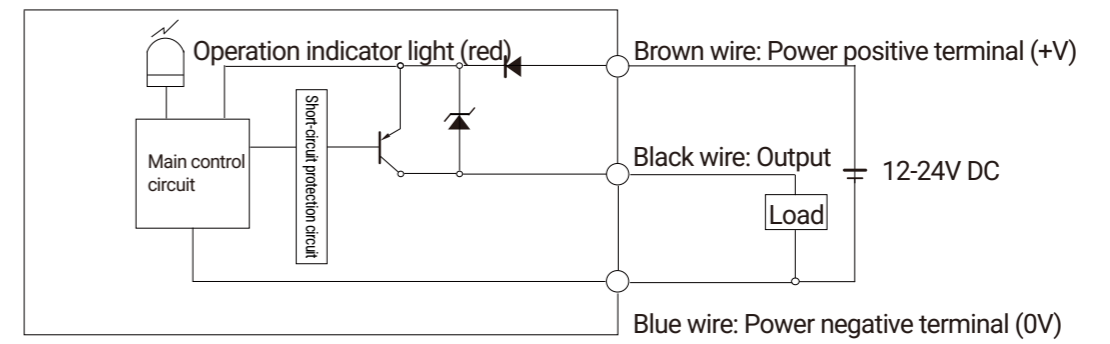
Type	Fiber Amplifier	
Appearance		
Model Number	NPN Output	FOS-N41
	PNP Output	FOS-N41P
Power Supply Voltage	12-24V DC $\pm 10\%$; Ripple voltage (P-P): Maximum 10%; Class 2	
Light Source	4-element red LED (Peak wavelength 640nm)	
Detection Method	Diffuse reflection, Through-beam (Determined by fiber optic type)	
Output Status	Light-ON/Dark-ON switching	
Detection Output	NPN open-collector output	PNP open-collector output
	Maximum input current: 100mA	
	Residual voltage: <1V	
Power Consumption	Standard mode: Maximum 710mW	Standard mode: Maximum 750mW
	At 24V: Maximum 29mA At 12V: Maximum 40mA	At 24V: Maximum 31mA; At 12V: Maximum 40mA
Response Time	30 μ s (HSP), 250 μ s (FINE), 500 μ s (TURBO), 1ms (SUPER), 1ms (ULTRA), 16ms (MEGA)	
Protection Circuit	Reverse current connection protection / Output overcurrent protection / Output surge protection	
Ambient Illuminance	Incandescent lamp: Maximum 20,000 Lux Sunlight: Maximum 30,000 Lux	
Ambient Temperature	-10~55°C (No freezing)	
Ambient Humidity	RH 35%~85% (No condensation)	
Vibration Resistance	10~55Hz, Combined amplitude 1.5mm, 2 hours each in X, Y, Z directions	
Shock Resistance	500m/s ² , 3 times each in X, Y, Z directions	
Material	Housing: Polycarbonate	
Housing Dimensions	80.6*42.1*11.2mm	
Weight	Approx. 80g	

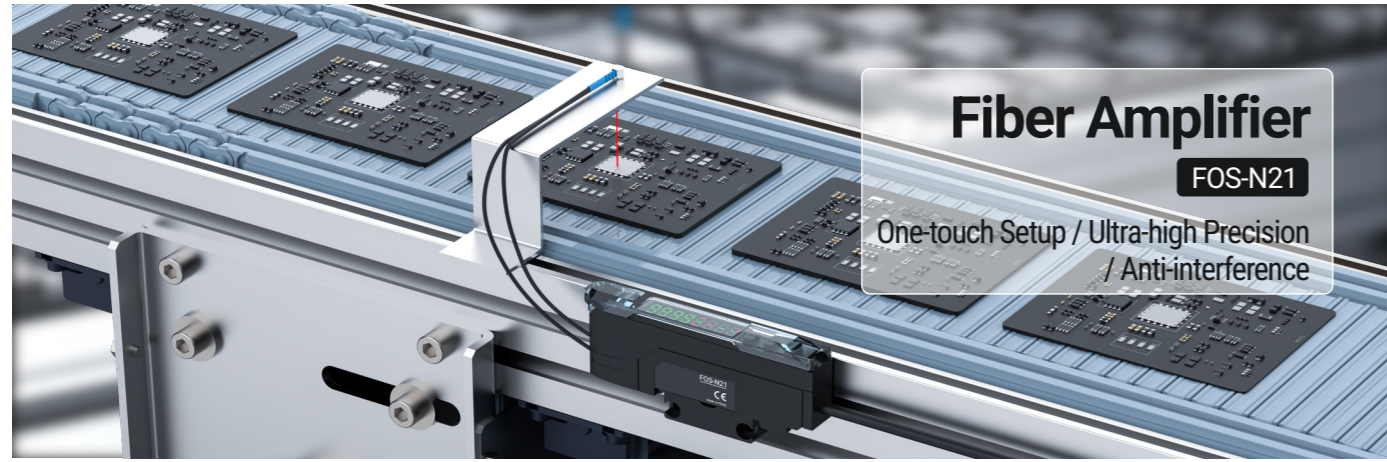


NPN Output

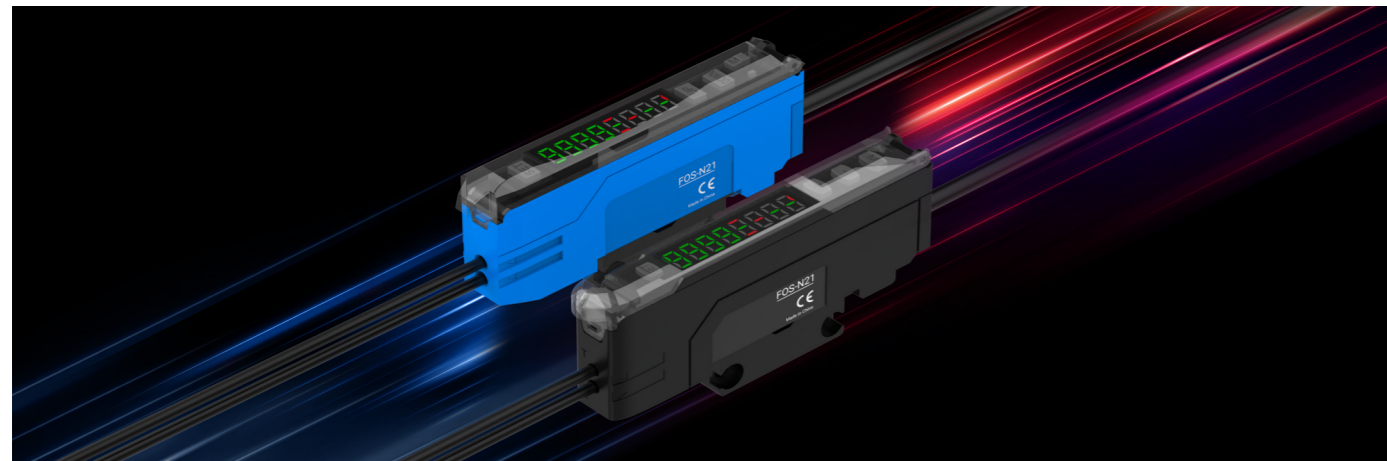


PNP Output

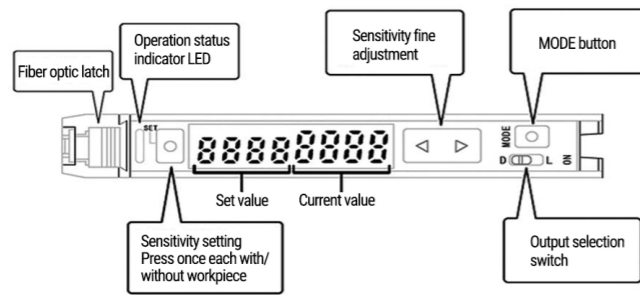




Product Specifications



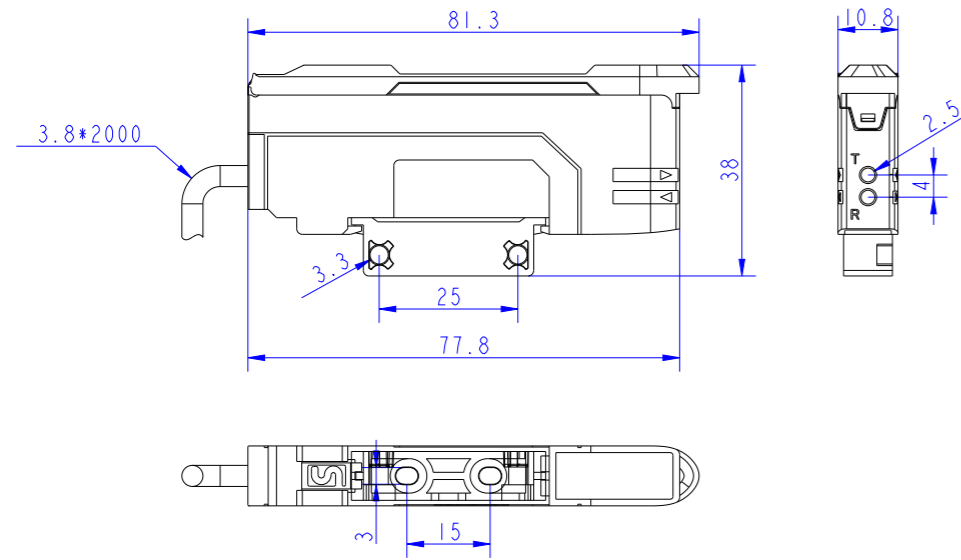
Operation Panel Instructions



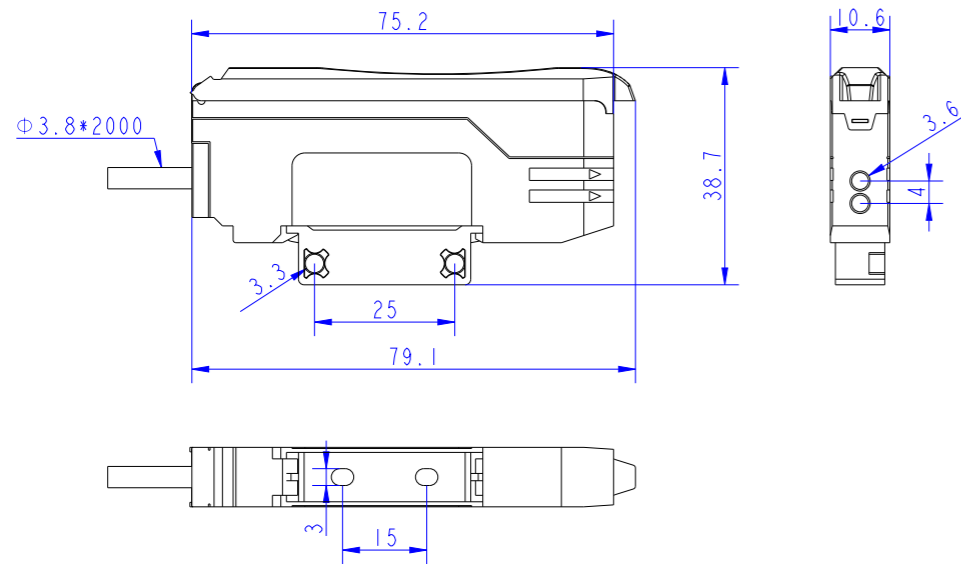
- Capable of long-distance detection, suitable for various automation and industrial applications
- Automatically adjusts brightness compensation to ensure detection accuracy and stability
- Features internal timer function for controlling detection time intervals

Type	Fiber Amplifier		
Appearance			
Model Number	FOS-N21V	FOS-N21A	FOS-N21AP
Output Type	Analog Voltage	NPN+Analog current	PNP+Analog current
Control Output	Black wire voltage output / Analog voltage: 0-5V		Switching output (black wire); 4-20mA analog output (white wire)
Light Source	Red, 4-element LED		Red, 4-element LED
Response Time	10μs		P-0:20μs; P-1:50μs; P-2:200μs; P-3:800μs; P-4:3.2ms; P-5:6.4ms; P-6:12.8ms
Output Selection	LIGHT-ON/DARK-ON(switch selectable)		LIGHT-ON / DARK-ON (selectable)
Display Indicator	Operating Indicator Light: Red LED, Dual Digital Monitor: Dual 7-digit display, with threshold (4-digit green LED indicator) and current value (4-digit red LED indicator) illuminated simultaneously. Current value range: 0 - 4095		1. Operating Indicator Light: Amber-red 2. Set Value (Threshold): 4-digit green LED digital display 3. Current Value: 4-digit red LED digital display 4. Current Value Range: 0 - 9999
Detection Method	Received Light Intensity of Reflected Light (capable of zone detection, provides automatic sensitivity tracking function)		
Delay Function	Timer Functions: Disconnect delay / Power-on delay / One-shot timer / Output extension. Display duration selectable: 1ms to 9999ms		
Control Output	Open Collector 24V, Max 100mA (main unit only) Max 20mA (when expansion unit is connected), Residual Voltage: 1V		NPN/PNP Open Collector 24V, Max 100mA, Residual Voltage: 1.5V. Analog Current 4-20mA, Detection Accuracy: 0.1%.
Power Supply	12 to 24VDC ±10%, Ripple Ratio (P-P): Max 10% Grade 2		
Operating Ambient Illuminance	Incandescent Lamp: Max 20,000 lux, Daylight: Max 30,000 lux		
Power Consumption	Standard Mode: Max 300mW, Maximum Voltage: 24V		
Vibration Resistance	10 to 55Hz, Double Amplitude: 1.5mm, 2 hours each for X, Y, Z axes		
Ambient Temperature	-10 to +55°C, No Freezing		

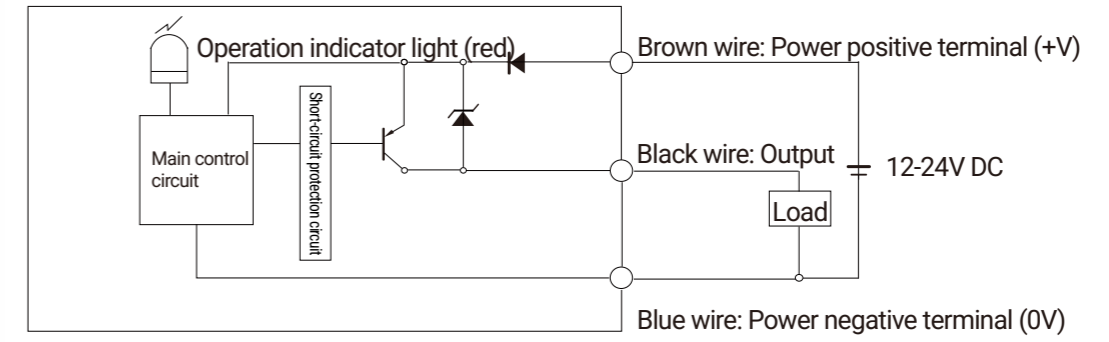
FOS-N21V Dimensional Drawing



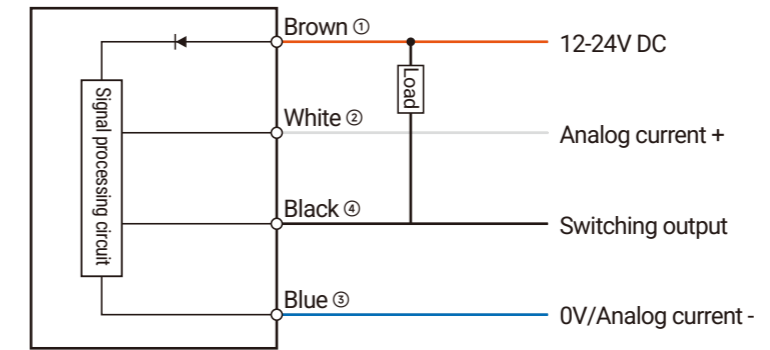
FOS-N21A Dimensional Drawing



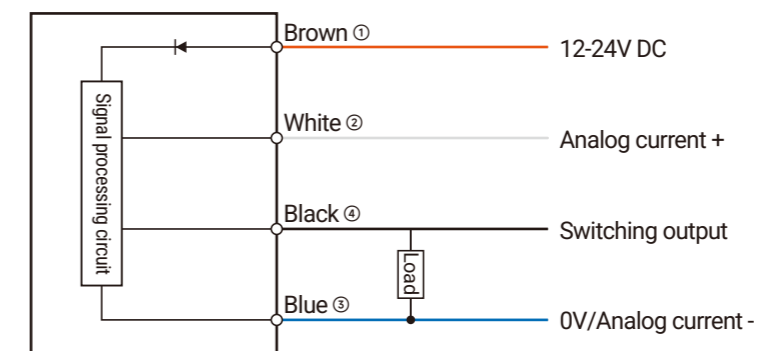
FOS-N21V Wiring Diagram

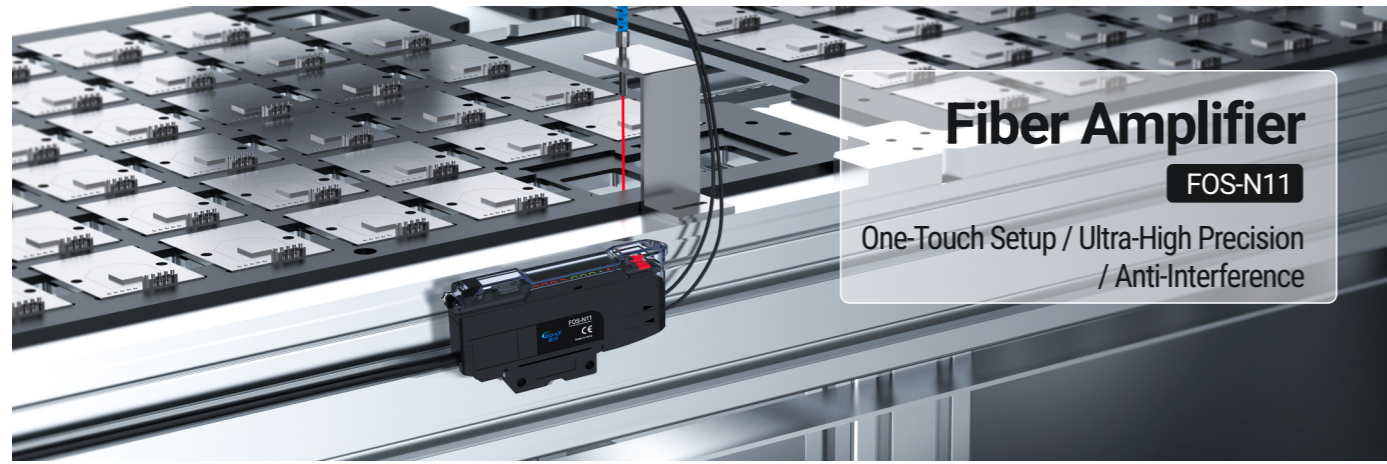


FOS-N21A Wiring Diagram



FOS-N21AP Wiring Diagram

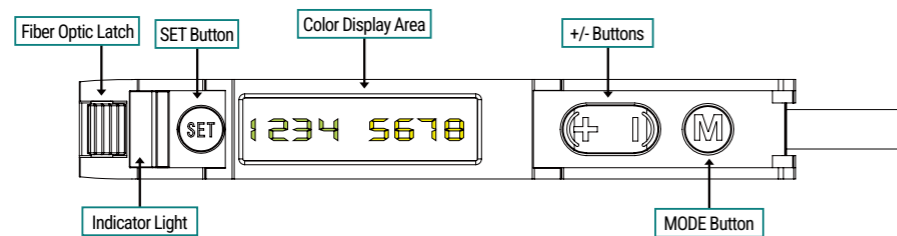





Product Specifications

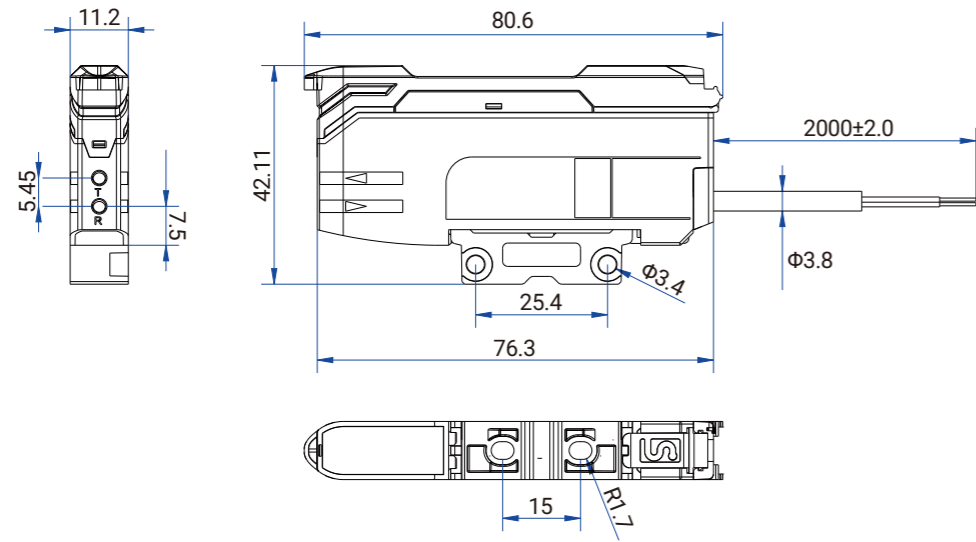


Operation Panel Instructions

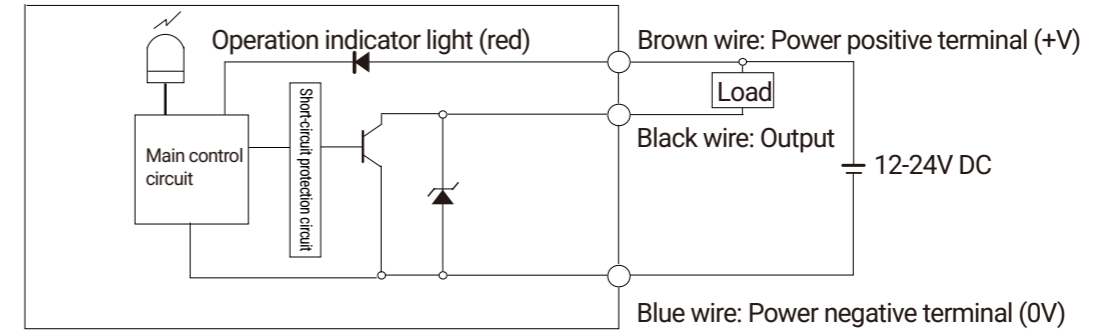


- Simple operation with one-touch setup
- Microsecond-level rapid response
- Multi-mode adjustment with high-power long-distance detection
- Adjustable light intensity
- Configurable anti-interference function

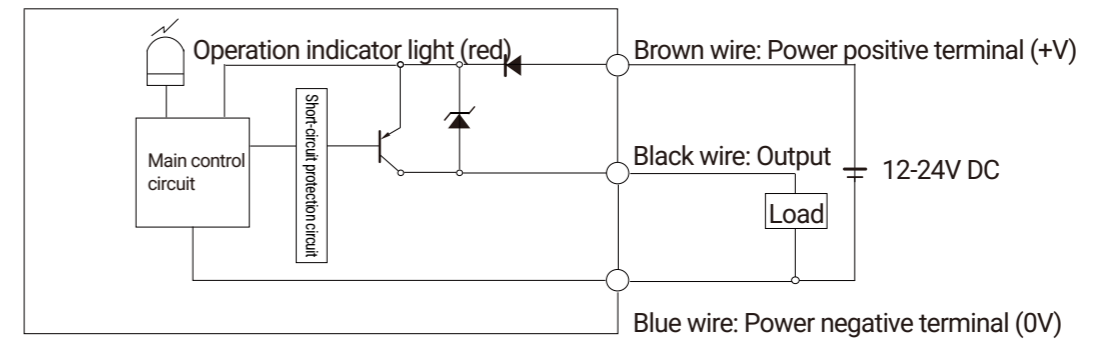
Type	Fiber Amplifier	
Appearance		
Model Number	NPN Output	FOS-N11
	PNP Output	FOS-N11P
Power Supply Voltage	12-24V DC±10%; Ripple voltage (P-P): Max 10%; Class 2	
Light Source	Four-element red LED (peak wavelength 640nm)	
Detection Method	Diffuse reflection, Through-beam (determined by fiber optic type)	
Output Status	Light-ON/Dark-ON switching	
Detection Output	NPN open collector output	PNP open collector output
	Maximum input current 100mA	
	Residual voltage less than 1V	
Power Consumption	Standard mode: max 710mW At 24V, max 29mA At 12V, max 40mA	Standard mode: max 750mW At 24V, max 31mA At 12V, max 40mA
	Response Time: 30µs (HSP), 250µs (FINE), 500µs (TURBO), 1ms (SUPER), 1ms (ULTRA), 16ms (MEGA)	
Protection Circuit	Reverse current connection protection / Output overcurrent protection / Output surge protection	
Ambient Illuminance	Incandescent lamp: Max 20000 Lux Daylight: Max 30000 Lux	
Ambient Temperature	-10~55°C (no freezing)	
Ambient Humidity	RH 35%~85% (no condensation)	
Vibration Resistance	10~55Hz, combined amplitude 1.5mm, 2 hours each in X, Y, Z axis directions	
Shock Resistance	500m/s ² , 3 times each in X, Y, Z axis directions	
Material	Housing: Polycarbonate	
Housing Dimensions	80.642.111.2mm	
Weight	Approx. 80g	

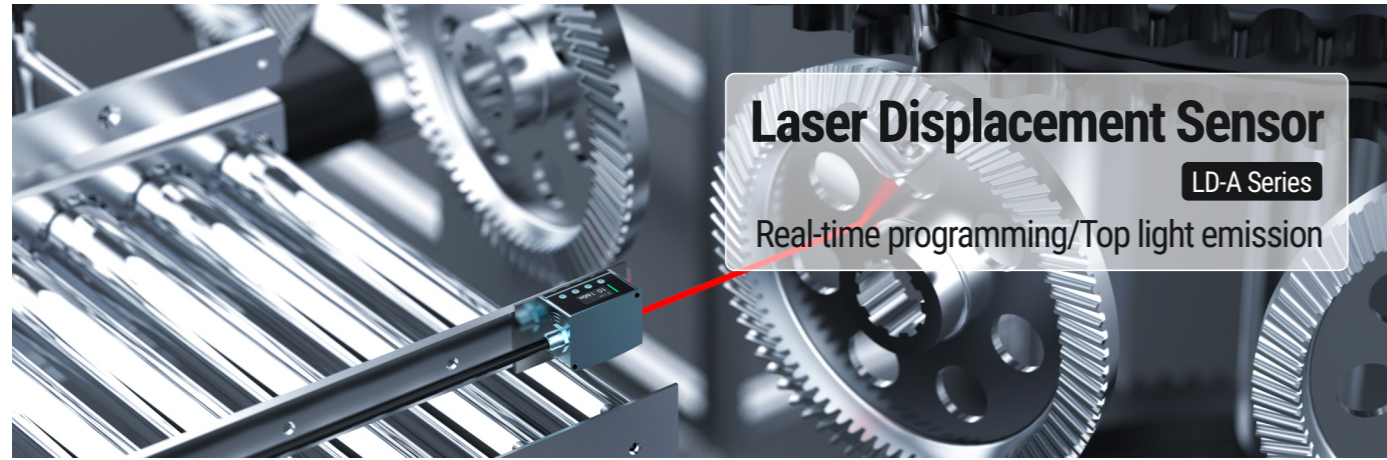


NPN Output



PNP Output

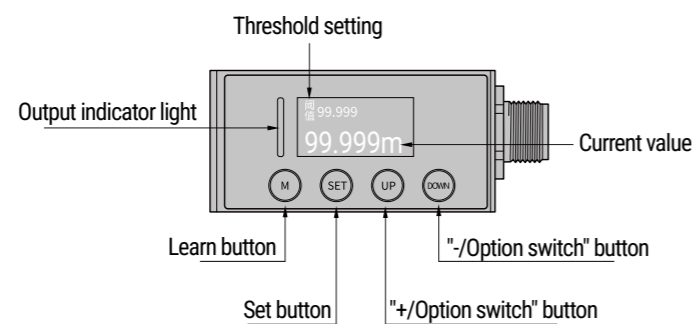





Product Specifications

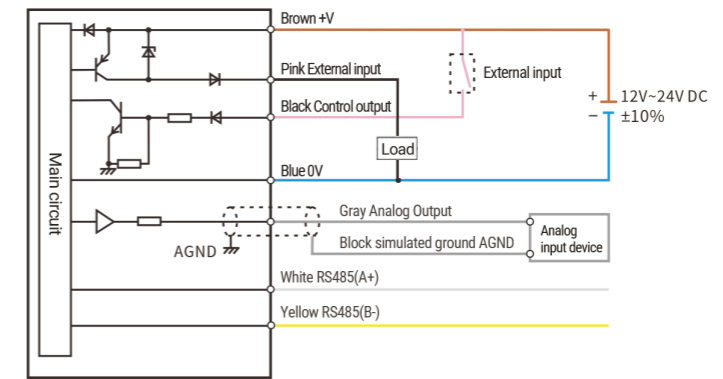
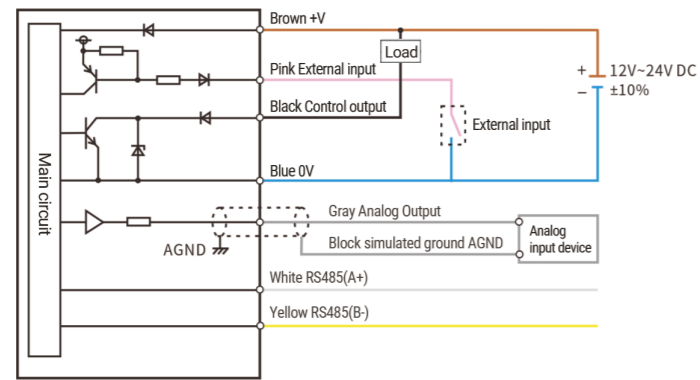
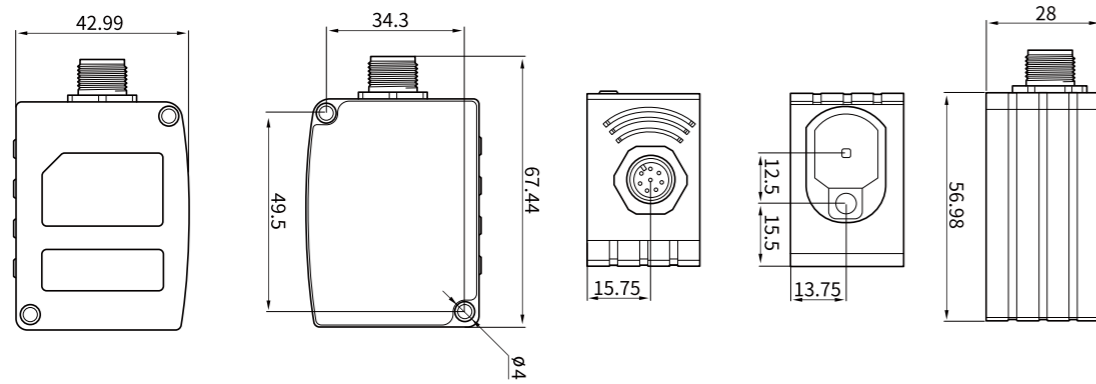


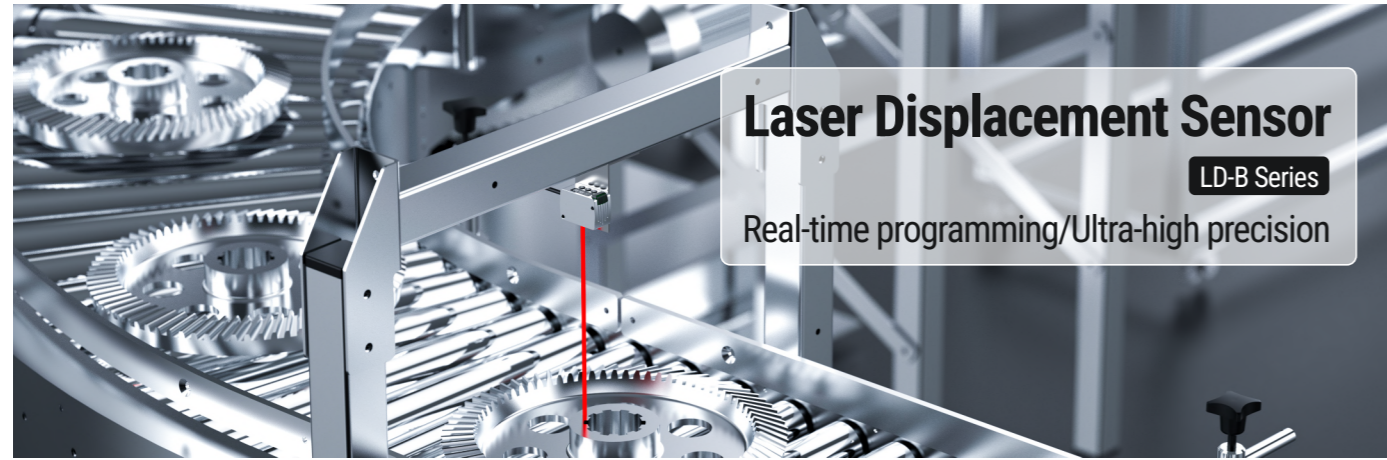
Operation Panel Instructions



- Achieves measurement accuracy at millimeter and even micrometer levels, meeting the requirements of high-precision measurement applications
- Features fast response speed, capable of capturing dynamic displacement changes of objects in real-time
- Can adapt to measuring objects with different materials, colors, and shapes, offering strong versatility and flexibility

Type	Laser Displacement Sensor			
Appearance				
Model Number	NPN+Analog+485	LD-A100NM-485	LD-A200NM-485	LD-A500NM-485
	PNP+Analog+485	LD-A100PM-485	LD-A200PM-485	LD-A500PM-485
	Sensing Distance	0.1m-1m	0.1m-2m	0.1m-5m
	NPN+Analog+485	LD-AM10NM-485	LD-AM20NM-485	LD-AM50NM-485
	PNP+Analog+485	LD-AM10PM-485	LD-AM20PM-485	LD-AM50PM-485
	Sensing Distance	0.1m-10m	0.1m-20m	0.1m-50m
Resolution	1mm			
Measurement Error	$\pm(2\text{ mm} + 0.01\% d)\star$			
Laser Type	Red semiconductor laser, Class 2 (655 ±10 nm, <1 mW)			
Power Supply Voltage	12–24 VDC ±10%, ripple P-P ≤10%			
Residual Voltage (Drop)	<1.5 V			
Current Consumption	≤50 mA @ 24 V			
Max. Load Current	50 mA			
Leakage Current	<0.1 mA			
Response Time	50–200 ms			
Analog Voltage Output	Output range: 0–5 V (5.2 V at alarm)			
	Output impedance: 100 Ω			
Analog Current Output	Output range: 4–20 mA (0 mA at alarm)			
	Output impedance: ≤300 Ω			
Ambient Temperature	Operating temperature: -10°C to +45°C (non-freezing, non-condensing); Storage temperature: -20°C to +60°C			
Ambient Humidity	35%–85% RH			
Ambient Illuminance	Incandescent light <3000 lux			
Protection Circuit	Short circuit protection			
Protection class	IP65			
External Input	NPN open collector input			
Operating Altitude	<2000 m			
Connection method	8-core composite cable, 2 m			
Material	Aluminum			
Weight	Approx. 150 g			
★	Indicates the sensing distance. Under adverse conditions (e.g., strong ambient light, excessive ambient temperature fluctuations, or low-reflectivity surfaces), measurement errors may increase significantly; target reflector use is recommended for improved accuracy.			

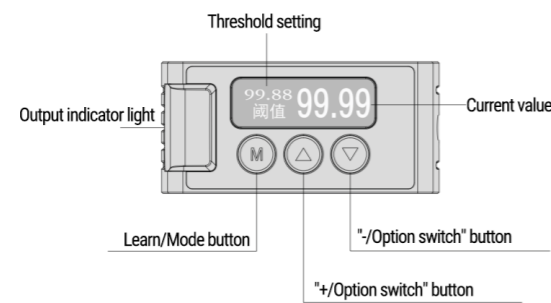


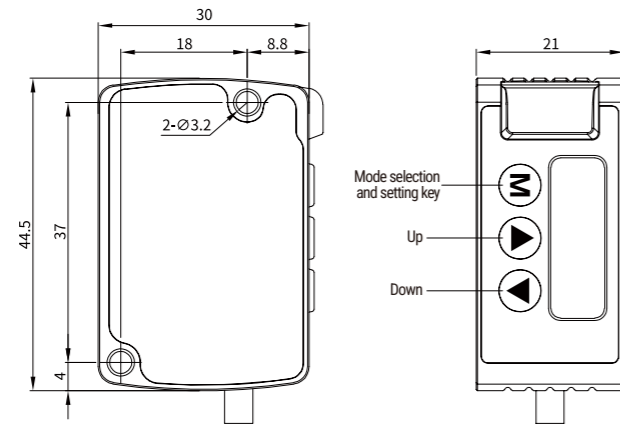


Product Specifications

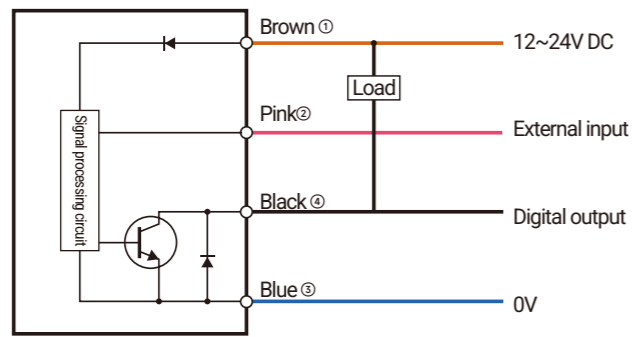


Operation Panel Instructions

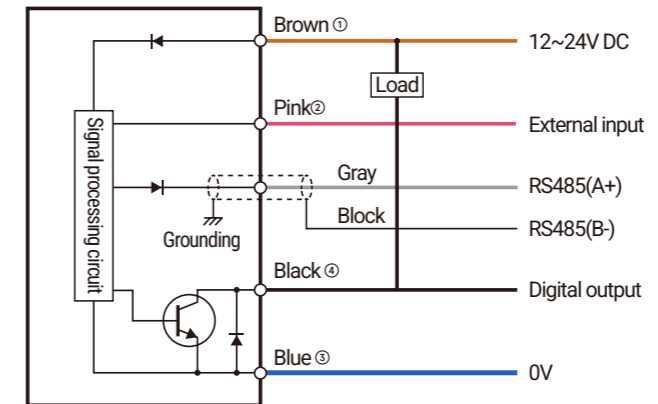
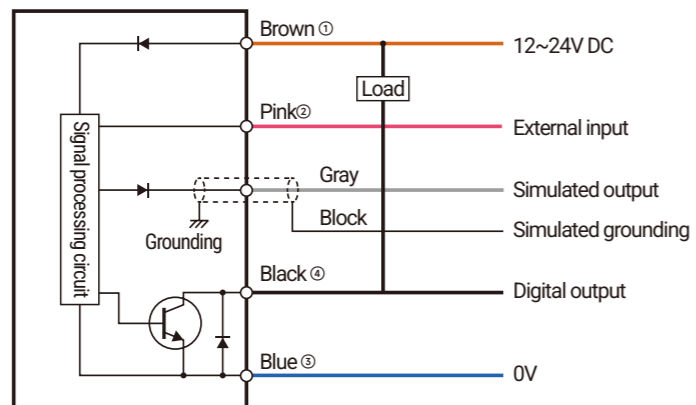


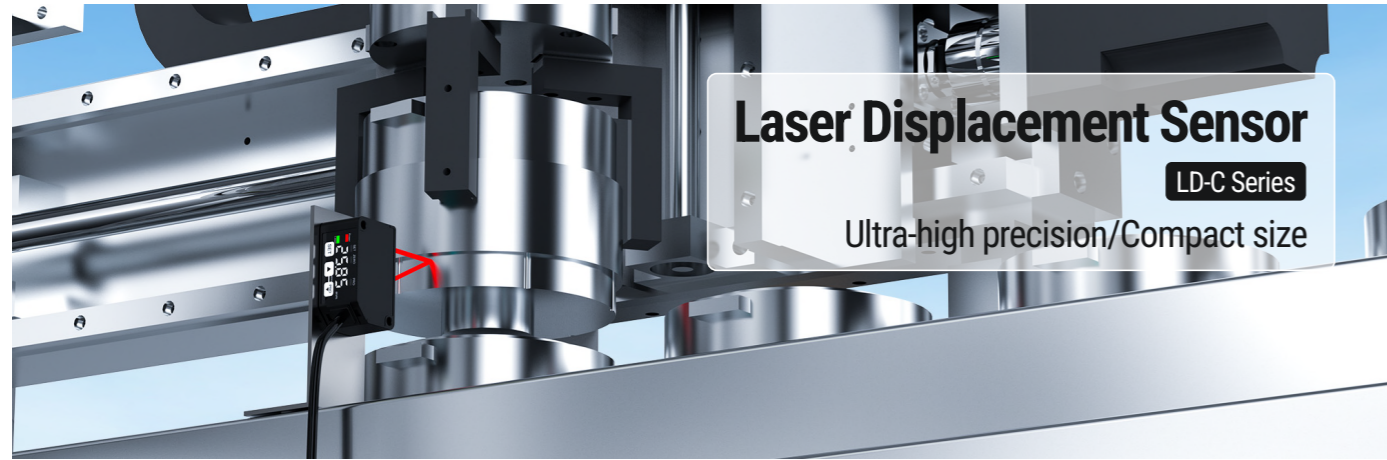


NPN

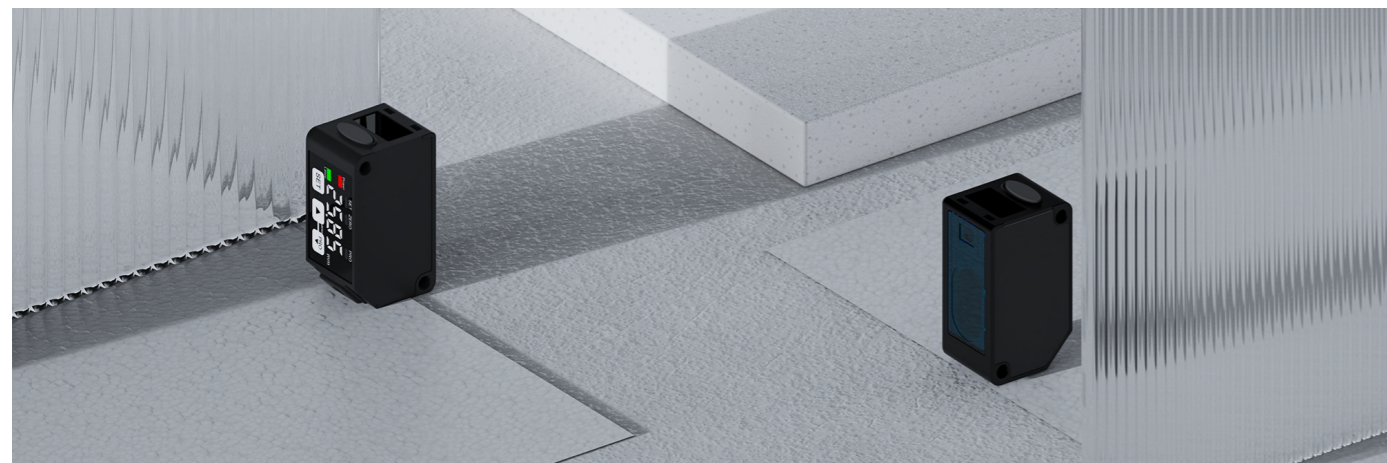


PNP+Analog

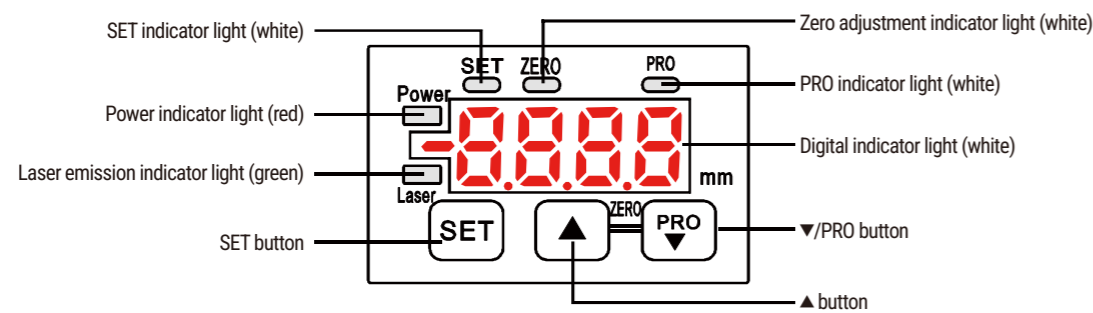





Product Specifications

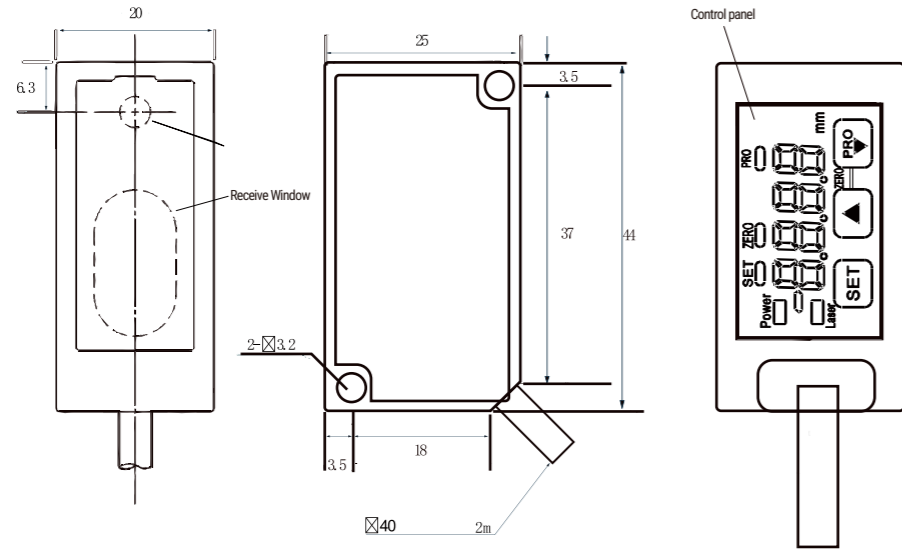


Operation Panel Instructions

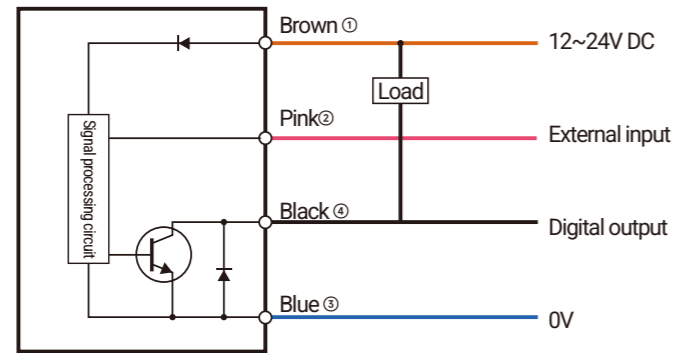


- Achieves measurement accuracy at millimeter and even micrometer levels, meeting the requirements of high-precision measurement applications
- Features fast response speed, capable of capturing dynamic displacement changes of objects in real-time
- Can adapt to measuring objects with different materials, colors, and shapes, offering strong versatility and flexibility

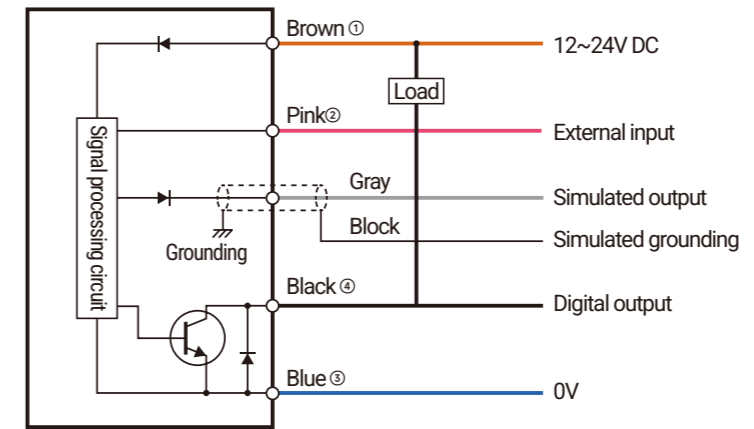
Type	Laser Displacement Sensor					
Appearance						
Model Number	NPN Output	LD-C30N	LD-C50N	LD-C100N	LD-C200N	LD-C400N
	NPN+Analog	LD-C30NM	LD-C50NM	LD-C100NM	LD-C200NM	LD-C400NM
Detection Method	Diffuse Reflection					
Reference (center) distance	30mm	50mm	100mm	200mm	400mm	
Measurement range (F.S.)	25-35mm	35-65mm	65-135mm	120-280mm	200-600mm	
Full scale	10mm	30mm	70mm	160mm	400mm	
Repeatability accuracy	10μm	30μm	70μm	200μm	600μm: 200-400mm 1500μm: 400-600mm	
Linearity accuracy	±0.1% F.S.		±0.2% F.S.		±0.2% F.S.	
Temperature drift characteristics	±0.03% F.S./°C					
Light Source	Medium	Red diode laser, wavelength 655nm				
	Output power	<1mW				
	Laser class	IEC Class 2				
Spot diameter	Φ50μm	Φ70μm	Φ120μm	Φ300μm	Φ500μm	
Output	Digital output	NPN open collector, ≤50mA/DC24V, residual voltage <2.5V				
	Analog	Analog voltage: 0~5V (alarm state: 5.2V); Analog current: 4~20mA (alarm state: 0mA), switchable via Chinese display				
Output switching action	Light.on / Dark.on selectable					
Response time	1.5ms/5ms/10ms, switchable					
Operating voltage	DC 12~24V +10%					
Consumption (no-load) current	<30mA (at 24V DC); ≤60mA (at 12V DC)					
Indicator light	Output indicator light: yellow; Power indicator light: green					
Ambient Illuminance	Incandescent lamp ≤3000Lux; Sunlight ≤20000Lux					
Ambient Temperature	Operating temperature: -10°C~45°C; Storage temperature: -20°C~60°C (no freezing)					
Ambient Humidity	Operating humidity: 35%~85% RH; Storage humidity: 35%~85% RH (no condensation)					
Protection Circuit	Reverse polarity protection/surge protection/short circuit protection					
Protection class	IP67 (IEC)					
Withstand voltage	AC 1000V 50/60Hz (1 minute)					
Vibration Resistance	10~55Hz (1 minute), double amplitude 1.5mm, 2 hours each in X/Y/Z directions					
Shock Resistance	Shock resistance: 500m/s ² (approx. 50G), 3 times in each XYZ direction					
Insulation resistance	Insulation resistance: ≥50MΩ (DC 500V megohmmeter)					
Material	Housing	Aluminum alloy				
	Lens	PMMA				
	Lead wire	PVC (polyvinyl chloride)				
Connection method	2m 5-core standard cable (4.0mm diameter), customizable length					
Weight	Approx. 85g (including 2m 5-core standard cable)					

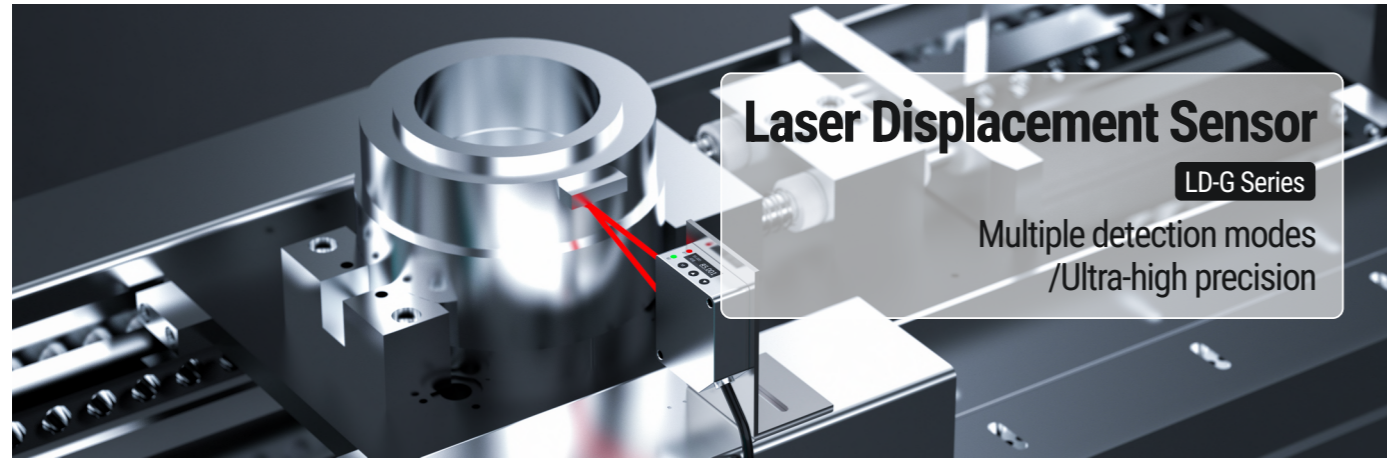


NPN Output type

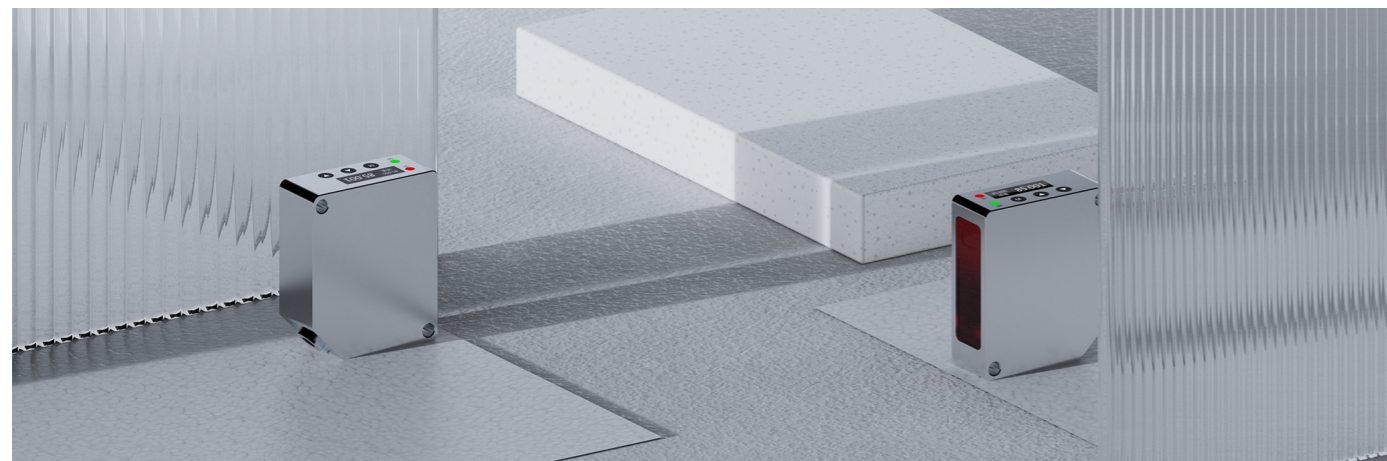


NPN+Analog output type

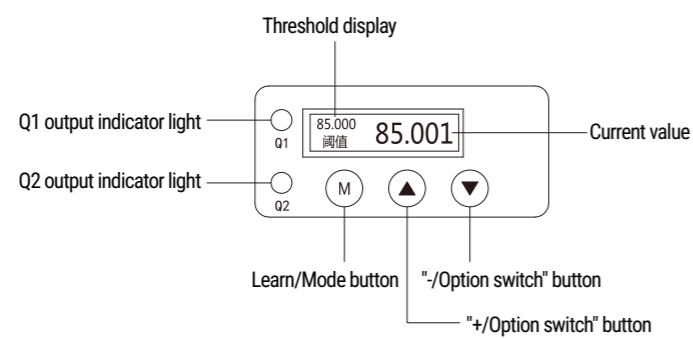


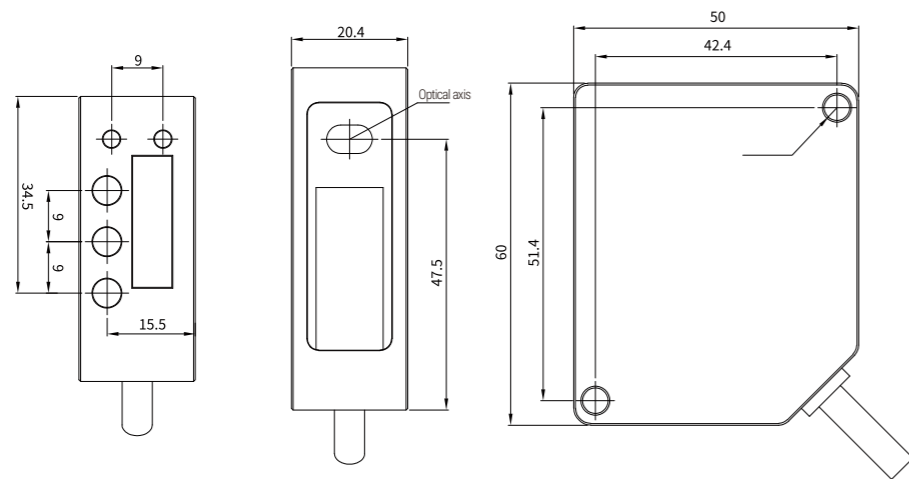


Product Specifications

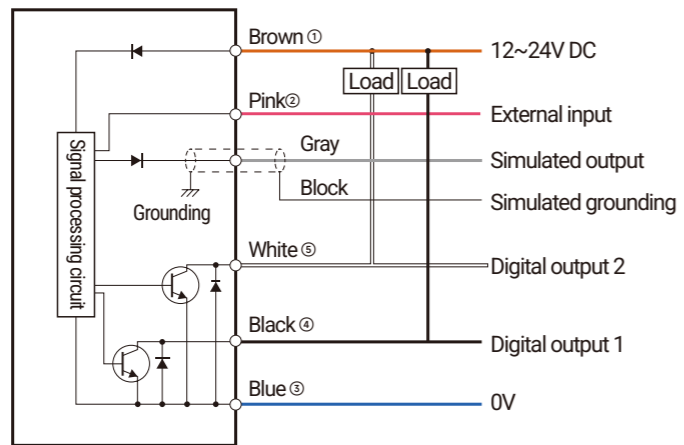


Operation Panel Instructions

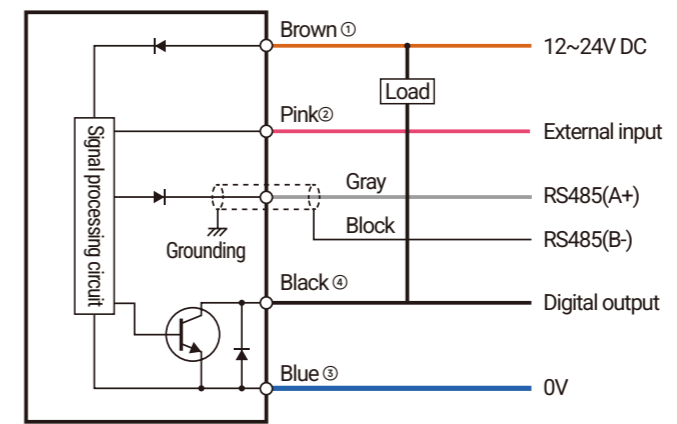


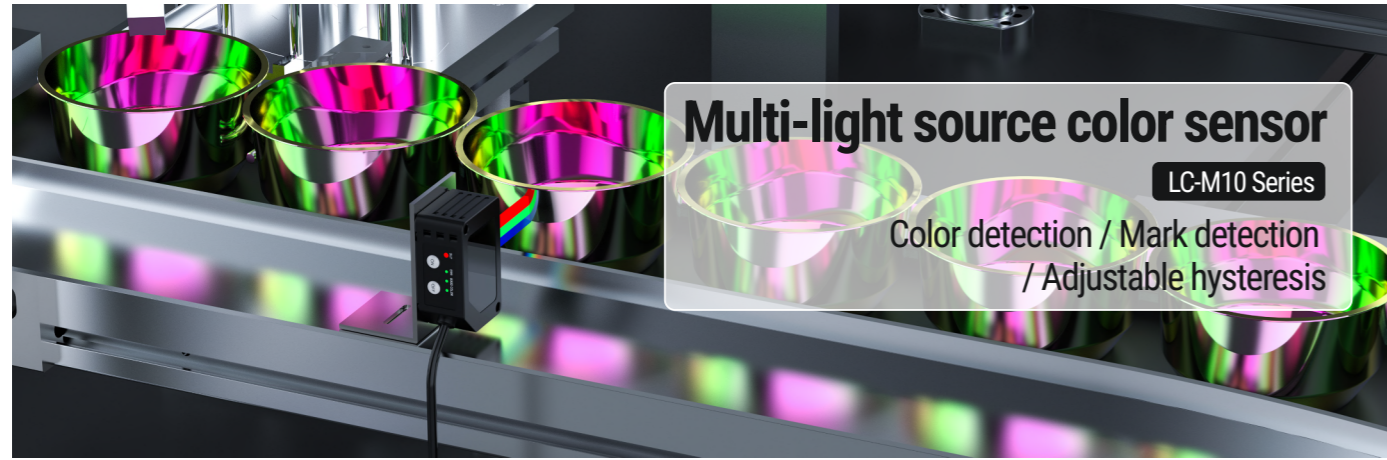


NPN+Analog output type



NPN+RS485 output type

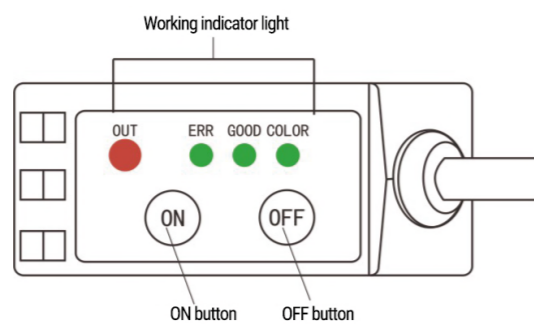





Product Specifications

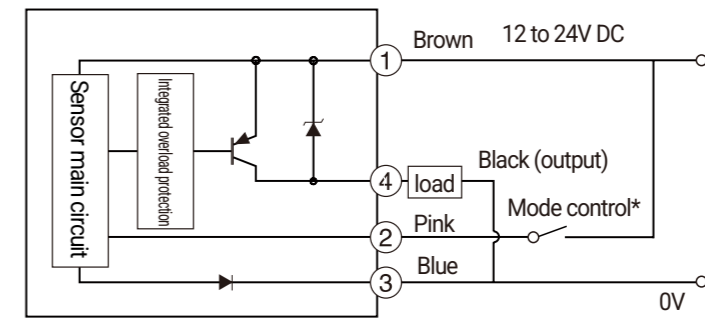
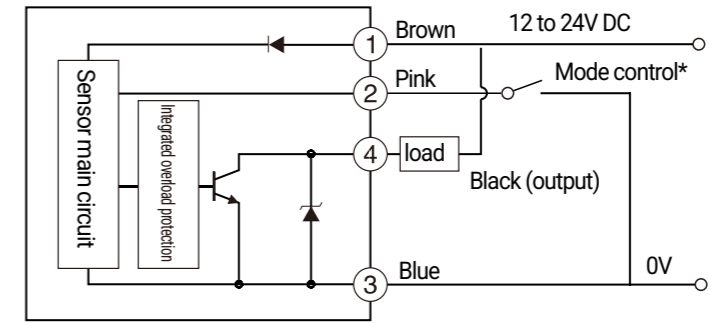
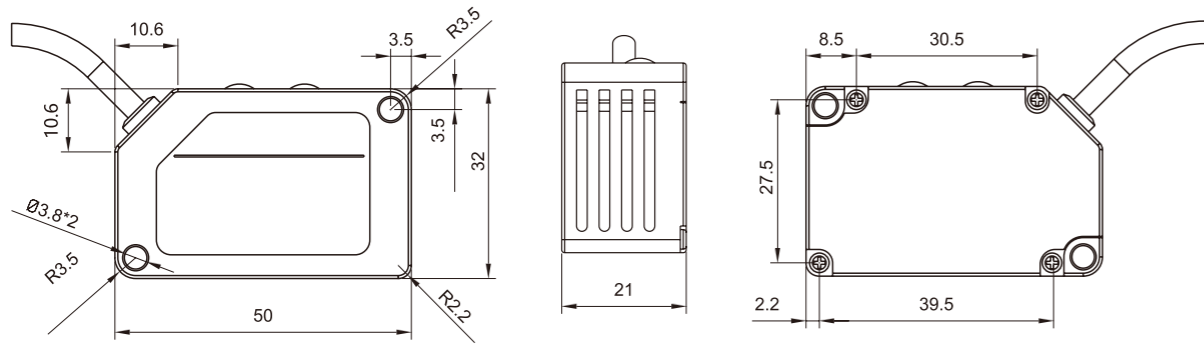


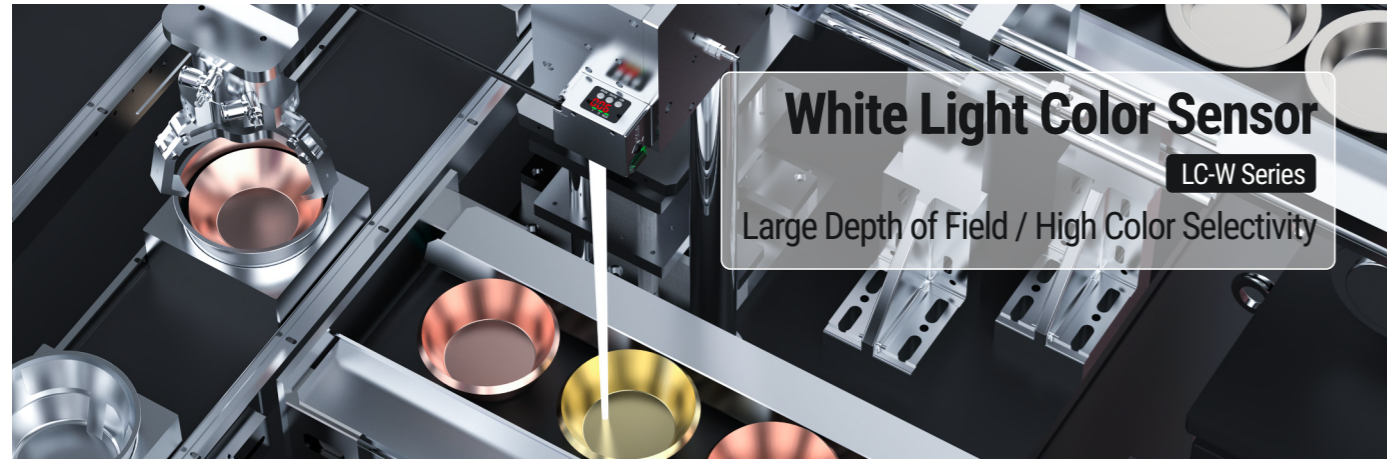
Operation Panel Instructions



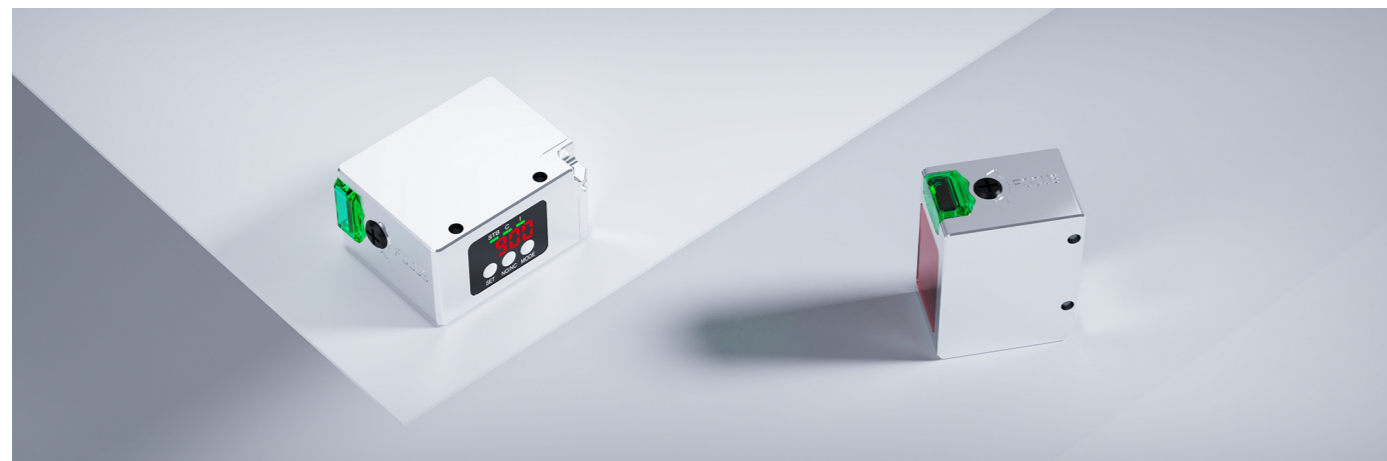
- Capable of precisely detecting object colors, including discrimination of nearly identical colors and different shades of the same color
- Attenuation function available to reduce sensitivity when reflected light intensity from target objects is excessive, adapting to varying environmental conditions
- External teach-in input compensates for display drift as environmental conditions change over time

Type	Cable-out Type	
Appearance		
Type	Cable Type	
Model Number	NPN Output	LC-M10
	PNP Output	LC-M10P
Sensing Distance	18 to 28mm	
Power Supply Voltage	24V DC +10%, ripple P-P ≤10%	
Current Consumption	Power consumption ≤850mW at 24V DC (current consumption ≤35mA)	
Mode Switching Input	Color Mark Mode	Low (ON): 0 to 0.6V DC
		Sinking current ≤0.5mA
	Color Mode	High (ON): 12 to +V DC
		High (OFF): 12 to +V DC or open
Output	NPN open collector	PNP open collector
	Maximum sinking current: 50mA	Maximum sourcing current: 50mA
	Supply voltage: ≤30V DC (between output and 0V)	Supply voltage: ≤30V DC (between output and +V)
	Residual voltage: ≤1.5V (at 50mA sinking current)*	Residual voltage: ≤1.5V (at 50mA sourcing current)*
Output Operation	Color Mark Mode	Color mark detection: ON
	Color Mode	ON when matched
Short Circuit Protection	Equipped (automatic recovery)	
Response Time	≤200μs	
Ambient Temperature	Operating: -10°C to +55°C (non-condensing, non-freezing); Storage: -20°C to 70°C	
Ambient Humidity	Operating humidity: 35% to 85% RH; Storage humidity: 35% to 85% RH	
Emitter Element	Red/Green/Blue tri-color LED	
	Emission peak wavelengths: 640nm/525nm/470nm	
Material	Housing: PBT; Panel: PC; Buttons: Silicone; Lens: PC	
Cable	0.2mm ² 4-core rubber cable (standard length 2m, color-coded)	
	Brown: +V; Black: Output; Pink: Mode switching input; Blue: 0V	
Weight	Approx. 110g	

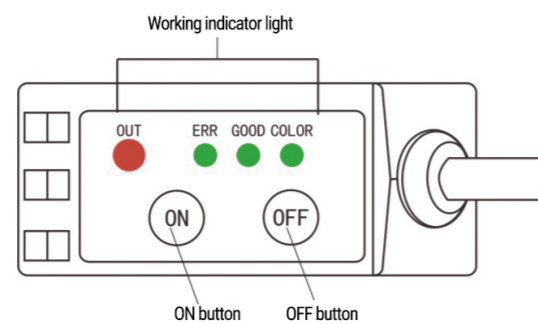




Product Specifications

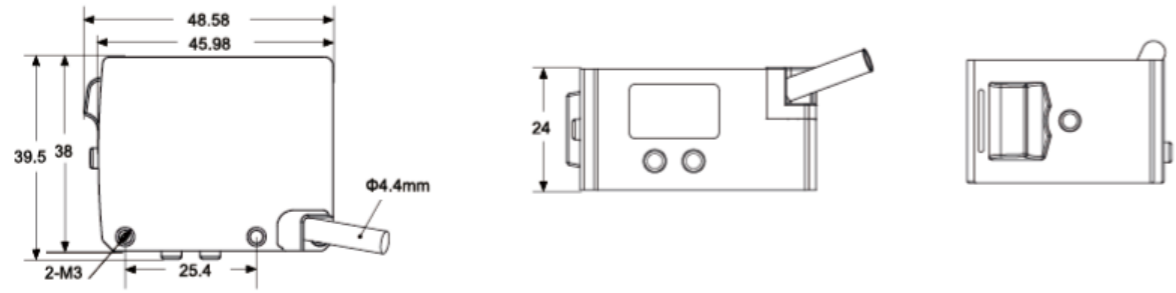


Operation Panel Instructions

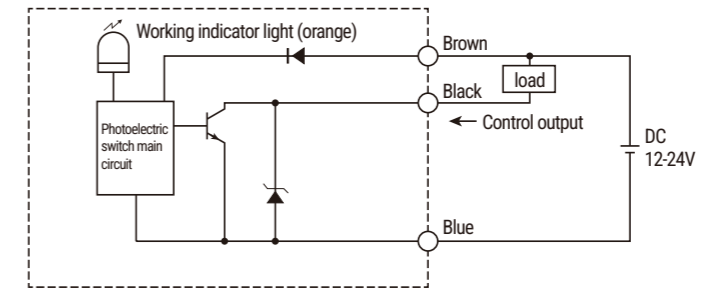


- Capable of simultaneous multi-color detection with multi-channel output, meeting requirements for complex application scenarios
- Modulation-demodulation technology effectively suppresses background light interference to enhance detection accuracy
- Automatically adapts to wavelength variations for intelligent and simplified color recognition

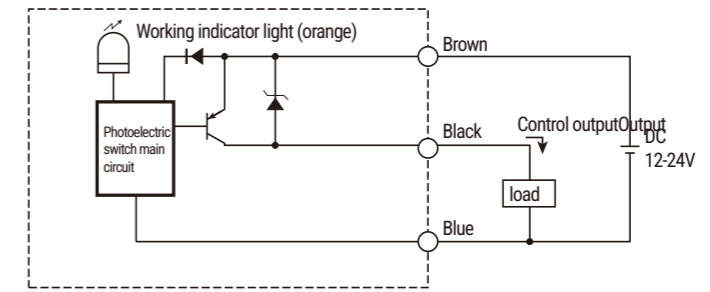
Type	Cable-out Type	
Appearance		
Model Number	NPN Output	LC-W500N
	PNP Output	LC-W500P
Type	Single output port, one external output port (lead wire type)	
Control Output	Single output port with short circuit protection and integrated interference suppression	
Light Source	White LED, adjustable spot size (minimum 3.6mm diameter)	
Response Time	AUTO, C, and CI modes: 200µs; MARK mode: 160µs	
Output Selection	LIGHT-ON/DARK-ON (selectable via keypad menu)	
Display Indicator	Operation indicator: red LED with LED display	
Detection Method	AUTO, C, CI, and MARK modes Sensing distance: 30mm to 500mm (long-range)	
Time Delay Function	De-energization delay timer / Energization delay timer / Single-cycle timer / Energization delay single-cycle timer, selectable Timing display range: 1ms to 9999ms	
Control Output	NPN/PNP open collector, 24V, max. 100mA (main unit only) Current consumption ≤40mA (when expansion module connected), residual voltage ≤2V	
Power Supply	12 to 24V DC ±10%, ripple (P-P) ≤10% (Level 2)	
Operating Ambient Light Level	Incandescent lamp: ≤20,000 Lux; Sunlight: ≤30,000 Lux	
Power Consumption	Max. voltage: 24V, current ≤60mA	
Vibration Resistance	10 to 55Hz, double amplitude 1.5mm, 2 hours each on X/Y/Z axes	
Ambient Temperature	Operating temperature: -10°C to +55°C (non-freezing)	



NPN Output

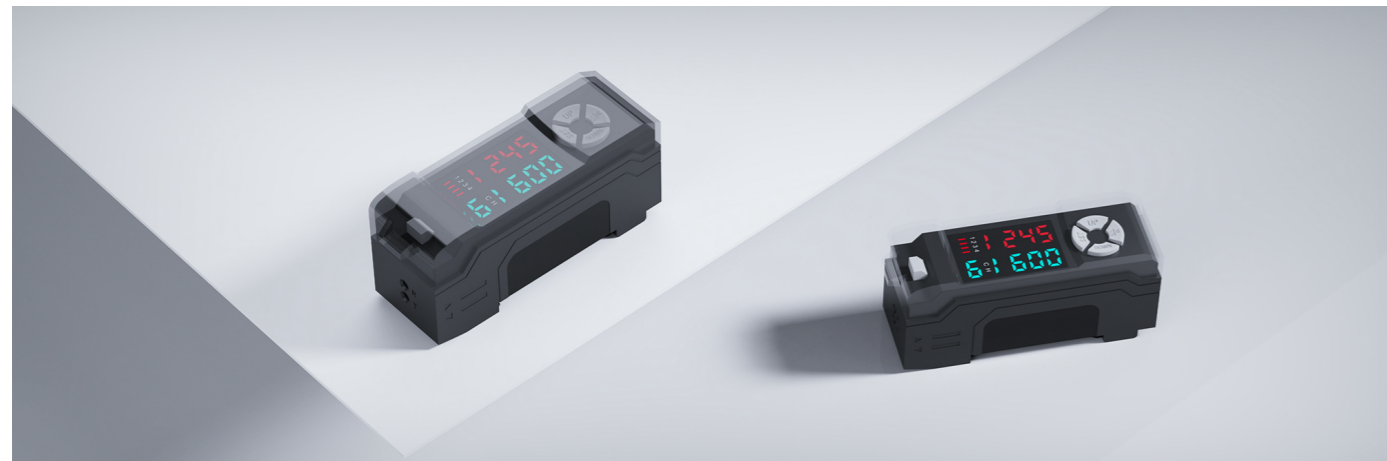


PNP Output

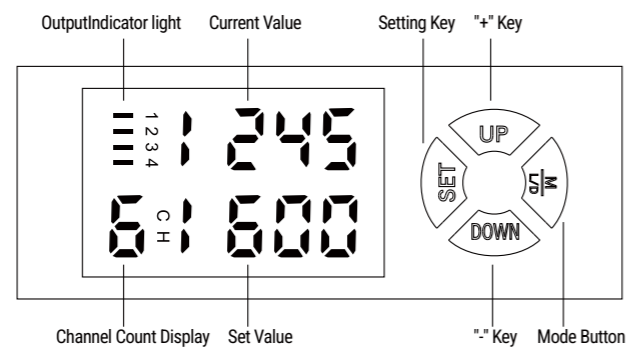





Product Specifications

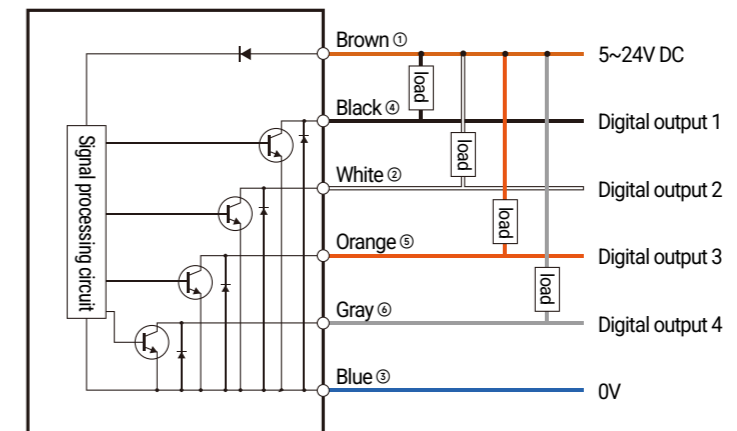
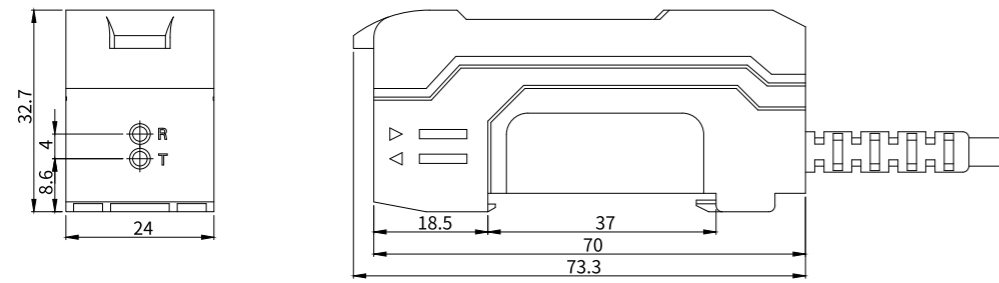


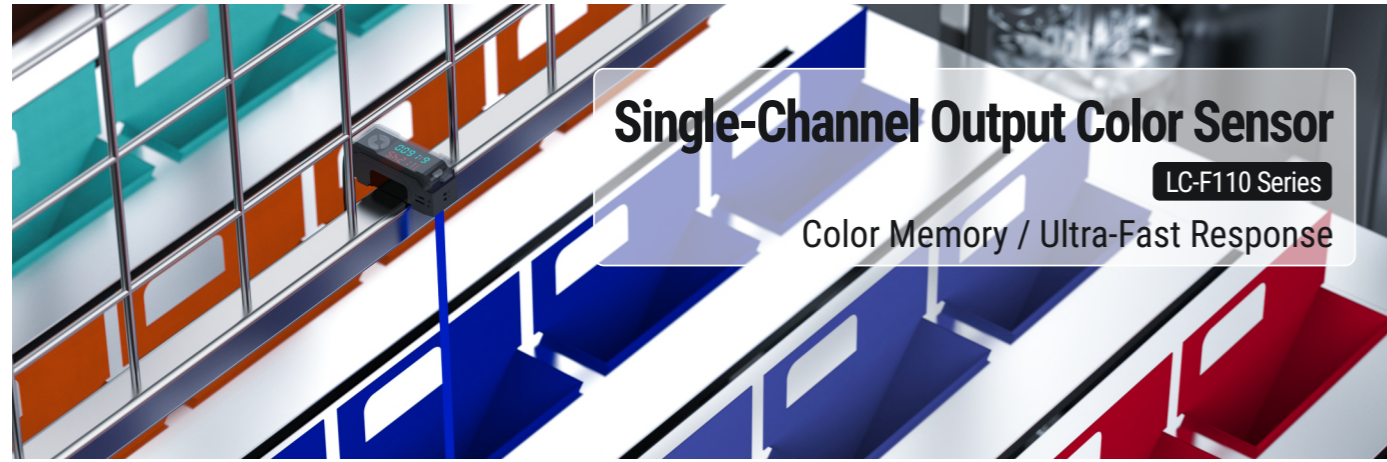
Operation Panel Instructions



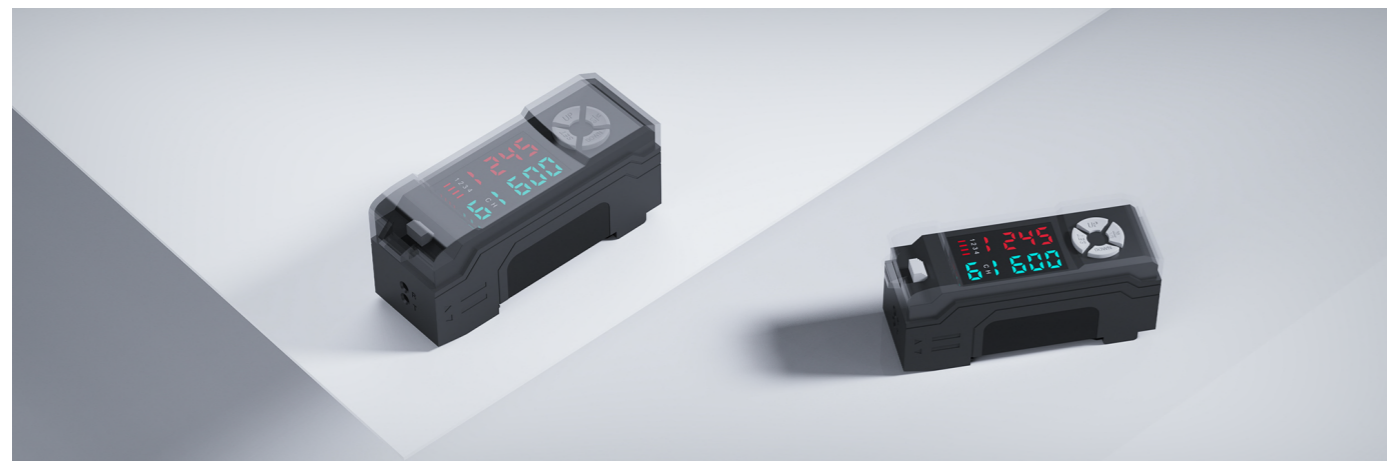
- Capable of simultaneous multi-color detection with multi-channel output functionality
- Immune to mechanical vibration of target objects, ensuring stable detection in vibrating environments
- Compact design enables seamless integration into diverse equipment and systems for automated and intelligent control

Type	Cable-out Type	
Appearance		
Model Number	NPN Output	LC-F410
	PNP Output	LC-F410P
Operating voltage	DC12~24V +10%	
Consumption (no-load) current	≤20mA	
Sensing Distance	18~28mm	
Light Source	RRGB Tri-Color, 4-Element LED	
Detection Mode	Color Mode / Color Mark Mode switchable	
Response time	<130μs	
Response Frequency	1000Hz	
Output Mode	NPN/PNP open collector Model Number, 4-channel output	
Maximum Input Current	<100mA	
Residual Voltage	<1.0V	
Switching Mode	L.on / D.on selectable	
Ambient Illuminance	Incandescent lamp ≤3000 Lux; Sunlight ≤10000 Lux	
Ambient Temperature	Operating temperature: -10°C to +55°C; Storage temperature: -25°C to +75°C (non-freezing)	
Ambient Humidity	Operating humidity: 35% to 85% RH; Storage humidity: 35% to 95% RH (non-condensing)	
Protection Circuit	Reverse polarity protection / surge protection / short circuit protection	
Protection class	IP65	
Connection method	Lead wire type (6-core, standard cable length 2m)	
HousingMaterial	PBT	
Withstand voltage	AC 500V 50/60Hz, 1 minute	
Vibration Resistance	10 to 55Hz, double amplitude 1.5mm, 2 hours each in X/Y/Z directions	
Shock Resistance	Shock resistance: 500m/s ² , 10 times in each X/Y/Z direction	
Insulation Resistance	Insulation resistance: ≥20MΩ (DC 500V megohmmeter)	

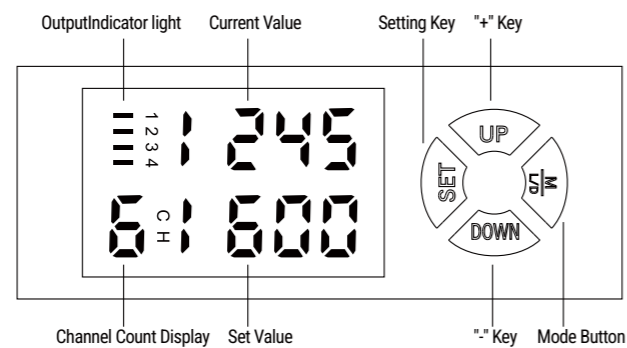





Product Specifications

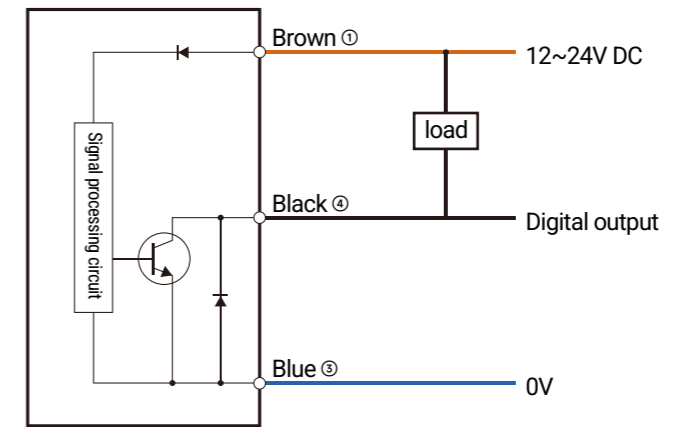
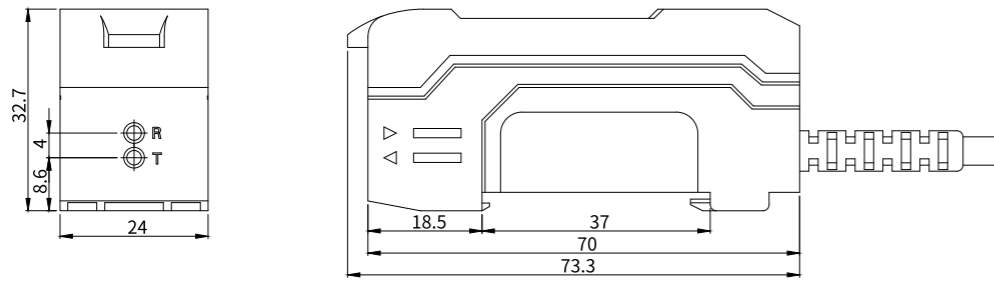


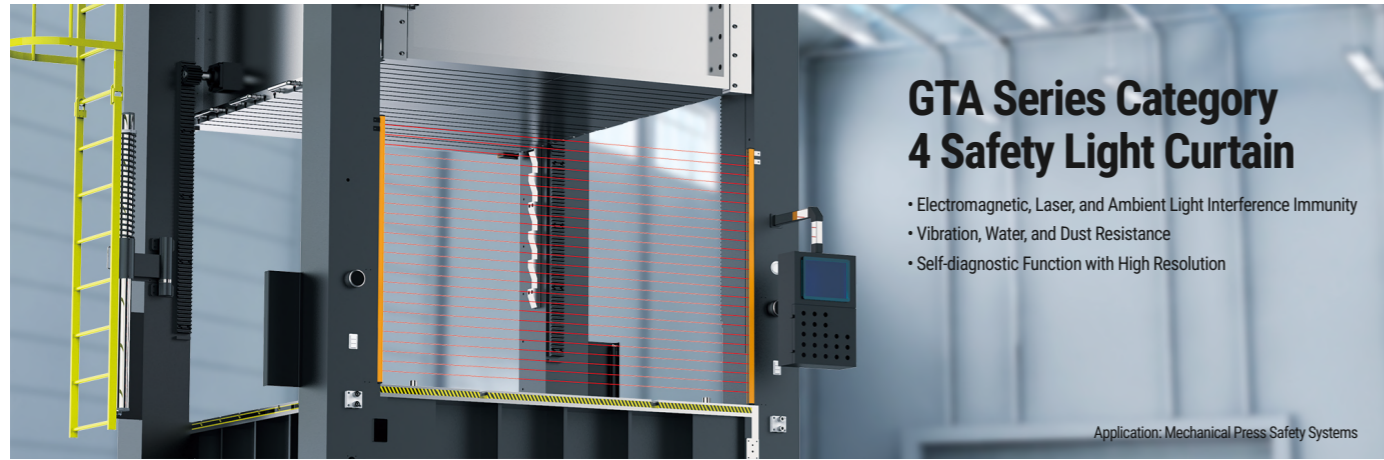
Operation Panel Instructions



- Distinguishes nearly identical colors and different shades of the same color with precision
- Immune to mechanical vibration of target objects, ensuring stable detection in vibrating environments
- Compact design enables seamless integration into diverse equipment for automated and intelligent control

Type	Cable-out Type	
Appearance		
Model Number	NPN Output	LC-F110
	PNP Output	LC-F110P
Operating voltage	DC12~24V +10%	
Consumption (no-load) current	≤20mA	
Sensing Distance	18~28mm	
Light Source	RGB Tri-Color, 4-Element LED	
Detection Mode	Color Mode / Color Mark Mode switchable	
Response time	<130µs	
Response Frequency	1000Hz	
Output Mode	NPN/PNP open collector Model Number, 4-channel output	
Maximum Input Current	<100mA	
Residual Voltage	<1.0V	
Switching Mode	L.on / D.on selectable	
Ambient Illuminance	Incandescent lamp ≤3000 Lux; Sunlight ≤10000 Lux	
Ambient Temperature	Operating temperature: -10°C to +55°C; Storage temperature: -25°C to +75°C (non-freezing)	
Ambient Humidity	Operating humidity: 35% to 85% RH; Storage humidity: 35% to 95% RH (non-condensing)	
Protection Circuit	Reverse polarity protection / surge protection / short circuit protection	
Protection class	IP65	
Connection method	Lead wire type (3-core, standard cable length 2m)	
HousingMaterial	ABS+PC	
Withstand voltage	AC 500V 50/60Hz, 1 minute	
Vibration Resistance	10 to 55Hz, double amplitude 1.5mm, 2 cycles each in X/Y/Z directions	
Shock Resistance	Shock resistance: 500m/s ² , 10 times in each X/Y/Z direction	
Insulation Resistance	Insulation resistance: ≥20MΩ (DC 500V megohmmeter)	

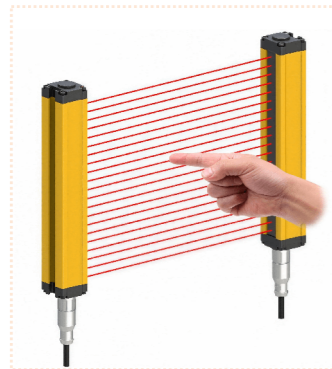




Multiple Detection Types

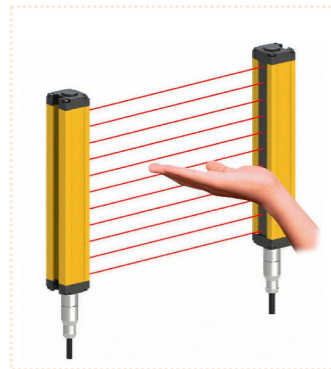
Available in 3 Detection Types Based on Minimum Detectable Object Size

Finger Detection



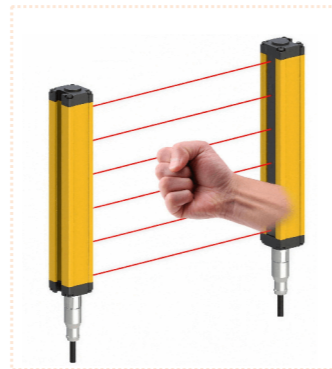
Beam Spacing (10mm)

Hand Detection



Beam Spacing (20mm)

Arm, Foot, and Body Detection



Beam Spacing (40mm)

Specification Selection

GT A 10 08 N E - 5

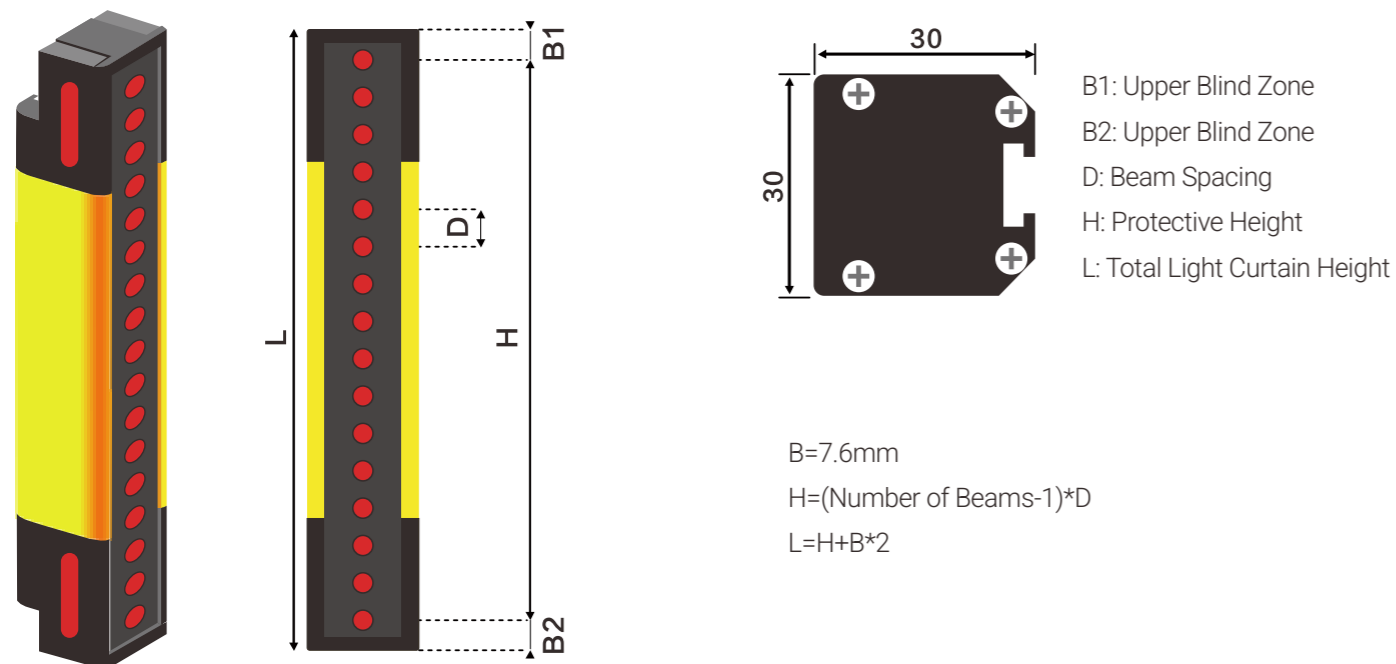
- Protective Width: 5=0.1~5m
- Mounting Method: E=Vertical Mounting L=Side Mounting B=Rear Mounting
- Output Signal: N=NPN P=PNP
- Number of Beams: 6,8,10,12,...76
- Beam Spacing: 10,20,40mm
- Product Series: A(Category 4)
- GT Series Safety Light Curtain

Beam Spacing	10mm			20mm			40mm		
	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)
6							GTA4006	200	215.2
8				GTA2008	140	155.2	GTA4008	280	295.2
10				GTA2010	180	195.2	GTA4010	360	375.2
12				GTA2012	220	235.2	GTA4012	440	455.2
14				GTA2014	260	275.2	GTA4014	520	535.2
15	GTA1015	140	155.2						
16				GTA2016	300	315.2	GTA4016	600	615.2
18				GTA2018	340	355.2	GTA4018	680	695.2
19	GTA1019	180	195.2						
20				GTA2020	380	395.2	GTA4020	760	775.2
22				GTA2022	420	435.2	GTA4022	840	855.2
23	GTA1023	220	235.2						
24				GTA2024	460	475.2	GTA4024	920	935.2
26				GTA2026	500	515.2	GTA4026	1000	1015.2
27	GTA1027	260	275.2						
28				GTA2028	540	555.2	GTA4028	1080	1095.2
30				GTA2030	580	595.2	GTA4030	1160	1175.2
31	GTA1031	300	315.2						
32				GTA2032	620	635.2	GTA4032	1240	1255.2
34				GTA2034	660	675.2	GTA4034	1320	1335.2
35	GTA1035	340	355.2						
36				GTA2036	700	715.2	GTA4036	1400	1415.2
38				GTA2038	740	755.2	GTA4038	1480	1495.2
39	GTA1039	380	395.2						
40				GTA2040	780	795.2	GTA4040	1560	1575.2
42				GTA2042	820	835.2	GTA4042	1640	1655.2
43	GTA1043	420	435.2						
44				GTA2044	860	875.2	GTA4044	1720	1735.2
46				GTA2046	900	915.2	GTA4046	1800	1815.2
47	GTA1047	460	475.2						
48				GTA2048	940	955.2	GTA4048	1880	1895.2
50				GTA2050	980	995.2	GTA4050	1960	1975.2
51	GTA1051	500	515.2						
52				GTA2052	1020	1035.2	GTA4052	2040	2055.2
54				GTA2054	1060	1075.2			
55	GTA1055	540	555.2						
56				GTA2056	1100	1115.2			
58				GTA2058	1140	1155.2			
59	GTA1059	580	595.2						
60				GTA2060	1180	1195.2			
62				GTA2062	1220	1235.2			
63	GTA1063	620	635.2						
64				GTA2064	1260	1275.2			
66				GTA2066	1300	1315.2			
67	GTA1067	660	675.2						
68				GTA2068	1340	1355.2			
70				GTA2070	1380	1395.2			
72				GTA2072	1420	1435.2			
74				GTA2074	1460	1475.2			
76				GTA2076	1500	1515.2			

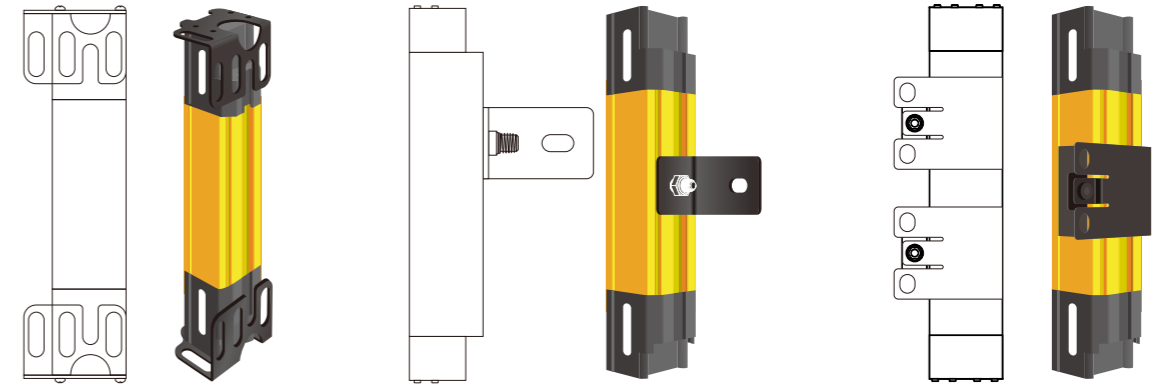
Note: This Model's Beam Spacing includes multiple options: 10 mm, 20 mm, and 40 mm, not fully listed in the selection table. If your required option is not included, please contact us for model selection.

Product Series	GTA
Cross-sectional Dimensions	30mm*30mm
Beam Spacing	10mm/20mm/40mm
Number of Beams	6,8,10...76
Protective Height	Beam Spacing*(Number of Beams-1)
Protective Width	0.1m-5m
Supply Voltage	DC 24V±20%
Power	≤5W
Response Time	LED Count × 0.3 ms + 6 ms
Detection Accuracy	15 mm / 25 mm / 45 mm
Signal Output	NPN NO/NC, PNP NO/NC
Operating Temperature	-10°C to +55°C
Storage Temperature	-30°C to +70°C
Operating Humidity	≤ 85% RH
Light Interference Resistance	10,000 lux
Light Curtain Configuration	Opposed-mode
Protection Rating	IP65
Product Certification	TYPE-4 (Compliant with EN 61496-1, EN 61496-2, ISO 13849-1)
Circuit Protection	Reverse Polarity Protection / Output Short-circuit Protection
Material	Aluminum Alloy + PC

Product Dimensions



Mounting Method



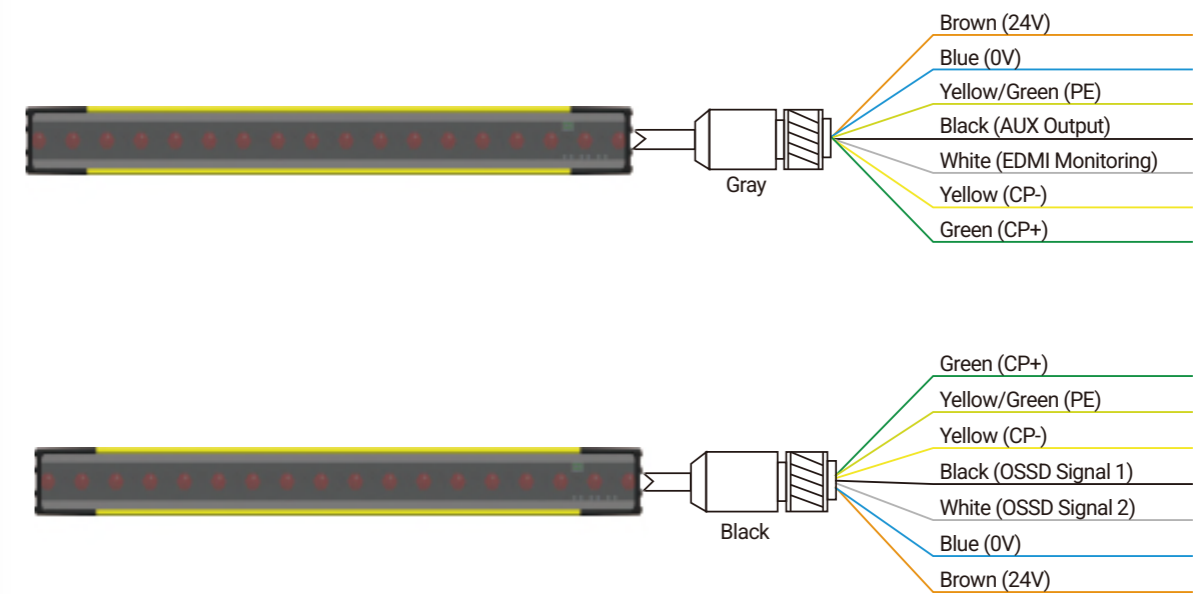
Vertical Mounting (Top-to-Bottom)

L-shaped Side Mounting

Rear Mounting

The GTA series offers three mounting methods: Vertical Mounting (Top-to-Bottom), L-shaped Side Mounting, and Rear Mounting.

Product Wiring Diagram

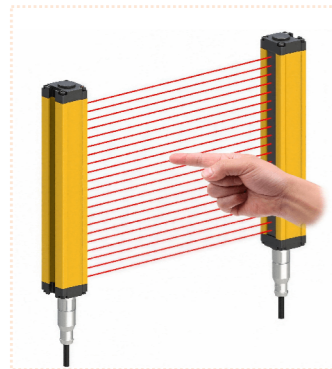




Multiple Detection Types

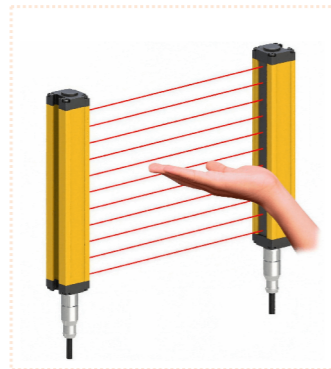
Available in 3 Detection Types Based on Minimum Detectable Object Size

Finger Detection



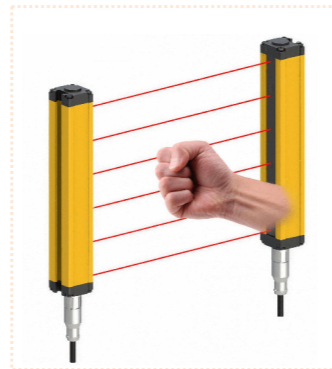
Beam Spacing (10mm)

Hand Detection



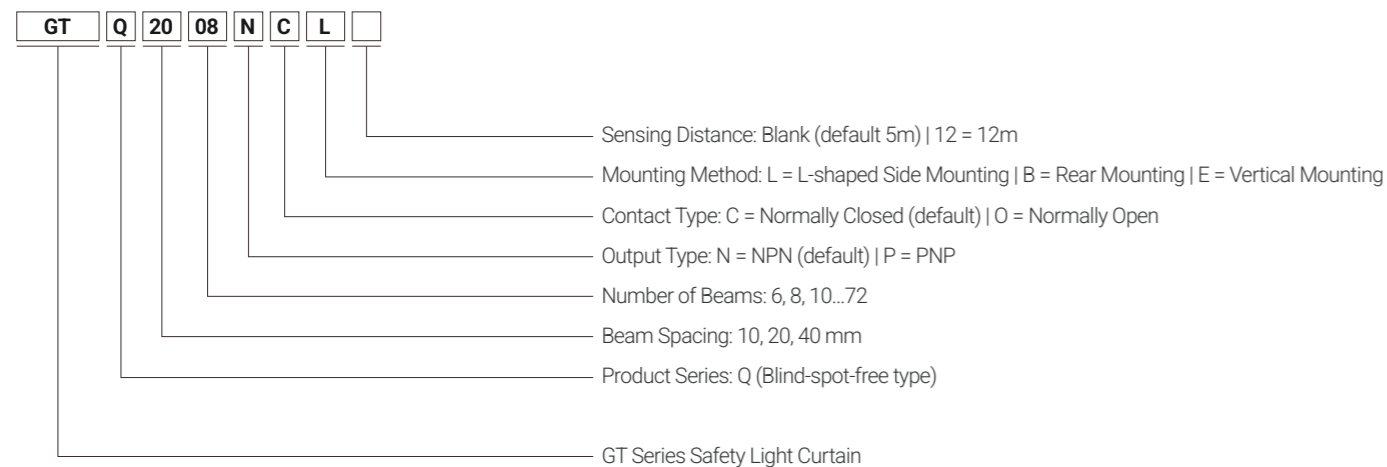
Beam Spacing (20mm)

Arm, Foot, and Body Detection



Beam Spacing (40mm)

Specification Selection



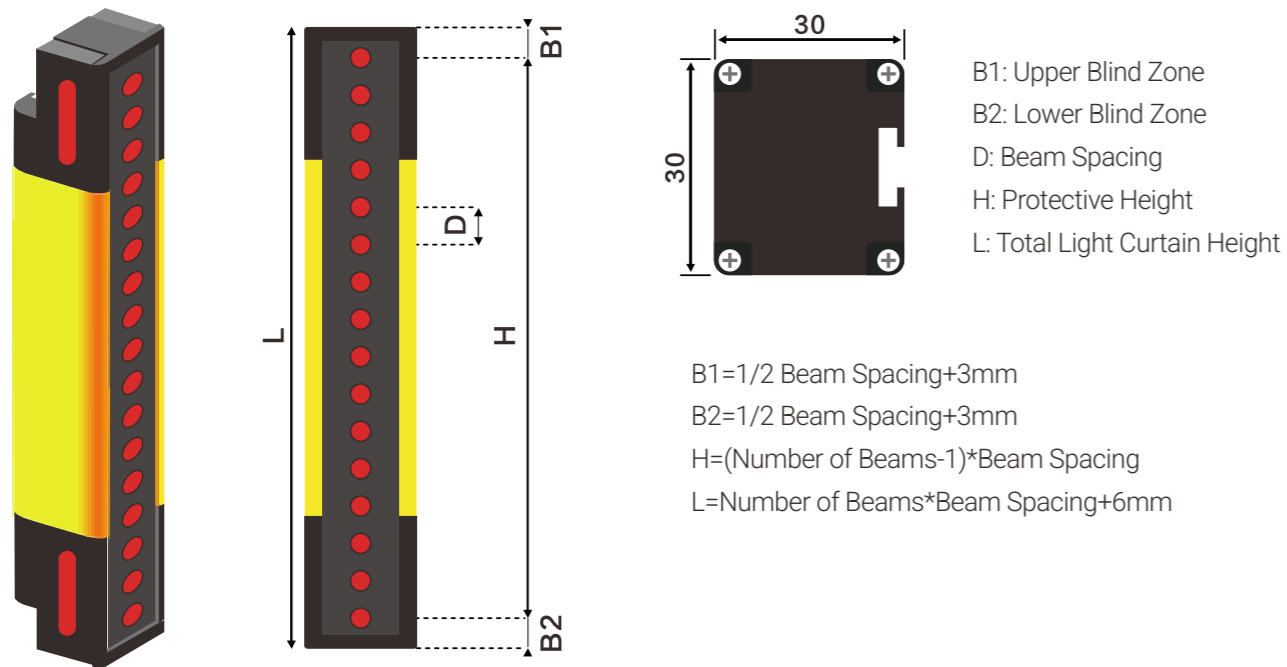
Beam Spacing	10mm			20mm			40mm		
	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)
4							GTQ4004	120	166
6							GTQ4006	200	246
8				GTQ2008	140	166	GTQ4008	280	326
10				GTQ2010	180	206	GTQ4010	360	406
12				GTQ2012	220	246	GTQ4012	440	486
14	GTQ1014	130	146	GTQ2014	260	286	GTQ4014	520	566
16	GTQ1016	150	166	GTQ2016	300	326	GTQ4016	600	646
18	GTQ1018	170	186	GTQ2018	340	366	GTQ4018	680	726
20	GTQ1020	190	206	GTQ2020	380	406	GTQ4020	760	806
22	GTQ1022	210	226	GTQ2022	420	446	GTQ4022	840	886
24	GTQ1024	230	246	GTQ2024	460	486	GTQ4024	920	966
26	GTQ1026	250	266	GTQ2026	500	526	GTQ4026	1000	1046
28	GTQ1028	270	286	GTQ2028	540	566	GTQ4028	1080	1126
30	GTQ1030	290	306	GTQ2030	580	606	GTQ4030	1160	1206
32	GTQ1032	310	326	GTQ2032	620	646	GTQ4032	1240	1286
34	GTQ1034	330	346	GTQ2034	660	686	GTQ4034	1320	1366
36	GTQ1036	350	366	GTQ2036	700	726	GTQ4036	1400	1446
38	GTQ1038	370	386	GTQ2038	740	766	GTQ4038	1480	1526
40	GTQ1040	390	406	GTQ2040	780	806	GTQ4040	1560	1606
42	GTQ1042	410	426	GTQ2042	820	846	GTQ4042	1640	1686
44	GTQ1044	430	446	GTQ2044	860	886	GTQ4044	1720	1766
46	GTQ1046	450	466	GTQ2046	900	926	GTQ4046	1800	1846
48	GTQ1048	470	486	GTQ2048	940	966	GTQ4048	1880	1926
50	GTQ1050	490	506	GTQ2050	980	1006	GTQ4050	1960	2006
52	GTQ1052	510	526	GTQ2052	1020	1046			
54	GTQ1054	530	546	GTQ2054	1060	1086			
56	GTQ1056	550	566	GTQ2056	1100	1126			
58	GTQ1058	570	586	GTQ2058	1140	1166			
60	GTQ1060	590	606	GTQ2060	1180	1206			
62	GTQ1062	610	626	GTQ2062	1220	1246			
64	GTQ1064	630	646	GTQ2064	1260	1286			
66	GTQ1066	650	666	GTQ2066	1300	1326			
68	GTQ1068	670	686	GTQ2068	1340	1366			
70	GTQ1070	690	706	GTQ2070	1380	1406			
72	GTQ1072	710	726	GTQ2072	1420	1446			

Note: This model's Beam Spacing options include 10mm, 20mm, and 40mm, which are not fully covered in the selection table. If your required spacing is not listed, please refer to the selection rules or contact us for selection assistance.

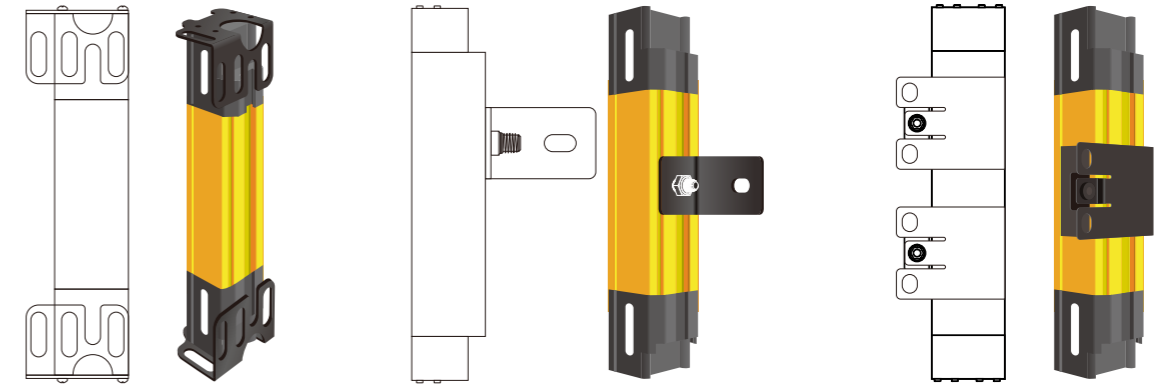
The total height for all products in this series is (Beam Spacing × Number of Beams) + 6mm.

Product Series	GTQ
Cross-sectional Dimensions	30mm*30mm
Beam Spacing	10mm/20mm/40mm
Number of Beams	4, 6, 8, 10...256
Protective Height	Beam Spacing*(Number of Beams-1)
Protective Width	0.2m-5m
Supply Voltage	24V±10%
Power	3-8W
Response Time	≤10ms
Insulation Resistance	≥100MΩ
Signal Output	NPN,PNP
Operating Temperature	-10°C~+55°C
Storage Temperature	-40°C~+70°C
Operating Humidity	35%RH~85%RH
Light Interference Resistance	10000Lux
Light Curtain Configuration	Through-Beam Type
Protection Rating	IP65
Product Certification	CE, FCC
Circuit Protection	Reverse Polarity Protection / Output Short-Circuit Protection
Compatible Controller	No

Product Dimensions



Mounting Method



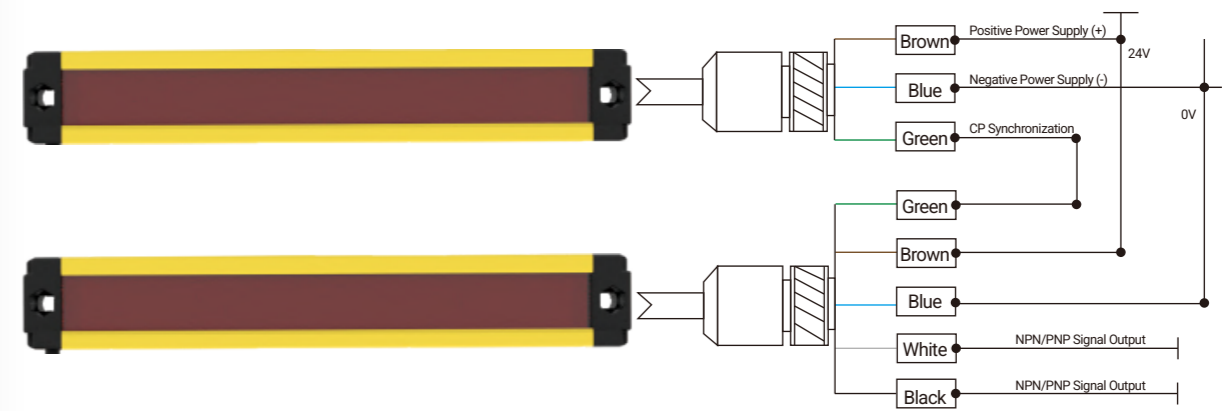
Vertical Mounting (Top-to-Bottom)

L-shaped Side Mounting

Rear Mounting

The GTQ series offers three mounting methods: Vertical Mounting (Top-to-Bottom), L-shaped Side Mounting, and Rear Mounting.

Product Wiring Diagram





GTF Series Safety Light Grid

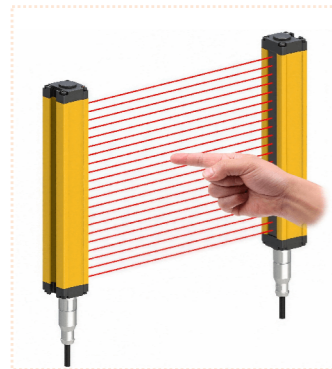
- Smallest in industry size, multiple housing options
- Front-emitting and side-emitting, suitable for demanding installations
- Powerful functionality, comprehensive self-diagnosis, easy to use, truly blind-spot-free

Application: Production line systems

Multiple Detection Types

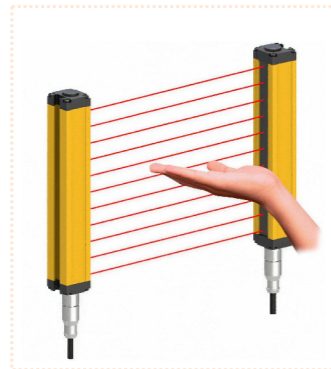
Available in 3 Detection Types Based on Minimum Detectable Object Size

Finger Detection



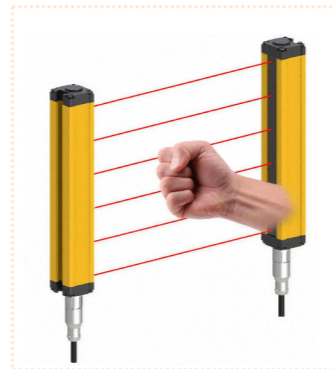
Beam Spacing
(5/10mm)

Hand Detection



Beam Spacing
(20mm)

Arm, Foot, and Body Detection



Beam Spacing
(40/60mm)

Specification Selection

GT F 05 04 N C

Contact Action: C = Normally Closed | O = Normally Open

Output Signal: N=NPN P=PNP

Number of Beams: 4,6,8,10...256

Beam Spacing: 5, 10, 15, 20, 30, 40, 60mm

Product Series: F(Ultra-thin front-emitting)

GT Series Safety Light Curtain

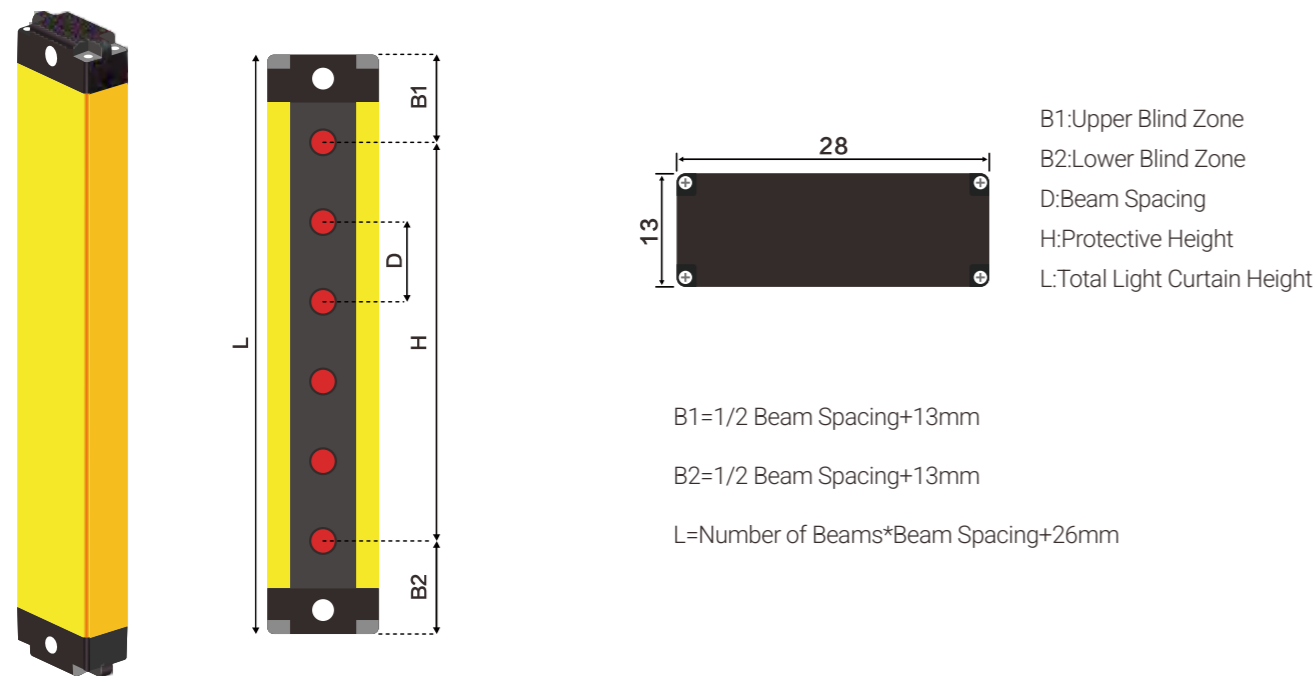
Beam Spacing	10mm			20mm			40mm			60mm		
	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)
4	GTF1004	30	106	GTF2004	60	106	GTF4004	120	186	GTF6004	180	266
6	GTF1006	50	106	GTF2006	100	146	GTF4006	200	266	GTF6006	300	386
8	GTF1008	70	106	GTF2008	140	186	GTF4008	280	346	GTF6008	420	506
10	GTF1010	90	126	GTF2010	180	226	GTF4010	360	426	GTF6010	540	626
12	GTF1012	110	146	GTF2012	220	266	GTF4012	440	506	GTF6012	660	746
14	GTF1014	130	166	GTF2014	260	306	GTF4014	520	586	GTF6014	780	866
16	GTF1016	150	186	GTF2016	300	346	GTF4016	600	666	GTF6016	900	986
18	GTF1018	170	206	GTF2018	340	386	GTF4018	680	746	GTF6018	1020	1106
20	GTF1020	190	226	GTF2020	380	426	GTF4020	760	826	GTF6020	1140	1226
22	GTF1022	210	246	GTF2022	420	466	GTF4022	840	906	GTF6022	1260	1346
24	GTF1024	230	266	GTF2024	460	506	GTF4024	920	986	GTF6024	1380	1466
26	GTF1026	250	286	GTF2026	500	546	GTF4026	1000	1066	GTF6026	1500	1586
28	GTF1028	270	306	GTF2028	540	586	GTF4028	1080	1146	GTF6028	1620	1706
30	GTF1030	290	326	GTF2030	580	626	GTF4030	1160	1226	GTF6030	1740	1826
32	GTF1032	310	346	GTF2032	620	666	GTF4032	1240	1306			
34	GTF1034	330	366	GTF2034	660	706	GTF4034	1320	1386			
36	GTF1036	350	386	GTF2036	700	746	GTF4036	1400	1466			
38	GTF1038	370	406	GTF2038	740	786	GTF4038	1480	1546			
40	GTF1040	390	426	GTF2040	780	826	GTF4040	1560	1626			
42	GTF1042	410	446	GTF2042	820	866	GTF4042	1640	1706			
44	GTF1044	430	466	GTF2044	860	906	GTF4044	1720	1786			
46	GTF1046	450	486	GTF2046	900	946	GTF4046	1800	1866	5mm		
48	GTF1048	470	506	GTF2048	940	986	GTF4048	1880	1946	GTF0508	35	111
50	GTF1050	490	526	GTF2050	980	1026	GTF4050	1960	2026	GTF0516	75	131
52	GTF1052	510	546	GTF2052	1020	1066				GTF0524	115	171
54	GTF1054	530	566	GTF2054	1060	1106				GTF0532	155	211
56	GTF1056	550	586	GTF2056	1100	1146				GTF0540	195	251
58	GTF1058	570	606	GTF2058	1140	1186				GTF0548	235	291
60	GTF1060	590	626	GTF2060	1180	1226				GTF0556	275	331
62	GTF1062	610	646	GTF2062	1220	1266				GTF0564	315	371
64	GTF1064	630	666	GTF2064	1260	1306				GTF0572	355	411
66	GTF1066	650	686	GTF2066	1300	1346				GTF0580	395	451
68	GTF1068	670	706	GTF2068	1340	1386				GTF0588	435	491
70	GTF1070	690	726	GTF2070	1380	1426				GTF0596	475	531
72	GTF1072	710	746	GTF2072	1420	1466				Beam Spacing: 5 mm Number of Beams: Multiples of 8		

Note: This model's Beam Spacing includes 5 mm, 10 mm, 15 mm, 20 mm, 30 mm, 40 mm, and 60 mm options, which are not fully covered in the selection table. If your required option is not listed, please contact us for selection assistance.

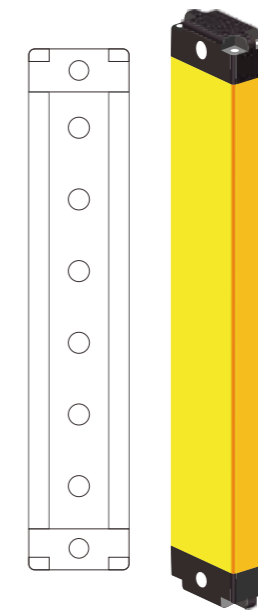
Except for the 5 mm spacing series and models 1004/1006, the total height for all products in this series is (Beam Spacing × Number of Beams) + 26 mm.

Product Series	GTF
Cross-sectional Dimensions	13.5mm*28mm
Beam Spacing	10mm/20mm/40mm
Number of Beams	4,6,8,10...256
Protective Height	Beam Spacing*(Number of Beams-1)
Protective Width	0.2m-2m
Supply Voltage	24V±10%
Power	≤3W
Response Time	4~18ms
Insulation Resistance	≥100MΩ
Signal Output	NPN Normally Open / Normally Closed, PNP Normally Open / Normally Closed
Operating Temperature	-10°C~+55°C
Storage Temperature	-40°C~+70°C
Operating Humidity	35%RH~85%RH
Light Interference Resistance	10000Lux
Light Curtain Configuration	Through-Beam Type
Protection Rating	IP65
Product Certification	CE
Circuit Protection	Reverse Polarity Protection / Output Short-Circuit Protection

Product Dimensions



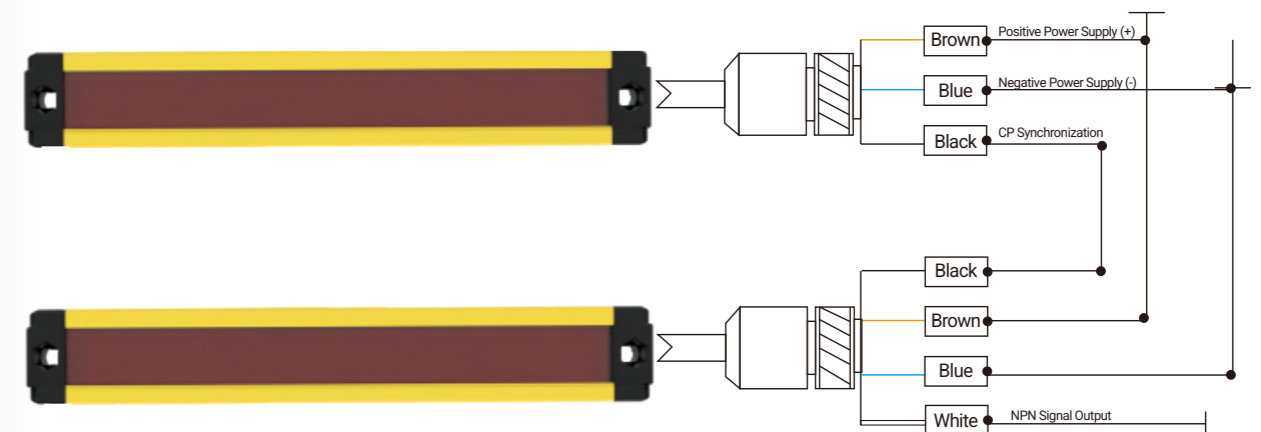
Mounting Method



Built-in mounting holes

GTF Series with built-in mounting holes

Product Wiring Diagram





GTL Series Safety Light Grid

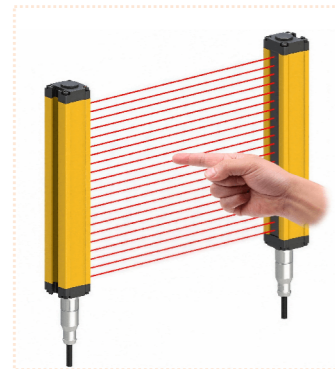
- Smallest in industry size, multiple housing options
- Front-emitting and side-emitting, suitable for demanding installations
- Powerful functionality, comprehensive self-diagnosis, easy to use, truly blind-spot-free

Application: Production line systems

Multiple Detection Types

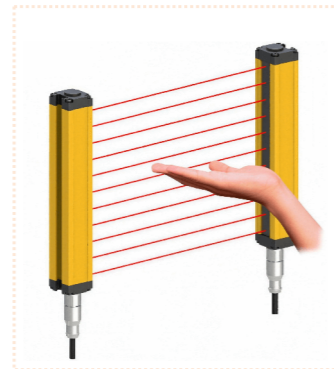
Available in 3 Detection Types Based on Minimum Detectable Object Size

Finger Detection



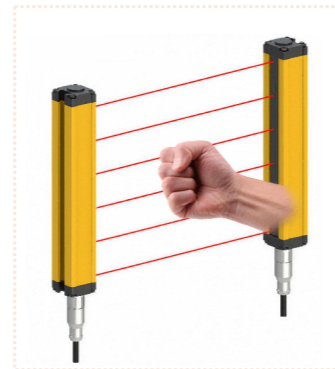
Beam Spacing (10mm)

Hand Detection



Beam Spacing (20/30mm)

Arm, Foot, and Body Detection



Beam Spacing (40mm)

Specification Selection

GT L 10 04 N C

Contact Action: C = Normally Closed | O = Normally Open

Output Signal: N=NPN P=PNP

Number of Beams: 4,6,8,10...256

Beam Spacing: 10,20,30,40mm

Product Series: L(Ultra-thin front-emitting)

GT Series Safety Light Curtain

Beam Spacing	10mm			20mm			30mm			40mm		
	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)
4	GTL1004	30	101	GTL2004	60	101	GTL3004	90	141	GTL4004	120	181
6	GTL1006	50	101	GTL2006	100	141	GTL3006	150	201	GTL4006	200	261
8	GTL1008	70	101	GTL2008	140	181	GTL3008	210	261	GTL4008	280	341
10	GTL1010	90	121	GTL2010	180	221	GTL3010	270	321	GTL4010	360	421
12	GTL1012	110	141	GTL2012	220	261	GTL3012	330	381	GTL4012	440	501
14	GTL1014	130	161	GTL2014	260	301	GTL3014	390	441	GTL4014	520	581
16	GTL1016	150	181	GTL2016	300	341	GTL3016	450	501	GTL4016	600	661
18	GTL1018	170	201	GTL2018	340	381	GTL3018	510	561	GTL4018	680	741
20	GTL1020	190	221	GTL2020	380	421	GTL3030	570	621	GTL4020	760	821
22	GTL1022	210	241	GTL2022	420	461	GTL3032	630	681	GTL4022	840	901
24	GTL1024	230	261	GTL2024	460	501	GTL3034	690	741	GTL4024	920	981
26	GTL1026	250	281	GTL2026	500	541	GTL3036	750	801	GTL4026	1000	1061
28	GTL1028	270	301	GTL2028	540	581	GTL3038	810	861	GTL4028	1080	1141
30	GTL1030	290	321	GTL2030	580	621	GTL3030	870	921	GTL4030	1160	1221
32	GTL1032	310	341	GTL2032	620	661	GTL3032	930	981	GTL4032	1240	1301
34	GTL1034	330	361	GTL2034	660	701	GTL3034	990	1041	GTL4034	1320	1381
36	GTL1036	350	381	GTL2036	700	741	GTL3036	1050	1101	GTL4036	1400	1461
38	GTL1038	370	401	GTL2038	740	781	GTL3038	1110	1161	GTL4038	1480	1541
40	GTL1040	390	421	GTL2040	780	821	GTL3040	1170	1221	GTL4040	1560	1121
42	GTL1042	410	441	GTL2042	820	861	GTL3042	1230	1281	GTL4042	1640	1701
44	GTL1044	430	461	GTL2044	860	901	GTL3044	1290	1341	GTL4044	1720	1781
46	GTL1046	450	481	GTL2046	900	941	GTL3046	1350	1401	GTL4046	1800	1861
48	GTL1048	470	501	GTL2048	940	981	GTL3048	1410	1461	GTL4048	1880	1941
50	GTL1050	490	521	GTL2050	980	1021	GTL3050	1470	1521	GTL4050	1960	2021
52	GTL1052	510	541	GTL2052	1020	1061	GTL3052	1530	1581	GTL4052	2040	2101
54	GTL1054	530	561	GTL2054	1060	1101	GTL3054	1590	1641	GTL4054	2120	2181
56	GTL1056	550	581	GTL2056	1100	1141	GTL3056	1650	1701	GTL4056	2200	2261
58	GTL1058	570	601	GTL2058	1140	1181	GTL3058	1710	1761	GTL4058	2280	2341
60	GTL1060	590	621	GTL2060	1180	1221	GTL3060	1770	1821	GTL4060	2360	2421
62	GTL1062	610	641	GTL2062	1220	1261	GTL3062	1830	1881	GTL4062	2440	2501
64	GTL1064	630	661	GTL2064	1260	1301	GTL3064	1890	1941	GTL4064	2520	2581
66	GTL1066	650	681	GTL2066	1300	1341	GTL3066	1950	2001	GTL4066	2600	2661
68	GTL1068	670	701	GTL2068	1340	1381	GTL3068	2010	2061	GTL4068	2680	2741
70	GTL1070	690	721	GTL2070	1380	1421	GTL3070	2070	2121	GTL4070	2760	2821
72	GTL1072	710	741	GTL2072	1420	1461	GTL3072	2130	2181	GTL4072	2840	2901

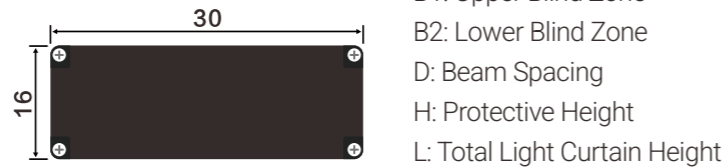
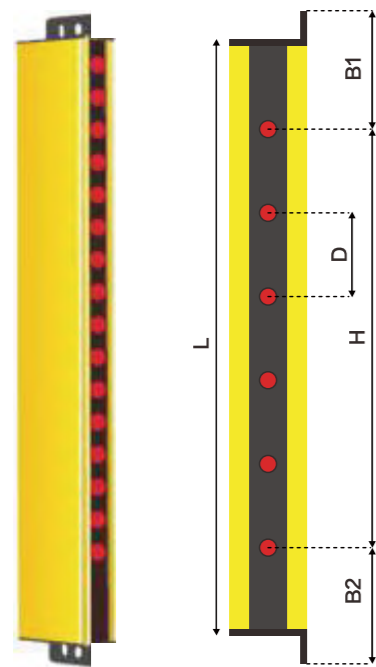
Note: The total height for vertical mounting is (Number of Beams × Beam Spacing) + 21 mm.

This model's Beam Spacing options include 10 mm, 20 mm, and 40 mm, which may not be fully covered in the selection table. If your required model is not listed, please refer to the selection rules or contact us for assistance.

Custom protective height configurations are available upon request to meet specific customer requirements.

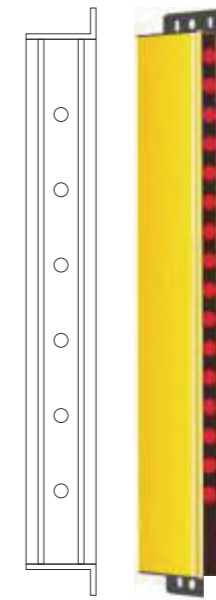
Product Series	GTL
Cross-sectional Dimensions	16mm*30mm
Beam Spacing	10mm/20mm/30mm/40mm
Number of Beams	4,6,8,10...256
Protective Height	Beam Spacing*(Number of Beams-1)
Protective Width	0.2m-2.5m(Factory setting: 2 m)
Supply Voltage	24V±10%
Power	3-8W
Response Time	≤10ms
Insulation Resistance	≥100MΩ
Signal Output	NPN Normally Open / Normally Closed, PNP Normally Open / Normally Closed
Operating Temperature	-10 °C to +55 °C
Storage Temperature	-40 °C to +70 °C
Operating Humidity	35 % RH to 85 % RH
Light Interference Resistance	10,000 lux
Light Curtain Configuration	Through-Beam Type
Protection Rating	IP65
Product Certification	CE, FCC
Circuit Protection	Reverse Polarity Protection / Output Short-Circuit Protection
Compatible Controller	Yes

Product Dimensions



$B1 = (1/2 \times \text{Beam Spacing}) + 10.5 \text{ mm}$
 (When using vertical mounting brackets, $B1 = (1/2 \times \text{Beam Spacing}) + 3 \text{ mm}$)
 $B2 = (1/2 \times \text{Beam Spacing}) + 10.5 \text{ mm}$
 (When using vertical mounting brackets, $B2 = (1/2 \times \text{Beam Spacing}) + 3 \text{ mm}$)
 $L = (\text{Number of Beams} \times \text{Beam Spacing}) + 21 \text{ mm}$
 (When using vertical mounting brackets, $L = (\text{Number of Beams} \times \text{Beam Spacing}) + 6 \text{ mm}$)

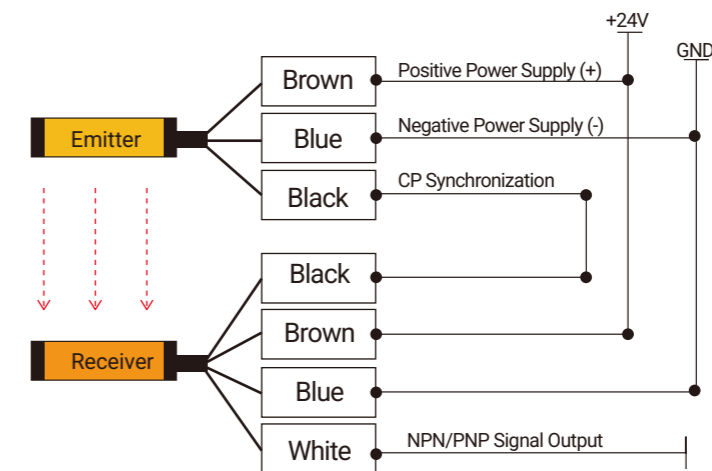
Mounting Method



Vertical Mounting (Top-to-Bottom)

GTL Series Exclusively Uses Vertical Mounting (Top-to-Bottom)

Product Wiring Diagram

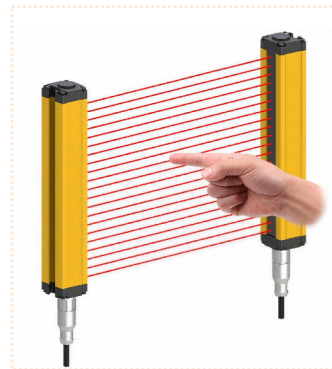




Multiple Detection Types

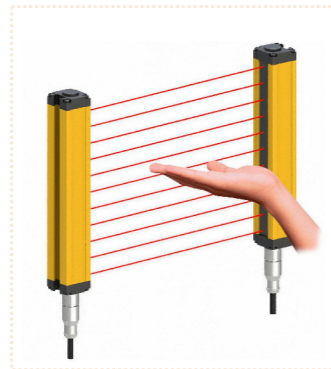
Available in 3 Detection Types Based on Minimum Detectable Object Size

Finger Detection



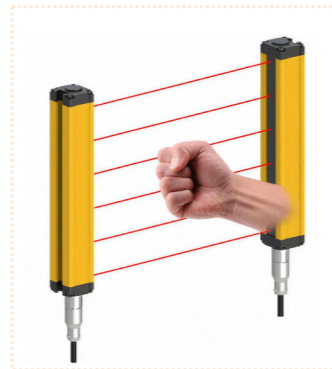
Beam Spacing (10mm)

Hand Detection



Beam Spacing (20mm)

Arm, Foot, and Body Detection



Beam Spacing (40mm)

Specification Selection

GT S 10 04 N C L

- Mounting Method: Blank (default vertical mounting) | L = Side Mounting
- Contact Action: C = Normally Closed | O = Normally Open
- Output Signal: N = NPN | P = PNP | NOF = Light Leakage Output | NCF = No Light Leakage Output
- Number of Beams: 4, 6, 8, 10, 12...256
- Beam Spacing: 10, 20, 30, 40, 60 mm
- Product Series: S (Standard Type)
- GT Series Safety Light Curtain

Beam Spacing	20mm			30mm			40mm		
	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)
4	GTS2004	60	162	GTS3004	90	197	GTS4004	120	232
6	GTS2006	100	202	GTS3006	150	257	GTS4006	200	312
8	GTS2008	140	242	GTS3008	210	317	GTS4008	280	392
10	GTS2010	180	282	GTS3010	270	377	GTS4010	360	472
12	GTS2012	220	322	GTS3012	330	437	GTS4012	440	552
14	GTS2014	260	362	GTS3014	390	497	GTS4014	520	632
16	GTS2016	300	402	GTS3016	450	557	GTS4016	600	712
18	GTS2018	340	442	GTS3018	510	617	GTS4018	680	792
20	GTS2020	380	482	GTS3020	570	677	GTS4020	760	872
22	GTS2022	420	522	GTS3022	630	737	GTS4022	840	952
24	GTS2024	460	562	GTS3024	690	797	GTS4024	920	1032
26	GTS2026	500	602	GTS3026	750	857	GTS4026	1000	1112
28	GTS2028	540	642	GTS3028	810	917	GTS4028	1080	1192
30	GTS2030	580	682	GTS3030	870	977	GTS4030	1160	1272
32	GTS2032	620	722	GTS3032	930	1037	GTS4032	1240	1352
34	GTS2034	660	762	GTS3034	990	1097	GTS4034	1320	1432
36	GTS2036	700	802	GTS3036	1050	1157	GTS4036	1400	1512
38	GTS2038	740	842	GTS3038	1110	1217	GTS4038	1480	1592
40	GTS2040	780	882	GTS3040	1170	1277	GTS4040	1560	1672
42	GTS2042	820	922	GTS3042	1230	1337	GTS4042	1640	1752
44	GTS2044	860	962	GTS3044	1290	1397	GTS4044	1720	1832
46	GTS2046	900	1002	GTS3046	1350	1457	GTS4046	1800	1912
48	GTS2048	940	1042	GTS3048	1410	1517	GTS4048	1880	1992
50	GTS2050	980	1082	GTS3050	1470	1577	GTS4050	1960	2072
52	GTS2052	1020	1122	GTS3052	1530	1637			
54	GTS2054	1060	1162	GTS3054	1590	1697			
56	GTS2056	1100	1202	GTS3056	1650	1757			
58	GTS2058	1140	1242	GTS3058	1710	1817			
60	GTS2060	1180	1282	GTS3060	1770	1877			
62	GTS2062	1220	1322	GTS3062	1830	1937			
64	GTS2064	1260	1362	GTS3064	1890	1997			
66	GTS2066	1300	1402	GTS3066	1950	2057			
68	GTS2068	1340	1442	GTS3068	2010	2117			
70	GTS2070	1380	1482	GTS3070	2070	2177			
72	GTS2072	1420	1522	GTS3072	2130	2237			

Note: This model's Beam Spacing options include 20 mm, 30 mm, 40 mm, and 60 mm, which are not fully covered in the selection table. If your required option is not listed, please refer to the selection rules or contact us for selection assistance.

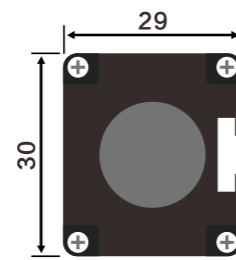
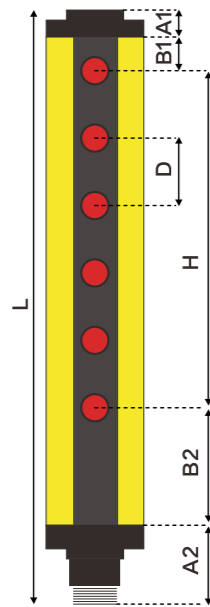
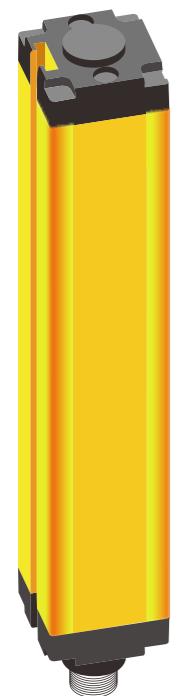
The total product height = Protective Height + (1/2 × Beam Spacing) + 92 mm (including 33 mm for the complete aviation connector).

Example: GTS4010* (10 beams × 40 mm spacing) = 360 + 20 + 92 = 472 mm.

If you require safety light grids with other Beam Spacing options, please contact us for selection assistance.

Product Series	GTS
Cross-sectional Dimensions	29mm*30mm
Beam Spacing	10mm/20mm/30mm/40mm/60mm
Number of Beams	4,6,8,10...256
Protective Height	Beam Spacing*(Number of Beams-1)
Protective Width	0.2m-3m
Supply Voltage	24V±10%
Power	3-8W
Response Time	≤10ms
Insulation Resistance	≥100MΩ
Signal Output	NPN, PNP, Relay
Operating Temperature	-10°C~+55°C
Storage Temperature	-40°C~+70°C
Operating Humidity	35%RH~85%RH
Light Interference Resistance	10000Lux
Light Curtain Configuration	Through-Beam Type
Protection Rating	IP65
Product Certification	CE FCC
Circuit Protection	Reverse Polarity Protection / Output Short-Circuit Protection
Compatible Controller	Yes

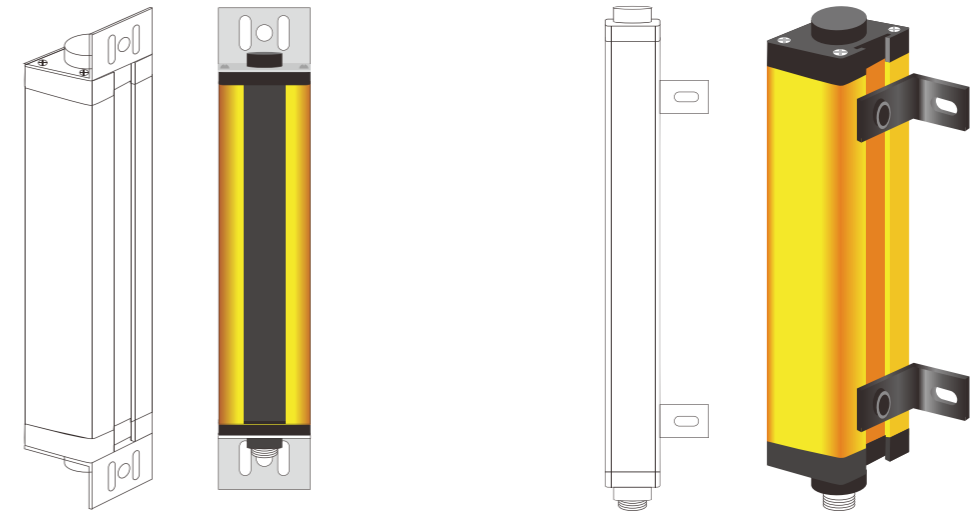
Product Dimensions



- A1: Top Cover
- A2: Bottom Cover + Aviation Connector
- B1: Upper Blind Zone
- B2: Lower Blind Zone
- D: Beam Spacing
- H: Protective Height
- L: Total Light Curtain Height

A1 = 12 mm, A2 = 45 mm (including 33 mm aviation plug)
 B1 = (1/2 × Beam Spacing)
 B2 = 35 mm (for 20 mm, 30 mm, 40 mm spacing)
 B2 = 30 mm (for 10 mm spacing)
 B2 = 55 mm (for 60 mm spacing)
 H = (Number of Beams - 1) × Beam Spacing
 L = A1 + B1 + H + B2 + A2
 Example: GTS4010* (10 beams × 40mm spacing)
 = 12+20+(10-1)×40+35+45=472 mm

Mounting Method

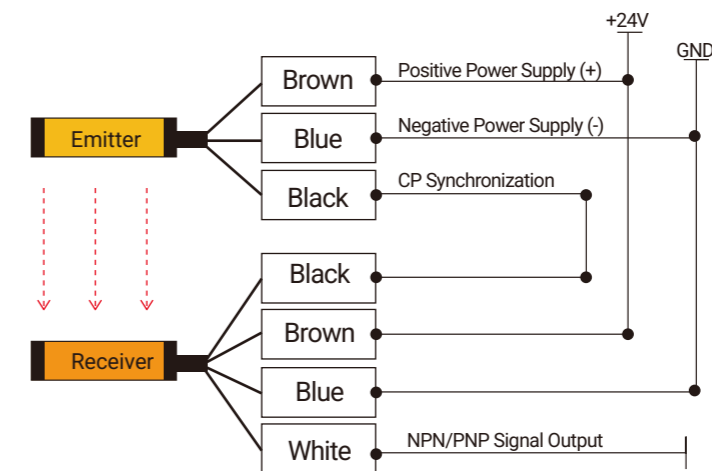


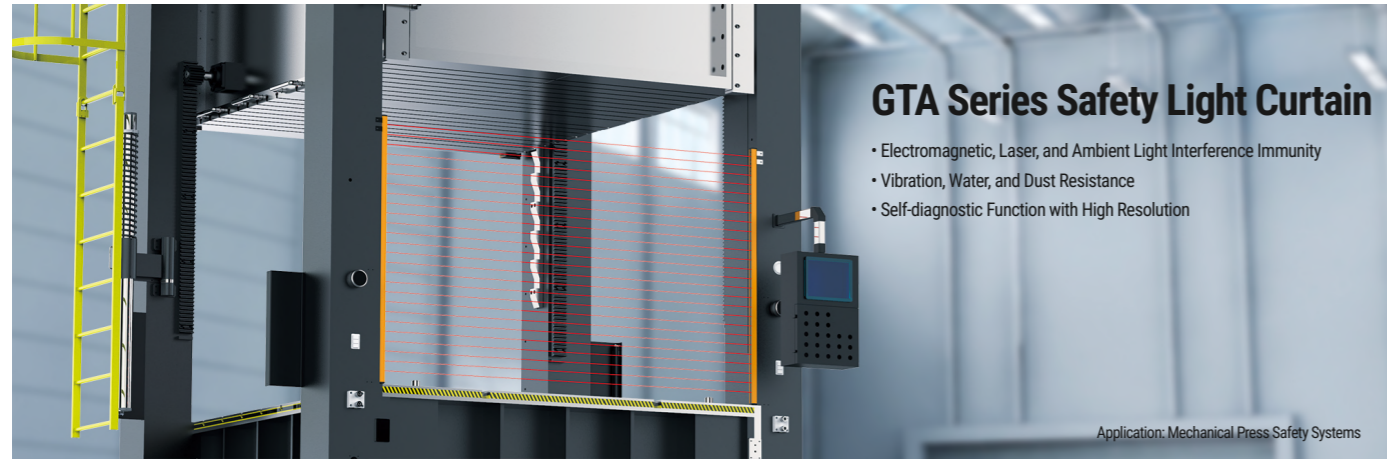
Vertical Mounting (Top-to-Bottom)

L-shaped Side Mounting

The GTS series offers two mounting methods: Vertical Mounting (Top-to-Bottom) and L-shaped Side Mounting.

Product Wiring Diagram





GTA Series Safety Light Curtain

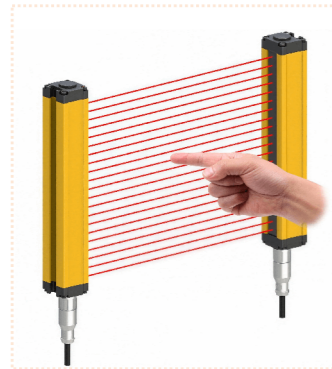
- Electromagnetic, Laser, and Ambient Light Interference Immunity
- Vibration, Water, and Dust Resistance
- Self-diagnostic Function with High Resolution

Application: Mechanical Press Safety Systems

Multiple Detection Types

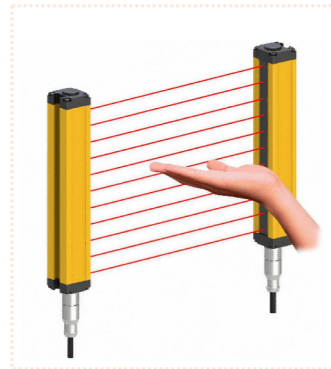
Available in 3 Detection Types Based on Minimum Detectable Object Size

Finger Detection



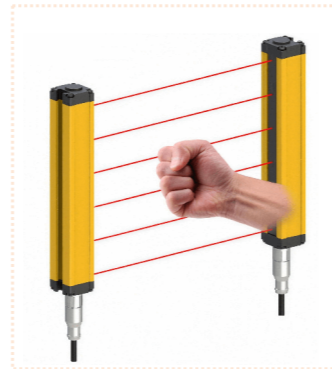
Beam Spacing
(5/10mm)

Hand Detection



Beam Spacing
(20mm)

Arm, Foot, and Body Detection



Beam Spacing
(40/60mm)

Specification Selection

GT R 05 04 N C L 05

- Protective Width: Blank (default 3 m) | 05 = 5 m
- Mounting Method: Blank (default vertical mounting) | L = Side Mounting
- Contact Action: C = Normally Closed | O = Normally Open
- Output Signal: N = NPN | P = PNP
- Number of Beams: 4, 6, 8, 10... 256
- Beam Spacing: 5, 10, 20, 30, 40, 60, 105 mm
- Product Series: R (Reinforced Type)

GT Series Safety Light Curtain

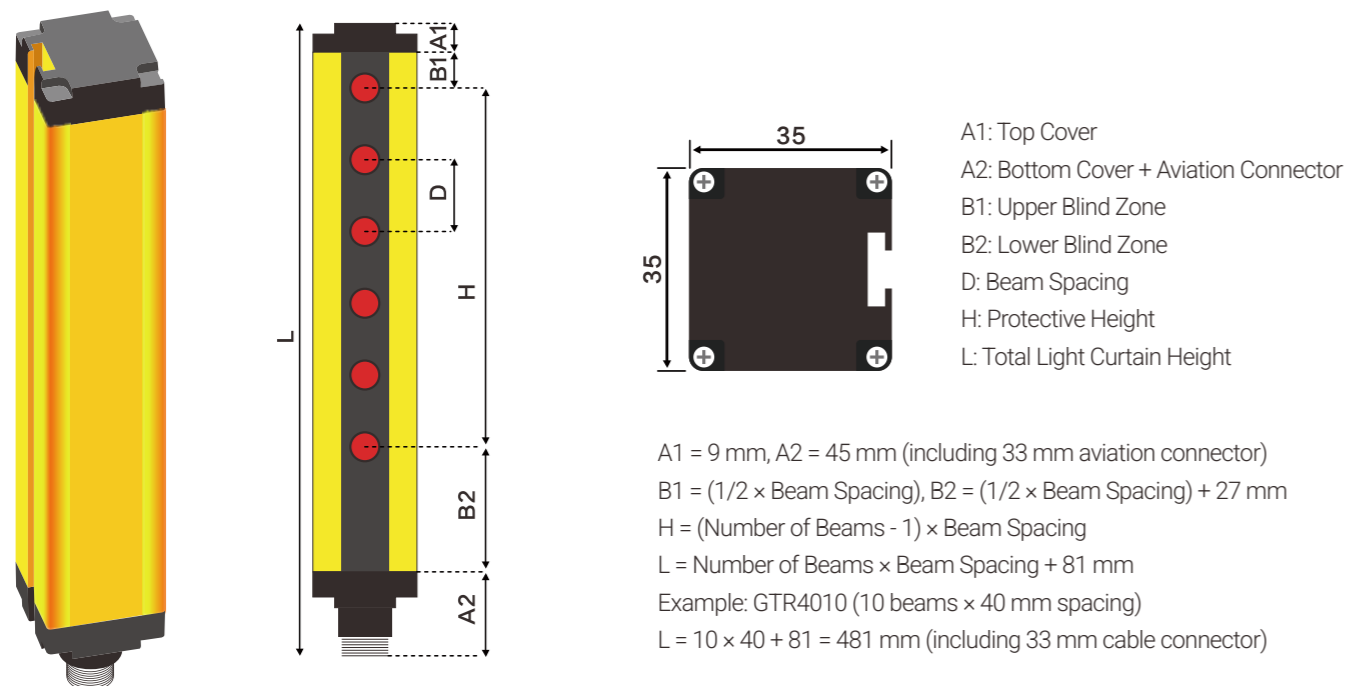
Beam Spacing	10mm			20mm			40mm			60mm		
	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)
4	GTR1004	30	141	GTR2004	60	161	GTR4004	120	241	GTR6004	180	321
6	GTR1006	50	141	GTR2006	100	201	GTR4006	200	321	GTR6006	300	441
8	GTR1008	70	161	GTR2008	140	241	GTR4008	280	401	GTR6008	420	561
10	GTR1010	90	181	GTR2010	180	281	GTR4010	360	481	GTR6010	540	681
12	GTR1012	110	201	GTR2012	220	321	GTR4012	440	561	GTR6012	660	801
14	GTR1014	130	221	GTR2014	260	361	GTR4014	520	641	GTR6014	780	921
16	GTR1016	150	241	GTR2016	300	401	GTR4016	600	721	GTR6016	900	1041
18	GTR1018	170	261	GTR2018	340	441	GTR4018	680	801	GTR6018	1020	1161
20	GTR1020	190	281	GTR2020	380	481	GTR4020	760	881	GTR6020	1140	1281
22	GTR1022	210	301	GTR2022	420	521	GTR4022	840	961	GTR6022	1260	1401
24	GTR1024	230	321	GTR2024	460	561	GTR4024	920	1041	GTR6024	1380	1521
26	GTR1026	250	341	GTR2026	500	601	GTR4026	1000	1121	GTR6026	1500	1641
28	GTR1028	270	361	GTR2028	540	641	GTR4028	1080	1201	GTR6028	1620	1761
30	GTR1030	290	381	GTR2030	580	681	GTR4030	1160	1281	GTR6030	1740	1881
32	GTR1032	310	401	GTR2032	620	721	GTR4032	1240	1361			
34	GTR1034	330	421	GTR2034	660	761	GTR4034	1320	1441			
36	GTR1036	350	441	GTR2036	700	801	GTR4036	1400	1521			
38	GTR1038	370	461	GTR2038	740	841	GTR4038	1480	1601			
40	GTR1040	390	481	GTR2040	780	881	GTR4040	1560	1681			
42	GTR1042	410	501	GTR2042	820	921	GTR4042	1640	1761			
44	GTR1044	430	521	GTR2044	860	961	GTR4044	1720	1841			
46	GTR1046	450	541	GTR2046	900	1001	GTR4046	1800	1921			
48	GTR1048	470	561	GTR2048	940	1041	GTR4048	1880	2001			
50	GTR1050	490	581	GTR2050	980	1081	GTR4050	1960	2081	GTF0508	35	141
52	GTR1052	510	601	GTR2052	1020	1121				GTF0516	75	161
54	GTR1054	530	621	GTR2054	1060	1161				GTF0524	115	201
56	GTR1056	550	641	GTR2056	1100	1201				GTF0532	155	241
58	GTR1058	570	661	GTR2058	1140	1241				GTF0540	195	281
60	GTR1060	590	681	GTR2060	1180	1281				GTF0548	235	321
62	GTR1062	610	701	GTR2062	1220	1321				GTF0556	275	361
64	GTR1064	630	721	GTR2064	1260	1361				GTF0564	315	401
66	GTR1066	650	741	GTR2066	1300	1401				GTF0572	355	441
68	GTR1068	670	761	GTR2068	1340	1441				GTF0580	395	481
70	GTR1070	690	781	GTR2070	1380	1481				GTF0588	435	521
72	GTR1072	710	801	GTR2072	1420	1521				GTF0596	475	561

Note: This model's Beam Spacing options include 5 mm, 10 mm, 20 mm, 30 mm, 40 mm, 60 mm, and 105 mm, which are not fully covered in the selection table. If your required option is not listed, please contact us for selection assistance.

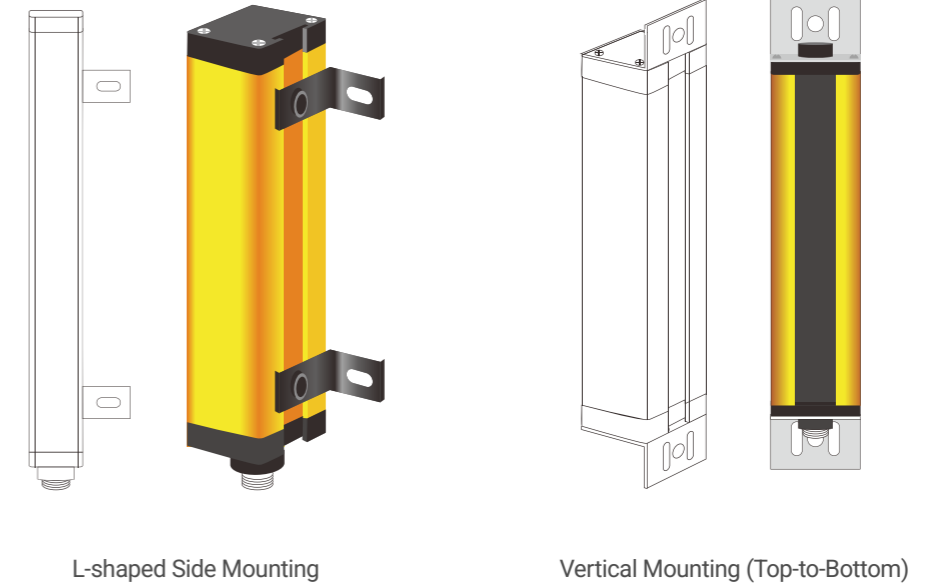
The total height for all products in this series is (Beam Spacing × Number of Beams) + 74 mm (for protective width ≤ 5 m) / + 84 mm (for protective width > 5 m).

Product Series	GTR
Cross-sectional Dimensions	35mm*35mm
Beam Spacing	5mm/10mm/20mm/30mm/40mm/60mm/105mm
Number of Beams	4, 6, 8, 10...256
Protective Height	Beam Spacing*(Number of Beams-1)
Protective Width	0.2m~3m (maximum 30m)
Supply Voltage	24V±10%
Power	3-8W
Response Time	≤10ms
Insulation Resistance	≥100MΩ
Signal Output	NPN Normally Open / Normally Closed, PNP Normally Open / Normally Closed, Relay Normally Open / Normally Closed
Operating Temperature	-10°C~+55°C
Storage Temperature	-40°C~+70°C
Operating Humidity	35%RH~85%RH
Light Interference Resistance	10000Lux
Light Curtain Configuration	Through-Beam Type
Protection Rating	IP65
Product Certification	CE, FCC
Circuit Protection	Reverse Polarity Protection / Output Short-Circuit Protection
Compatible Controller	Yes

Product Dimensions

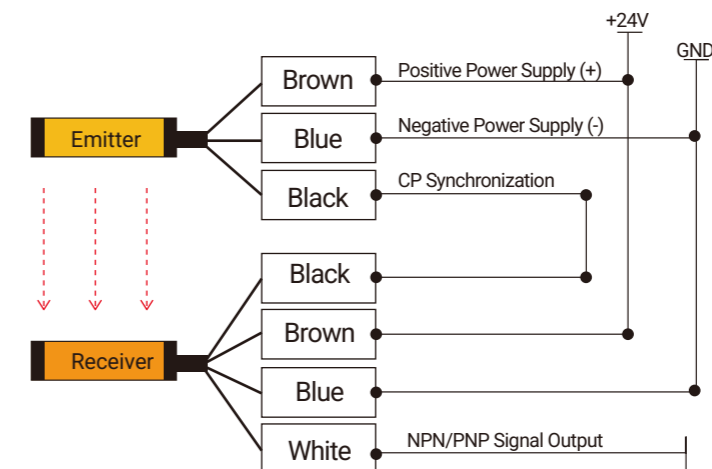


Mounting Method



The GTR series offers two mounting methods: Vertical Mounting (Top-to-Bottom) and L-shaped Side Mounting.

Product Wiring Diagram

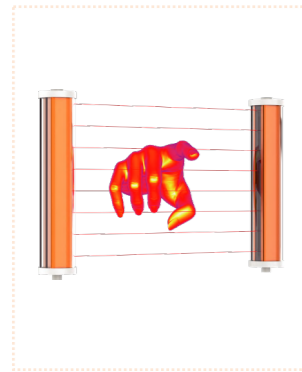




Multiple Detection Types

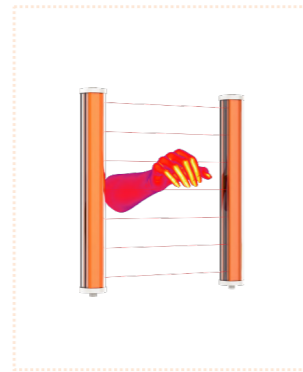
Available in 3 Detection Types Based on Minimum Detectable Object Size

Finger Detection



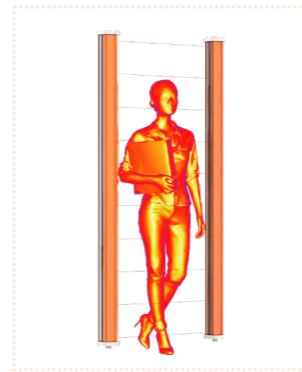
Beam Spacing (10mm)

Hand Detection



Beam Spacing (20mm)

Arm, Foot, and Body Detection



Beam Spacing (40mm)

Specification Selection

GT W 05 04 N C

- Contact Action: C = Normally Closed O = Normally Open
- Output Signal: N = NPN P = PNP
- Number of Beams: 4, 6, 8, 10, 12... 256
- Beam Spacing: 5, 10, 20, 30, 40, 60 mm
- Product Series: W (Waterproof Type) | GTWA = Φ37 mm GTWB = Φ55 mm

GT Series Safety Light Curtain

Beam Spacing	10mm			20mm			40mm			60mm		
	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)
4	GTWA1004	30	137	GTWA2004	60	177	GTWA4004	120	257	GTWA6004	180	337
6	GTWA1006	50	157	GTWA2006	100	217	GTWA4006	200	337	GTWA6006	300	457
8	GTWA1008	70	177	GTWA2008	140	257	GTWA4008	280	417	GTWA6008	420	577
10	GTWA1010	90	197	GTWA2010	180	297	GTWA4010	360	497	GTWA6010	540	697
12	GTWA1012	110	217	GTWA2012	220	337	GTWA4012	440	577	GTWA6012	660	817
14	GTWA1014	130	237	GTWA2014	260	377	GTWA4014	520	657	GTWA6014	780	937
16	GTWA1016	150	257	GTWA2016	300	417	GTWA4016	600	737	GTWA6016	900	1057
18	GTWA1018	170	277	GTWA2018	340	457	GTWA4018	680	817	GTWA6018	1020	1177
20	GTWA1020	190	297	GTWA2020	380	497	GTWA4020	760	897	GTWA6020	1140	1297
22	GTWA1022	210	317	GTWA2022	420	537	GTWA4022	840	977	GTWA6022	1260	1417
24	GTWA1024	230	337	GTWA2024	460	577	GTWA4024	920	1057	GTWA6024	1380	1537
26	GTWA1026	250	357	GTWA2026	500	617	GTWA4026	1000	1137	GTWA6026	1500	1657
28	GTWA1028	270	377	GTWA2028	540	657	GTWA4028	1080	1217	GTWA6028	1620	1777
30	GTWA1030	290	397	GTWA2030	580	697	GTWA4030	1160	1297	GTWA6030	1740	1897
32	GTWA1032	310	417	GTWA2032	620	737	GTWA4032	1240	1377			
34	GTWA1034	330	437	GTWA2034	660	777	GTWA4034	1320	1457			
36	GTWA1036	350	457	GTWA2036	700	817	GTWA4036	1400	1537			
38	GTWA1038	370	477	GTWA2038	740	857	GTWA4038	1480	1617			
40	GTWA1040	390	497	GTWA2040	780	897	GTWA4040	1560	1697			
42	GTWA1042	410	517	GTWA2042	820	937	GTWA4042	1640	1777			
44	GTWA1044	430	537	GTWA2044	860	977	GTWA4044	1720	1857			
46	GTWA1046	450	557	GTWA2046	900	1017	GTWA4046	1800	1937			
48	GTWA1048	470	577	GTWA2048	940	1057	GTWA4048	1880	2017			
50	GTWA1050	490	597	GTWA2050	980	1097	GTWA4050	1960	2097			
52	GTWA1052	510	617	GTWA2052	1020	1137						
54	GTWA1054	530	637	GTWA2054	1060	1177						
56	GTWA1056	550	657	GTWA2056	1100	1217						
58	GTWA1058	570	677	GTWA2058	1140	1257						
60	GTWA1060	590	697	GTWA2060	1180	1297						
62	GTWA1062	610	717	GTWA2062	1220	1337						
64	GTWA1064	630	737	GTWA2064	1260	1377						
66	GTWA1066	650	757	GTWA2066	1300	1417						
68	GTWA1068	670	777	GTWA2068	1340	1457						
70	GTWA1070	690	797	GTWA2070	1380	1497						
72	GTWA1072	710	817	GTWA2072	1420	1537						

Note: This model's Beam Spacing options include 10 mm, 20 mm, 30 mm, 40 mm, and 60 mm, which are not fully covered in the selection table. If your required option is not listed, please contact us for selection assistance.

The total height for all products in this series is (Beam Spacing × Number of Beams) + 97 mm.

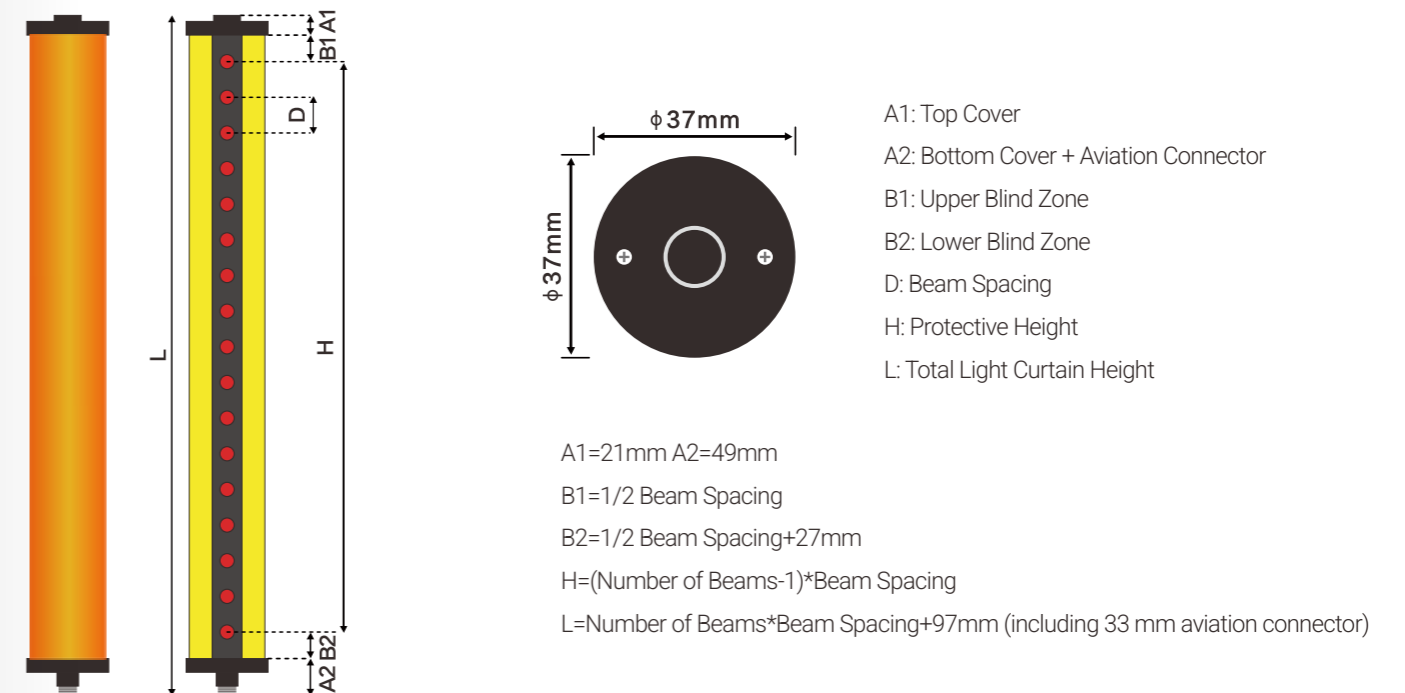
Beam Spacing	10mm			20mm			40mm			60mm		
	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)
4	GTWB1004	30	128	GTWB2004	60	168	GTWB4004	120	248	GTWB6004	180	328
6	GTWB1006	50	148	GTWB2006	100	208	GTWB4006	200	328	GTWB6006	300	448
8	GTWB1008	70	168	GTWB2008	140	248	GTWB4008	280	408	GTWB6008	420	568
10	GTWB1010	90	188	GTWB2010	180	288	GTWB4010	360	488	GTWB6010	540	688
12	GTWB1012	110	208	GTWB2012	220	328	GTWB4012	440	568	GTWB6012	660	808
14	GTWB1014	130	228	GTWB2014	260	368	GTWB4014	520	648	GTWB6014	780	928
16	GTWB1016	150	248	GTWB2016	300	408	GTWB4016	600	728	GTWB6016	900	1048
18	GTWB1018	170	268	GTWB2018	340	448	GTWB4018	680	808	GTWB6018	1020	1168
20	GTWB1020	190	288	GTWB2020	380	488	GTWB4020	760	888	GTWB6020	1140	1288
22	GTWB1022	210	308	GTWB2022	420	528	GTWB4022	840	968	GTWB6022	1260	1408
24	GTWB1024	230	328	GTWB2024	460	568	GTWB4024	920	1048	GTWB6024	1380	1528
26	GTWB1026	250	348	GTWB2026	500	608	GTWB4026	1000	1128	GTWB6026	1500	1648
28	GTWB1028	270	368	GTWB2028	540	648	GTWB4028	1080	1208	GTWB6028	1620	1768
30	GTWB1030	290	388	GTWB2030	580	688	GTWB4030	1160	1288	GTWB6030	1740	1888
32	GTWB1032	310	408	GTWB2032	620	728	GTWB4032	1240	1368			
34	GTWB1034	330	428	GTWB2034	660	768	GTWB4034	1320	1448			
36	GTWB1036	350	448	GTWB2036	700	808	GTWB4036	1400	1528			
38	GTWB1038	370	468	GTWB2038	740	848	GTWB4038	1480	1608			
40	GTWB1040	390	488	GTWB2040	780	888	GTWB4040	1560	1688			
42	GTWB1042	410	508	GTWB2042	820	928	GTWB4042	1640	1768			
44	GTWB1044	430	528	GTWB2044	860	968	GTWB4044	1720	1848			
46	GTWB1046	450	548	GTWB2046	900	1008	GTWB4046	1800	1928			
48	GTWB1048	470	568	GTWB2048	940	1048	GTWB4048	1880	2008			
50	GTWB1050	490	588	GTWB2050	980	1088	GTWB4050	1960	2088			
52	GTWB1052	510	608	GTWB2052	1020	1128						
54	GTWB1054	530	628	GTWB2054	1060	1168						
56	GTWB1056	550	648	GTWB2056	1100	1208						
58	GTWB1058	570	668	GTWB2058	1140	1248						
60	GTWB1060	590	688	GTWB2060	1180	1288						
62	GTWB1062	610	708	GTWB2062	1220	1328						
64	GTWB1064	630	728	GTWB2064	1260	1368						
66	GTWB1066	650	748	GTWB2066	1300	1408						
68	GTWB1068	670	768	GTWB2068	1340	1448						
70	GTWB1070	690	788	GTWB2070	1380	1488						
72	GTWB1072	710	808	GTWB2072	1420	1528						

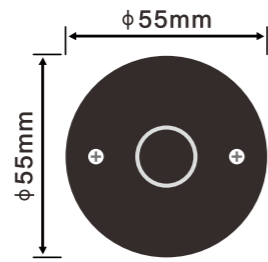
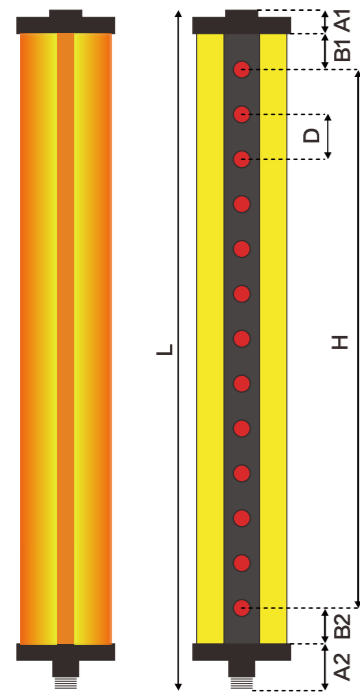
Note: This model's Beam Spacing options include 5 mm, 10 mm, 20 mm, 30 mm, 40 mm, 60 mm, and 105 mm, which are not fully covered in the selection table. If your required option is not listed, please contact us for selection assistance.

The total height for all products in this series is (Beam Spacing × Number of Beams) + 88 mm.

Product Series	GTWA	GTWB
Cross-sectional Dimensions	Φ37mm	Φ55mm
Beam Spacing	5mm/10mm/20mm/30mm/40mm/60mm	
Number of Beams	4,6,8,10...256	
Protective Height	Beam Spacing*(Number of Beams-1)	
Protective Width		
Supply Voltage	0.2m-3m	24V±10% 0-30m
Power	3-8W	
Response Time	≤10ms	
Insulation Resistance	≥100MΩ	
Signal Output	NPN Normally Open / Normally Closed, PNP Normally Open / Normally Closed, Relay Normally Open / Normally Closed	
Operating Temperature	-10 °C to +55 °C	
Storage Temperature	-40 °C to +70 °C	
Operating Humidity	35 % RH to 85 % RH	
Light Interference Resistance	10,000 lux	
Light Curtain Configuration	Through-Beam Type	
Protection Rating	IP69	
Product Certification	CE, FCC	
Circuit Protection	Reverse Polarity Protection / Output Short-Circuit Protection	
Compatible Controller	Yes	

Product Dimensions-GTWA

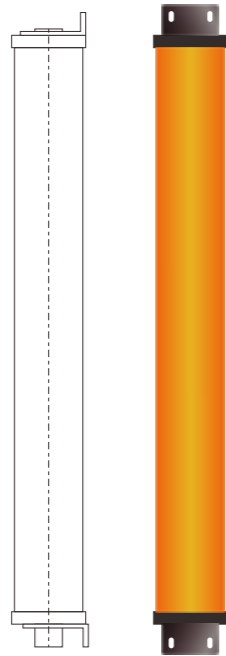




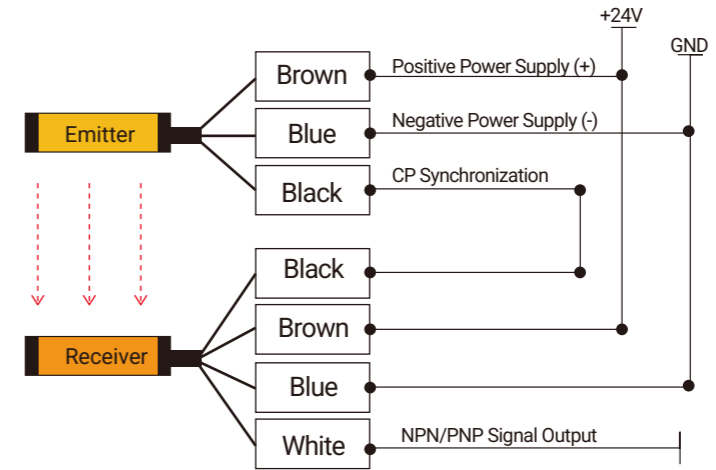
- A1: Top Cover
- A2: Bottom Cover + Aviation Connector
- B1: Upper Blind Zone
- B2: Lower Blind Zone
- D: Beam Spacing
- H: Protective Height
- L: Total Light Curtain Height

A1=14mm A2=47mm
 B1=1/2 Beam Spacing
 B2=1/2 Beam Spacing+27mm
 H=(Number of Beams-1)*Beam Spacing
 L=Number of Beams*Beam Spacing+88mm (including 33 mm aviation connector)

Mounting Method



Vertical Mounting (Top-to-Bottom) method

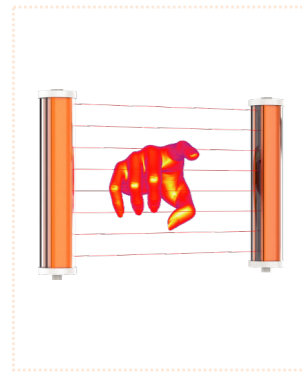




Multiple Detection Types

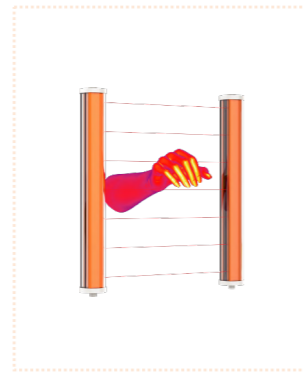
Available in 3 Detection Types Based on Minimum Detectable Object Size

Finger Detection



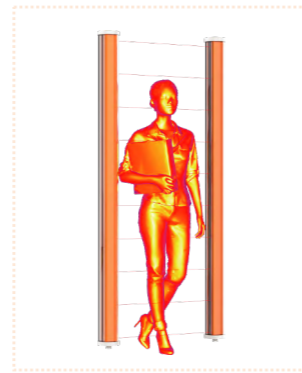
Beam Spacing (10mm)

Hand Detection



Beam Spacing (20mm)

Arm, Foot, and Body Detection



Beam Spacing (40mm)

Specification Selection

GT M 05 04 N C L

- Protective Width: Blank (default 3 m) 05 = 5 m
- Mounting Method: Blank (default vertical mounting) L = Side Mounting
- Contact Action: C = Normally Closed O = Normally Open
- Output Signal: N = NPN P = PNP
- Number of Beams: 4, 6, 8, 10, 12... 256
- Beam Spacing: 1, 2, 5, 10, 15, 20, 30, 40, 60 mm
- Product Series: M (Measurement Type)
- MA/MB = 13 x 28 mm High Precision MC/MD = 35 x 35 mm High Precision
- GT Series Safety Light Grid

Beam Spacing	10mm			20mm			40mm			60mm		
	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)
4	GTMB1004	30	106	GTMB2004	60	106	GTMB4004	120	186	GTMB6004	180	266
6	GTMB1006	50	106	GTMB2006	100	146	GTMB4006	200	266	GTMB6006	300	386
8	GTMB1008	70	106	GTMB2008	140	186	GTMB4008	280	346	GTMB6008	420	506
10	GTMB1010	90	126	GTMB2010	180	226	GTMB4010	360	426	GTMB6010	540	626
12	GTMB1012	110	146	GTMB2012	220	266	GTMB4012	440	506	GTMB6012	660	746
14	GTMB1014	130	166	GTMB2014	260	306	GTMB4014	520	586	GTMB6014	780	866
16	GTMB1016	150	186	GTMB2016	300	346	GTMB4016	600	666	GTMB6016	900	986
18	GTMB1018	170	206	GTMB2018	340	386	GTMB4018	680	746	GTMB6018	1020	1106
20	GTMB1020	190	226	GTMB2020	380	426	GTMB4020	760	826	GTMB6020	1140	1226
22	GTMB1022	210	246	GTMB2022	420	466	GTMB4022	840	906	GTMB6022	1260	1346
24	GTMB1024	230	266	GTMB2024	460	506	GTMB4024	920	986	GTMB6024	1380	1466
26	GTMB1026	250	286	GTMB2026	500	546	GTMB4026	1000	1066	GTMB6026	1500	1586
28	GTMB1028	270	306	GTMB2028	540	586	GTMB4028	1080	1146	GTMB6028	1620	1706
30	GTMB1030	290	326	GTMB2030	580	626	GTMB4030	1160	1226	GTMB6030	1740	1826
32	GTMB1032	310	346	GTMB2032	620	666	GTMB4032	1240	1306			
34	GTMB1034	330	366	GTMB2034	660	706	GTMB4034	1320	1386			
36	GTMB1036	350	386	GTMB2036	700	746	GTMB4036	1400	1466			
38	GTMB1038	370	406	GTMB2038	740	786	GTMB4038	1480	1546			
40	GTMB1040	390	426	GTMB2040	780	826	GTMB4040	1560	1626			
42	GTMB1042	410	446	GTMB2042	820	866	GTMB4042	1640	1706			
44	GTMB1044	430	466	GTMB2044	860	906	GTMB4044	1720	1786			
46	GTMB1046	450	486	GTMB2046	900	946	GTMB4046	1800	1866	5mm		
48	GTMB1048	470	506	GTMB2048	940	986	GTMB4048	1880	1946	GTMA0508	35	111
50	GTMB1050	490	526	GTMB2050	980	1026	GTMB4050	1960	2026	GTMA0516	75	131
52	GTMB1052	510	546	GTMB2052	1020	1066				GTMA0524	115	171
54	GTMB1054	530	566	GTMB2054	1060	1106				GTMA0532	155	211
56	GTMB1056	550	586	GTMB2056	1100	1146				GTMA0540	195	251
58	GTMB1058	570	606	GTMB2058	1140	1186				GTMA0548	235	291
60	GTMB1060	590	626	GTMB2060	1180	1226				GTMA0556	275	331
62	GTMB1062	610	646	GTMB2062	1220	1266				GTMA0564	315	371
64	GTMB1064	630	666	GTMB2064	1260	1306				GTMA0572	355	411
66	GTMB1066	650	686	GTMB2066	1300	1346				GTMA0580	395	451
68	GTMB1068	670	706	GTMB2068	1340	1386				GTMA0588	435	491
70	GTMB1070	690	726	GTMB2070	1380	1426				GTMA0596	475	531
72	GTMB1072	710	746	GTMB2072	1420	1466				Beam Spacing: 5 mm Number of Beams: Multiples of 8		

Note: This model's Beam Spacing options include 1 mm, 2 mm, 5 mm, 10 mm, 15 mm, 20 mm, 30 mm, 40 mm, and 60 mm, which are not fully covered in the selection table. If your required option is not listed, please contact us for selection assistance (except for 1 mm, 2 mm, and 5 mm series).

The total height for all products in this series is (Beam Spacing x Number of Beams) + 26 mm.

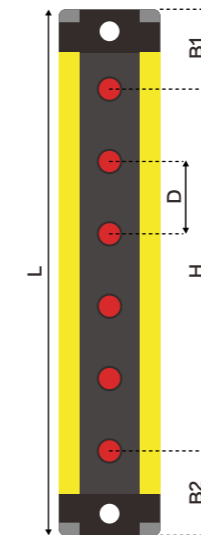
Beam Spacing	10mm			20mm			40mm			60mm		
	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)	Model	Protective Height H1(mm)	Housing Height H(mm)
4	GTMD1004	30	141	GTMD2004	60	161	GTMD4004	120	241	GTMD6004	180	321
6	GTMD1006	50	141	GTMD2006	100	201	GTMD4006	200	321	GTMD6006	300	441
8	GTMD1008	70	161	GTMD2008	140	241	GTMD4008	280	401	GTMD6008	420	561
10	GTMD1010	90	181	GTMD2010	180	281	GTMD4010	360	481	GTMD6010	540	681
12	GTMD1012	110	201	GTMD2012	220	321	GTMD4012	440	561	GTMD6012	660	801
14	GTMD1014	130	221	GTMD2014	260	361	GTMD4014	520	641	GTMD6014	780	921
16	GTMD1016	150	241	GTMD2016	300	401	GTMD4016	600	721	GTMD6016	900	1041
18	GTMD1018	170	261	GTMD2018	340	441	GTMD4018	680	801	GTMD6018	1020	1161
20	GTMD1020	190	281	GTMD2020	380	481	GTMD4020	760	881	GTMD6020	1140	1281
22	GTMD1022	210	301	GTMD2022	420	521	GTMD4022	840	961	GTMD6022	1260	1401
24	GTMD1024	230	321	GTMD2024	460	561	GTMD4024	920	1041	GTMD6024	1380	1521
26	GTMD1026	250	341	GTMD2026	500	601	GTMD4026	1000	1121	GTMD6026	1500	1641
28	GTMD1028	270	361	GTMD2028	540	641	GTMD4028	1080	1201	GTMD6028	1620	1761
30	GTMD1030	290	381	GTMD2030	580	681	GTMD4030	1160	1281	GTMD6030	1740	1881
32	GTMD1032	310	401	GTMD2032	620	721	GTMD4032	1240	1361			
34	GTMD1034	330	421	GTMD2034	660	761	GTMD4034	1320	1441			
36	GTMD1036	350	441	GTMD2036	700	801	GTMD4036	1400	1521			
38	GTMD1038	370	461	GTMD2038	740	841	GTMD4038	1480	1601			
40	GTMD1040	390	481	GTMD2040	780	881	GTMD4040	1560	1681			
42	GTMD1042	410	501	GTMD2042	820	921	GTMD4042	1640	1761			
44	GTMD1044	430	521	GTMD2044	860	961	GTMD4044	1720	1841			
46	GTMD1046	450	541	GTMD2046	900	1001	GTMD4046	1800	1921	5mm		
48	GTMD1048	470	561	GTMD2048	940	1041	GTMD4048	1880	2001	GTMC0508	35	141
50	GTMD1050	490	581	GTMD2050	980	1081	GTMD4050	1960	2081	GTMC0516	75	161
52	GTMD1052	510	601	GTMD2052	1020	1121				GTMC0524	115	201
54	GTMD1054	530	621	GTMD2054	1060	1161				GTMC0532	155	241
56	GTMD1056	550	641	GTMD2056	1100	1201				GTMC0540	195	281
58	GTMD1058	570	661	GTMD2058	1140	1241				GTMC0548	235	321
60	GTMD1060	590	681	GTMD2060	1180	1281				GTMC0556	275	361
62	GTMD1062	610	701	GTMD2062	1220	1321				GTMC0564	315	401
64	GTMD1064	630	721	GTMD2064	1260	1361				GTMC0572	355	441
66	GTMD1066	650	741	GTMD2066	1300	1401				GTMC0580	395	481
68	GTMD1068	670	761	GTMD2068	1340	1441				GTMC0588	435	521
70	GTMD1070	690	781	GTMD2070	1380	1481				GTMC0596	475	561
72	GTMD1072	710	801	GTMD2072	1420	1521						

Note: This model's Beam Spacing options include 1 mm, 2 mm, 5 mm, 10 mm, 20 mm, 30 mm, 40 mm, 60 mm, and 105 mm, which are not fully covered in the selection table. If your required option is not listed, please contact us for selection assistance (except for 1 mm, 2 mm, 105 mm series and 0805 Model).

The total height for all products in this series is (Beam Spacing × Number of Beams) + 81 mm.

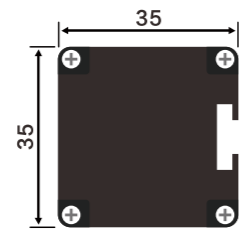
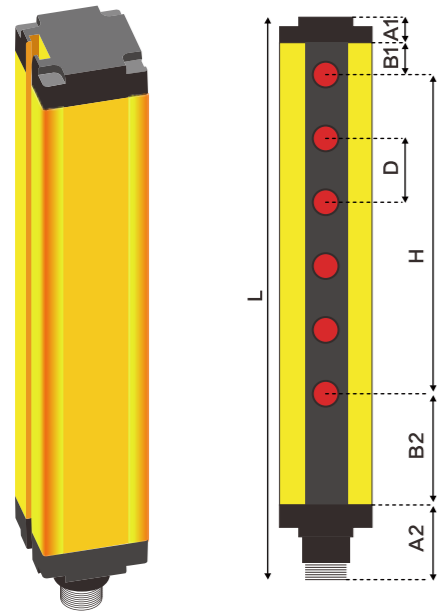
Product Series	GTMA	GTMB	GTMC	GTMD
Cross-sectional Dimensions	13mm*28mm		35mm*35mm	
Beam Spacing	1mm/2mm/5mm	10mm/15mm/20mm 30mm/40mm/60mm	1mm/2mm/5mm	10mm/15mm/20mm 30mm/40mm/60mm
Number of Beams	8,16,24,32...	4,6,8,10...256	8,16,24,32...	4,6,8,10...256
Protective Height	58mm-3000mm			
Protective Width	100mm-400mm	400mm-3000mm	100mm-400mm	400mm-2000mm
Supply Voltage	24V±10%			
Power	3-10W			
Response Time	≤10ms			
Insulation Resistance	≥100MΩ			
Signal Output	Digital Output / Analog Output / RS485			
Operating Temperature	-10°C~+55°C			
Storage Temperature	-40°C~+70°C			
Operating Humidity	≤85%RH			
Light Interference Resistance	10000Lux			
Light Curtain Configuration	Through-Beam Type			
Protection Rating	IP65			
Product Certification	CE, FCC			
Circuit Protection	Reverse Polarity Protection / Output Short-Circuit Protection			
Compatible Controller	Yes			

Product Dimensions-GTMA/GTMB Series



B1: Upper Blind Zone
 B2: Lower Blind Zone
 D: Beam Spacing
 H: Protective Height
 L: Total Light Curtain Height

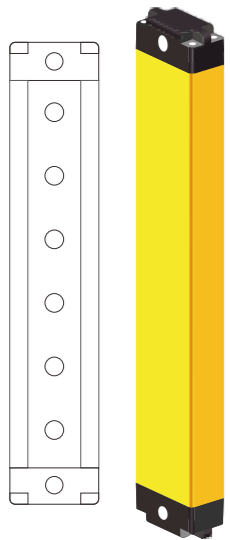
B1=1/2 Beam Spacing+13mm
 B2=1/2Beam Spacing+13mm
 L=Number of Beams*Beam Spacing+26mm



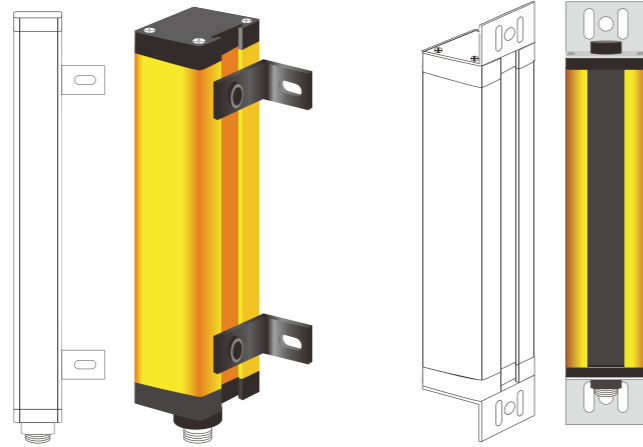
A1: Top Cover
 A2: Bottom Cover + Aviation Connector
 B1: Upper Blind Zone
 B2: Lower Blind Zone
 D: Beam Spacing
 H: Protective Height
 L: Total Light Curtain Height

A1=9mm A2=45mm
 B1=1/2 Beam Spacing
 B2=1/2 Beam Spacing+27mm
 H=(Number of Beams-1)*Beam Spacing
 L=Number of Beams*Beam Spacing+81mm
 (including 33 mm aviation connector)

Mounting Method

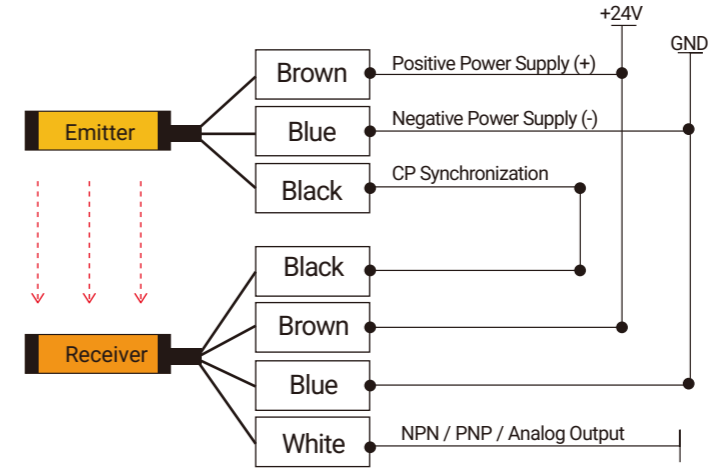


GTMA/GTMB Series
 Built-in mounting holes

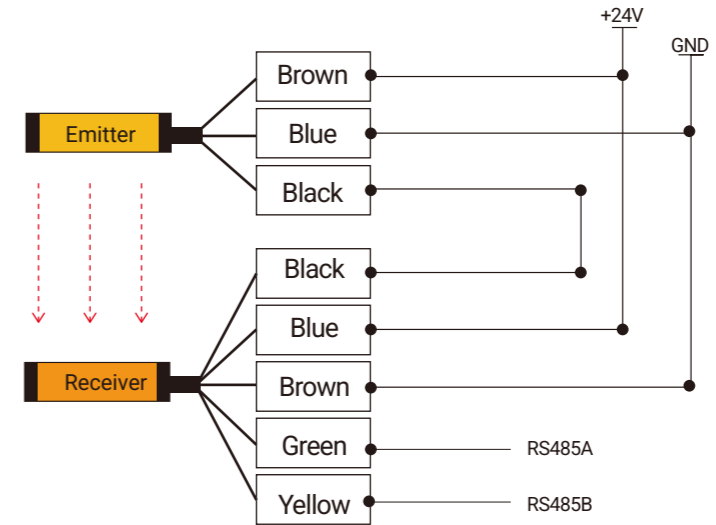


GTMC/GTMD Series
 Available in L-shaped Side Mounting
 and Vertical Mounting (Top-to-Bottom) configurations

NPN / PNP / Analog Output



RS485 Output





D3-M05 Series Safety Interlock

- Gold-Plated Contacts Compliant with SIL 3 (IEC 62061:2021) and PLc (ISO 13849-1:2020) Safety Certification
- Suitable for Standard Loads and Low-Power Circuits (≥ 10 mA)
- Simplified Wiring with Multiple Configurations Available

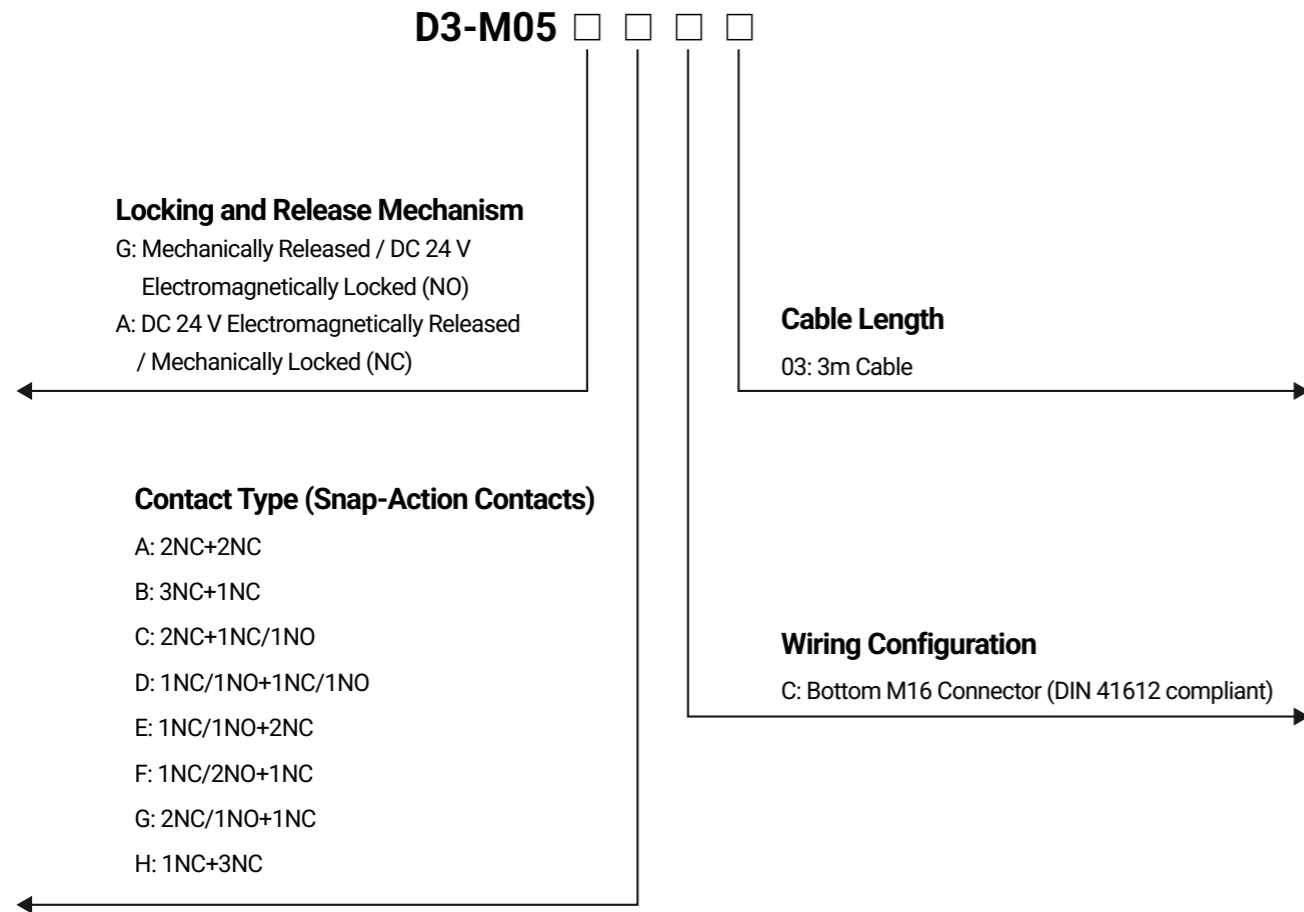
Application: Safety Fencing Systems

Product Image

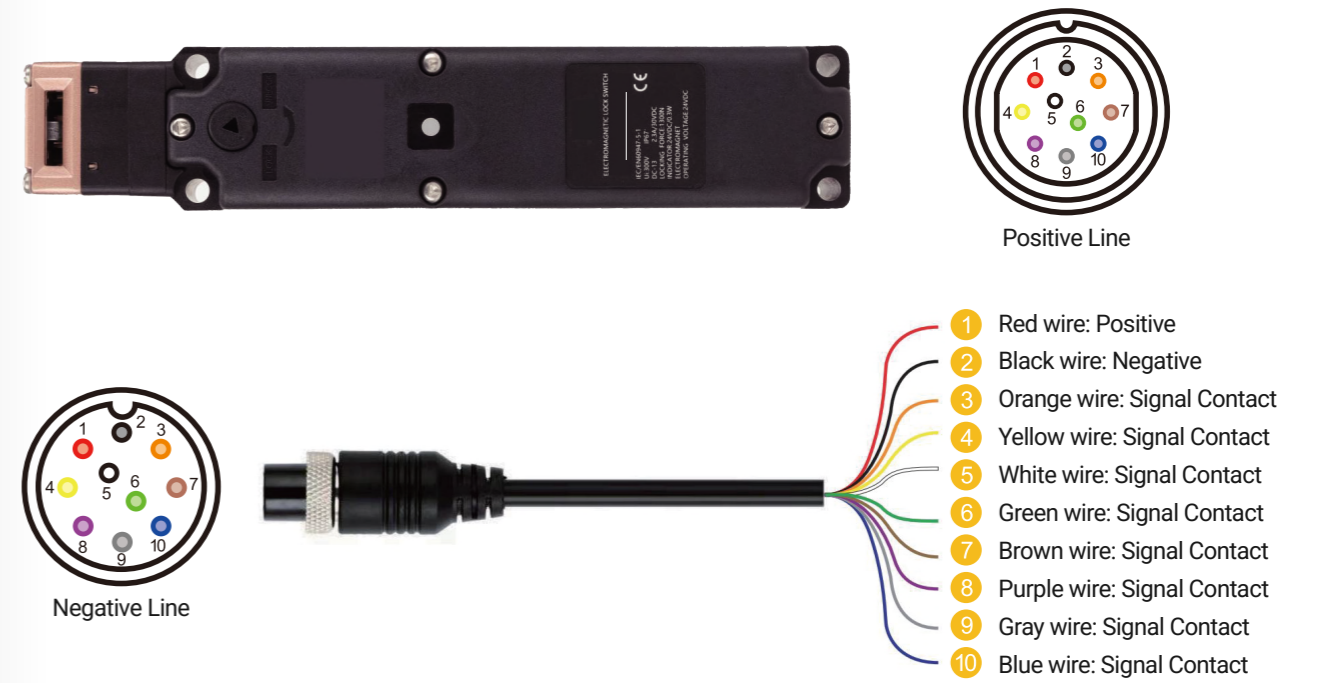


- Gold-Plated Contacts (≥ 0.8 μm thickness) Certified to SIL 3 / PLc Mechanical Safety Standards
- Safety Interlock for Standard Loads and Low-Power Circuits (≥ 10 mA)
- Multiple Metal Head Options (Stainless Steel / Brass)
- Tool-Free Wiring Design for Labor Savings and Rapid Replacement

Model	D3-M05SC	D3-M05G	D3-M05A
Interlock Type	Miniature Safety Interlock Switch No Locking Force, Two NC and One NO	Electromagnetic Locking Safety Interlock Switch	Electromagnetic Locking Safety Interlock Switch
Locking Mechanism	/	Electromagnetically Locked, Mechanically Released	Mechanically Locked, Electromagnetically Released
Protection Class	IP67 (per EN 60947-5-1, except key operation hole)		
Housing Material	Flame-Retardant Resin + PA66		
Contact Material	Silver-Plated Copper Alloy		
Service Life	Mechanical Life: >1,000,000 operations		
	Electrical Life: >500,000 operations		
Utilization Category	DC-13		
Locking Tensile Strength	/	1300N	
Positive Opening Distance	/	$\geq 10\text{mm}$	
Positive Opening Action Force	/	$\geq 60\text{N}$	
Ambient Temperature	-20°C~60°C, Non-Freezing		
Ambient Humidity	$\leq 85\%$ RH		
Permissible Operating Speed	0.05 to 0.5 m/s		
Permissible Operating Frequency	Max. 30 operations/minute		
Rated Thermal Current (I _{th})	/	10A	
Rated Operating Current	/	200mA(Initial Value)	
Rated Operating Voltage	/	24V	
Rated Conditional Short-Circuit Current	/	1000A	



Note: The No Locking Force product is exclusively available as D3-M05SC with 2NC+1NO contact configuration and no integrated cable.

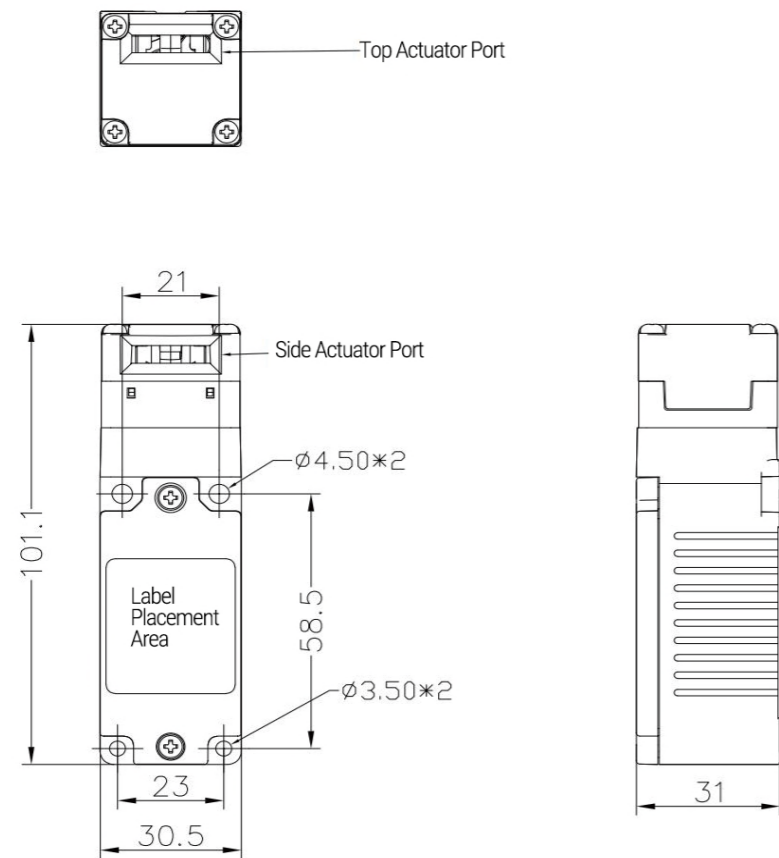


Item No.	Signal Definitions	Color Codes	Descriptions
1	24V	Red	Positive G1
2	0V	Black	Negative G2
3	Signal Contact A1	Orange	Signal Contact
4	Signal Contact A2	Yellow	Signal Contact
5	Signal Contact B1	White	Signal Contact
6	Signal Contact B2	Green	Signal Contact
7	Signal Contact C1	Brown	Signal Contact
8	Signal Contact C2	Purple	Signal Contact
9	Signal Contact D1	Gray	Signal Contact
10	Signal Contact D2	Blue	Signal Contact

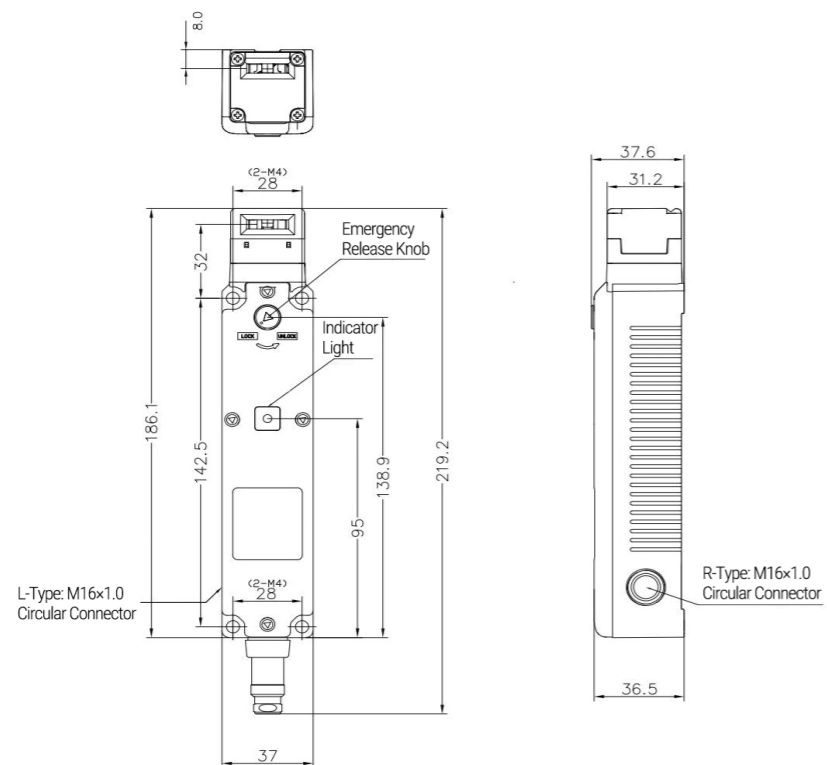
Model	Type	Size diagram
K1	Vertical Mounting	
K2	Horizontal Mounting	
K3	Extended Horizontal Mounting	

Model	Type	Size diagram
K4	Extended Vertical Mounting	
K5	Adjustable Horizontal Mounting	
K6	Adjustable Horizontal/Vertical Mounting	

D3-M05SC



D3-M05A/G



The following contact diagram depicts the configuration with actuator inserted in locked position

Model	Contact Type (Door Monitoring +Lock Monitoring)	Wiring Diagram		Contact Operation ■:Contact ON □:Contact OFF
		Door Monitoring	Lock Monitoring	
D3-M05GAC03 D3-M05AAC03	2NC+2NC	A1-A2 C1-C2	B1-B2 D1-D2	Locked Position A1-A2 B1-B2 C1-C2 D1-D2
D3-M05GBC03 D3-M05ABC03	3NC+1NC	A1-A2 C1-C2 D1-D2	B1-B2	Locked Position A1-A2 B1-B2 C1-C2 D1-D2
D3-M05GCC03 D3-M05ACC03	2NC+1NC/1NO	A1-A2 C1-C2	B1-B2 D1-D2	Locked Position A1-A2 B1-B2 C1-C2 D1-D2
D3-M05GDC03 D3-M05ADC03	NC/1NO+1NC/1N	A1-A2 D1-D2	B1-B2 C1-C2	Locked Position A1-A2 B1-B2 C1-C2 D1-D2
D3-M05GEC03 D3-M05AEC03	1NC/1NO+2NC	A1-A2 C1-C2	B1-B2 D1-D2	Locked Position A1-A2 B1-B2 C1-C2 D1-D2
D3-M05GFC03 D3-M05AFC03	1NC/2NO+1NC	A1-A2 C1-C2 D1-D2	B1-B2	Locked Position A1-A2 B1-B2 C1-C2 D1-D2
D3-M05GGC03 D3-M05AGC03	2NC/1NO+1NC	A1-A2 C1-C2 D1-D2	B1-B2	Locked Position A1-A2 B1-B2 C1-C2 D1-D2
D3-M05GHC03 D3-M05AHC03	1NC+3NC	A1-A2	B1-B2 C1-C2 D1-D2	Locked Position A1-A2 B1-B2 C1-C2 D1-D2

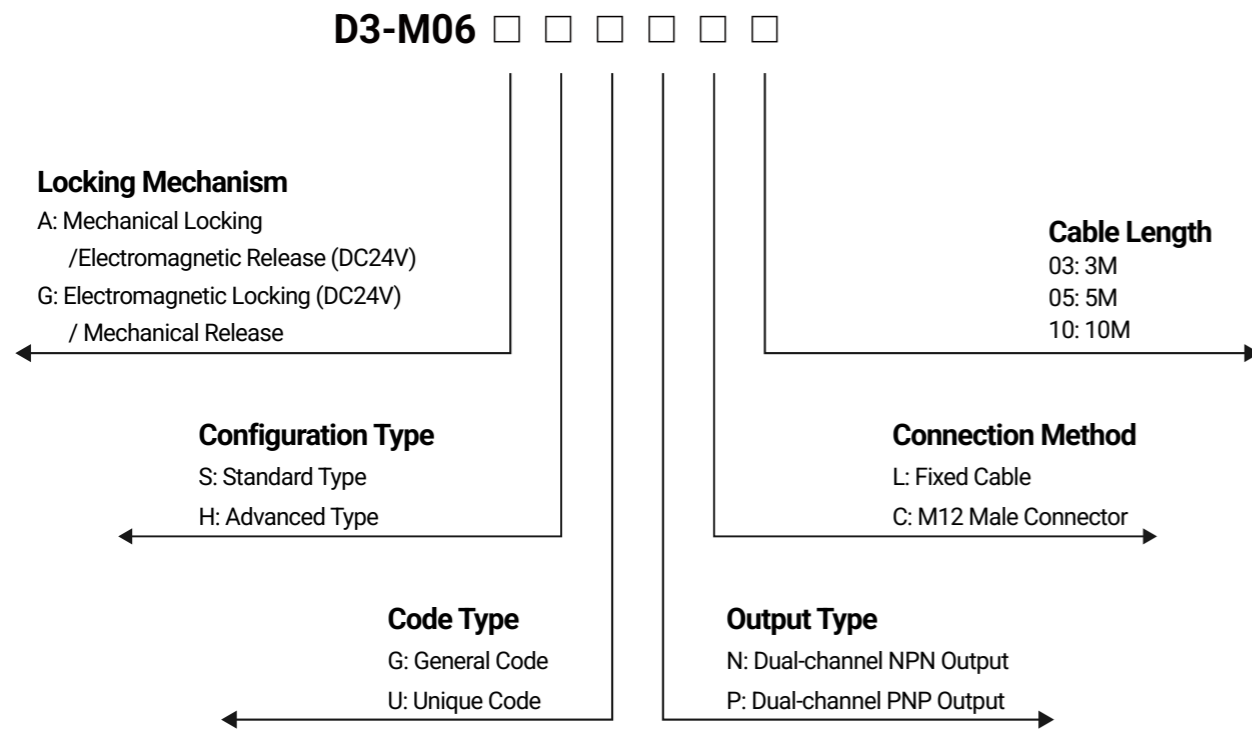


Application Examples



- All-metal construction: robust, safe, and durable.
- Multiple functions: simultaneous mechanical lock and monitoring capabilities.
- Multiple encoding methods: selectable unique and universal encoding options.
- Independent redundant dual outputs: prevent safety hazards caused by single circuit failure.
- Cascading connection of door switches: reduces the number of input points.
- Compact design: 30mm x 30mm cross-sectional dimensions.
- Flexible installation: allows direct mounting on aluminum frames up to 30mm wide.

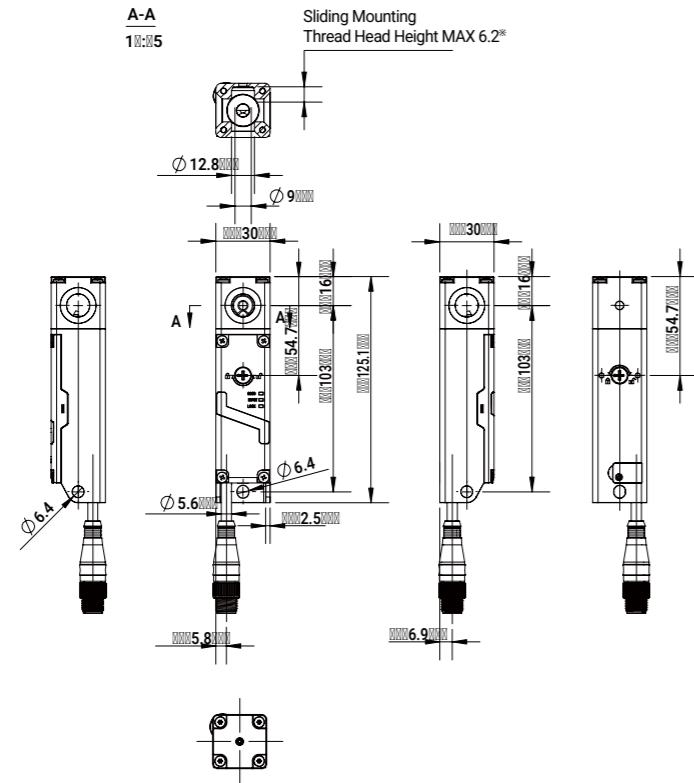
Standard		ISO13849-1(Category4/PLe);IEC/EN60947-5-3
Certifications		CE
Locking Mechanism		Mechanical Locking / Electromagnetic Locking
Safety Output		NPN2/PNP2
Response Time	Locking→Unlocking	100ms(standalone operation)
	Unlocking → Locking	
Lock	Holding Force Fzh	≥2000N
	Lock Bolt Insertion Tolerance	≤2mm
	Mechanical Cycle Life	1,000,000 cycles (door operation speed 1m/s)
	Operating Frequency	1Hz
	Minimum Radius for Revolving Doors	≥220mm
Manual Unlocking		Front / Rear
Cascade Connection		Up to 20 units
Control Output (OSSD)	Output Type	Transistor output × 2
	Maximum Load Current	≤200mA
	Residual Voltage (ON)	<2.5V @ 200mA
	Voltage (OFF)	≤2V @ 5m cable
	Leakage Current	≤0.5mA
	Maximum Load Capacity	2.2μF
Load Connection Resistance		≤2.5Ω
Auxiliary Output (Non-Safety Output)	Output Type	Transistor output
	Number of Outputs	1
	Maximum Load Current	50mA
Residual Voltage (ON)		≤2.5V @ 50mA
External Input (Trip Current)	Safety Input	1.5mA × 2
	Reset/EDM Input	Approx. 10mA × 1
	Locking Control Input	Approx. 10mA × 1
Power Supply	Operating Voltage	DC 24V ±15%
	Rated Power	4.6W (no-load)
Protection		Safety circuit breaking protection, Current limiting, Overload protection, Overvoltage protection, Overheat protection with shutdown and restart, Reverse polarity protection, Transient noise protection, Fail-safe pulse protection
Environmental Resistance	IP Rating	IP65
	Operating Ambient Temperature	-20°C to 55°C (non-freezing)
	Storage Ambient Temperature	-25°C to 70°C (non-freezing)
	Operating Ambient Humidity	5% to 95% RH
	Storage Ambient Humidity	5% to 95% RH
	Vibration Resistance	10 to 55Hz, 2.0mm double amplitude, 5min/axis (X, Y, Z) (IEC 60947-5-3)
Shock Resistance		30g, 6 shocks/axis (X, Y, Z) (IEC 60947-5-3)
Risk Time		100ms
Start-up Time		3.5s
Material		Nylon / Zinc alloy / Stainless steel



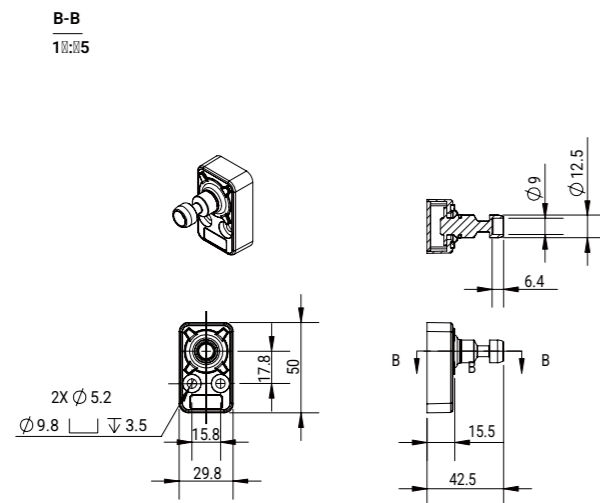
Standard Type vs. Advanced Type Comparison		
	Standard Type	Advanced Type
Safety Output Channel	●	●
AUX Output Channel	●	●
Safety Input Channel	●	●
Locking Input Channel	●	●
EDM		●
Reset		●

Category	Product Diagram	Product Name	Model
Mounting Bracket		Hinge Mounting Bracket (for Left-Opening Hinged Doors)	M06-ZJ-JL-L
		Hinge Mounting Bracket (for Right-Opening Hinged Doors)	M06-ZJ-JL-R
		Sliding Mounting Bracket (for Left-Opening Sliding Doors)	M06-ZJ-TL-L
		Sliding Mounting Bracket (for Right-Opening Sliding Doors)	M06-ZJ-TL-R
M12 Cable		Standard Type Cable (8-pin)	M06-XL-P8C3
			M06-XL-P8C5
			M06-XL-P8C10
		Advanced Type Cable (12-pin)	M06-XL-P12C3
			M06-XL-P12C5
			M06-XL-P12C10

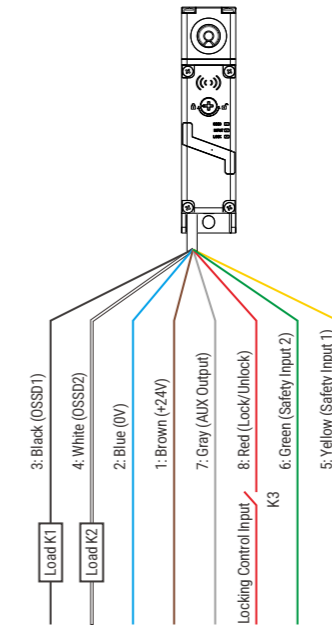
● D3-M06 Door Lock



● M06-K10 Operating Key



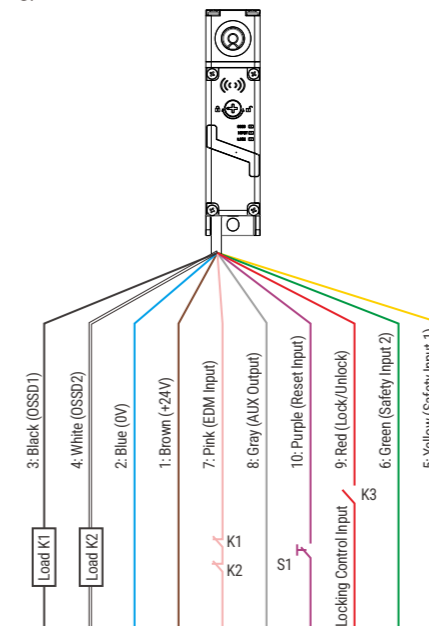
● D3-M06 Standard Type (NPN, Non-Cascading)



Locking Control Input:

1. Electromagnetic Locking, Mechanical Release (K3): Switch closed = Locked state, Switch open = Unlocked state
2. Mechanical Locking, Electromagnetic Release (K3): Switch open = Locked state, Switch closed = Unlocked state

● D3-M06 Advanced Type (NPN, Non-Cascading)



Locking Control Input:

1. Electromagnetic Locking, Mechanical Release (K3): Switch closed = Locked state, Switch open = Unlocked state
 2. Mechanical Locking, Electromagnetic Release (K3): Switch open = Locked state, Switch closed = Unlocked state
- Note: When EDM function is not in use, short-circuit Pink wire (EDM Input) to 0V for NPN-type, or to +24V for PNP-type

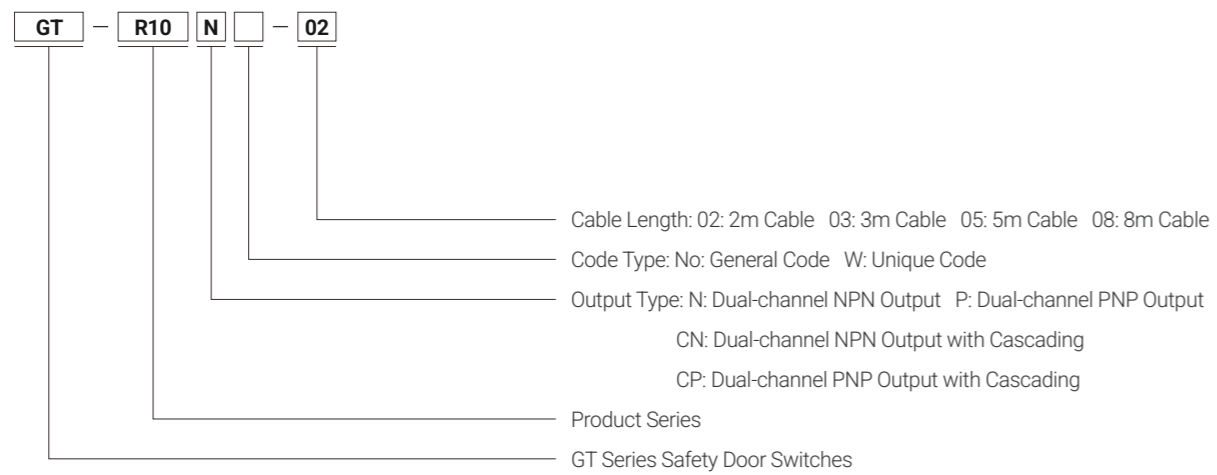



Safety Door Switch
GT-R10 Series
 Durable / Millisecond Response

Application Examples

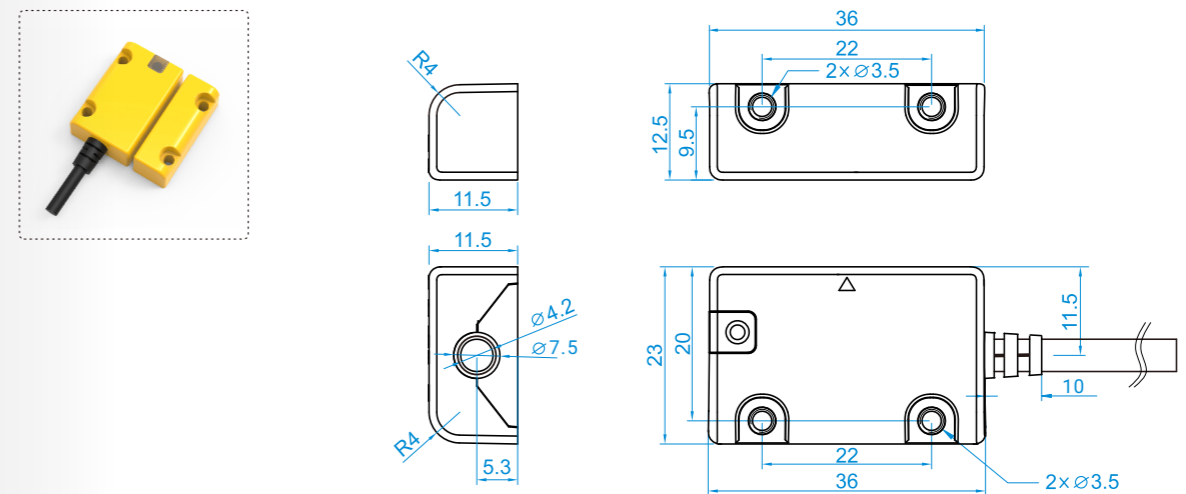


Specification Selection Guide



Type	Safety Door Switch
Appearance	
Safety Standards	ISO13849-1 IEC/EN60947-5-1 IEC/EN60947-5-3
Safety Category	Compliant with ISO 13849-1 Category 4 Switch / Suitable for PLe/PLd
Certifications	CE
Horizontal Operating Distance	Actuation, 0-10mm
Vertical Operating Distance	Actuation, 0-8mm
Operating Voltage	24V DC ±15%
Operating Current	30mA
Output Current	150mA
Response Time	60ms
IP Rating	IP65, IP67\IP68 (Customizable)
Operating Frequency	1 Hz
Operating Temperature	-10~+55°C
Relative Humidity	5~95%
Material	Flame-retardant Grade Thermoplastic

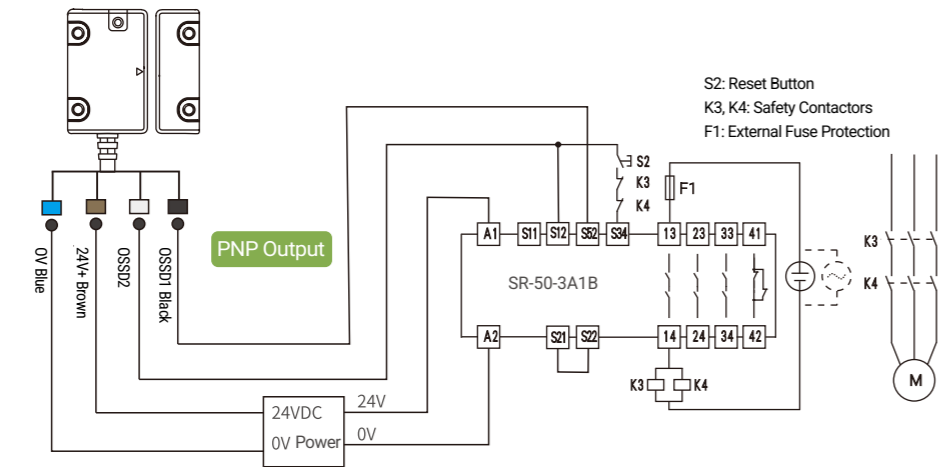
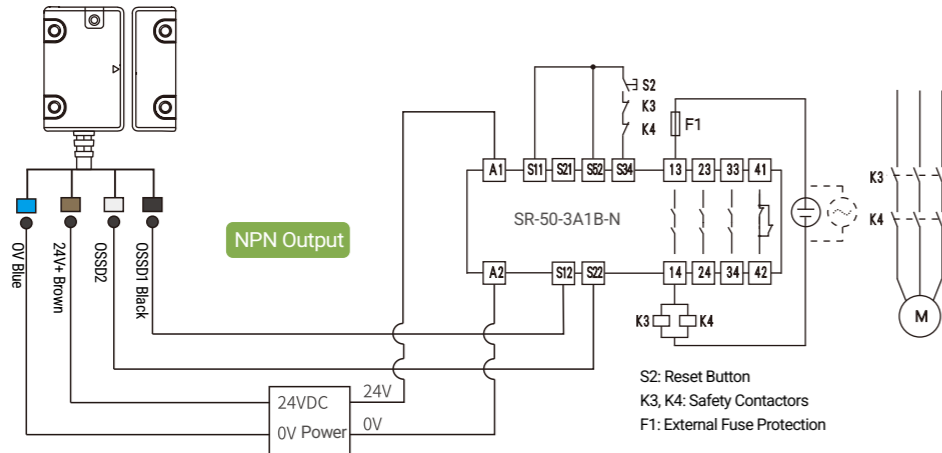
Product Dimensional Drawing



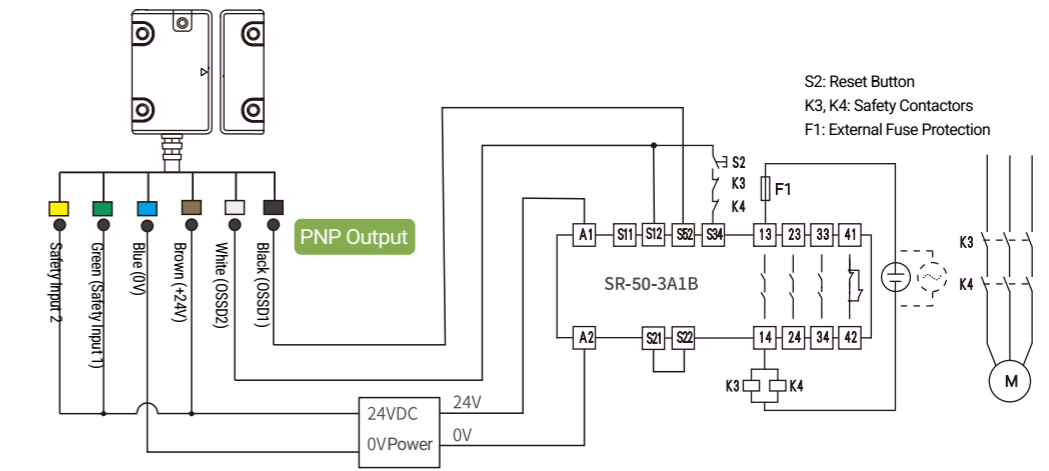
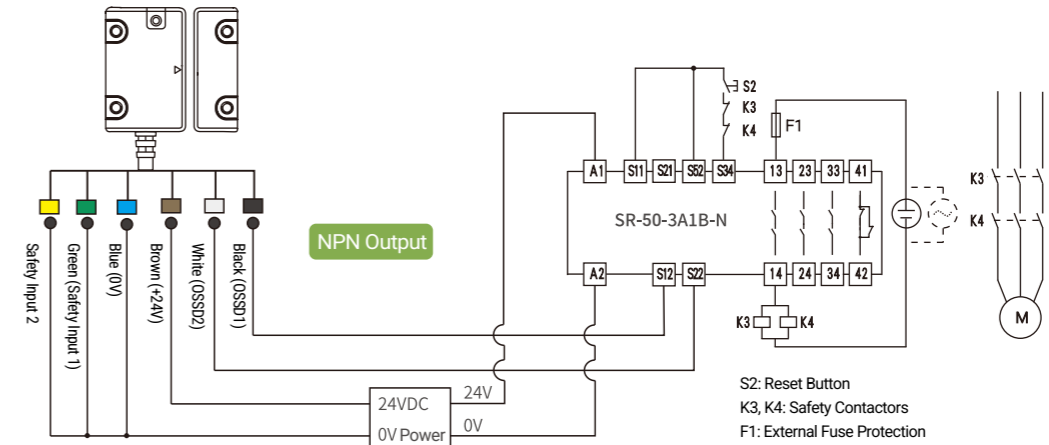
Product Selection Table

Model	Specifications
GT-R10N-02	4-conductor Fixed Cable, Dual-channel NPN Output, 2m Cable
GT-R10P-02	4-conductor Fixed Cable, Dual-channel PNP Output, 2m Cable
GT-R10CN-02	6-conductor Fixed Cable, Dual-channel NPN Output with Cascading, 2m Cable
GT-R10CP-02	6-conductor Fixed Cable, Dual-channel PNP Output with Cascading, 2m Cable
GT-R10NW-02	4-conductor Fixed Cable, Dual-channel NPN Output, 2m Cable with Unique Code
GT-R10PW-02	4-conductor Fixed Cable, Dual-channel PNP Output, 2m Cable with Unique Code
GT-R10CNW-02	6-conductor Fixed Cable, Dual-channel NPN Output with Cascading, 2m Cable with Unique Code
GT-R10-CPW-02	6-conductor Fixed Cable, Dual-channel PNP Output with Cascading, 2m Cable with Unique Code

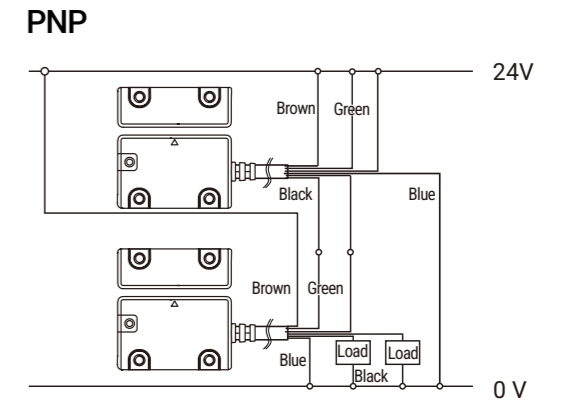
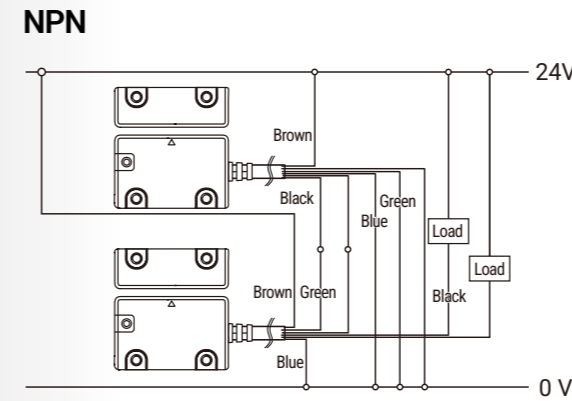
Wiring Diagram for Dual-channel Output



Wiring Diagram for Dual-channel Cascaded Output



Output Wiring Diagram



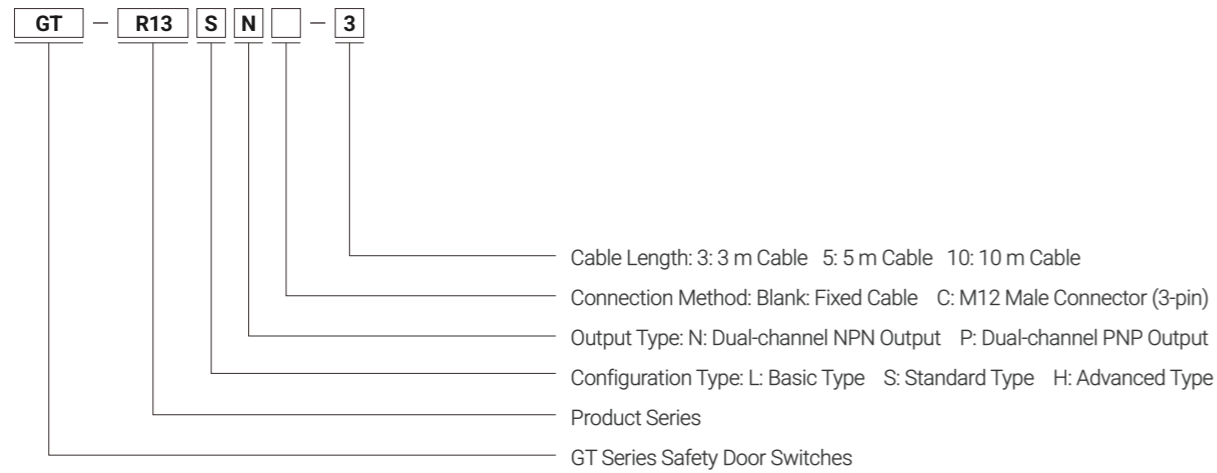


Application Examples

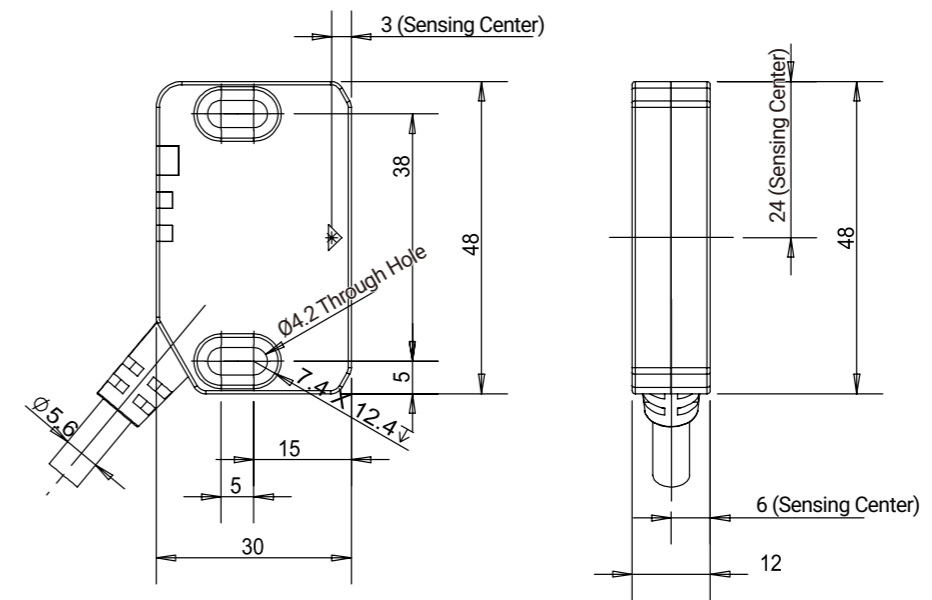


- Compact design (compatible with 30mm aluminum frame) for easy installation;
- Redundant internal circuitry (dual CPU cross-checking) with self-diagnostic function;
- Intelligent diagnostics and status indication: Integrated LED indicators provide real-time feedback on door status and fault information for rapid troubleshooting;
- Supports multi-switch cascading (up to 30 switches), adaptable to complex equipment layouts;
- Actuator coding with General and Unique levels: Auto-learning during initial installation matches sensor, Unique level ensures non-interchangeability;
- Magnetic latching function with 15 N holding force, capable of replacing door electromagnets.

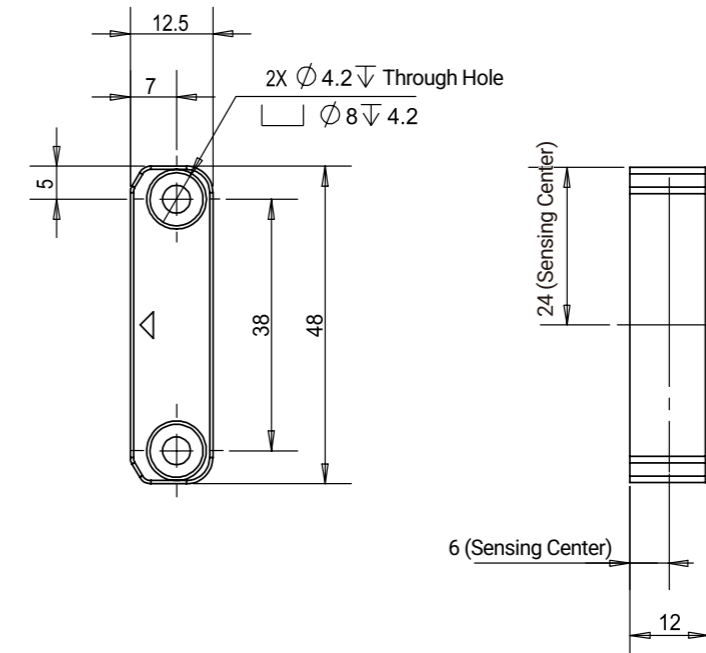
Model		GTR13L	GTR13S	GTR13H
Type		Basic Type	Standard Type	Advanced Type
Front Sensing Distance	Sao (OFF→ON)	10 mm		
	Sar (ON→OFF)	18 mm		
Side Sensing Distance	Sao (OFF→ON)	6 mm		
	Sar (ON→OFF)	14 mm		
Detection Response Time	Detection → Non-detection	20 ms + 2 ms × (Total Cascaded Units - 1)		
	Non-detection → Detection	30 ms + 25 ms × (Total Cascaded Units - 1)		
Permissible Operating Frequency		3 Hz		
Cascading Standard		Up to 30 Units		
Control Output (OSSD)	Output Type	-	Dual Transistor Outputs	
	Max. Load Current	PNP: ≤ 150 mA, NPN: ≤ 100 mA		
	Residual Voltage (ON)	Max 2.5 V (at 5 m cable length)		
	Voltage (OFF)	Max 2.0 V (at 5 m cable length)		
	Leakage Current	Max 0.5 mA		
	Max. Switching Capacity	2.2 μF		
	Load Wiring Resistance	Max 2.5 Ω		
AUX Output (Non-safety Output)	Output Type	Transistor Output		
	Number of Outputs	1		
	Max. Load Current	50 mA		
	Residual Voltage (ON)	Max 2.5 V (at 5 m cable length)		
External Input (Trip Current)	Safety Inputs	-	Approx. 1.5 mA × 2	
	Reset/EDM Inputs	-	Approx. 5 mA×1	
Power Supply	Supply Voltage	24 VDC ±20% including 10% P-P Ripple (Class 2)		
	Power Consumption	0.8 W/²		
Protection Circuitry		Reverse Polarity Protection, Output Short-Circuit Protection, Output Surge Protection, Output Reverse Connection Protection		
Safety-related Parameters		ISO 13849-1, IEC/EN 60947-5-1, IEC/EN 60947-5-3		
		Compliant with ISO 13849-1 Category 4 Switch / Suitable for PLe/PLd		
		CE		
Environmental Resistance	Enclosure Protection Rating	IP65, IP67, IP68 (Customizable – Consult Sales Before Ordering)		
	Ambient Temperature	-20°C to +55°C (Non-freezing)		
	Ambient Humidity	5% to 95% RH		
	Vibration Resistance	10–55 Hz, 3.0 mm Double Amplitude, 5 min on X/Y/Z axes (IEC 60947-5-3)		
	Shock Resistance	30 G, 6 Impacts on X/Y/Z axes (IEC 60947-5-3)		
Material		Housing: Flame-retardant Grade Thermoplastic, Cable: PVC		



Feature Comparison of Three Configuration Types			
	Basic Type	Standard Type	Advanced Type
Pin Count	5	8	12
OSSD	✓	✓	✓
Safety Inputs	—	✓	✓
Latching Function	—	—	✓
EDM Function	—	—	✓
AUX Output	—	✓	✓
Key Coding	✓	✓	✓



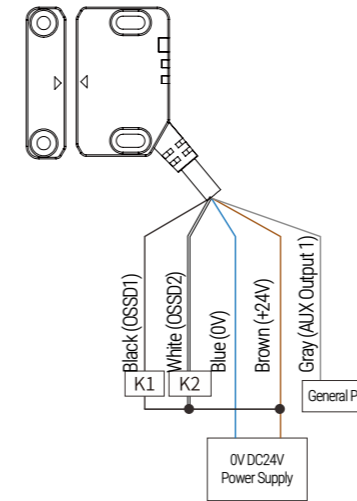
Unit: (mm)



Unit: (mm)

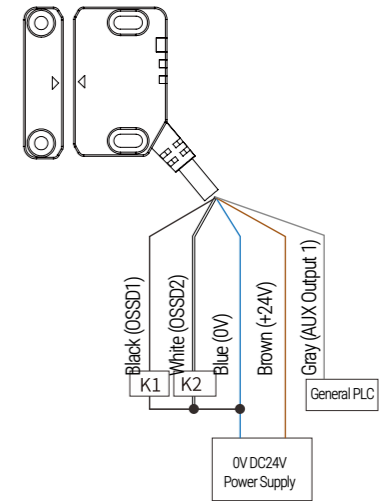
Sensor Model	Configuration Type	Output Type	Connection Method	Cable Length	Model	
	Basic Type	NPN	Fixed Cable	3M	GT-R13LN-3	
				5M	GT-R13LN-5	
				10M	GT-R13LN-10	
		M12 Connector	—	GT-R13LNC		
			PNP	Fixed Cable	3M	GT-R13LP-3
					5M	GT-R13LP-5
	10M	GT-R13LP-10				
	M12 Connector	—	GT-R13LPC			
		Standard Type	NPN	Fixed Cable	3M	GT-R13SN-3
					5M	GT-R13SN-5
	10M				GT-R13SN-10	
	M12 Connector		—	GT-R13SNC		
			PNP	Fixed Cable	3M	GT-R13SP-3
					5M	GT-R13SP-5
	10M	GT-R13SP-10				
	M12 Connector	—	GT-R13SPC			
		Advanced Type	NPN	Fixed Cable	3M	GT-R13HN-3
					5M	GT-R13HN-5
10M	GT-R13HN-10					
M12 Connector	—		GT-R13HNC			
	PNP		Fixed Cable	3M	GT-R13HP-3	
				5M	GT-R13HP-5	
10M		GT-R13HP-10				
M12 Connector	—	GT-R13HPC				

GT-R13 Basic Type (NPN)



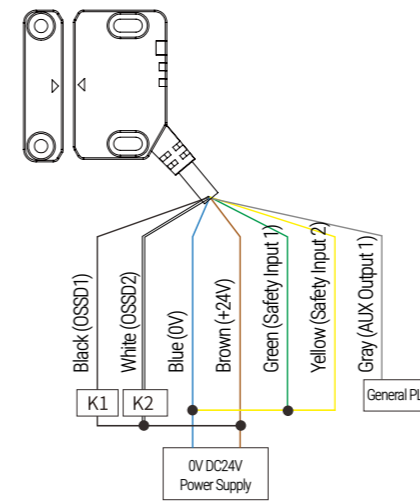
K1, K2: External Devices (Positively Driven Relays, Electromagnetic Contactors, etc.)

GT-R13 Basic Type (PNP)



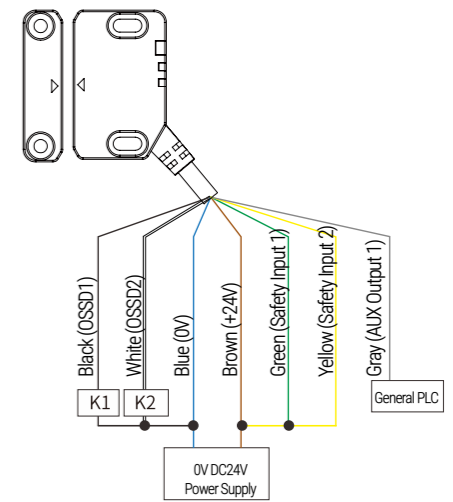
K1, K2: External Devices (Positively Driven Relays, Electromagnetic Contactors, etc.)

GT-R13 Standard Type (NPN)



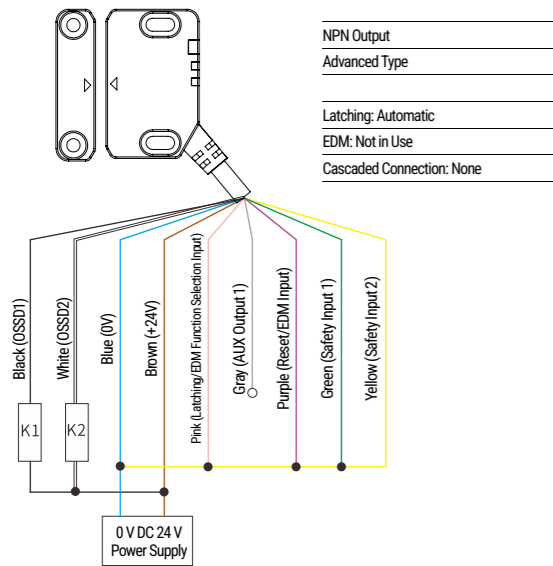
K1, K2: External Devices (Positively Driven Relays, Electromagnetic Contactors, etc.)

GT-R13 Standard Type (PNP)



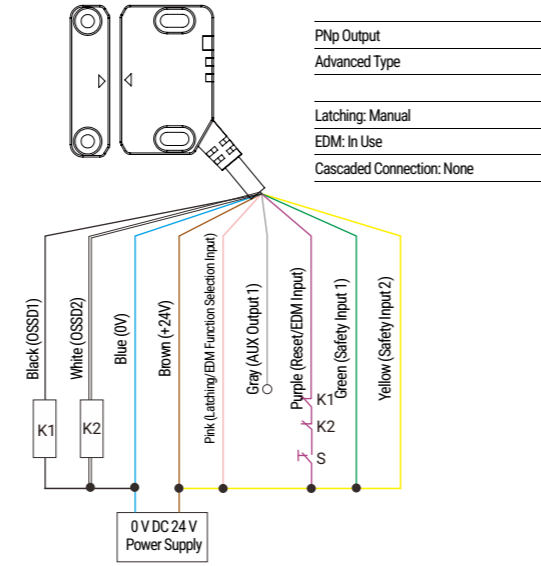
K1, K2: External Devices (Positively Driven Relays, Electromagnetic Contactors, etc.)

GT-R13 Advanced Type(NPN)



NPN Output
Advanced Type
Latching: Automatic
EDM: Not in Use
Cascaded Connection: None

GT-R13 Advanced Type (PNP)

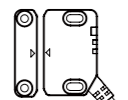


PNP Output
Advanced Type
Latching: Manual
EDM: In Use
Cascaded Connection: None

Wiring Example for Cascaded Connection

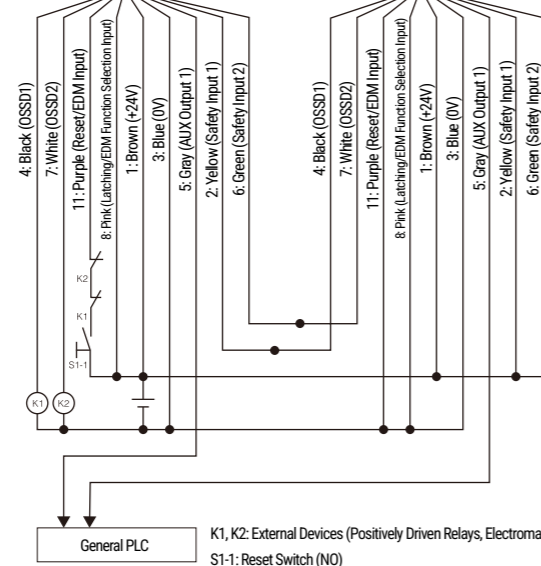
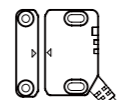
Unit 1

PNP Output
Advanced Type
Latching: Manual
EDM: In Use
Cascaded Connection: Active

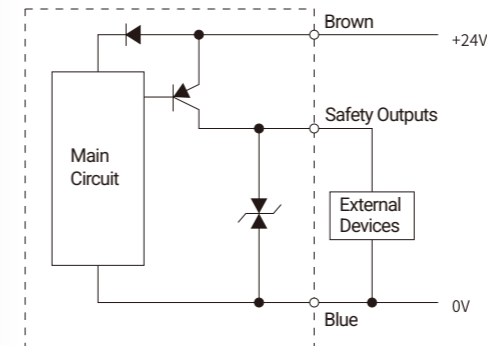


Unit 2

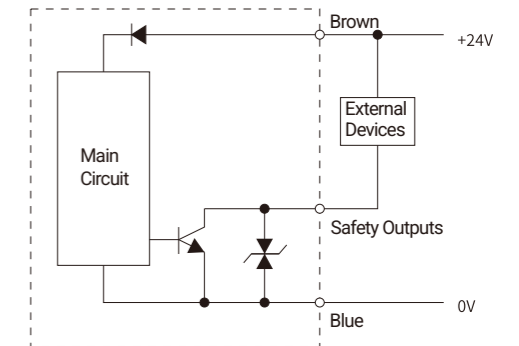
PNP Output
Advanced Type
Latching: Automatic
EDM: Not in Use
Cascaded Connection: None



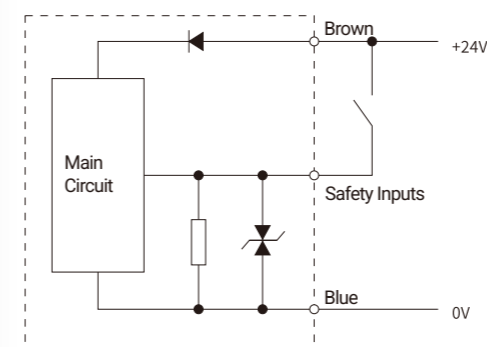
OSSD Output Circuit (PNP-type)



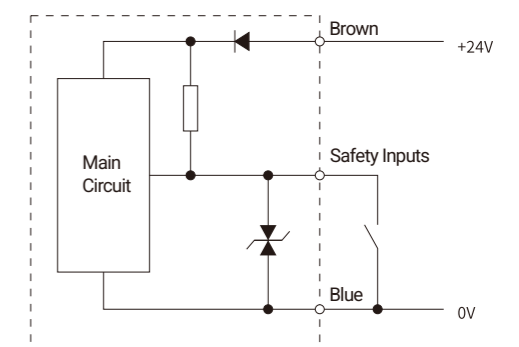
OSSD Output Circuit (NPN-type)



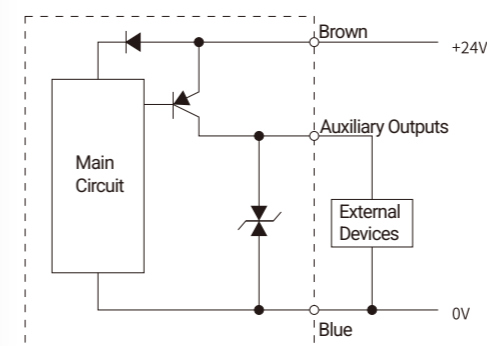
Safety Input Circuit (PNP-type)



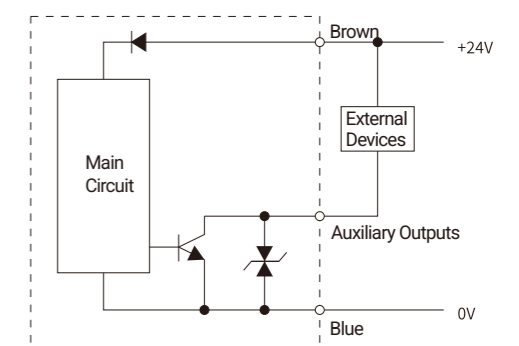
Safety Input Circuit (NPN-type)

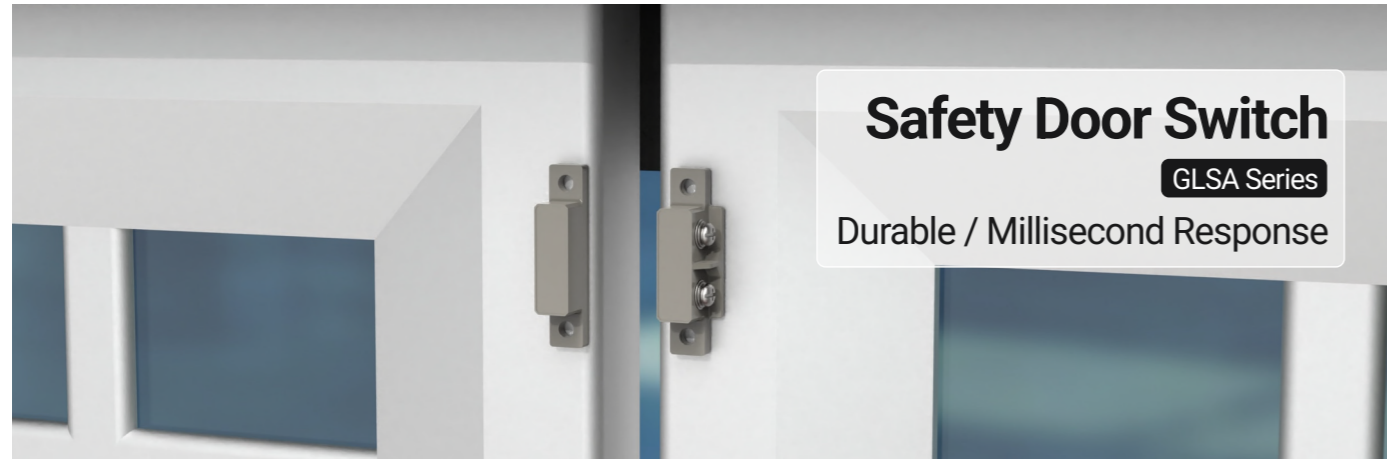


AUX Output Circuit Diagram (PNP-type)

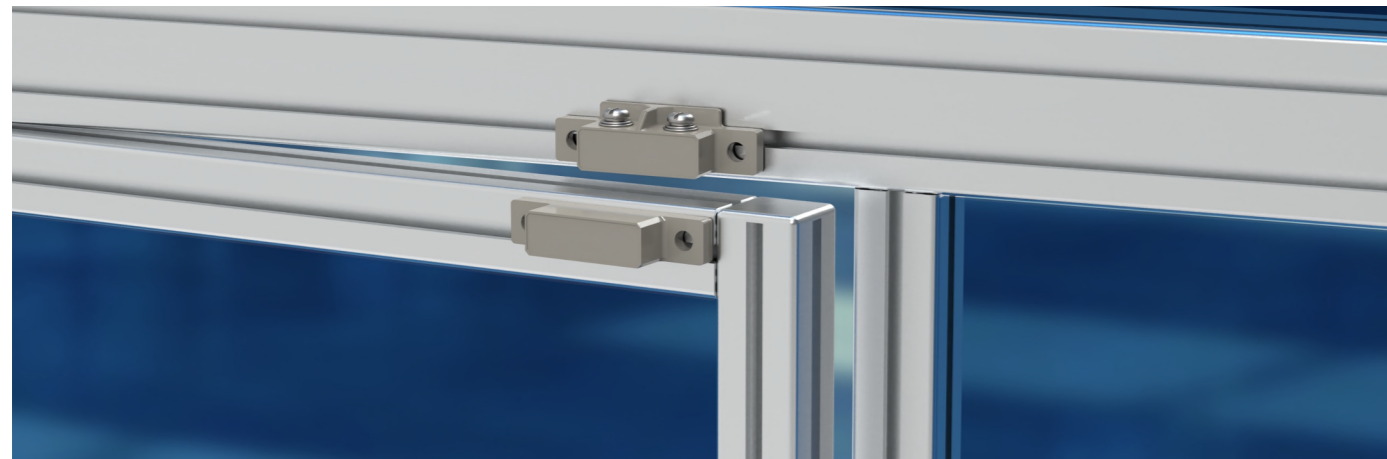


AUX Output Circuit Diagram (NPN-type)

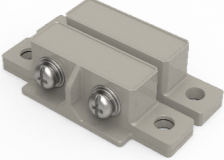




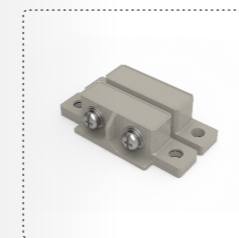
Application Examples



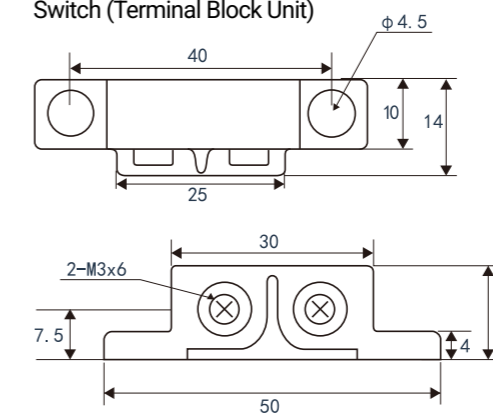
- Sensing Distance: 15 mm
- Proximity switch activated by permanent magnet to operate reed contact or switching points
- Suitable for detecting door and magnetic latch position status

Type	Safety Door Switch
Appearance	
Model	GLSA
Sensor Head Dimensions	50mm×14mm×14mm
Type	Reed Switch/Proximity Sensing
Sensing Distance	15 mm
Response Frequency	≤ 20 Hz
Operating Temperature Range	-20~+60°C
Non-Operating Temperature Range	*-20~+60°C
Operating Humidity Range	35~85% RH
Non-Operating Humidity Range	35~85% RH
Withstand Voltage	Terminals to Housing: AC 1000 V, 50/60 Hz, 1 min
Vibration (Endurance)	Vibration Resistance: 10~55 Hz, 1.5 mm Double Amplitude, 2 h on X/Y/Z axes
Shock (Endurance)	Shock Resistance: 300 m/s ² , 3 impacts on X/Y/Z axes
IP Rating	IP40
Connection Method	Terminal Block Type
Material	Sensor: ABS Magnet: ABS

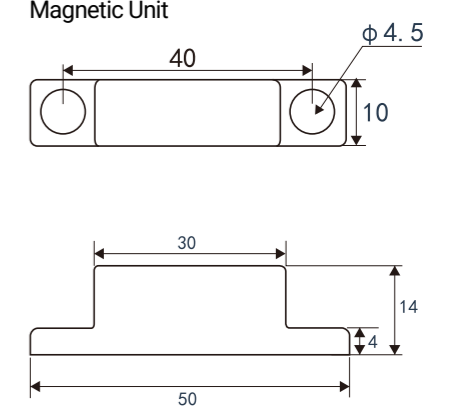
GLSA Dimension Drawing

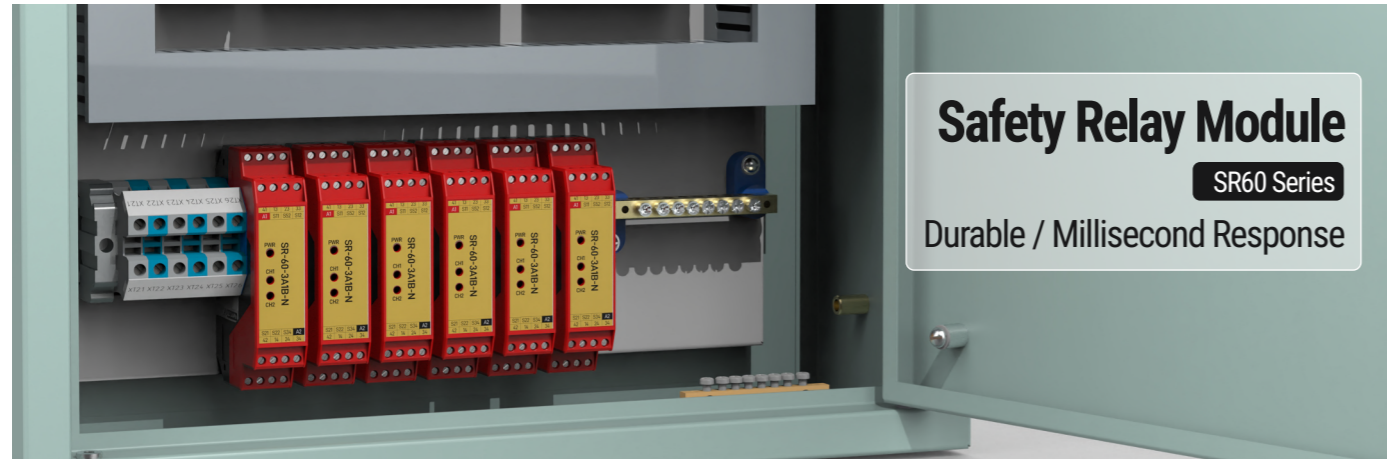


Switch (Terminal Block Unit)

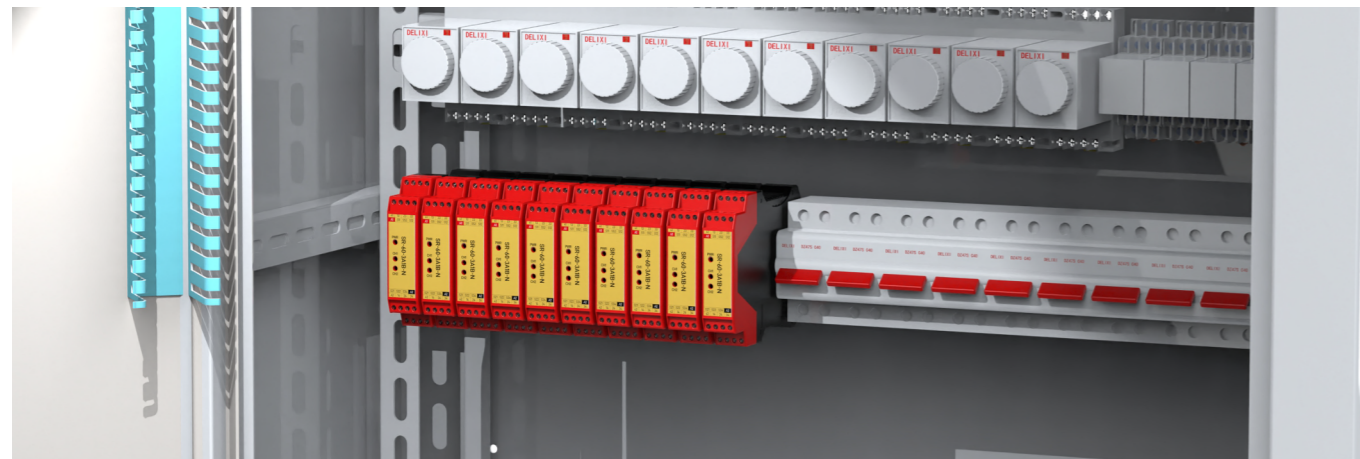


Magnetic Unit





Application Examples



• Designed in accordance with ISO 13849-1 (Category 4, PLe)

• Relay Outputs: 3 Normally Open (NO) Contacts, 1 Normally Closed (NC) Auxiliary Contact

• Automatic and Manual Reset Selection

• Reverse Polarity Protection

• Cross-fault Monitoring in Internal Circuitry


• Intuitive Status Indicators for Operational Diagnosis

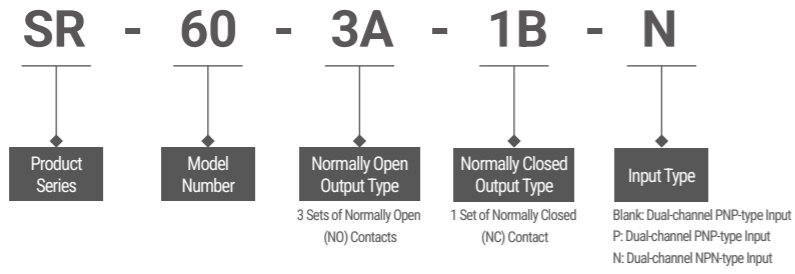
• Redundant Circuit Design with Self-diagnostic Function

• Removable Terminal Blocks for Easy Maintenance

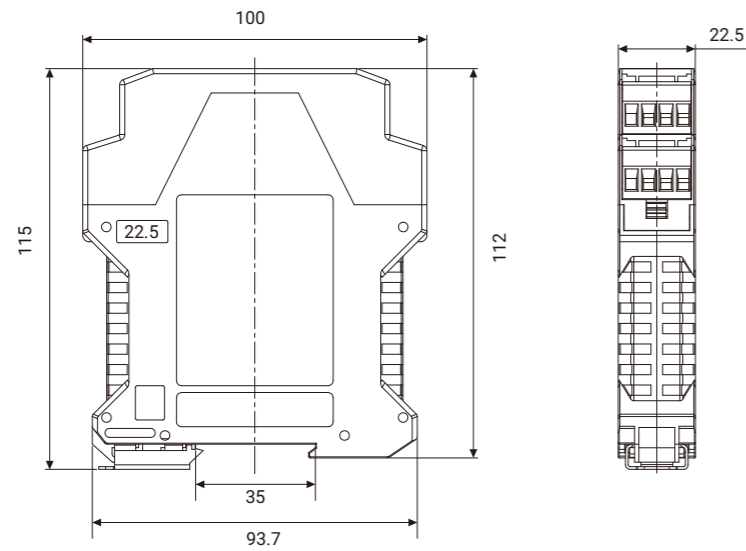
• Input Power Overvoltage Protection

• Standard 35 mm DIN Rail Mounting Design

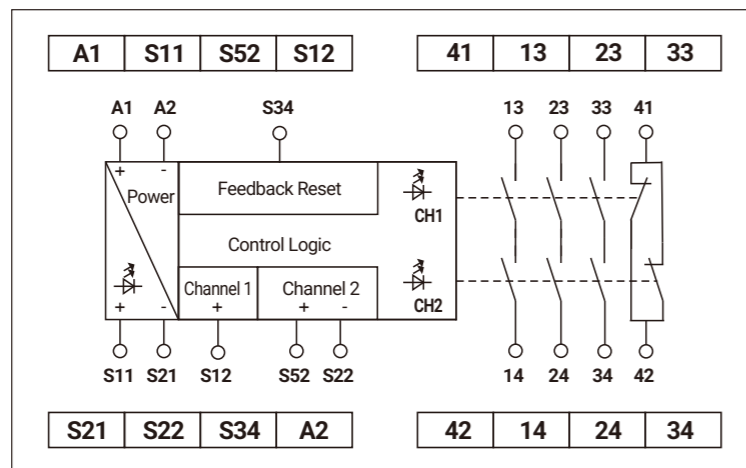
Type	Safety Relay Module	
Appearance		
Model	NPN Output	SR-60-3A1B-N
	PNP Output	SR-60-3A1B-N
Compliance Standards	ISO 13849 - 1(Category 4/PL e)	
Safety Level	ISO 13849-1 Category 4 (PLe)	
Supply Voltage	DC 24 V ±10%	
Power Consumption	< 3 W	
Detection Response Time	< 15 ms	
Pick-up Buffer Time	< 100 ms	
Power-on Start-up Time	< 1 s	
Protection Circuitry	Input Power Overvoltage Protection, Reverse Polarity Protection	
Safety Inputs	Dual NPN Normally Closed Inputs, Dual PNP Normally Closed Inputs; Dual-channel Safety Gate or Emergency Stop Button	
Input Synchronization	Unrestricted during Automatic Reset (Channel 2 before Channel 1)	
Safety Outputs	3 Normally Open (NO) Passive Contacts, 1 Normally Closed (NC) Passive Contact	
B10d Value	Rated Load: 400,000 cycles; Light Load: 2,000,000 cycles	
Contact Rating	AC15: 5 A / 250 V; DC13: 6 A / 24 V	
Electrical Life	≥ 100,000 cycles (1NO: 5 A 250 V AC, Resistive Load, 1 s ON / 9 s OFF)	
Mechanical Life	≥ 10,000,000 cycles	
Vibration Resistance	10–55 Hz, 0.35 ± 0.05 mm Double Amplitude, 20 cycles per X/Y/Z axes	
Shock Resistance	10 g Acceleration, 16 ms Pulse Duration, 1,000 impacts per X/Y/Z axes	
Operating Temperature	-5 to +55 °C	
Storage Temperature	-40 to +85 °C	
IP Rating	Housing/Terminal Block Protection: IP40 / IP20	
Installation	35 mm DIN Rail	
Conductor Size	0.2~2.5mm ²	
Dimensions	115×100×22.5mm	



Product Dimensional Drawing

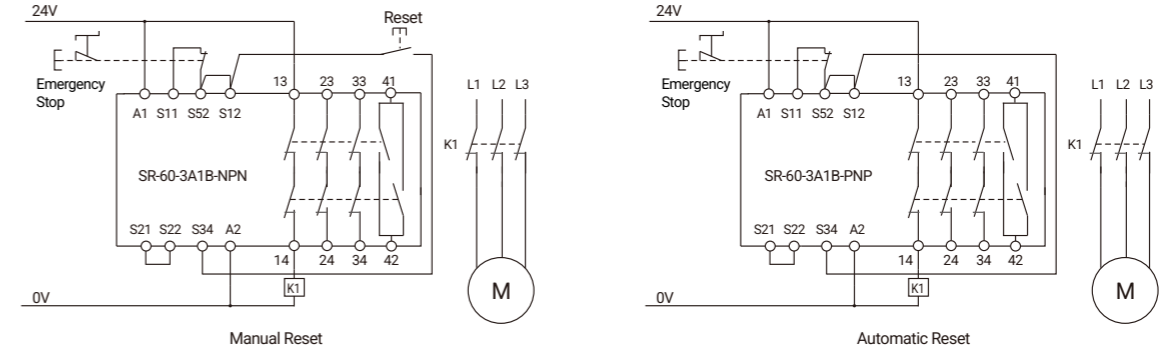


Functional Block Diagram

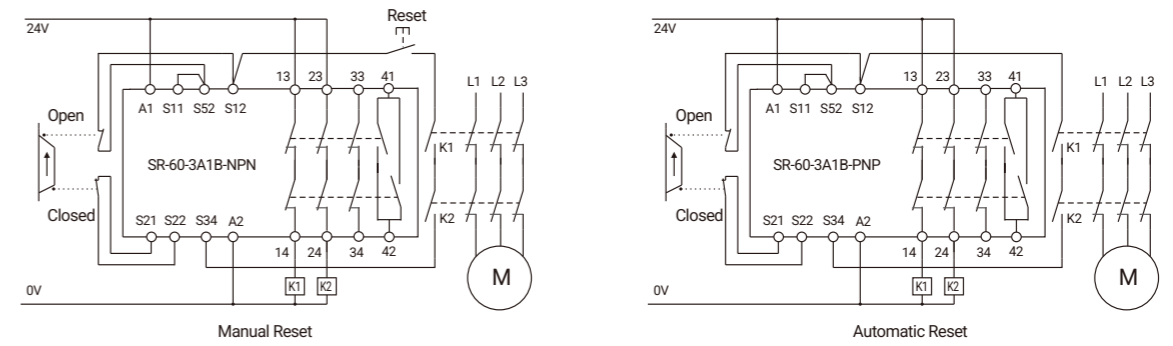


Product Wiring Diagram

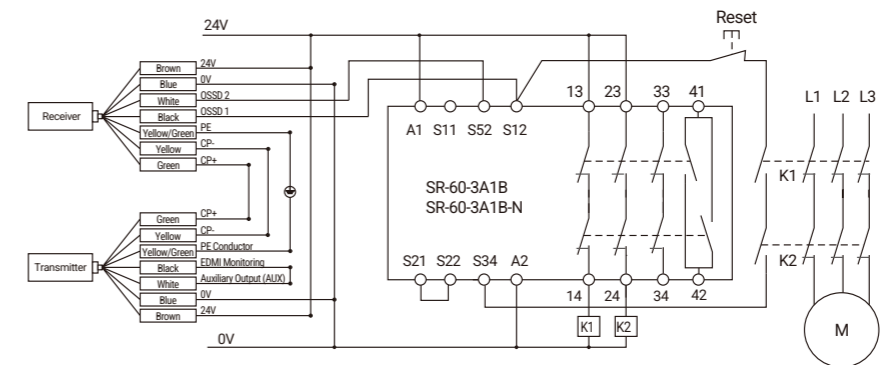
Single-channel Emergency Stop, Automatic Reset, Without Output Monitoring

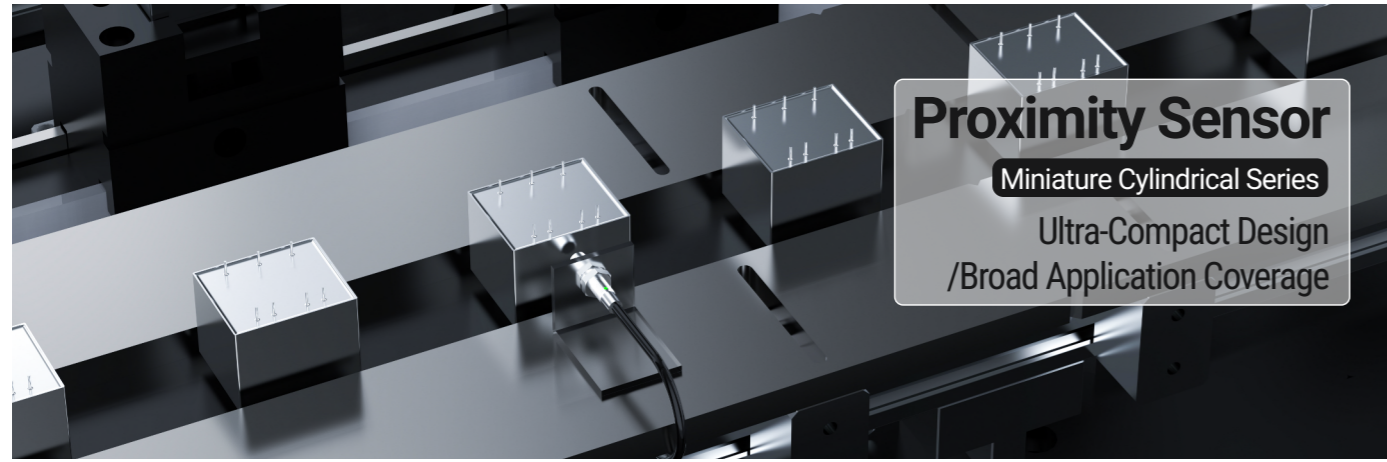


Dual-channel Safety Gate, Automatic Reset, With Output Monitoring

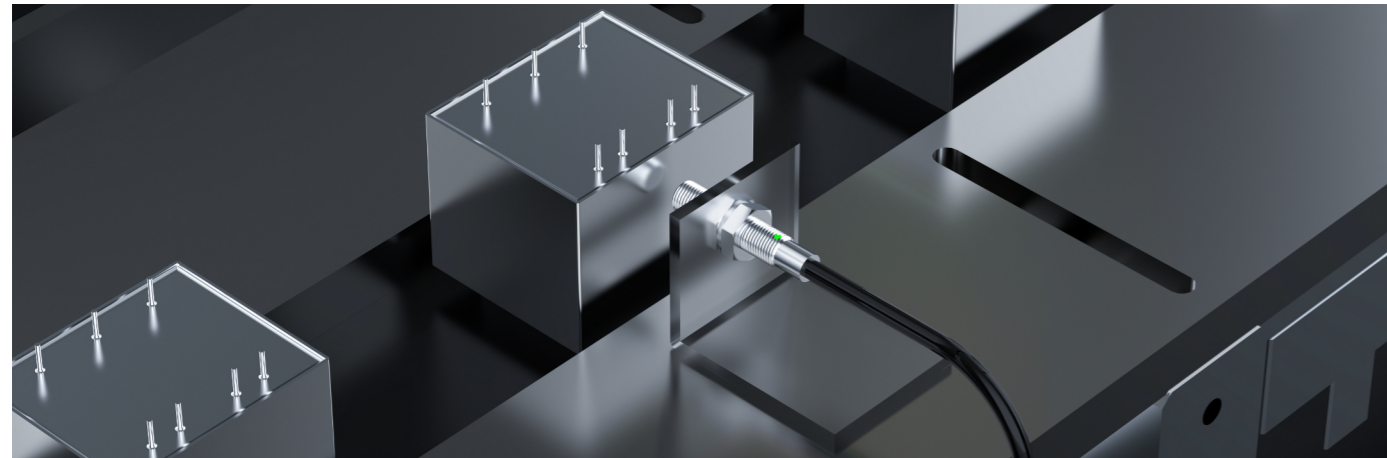


GTA Series Light Curtain, Monitored Manual Reset, With Output Monitoring





Application Examples



· Standard 2 m Flexible Cable (Custom Lengths Available; Continuous-Flexing Chain Cable Optional)

· 3 kHz Response Frequency for High-Speed Operation


· Non-Contact Detection Ensures Zero Wear/Damage to Target Objects


· Solid-State Output Extends Service Life (No Contact Degradation)

· Wide Operating Temperature Range

· Detects Physical Property Variations (Immune to Surface Color/Finish)

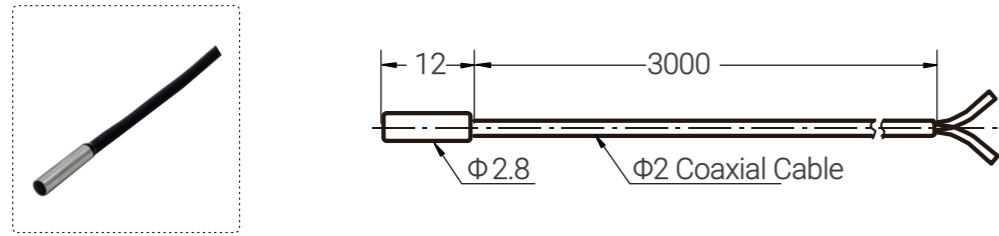
· IP68/IP69K Rated for Reliable Operation in Water/Oil Environments (Unaffected by Contaminants)

Sensor Head	Appearance	
	Model	GR2R-1.2NF-HD
	Type	Cylindrical Flush Type
	Stable Detection Range	0 to 0.6 mm
	Max. Sensing Distance	1.2 mm
	Detectable Objects	Black Metals (refer to Non-ferrous Metals characteristics)
	Standard Target Object (Iron, t=1mm)	5X5mm
	Repeatability	0.002mm
	Hysteresis (Differential Distance)	0.04mm

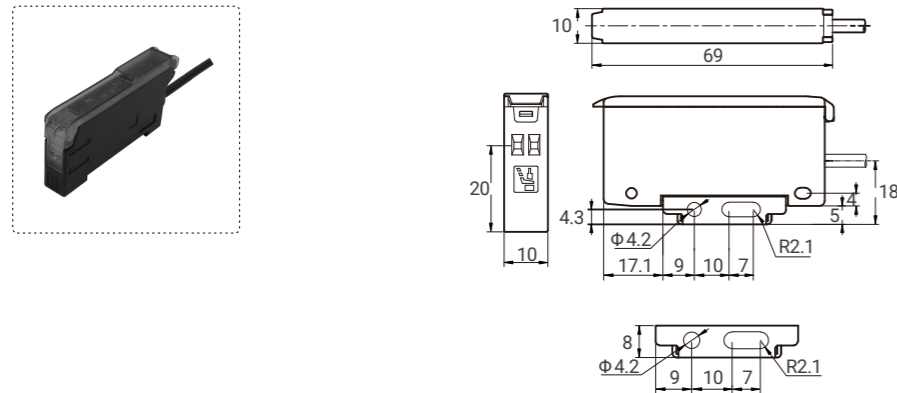
Amplifier	Appearance	
	Model	GR2R-1.2NF-CT
	Power Supply	12-24V DC, Ripple (P-P) max. 10%
	Current/Power	Max. 25 mA
	Response Time	Max. 1 ms
	Temperature Drift	±8% of Sensing Distance at 23°C, within 0-50°C range
	Sensitivity Adjustment	25-turn Knob Adjuster
	Operating Mode	Selectable NO (Normally Open) / NC (Normally Closed)
	Timer Function	Selectable 10 ms Delay, Timer Off
	Control Output	NPN (PNP) Open Collector Max. 100 mA (40V/PNP 26.4V), Residual Voltage Max. 1 V
	Disconnection Alarm Output	NPN (PNP) Open Collector Max. 100 mA (0V/PNP 26.4V), Residual Voltage ≤1 V
	Switch Protection	Reverse Current Protection, Output Overvoltage Protection, Output Surge Protection
	Ambient Humidity	0-50°C
	Relative Humidity	35-85% RH (non-condensing)
Weight (Including Nut and 2m Cable)	Approx. 65 g	

Cable	Model	GRZR-1.2NF-XL
	Core Count	3-core
	Length	2m
	Diameter	Φ3.0
	Material	PVC

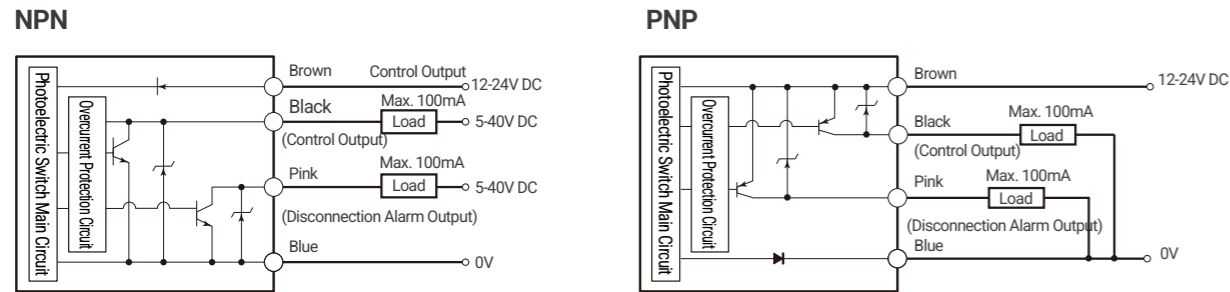
GR2R-1.2NF Proximity Sensor Dimensional Drawing



GR2R-1.2NF Amplifier Dimensional Drawing

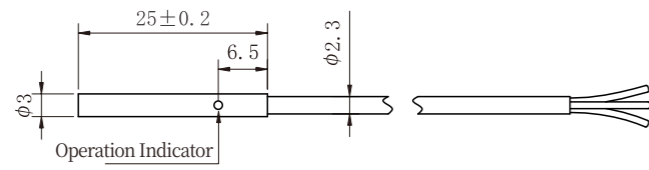


GR2R-1.2NF Wiring Diagram

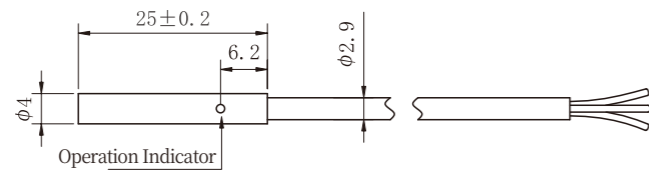


Type	Standard Version				
Appearance					
Model	NPN NO	GS030.8N/1.0N	GS041.0N/1.5N	GSM041.0N	GSM051.0N/1.5N
	NPN NC	GS030.8NC/1.0NC	GS041.0NC/1.5NC	GSM041.0NC	GSM051.0NC/1.5NC
	PNP NO	GS030.8P/1.0P	GS041.0P/1.5P	GSM041.0P	GSM051.0P/1.5P
	PNP NC	GS030.8PC/1.0PC	GS041.0PC/1.5PC	GSM041.0PC	GSM051.0PC/1.5PC
Mounting Method	Flush Mounting with Integral Cable				
Dimensions	Φ3	Φ4	M4	M5	
Sensing Distance	0.8mm/1.0mm	1.0mm/1.5mm	1.0mm	1.0mm/1.5mm	
Housing Material	Stainless Steel				
Operating Voltage	10~30V DC(Ripple<10%)				
Voltage Drop	<1.5V				
Load Current	100mA				
No-Load Current	<10mA				
Leakage Current	<0.01mA				
Switching Frequency	1K Hz				
Response Time	0.1ms				
Repeatability	<5.0%(Sr)				
Hysteresis	<15%(Sr)				
Sensing Face Material	Pa66				
Operating Temperature	-25°C~+70°C				
IP Rating	IP67				
Cable Specification	Oil-Immersion Tested Optional (R)				

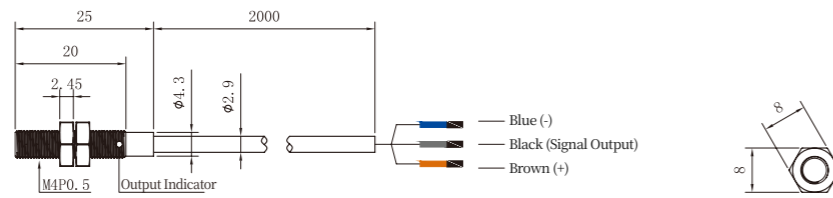
GS030.8/1.0



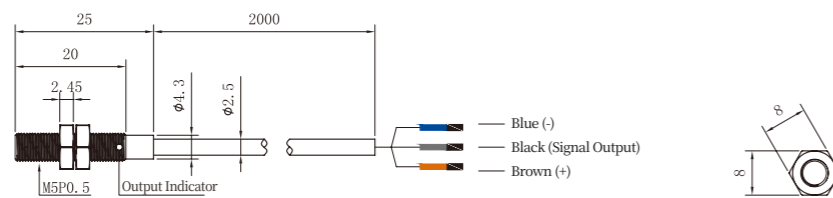
GS041.0/1.5





GSM041.0




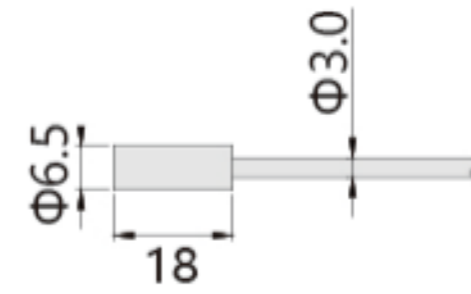
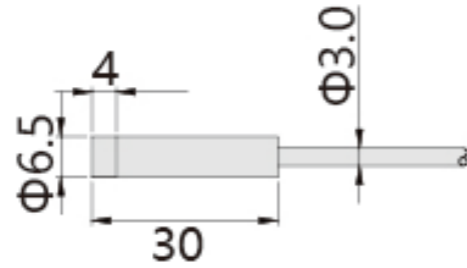
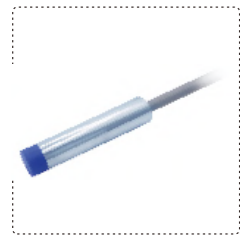
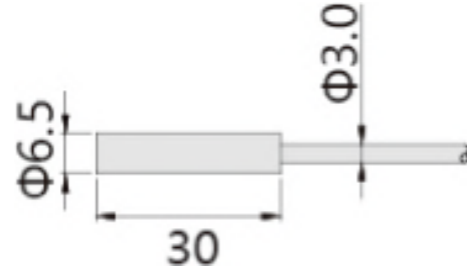
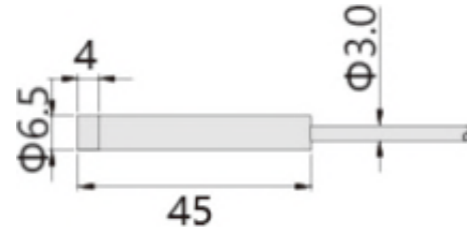
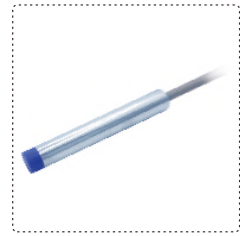
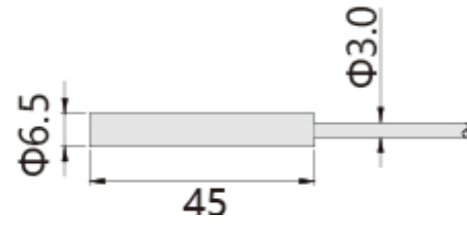
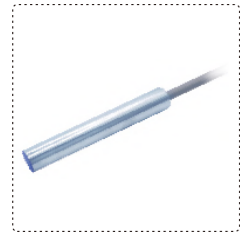
GSM051.0/1.5



Type	Standard Version				
Appearance					
Model	NPN NO	GR6R-02NOF	GR6R-03NOF	GR6R-04NON	GR6R-06NON
	NPN NC	GR6R-02NCF	GR6R-03NCF	GR6R-04NCN	GR6R-06NCN
	PNP NO	GR6R-02POF	GR6R-03POF	GR6R-04PON	GR6R-06PON
	PNP NC	GR6R-02PCF	GR6R-03PCF	GR6R-04PCN	GR6R-06PCN
Mounting Method	Flush Mounting with Integral Cable		Non-Flush Mounting with Integral Cable		
Dimensions	φ6.5				
Sensing Distance	2mm	3mm	4mm	6mm	
Operating Voltage	10~30V DC(±10%)				
Voltage Drop	≤2.0V				
Load Current	100mA				
No-Load Current	≤10mA				
Leakage Current	≤0.01mA				
Switching Frequency	3000Hz	1000Hz	500Hz		
Repeatability	<1.0%(Sr)				
Hysteresis	<15%(Sr)				
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection				
Operating Temperature	-25°C~+70°C				
IP Rating	IP67				
Housing Material	Stainless Steel				
Sensing Face Material	POM				
Connection Method	2m PVC Cable, 3*0.18mm ²				

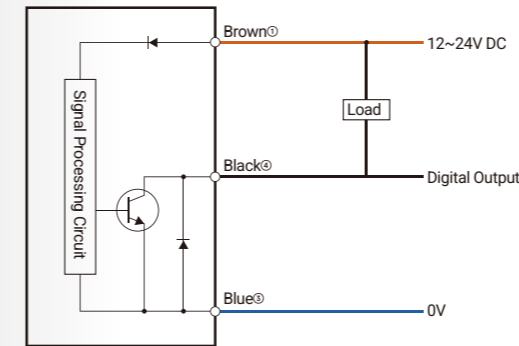
Type		Short Body			
Appearance					
Model	NPN NO	GS6R-02NOF	GS6R-03NOF	GS6R-04NON	GS6R-06NON
	NPN NC	GS6R-02NCF	GS6R-03NCF	GS6R-04NCN	GS6R-06NCN
	PNP NO	GS6R-02POF	GS6R-03POF	GS6R-04PON	GS6R-06PON
	PNP NC	GS6R-02PCF	GS6R-03PCF	GS6R-04PCN	GS6R-06PCN
Mounting Method		Flush Mounting with Integral Cable		Non-Flush Mounting with Integral Cable	
Dimensions		Φ6.5			
Sensing Distance		2mm	3mm	4mm	6mm
Operating Voltage		10~30V DC(±10%)			
Voltage Drop		≤2.0V			
Load Current		100mA			
No-Load Current		≤10mA			
Leakage Current		≤0.01mA			
Switching Frequency		2000Hz	1000Hz	500Hz	
Repeatability		<1.0%(Sr)			
Hysteresis		<15%(Sr)			
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection			
Operating Temperature		-25°C~+70°C			
IP Rating		IP67			
Housing Material		Stainless Steel			
Sensing Face Material		POM			
Connection Method		2m PVC cable, 3*0.18mm ²			

Type		Ultra-Short Body	
Appearance			
Model	NPN NO	GD6R-02NOF	GD6R-03NOF
	NPN NC	GD6R-02NCF	GD6R-03NCF
	PNP NO	GD6R-02POF	GD6R-03POF
	PNP NC	GD6R-02PCF	GD6R-03PCF
Mounting Method		Flush Mounting with Integral Cable	
Dimensions		Φ6.5	
Sensing Distance		2mm	3mm
Operating Voltage		10~30V DC(±10%)	
Voltage Drop		≤2.0V	
Load Current		100mA	
No-Load Current		≤10mA	
Leakage Current		≤0.01mA	
Switching Frequency		2000Hz	1000Hz
Repeatability		<1.0%(Sr)	
Hysteresis		<15%(Sr)	
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection	
Operating Temperature		-25°C~+70°C	
IP Rating		IP67	
Housing Material		Stainless Steel	
Sensing Face Material		POM	
Connection Method		2m PVC cable, 3*0.18mm ²	

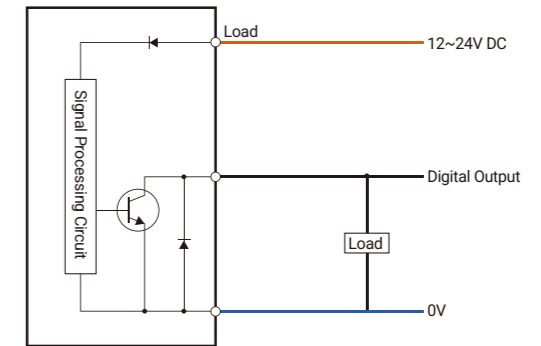


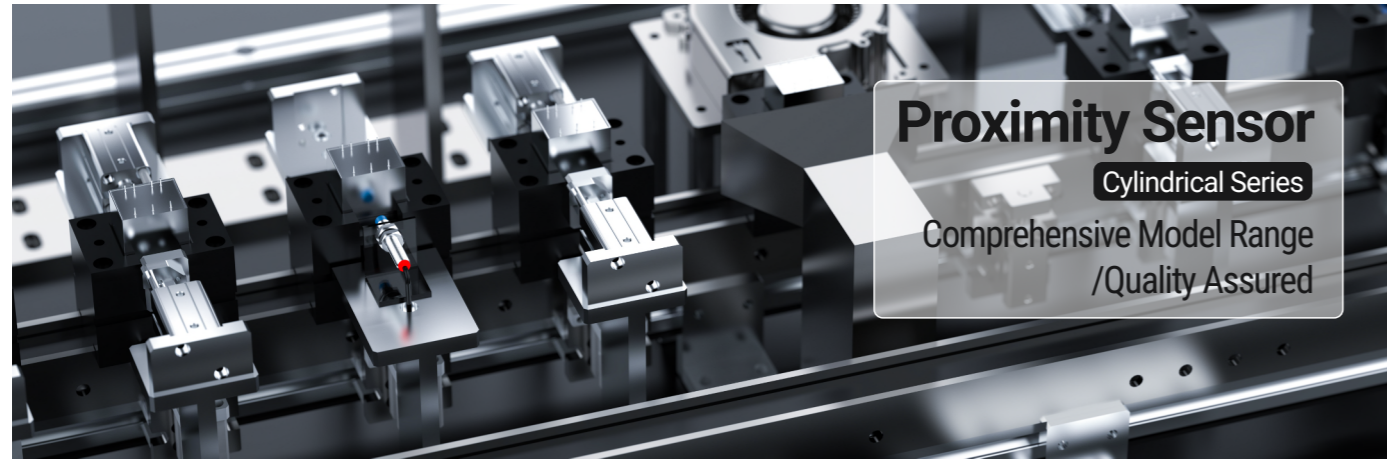
Miniature Cylindrical Series Wiring Diagram

NPN Output

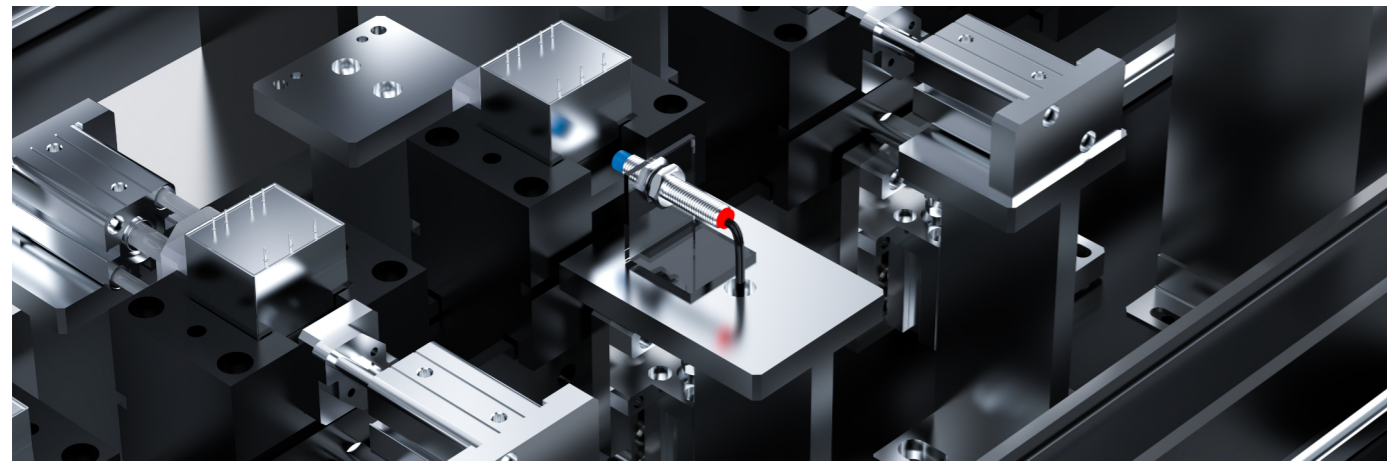


PNP Output





Application Examples




- Standard 2 m Flexible Cable (Custom Lengths Available; Oil-Immersion Tested Cable Optional)
- 3 kHz Response Frequency for High-Speed Operation
- Non-Contact Detection Ensures Zero Wear/Damage to Target Objects
- Solid-State Output Extends Service Life (No Contact Degradation)
- Wide Operating Temperature Range
- Detects Physical Property Variations (Immune to Surface Color/Finish)
- IP68/IP69K Rated for Reliable Operation in Contaminated Environments (Unaffected by Oil/Water/Particulates)

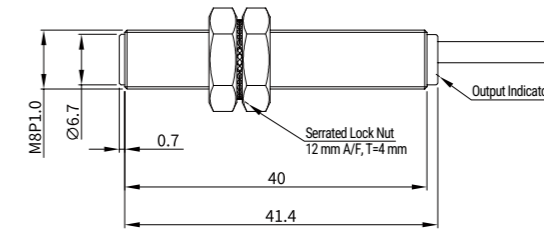
Type	Standard Version			
Appearance				
Model	NPN NO	GR08-01NOF	GR08-02NOF	GR08-03NOF
	NPN NC	GR08-01NCF	GR08-02NCF	GR08-03NCF
	PNP NO	GR08-01POF	GR08-02POF	GR08-03POF
	PNP NC	GR08-01PCF	GR08-02PCF	GR08-03PCF
Mounting Method	Flush Mounting with Integral Cable			
Dimensions (mm)	M8*42		M8*45	
Sensing Distance (mm)	1.0	2.0	3.0	
Repeatability	<3%(Sr)		<1.0%(Sr)	
Hysteresis (Differential Distance)	<15%(Sr)			
Response Frequency (Hz)	2000	1000		
Operating Voltage	DC 10~30V ±10%			
Residual Voltage (Voltage Drop)	<1.5V		≤2.0V	
Max. Load Current	100mA			
No-Load Current Consumption	≤10mA			
Leakage Current	≤0.01mA			
Ambient Temperature	Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)			
Ambient Humidity	35%-85% RH (non-condensing)			
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection			
Protection Class	IP67			
Material	Sensing Face:PBT Main Body:Stainless Steel(SUS303)		Sensing Face:POM Main Body:Stainless Steel	
Withstand Voltage	AC 1000V, 50/60Hz, 1 min			
Vibration Resistance	10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes			
Shock Resistance	500 m/s ² , 10 impacts each on X/Y/Z axes			
Insulation Resistance	50 MΩ (measured with DC 500V megohmmeter)			
Indicator	Red LED Indicator During Detection			
Connection Method	Standard 2 m 3-core cable (3.0 mm diameter), custom lengths available			
Cable Specification	Oil-Immersion Tested Optional (R)			

Type		Standard Version		
Appearance				
Model	NPN NO	GR08-01NOF-M8	GR08-02NOF-M8	GR08-03NOF-M8
	NPN NC	GR08-01NCF-M8	GR08-02NCF-M8	GR08-03NCF-M8
	PNP NO	GR08-01POF-M8	GR08-02POF-M8	GR08-03POF-M8
	PNP NC	GR08-01PCF-M8	GR08-02PCF-M8	GR08-03PCF-M8
Mounting Method		Flush Mounting with Connector		
Dimensions (mm)		M8*42		M8*60
Sensing Distance (mm)		1.0	2.0	3.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		2000	1000	
Operating Voltage		DC 10~30V ±10%		
Residual Voltage (Voltage Drop)		<1.5V		≤2.0V
Max. Load Current		100mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face:PBT Main Body:Stainless Steel(SUS303)		Sensing Face:POM Main Body:Stainless Steel
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		M8 Male 3-Pin Connector		
Cable Specification		Oil-Immersion Tested Optional (R)		

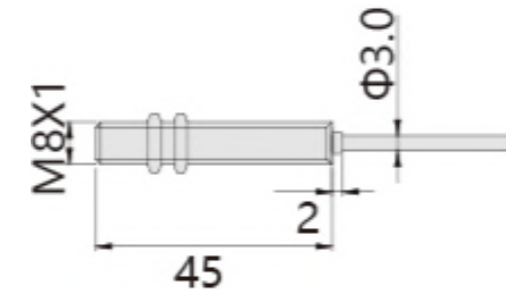
Type		Standard Version		
Appearance				
Model	NPN NO	GR08-02NON	GR08-04NON	GR08-06NON
	NPN NC	GR08-02NCN	GR08-04NCN	GR08-06NCN
	PNP NO	GR08-02PON	GR08-04PON	GR08-06PON
	PNP NC	GR08-02PCN	GR08-04PCN	GR08-06PCN
Mounting Method		Non-Flush Mounting with Integral Cable		
Dimensions (mm)		M8*46		M8*60
Sensing Distance (mm)		2.0	4.0	6.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		1000	800	500
Operating Voltage		DC 10~30V± 10%		
Residual Voltage (Voltage Drop)		<1.5V		≤2.0V
Max. Load Current		100mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face:PBT Main Body:Stainless Steel(SUS303)		Sensing Face:POM Main Body:Stainless Steel
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		Standard 2 m 3-core cable (3.0 mm diameter), custom lengths available		
Cable Specification		Oil-Immersion Tested Optional (R)		

Type	Standard Version			
Appearance				
Model	NPN NO	GR08-02NON-M8	GR08-04NON-M8	GR08-06NON-M8
	NPN NC	GR08-02NCN-M8	GR08-04NCN-M8	GR08-06NCN-M8
	PNP NO	GR08-02PON-M8	GR08-04PON-M8	GR08-06PON-M8
	PNP NC	GR08-02PCN-M8	GR08-04PCN-M8	GR08-06PCN-M8
Mounting Method	Non-Flush Mounting with Connector			
Dimensions (mm)	M8*46		M8*60	
Sensing Distance (mm)	2.0	4.0	6.0	
Repeatability	<3%(Sr)		<1.0%(Sr)	
Hysteresis (Differential Distance)	<15%(Sr)			
Response Frequency (Hz)	1000	800	500	
Operating Voltage	DC 10~30V ±10%			
Residual Voltage (Voltage Drop)	<1.5V		≤2.0V	
Max. Load Current	100mA			
No-Load Current Consumption	≤10mA			
Leakage Current	≤0.01mA			
Ambient Temperature	Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)			
Ambient Humidity	35%-85% RH (non-condensing)			
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection			
Protection Class	IP67			
Material	Sensing Face:PBT Main Body:Stainless Steel(SUS303)		Sensing Face:POM Main Body:Stainless Steel	
Withstand Voltage	AC 1000V, 50/60Hz, 1 min			
Vibration Resistance	10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes			
Shock Resistance	500 m/s ² , 10 impacts each on X/Y/Z axes			
Insulation Resistance	50 MΩ (measured with DC 500V megohmmeter)			
Indicator	Red LED Indicator During Detection			
Connection Method	M8 Male 3-Pin Connector			
Cable Specification	Oil-Immersion Tested Optional (R)			

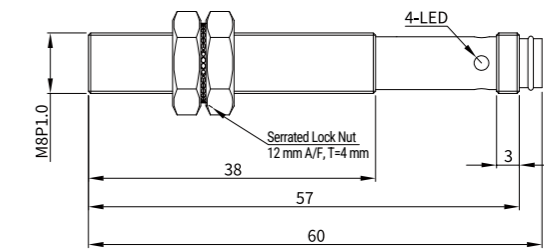
GR08-01/02 Flush Mounting with Integral Cable



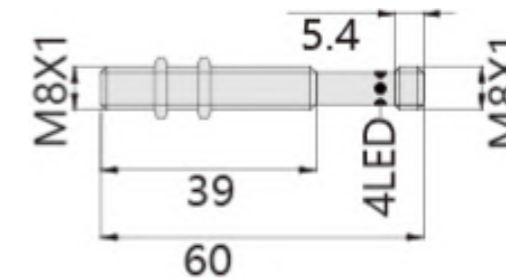
GR08-03 Flush Mounting with Integral Cable



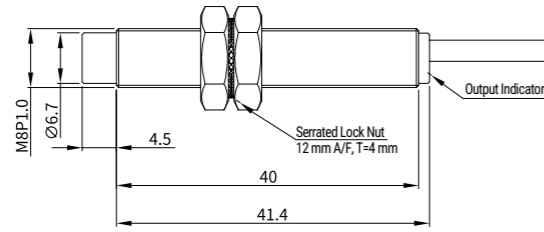
GR08-01/02 Flush Mounting with Connector



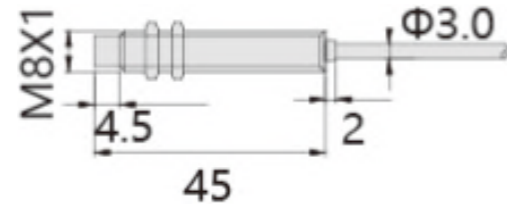
GR08-03 Flush Mounting with Connector



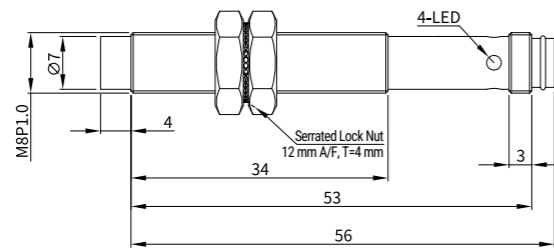
GR08-02/04 Non-Flush Mounting with Integral Cable



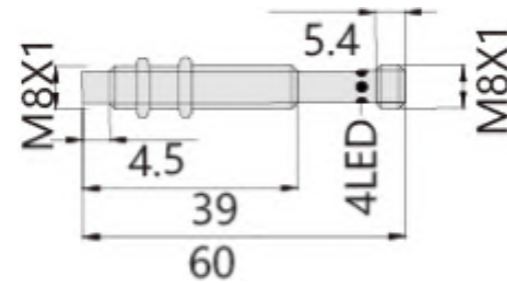
GR08-06 Non-Flush Mounting with Integral Cable




GR08-02/04 Non-Flush Mounting with Connector





GR08-06 Non-Flush Mounting with Connector



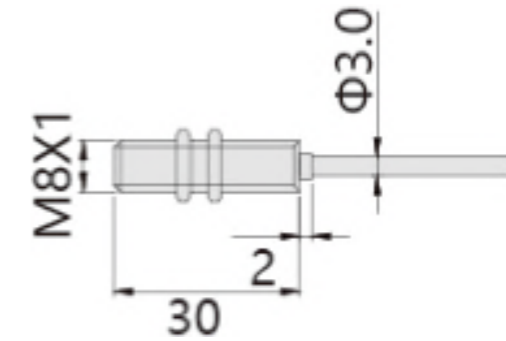
Type	Short Body		
Appearance			
Model	NPN NO	GS08-02NOF	GS08-03NOF
	NPN NC	GS08-02NCF	GS08-03NCF
	PNP NO	GS08-02POF	GS08-03POF
	PNP NC	GS08-02PCF	GS08-03PCF
Mounting Method	Flush Mounting with Integral Cable		
Dimensions (mm)	M8*30		
Sensing Distance (mm)	2.0	3.0	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	2000	1000	
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	≤2.0V		
Max. Load Current	100mA		
No-Load Current Consumption	≤10mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25°C~70°C		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:POM Main Body:Stainless Steel		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	2m PVC cable,3*0.18mm ²		

Type	Short Body		
Appearance			
Model	NPN NO	GS08-02NOF-M8	GS08-03NOF-M8
	NPN NC	GS08-02NCF-M8	GS08-03NCF-M8
	PNP NO	GS08-02POF-M8	GS08-03POF-M8
	PNP NC	GS08-02PCF-M8	GS08-03PCF-M8
Mounting Method	Flush Mounting with Connector		
Dimensions (mm)	M8*45		
Sensing Distance (mm)	2.0	3.0	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	2000	1000	
Operating Voltage	DC 10~30V±10%		
Residual Voltage (Voltage Drop)	≤2.0V		
Max. Load Current	100mA		
No-Load Current Consumption	≤10mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25℃~70℃		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:POM Main Body:Stainless Steel		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	M8 Male 3-Pin Connector		

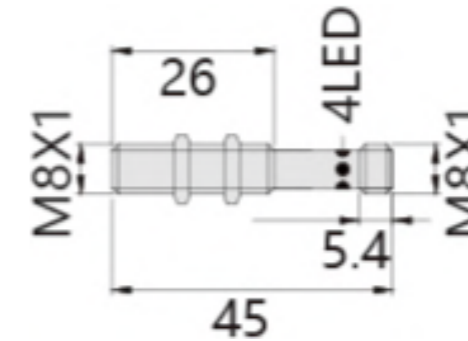
Type	Short Body		
Appearance			
Model	NPN NO	GS08-04NON	GS08-06NON
	NPN NC	GS08-04NCN	GS08-06NCN
	PNP NO	GS08-04PON	GS08-06PON
	PNP NC	GS08-04PCN	GS08-06PCN
Mounting Method	Non-Flush Mounting with Integral Cable		
Dimensions (mm)	M8*30		
Sensing Distance (mm)	4.0	6.0	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	1000	500	
Operating Voltage	DC 10~30V±10%		
Residual Voltage (Voltage Drop)	≤2.0V		
Max. Load Current	100mA		
No-Load Current Consumption	≤10mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25℃~70℃		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:POM Main Body:Stainless Steel		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	2m PVC cable, 3*0.18mm ²		

Type	Short Body		
Appearance			
Model	NPN NO	GS08-04NON-M8	GS08-06NON-M8
	NPN NC	GS08-04NCN-M8	GS08-06NCN-M8
	PNP NO	GS08-04PON-M8	GS08-06PON-M8
	PNP NC	GS08-04PCN-M8	GS08-06PCN-M8
Mounting Method	Non-Flush Mounting with Connector		
Dimensions (mm)	M8*45		
Sensing Distance (mm)	4.0	6.0	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	1000	500	
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	≤2.0V		
Max. Load Current	100mA		
No-Load Current Consumption	≤10mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25°C~70°C		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:POM Main Body:Stainless Steel		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	M8 Male 3-Pin Connector		

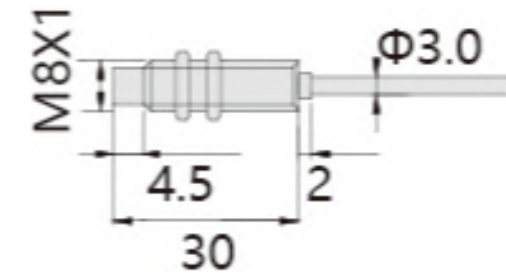
GS08-02/03 Flush Mounting with Integral Cable



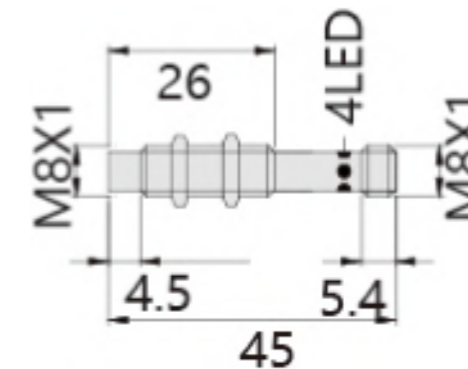
GS08-02/03 Flush Mounting with Connector




GS08-04/06 Non-Flush Mounting with Integral Cable

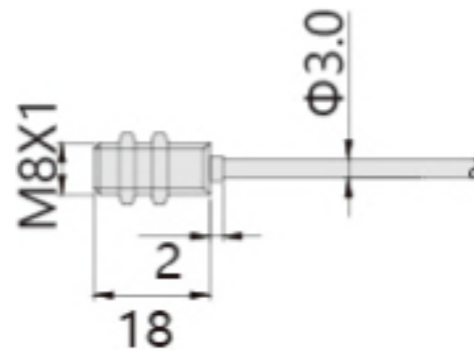



GS08-04/06 Non-Flush Mounting with Connector



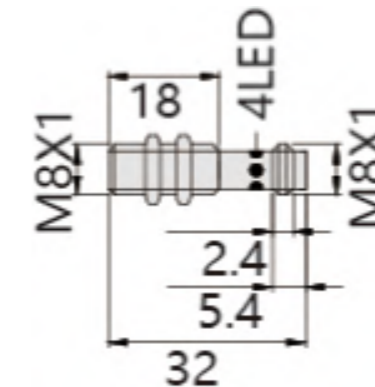
Type	Ultra-Short Body		
Appearance			
Model	NPN NO	GD08-02NOF	GD08-03NOF
	NPN NC	GD08-02NCF	GD08-03NCF
	PNP NO	GD08-02POF	GD08-03POF
	PNP NC	GD08-02PCF	GD08-03PCF
Mounting Method	Flush Mounting with Integral Cable		
Dimensions (mm)	M8*18		
Sensing Distance (mm)	2.0	3.0	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	2000	1000	
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	≤2.0V		
Max. Load Current	100mA		
No-Load Current Consumption	≤10mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25°C~70°C		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:POM Main Body:Stainless Steel		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	2m PVC cable,3*0.18mm ²		



GD08-02/03 Flush Mounting with Integral Cable






Type	Ultra-Short Body		
Appearance			
Model	NPN NO	GD08-02NOF-M8	GD08-03NOF-M8
	NPN NC	GD08-02NCF-M8	GD08-03NCF-M8
	PNP NO	GD08-02POF-M8	GD08-03POF-M8
	PNP NC	GD08-02PCF-M8	GD08-03PCF-M8
Mounting Method	Flush Mounting with Connector		
Dimensions (mm)	M8*32		
Sensing Distance (mm)	2.0	3.0	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	2000	1000	
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	≤2.0V		
Max. Load Current	100mA		
No-Load Current Consumption	≤10mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25°C~70°C		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:POM Main Body:Stainless Steel		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	M8 Male 3-Pin Connector		


GD08-02/03 Flush Mounting with Connector



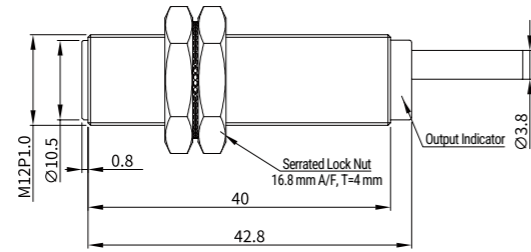
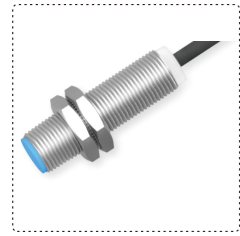
Type		Standard Version		
Appearance				
Model	NPN NO	GR12-02NOF	GR12-04NOF	GR12-06NOF
	NPN NC	GR12-02NCF	GR12-04NCF	GR12-06NCF
	PNP NO	GR12-02POF	GR12-04POF	GR12-06POF
	PNP NC	GR12-02PCF	GR12-04PCF	GR12-06PCF
Mounting Method		Flush Mounting with Integral Cable		
Dimensions (mm)		M12*44		M12*50
Sensing Distance (mm)		2.0	4.0	6.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		1000	800	
Operating Voltage		DC 10~30V ±10%		
Residual Voltage (Voltage Drop)		≤2.0V		
Max. Load Current		200mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face: PBT Main Body: Nickel-Copper Alloy		
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		Standard 2 m 3-core cable (3.8 mm diameter), custom lengths available		
Cable Specification		Oil-Immersion Tested Optional (R)		

Type		Standard Version		
Appearance				
Model	NPN NO	GR12-02NOF-M12	GR12-04NOF-M12	GR12-06NOF-M12
	NPN NC	GR12-02NCF-M12	GR12-04NCF-M12	GR12-06NCF-M12
	PNP NO	GR12-02POF-M12	GR12-04POF-M12	GR12-06POF-M12
	PNP NC	GR12-02PCF-M12	GR12-04PCF-M12	GR12-06PCF-M12
Mounting Method		Flush Mounting with Connector		
Dimensions (mm)		M12*57		M12*68
Sensing Distance (mm)		2.0	4.0	6.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		1000	800	
Operating Voltage		DC 10~30V± 10%		
Residual Voltage (Voltage Drop)		≤2.0V		
Max. Load Current		200mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face: PBT Main Body: Nickel-Copper Alloy		
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		M12 Male 3-Pin Connector		
Cable Specification		Oil-Immersion Tested Optional (R)		

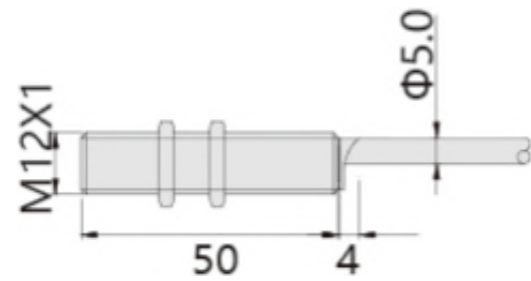
Type		Standard Version		
Appearance				
Model	NPN NO	GR12-04NON	GR12-08NON	GR12-10NON
	NPN NC	GR12-04NCN	GR12-08NCN	GR12-10NCN
	PNP NO	GR12-04PON	GR12-08PON	GR12-10PON
	PNP NC	GR12-04PCN	GR12-08PCN	GR12-10PCN
Mounting Method		Non-Flush Mounting with Integral Cable		
Dimensions (mm)		M12*48		M12*50
Sensing Distance (mm)		4.0	8.0	10.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		1200	1000	400
Operating Voltage		DC 10~30V± 10%		
Residual Voltage (Voltage Drop)		≤2.0V		
Max. Load Current		200mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face: PBT Main Body: Nickel-Copper Alloy		
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		Standard 2 m 3-core cable (3.8 mm diameter), custom lengths available		
Cable Specification		Oil-Immersion Tested Optional (R)		

Type		Standard Version		
Appearance				
Model	NPN NO	GR12-04NON-M12	GR12-08NON-M12	GR12-10NON-M12
	NPN NC	GR12-04NCN-M12	GR12-08NCN-M12	GR12-10NCN-M12
	PNP NO	GR12-04PON-M12	GR12-08PON-M12	GR12-10PON-M12
	PNP NC	GR12-04PCN-M12	GR12-08PCN-M12	GR12-10PCN-M12
Mounting Method		Non-Flush Mounting with Connector		
Dimensions (mm)		M12*61		M12*68
Sensing Distance (mm)		4.0	8.0	10.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		1200	1000	400
Operating Voltage		DC 10~30V± 10%		
Residual Voltage (Voltage Drop)		≤2.0V		
Max. Load Current		200mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face: PBT Main Body: Nickel-Copper Alloy		
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		M12 Male 3-Pin Connector		
Cable Specification		Oil-Immersion Tested Optional (R)		

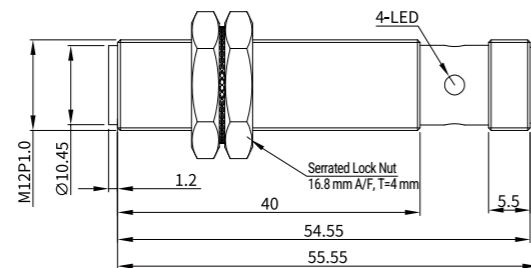
GR12-02/04 Flush Mounting with Integral Cable



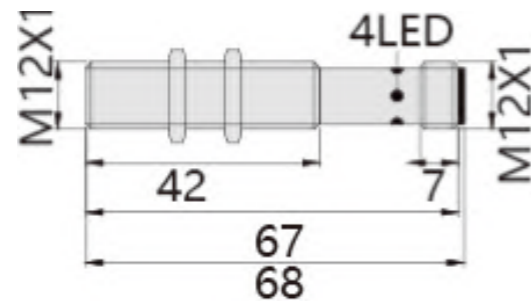
GR12-06 Flush Mounting with Integral Cable



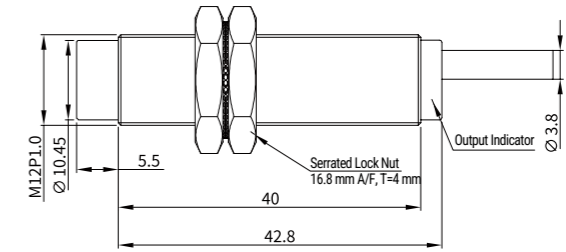
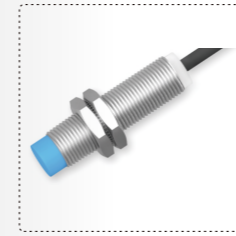
GR12-02/04 Flush Mounting with Connector



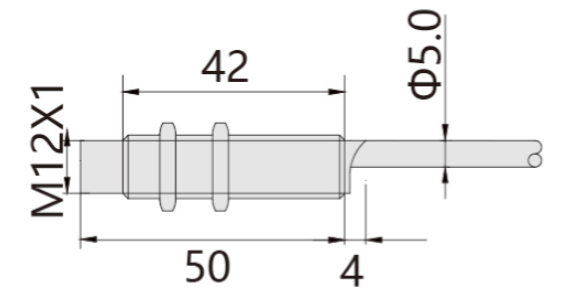
GR12-06 Flush Mounting with Connector



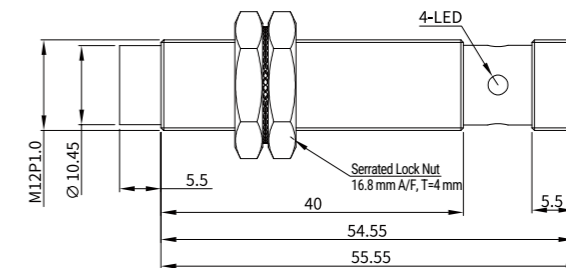
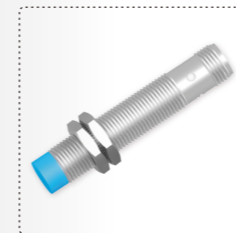
GR12-04/08 Non-Flush Mounting with Integral Cable



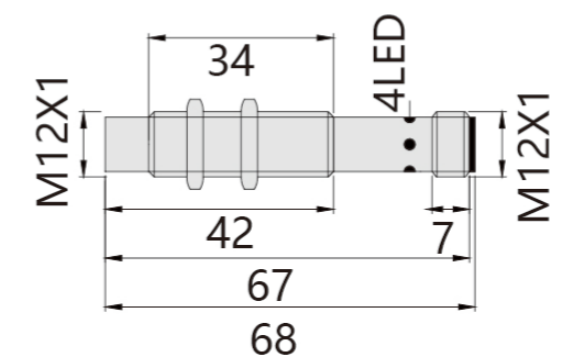
GR12-10 Non-Flush Mounting with Integral Cable





GR12-04/08 Non-Flush Mounting with Connector





GR12-10 Non-Flush Mounting with Connector



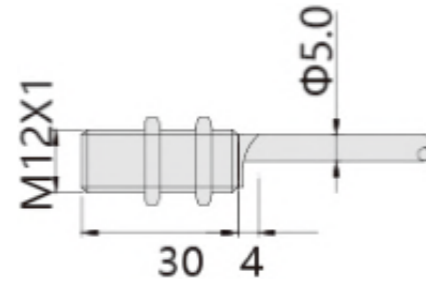
Type	Short Body		
Appearance			
Model	NPN NO	GS12-04NOF	GS12-06NOF
	NPN NC	GS12-04NCF	GS12-06NCF
	PNP NO	GS12-04POF	GS12-06POF
	PNP NC	GS12-04PCF	GS12-06PCF
Mounting Method	Flush Mounting with Integral Cable		
Dimensions (mm)	M12*30		
Sensing Distance (mm)	4.0	6.0	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	3000	800	
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	≤2.0V		
Max. Load Current	100mA		
No-Load Current Consumption	≤10mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25°C~70°C		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:PBT Main Body:Nickel-Copper Alloy		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	2m PVC cable, 3*0.35mm ²		

Type	Short Body		
Appearance			
Model	NPN NO	GS12-04NOF-M12	GS12-06NOF-M12
	NPN NC	GS12-04NCF-M12	GS12-06NCF-M12
	PNP NO	GS12-04POF-M12	GS12-06POF-M12
	PNP NC	GS12-04PCF-M12	GS12-06PCF-M12
Mounting Method	Flush Mounting with Connector		
Dimensions (mm)	M12*50		
Sensing Distance (mm)	4.0	6.0	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	3000	800	
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	≤2.0V		
Max. Load Current	200mA		
No-Load Current Consumption	≤10mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25°C~70°C		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:PBT Main Body:Nickel-Copper Alloy		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	M12 Male 3-Pin Connector		

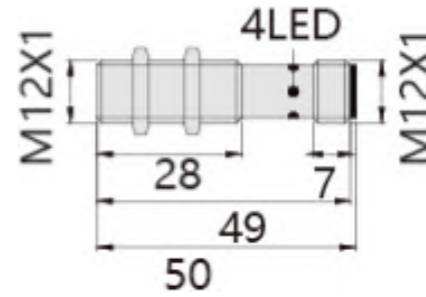
Type	Short Body		
Appearance			
Model	NPN NO	GS12-08NON	GS12-10NON
	NPN NC	GS12-08NCN	GS12-10NCN
	PNP NO	GS12-08PON	GS12-10PON
	PNP NC	GS12-08PCN	GS12-10PCN
Mounting Method	Non-Flush Mounting with Integral Cable		
Dimensions (mm)	M12*30		
Sensing Distance (mm)	8.0	10.0	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	500	400	
Operating Voltage	DC 10~30V±10%		
Residual Voltage (Voltage Drop)	≤2.0V		
Max. Load Current	200mA		
No-Load Current Consumption	≤10mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25°C~70°C		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:PBT Main Body:Nickel-Copper Alloy		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	2m PVC cable,3*0.35mm ²		

Type	Short Body		
Appearance			
Model	NPN NO	GS12-08NON-M12	GS12-10NON-M12
	NPN NC	GS12-08NCN-M12	GS12-10NCN-M12
	PNP NO	GS12-08PON-M12	GS12-10PON-M12
	PNP NC	GS12-08PCN-M12	GS12-10PCN-M12
Mounting Method	Non-Flush Mounting with Connector		
Dimensions (mm)	M12*50		
Sensing Distance (mm)	8.0	10.0	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	500	400	
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	≤2.0V		
Max. Load Current	200mA		
No-Load Current Consumption	≤10mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25°C~70°C		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:PBT Main Body:Nickel-Copper Alloy		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	M12 Male 3-Pin Connector		

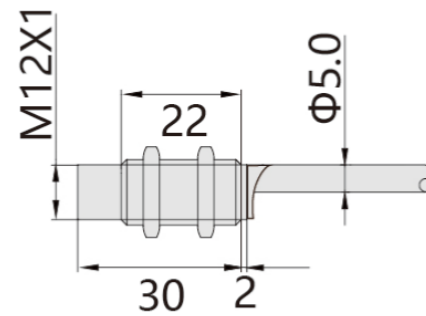
GS12-04/06 Flush Mounting with Integral Cable



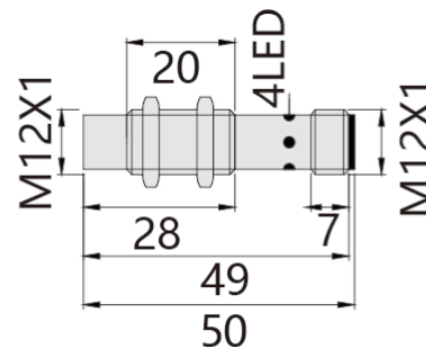
GS12-04/06 Flush Mounting with Connector




GS12-08/10 Non-Flush Mounting with Integral Cable





GS12-08/10 Non-Flush Mounting with Connector



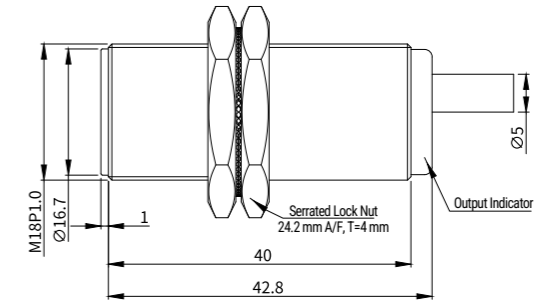
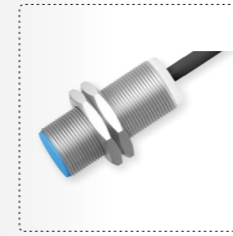
Type	Standard Version			
Appearance				
Model	NPN NO	GR18-05NOF	GR18-08NOF	GR18-12NOF
	NPN NC	GR18-05NCF	GR18-08NCF	GR18-12NCF
	PNP NO	GR18-05POF	GR18-08POF	GR18-12POF
	PNP NC	GR18-05PCF	GR18-08PCF	GR18-12PCF
Mounting Method	Flush Mounting with Integral Cable			
Dimensions (mm)	M18*44		M18*55	
Sensing Distance (mm)	5.0	8.0	12.0	
Repeatability	<3%(Sr)		<1.0%(Sr)	
Hysteresis (Differential Distance)	<15%(Sr)			
Response Frequency (Hz)	1000	500	800	
Operating Voltage	DC 10~30V ±10%			
Residual Voltage (Voltage Drop)	≤2.0V			
Max. Load Current	200mA			
No-Load Current Consumption	≤10mA			
Leakage Current	≤0.01mA			
Ambient Temperature	Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)			
Ambient Humidity	35%-85% RH (non-condensing)			
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection			
Protection Class	IP67			
Material	Sensing Face:PBT Main Body:Nickel-Copper Alloy		Sensing Face:POM Main Body:Nickel-Copper Alloy	
Withstand Voltage	AC 1000V, 50/60Hz, 1 min			
Vibration Resistance	10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes			
Shock Resistance	500 m/s ² , 10 impacts each on X/Y/Z axes			
Insulation Resistance	50 MΩ (measured with DC 500V megohmmeter)			
Indicator	Red LED Indicator During Detection			
Connection Method	Standard 2 m 3-core cable (5.0 mm diameter), custom lengths available			
Cable Specification	Oil-Immersion Tested Optional (R)			

Type		Standard Version		
Appearance				
Model	NPN NO	GR18-05NOF-M12	GR18-08NOF-M12	GR18-12NOF-M12
	NPN NC	GR18-05NCF-M12	GR18-08NCF-M12	GR18-12NCF-M12
	PNP NO	GR18-05POF-M12	GR18-08POF-M12	GR18-12POF-M12
	PNP NC	GR18-05PCF-M12	GR18-08PCF-M12	GR18-12PCF-M12
Mounting Method		Flush Mounting with Connector		
Dimensions (mm)		M18*54		M18*79
Sensing Distance (mm)		5.0	8.0	12.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		1000	500	800
Operating Voltage		DC 10~30V ±10%		
Residual Voltage (Voltage Drop)		≤2.0V		
Max. Load Current		200mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face:PBT Main Body:Nickel-Copper Alloy		Sensing Face:POM Main Body:Nickel-Copper Alloy
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		Standard 2 m 3-core cable (5.0 mm diameter), custom lengths available		
Cable Specification		Oil-Immersion Tested Optional (R)		

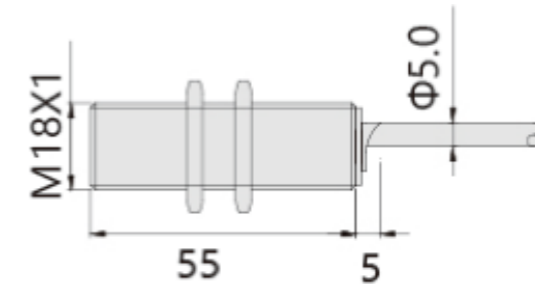
Type		Standard Version		
Appearance				
Model	NPN NO	GR18-08NON	GR18-12NON	GR18-16NON
	NPN NC	GR18-08NCN	GR18-12NCN	GR18-16NCN
	PNP NO	GR18-08PON	GR18-12PON	GR18-16PON
	PNP NC	GR18-08PCN	GR18-12PCN	GR18-16PCN
Mounting Method		Non-Flush Mounting with Integral Cable		
Dimensions (mm)		M18*52		M18*55
Sensing Distance (mm)		8.0	12.0	16.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		500	150	500
Operating Voltage		DC 10~30V ±10%		
Residual Voltage (Voltage Drop)		≤2.0V		
Max. Load Current		200mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face:PBT Main Body:Nickel-Copper Alloy		Sensing Face:POM Main Body:Nickel-Copper Alloy
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		Standard 2 m 3-core cable (5.0 mm diameter), custom lengths available		
Cable Specification		Oil-Immersion Tested Optional (R)		

Type		Standard Version		
Appearance				
Model	NPN NO	GR18-08NON-M12	GR18-12NON-M12	GR18-16NON-M12
	NPN NC	GR18-08NCN-M12	GR18-12NCN-M12	GR18-16NCN-M12
	PNP NO	GR18-08PON-M12	GR18-12PON-M12	GR18-16PON-M12
	PNP NC	GR18-08PCN-M12	GR18-12PCN-M12	GR18-16PCN-M12
Mounting Method		Non-Flush Mounting with Connector		
Dimensions (mm)		M18*63		M18*79
Sensing Distance (mm)		8.0	12.0	16.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		500	150	500
Operating Voltage		DC 10~30V ±10%		
Residual Voltage (Voltage Drop)		≤2.0V		
Max. Load Current		200mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face:PBT Main Body:Nickel-Copper Alloy		Sensing Face:POM Main Body:Nickel-Copper Alloy
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		M12 Male 3-Pin Connector		
Cable Specification		Oil-Immersion Tested Optional (R)		

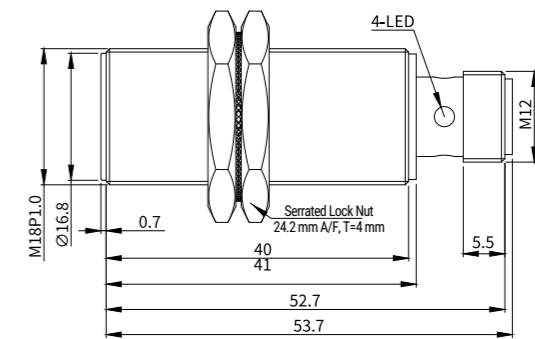
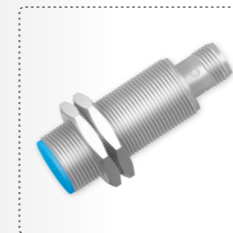
GR18-05/08 Flush Mounting with Integral Cable



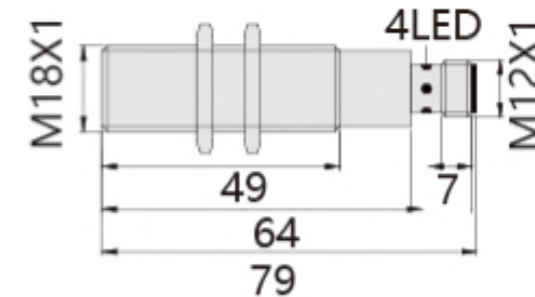
GR18-12 Flush Mounting with Integral Cable



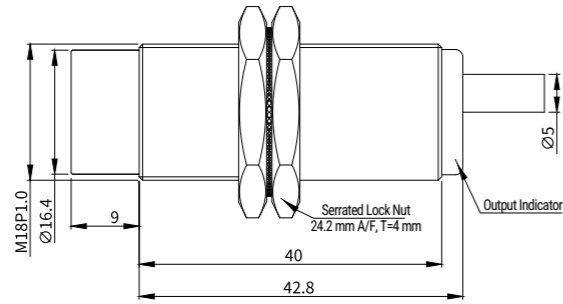
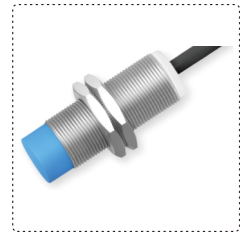
GR18-05/08 Flush Mounting with Connector



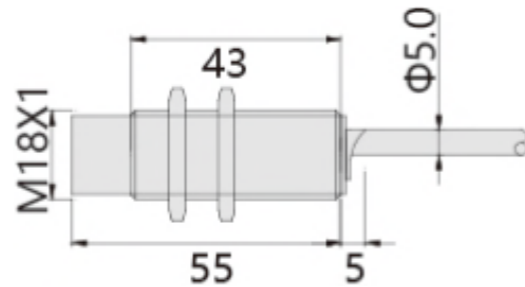
GR18-12 Flush Mounting with Connector



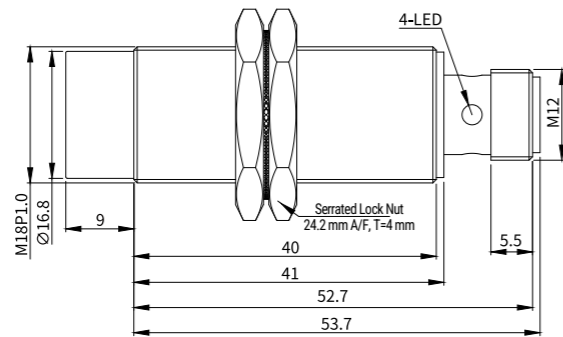
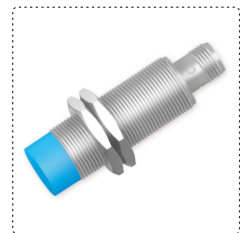
GR18-08/12 Non-Flush Mounting with Integral Cable



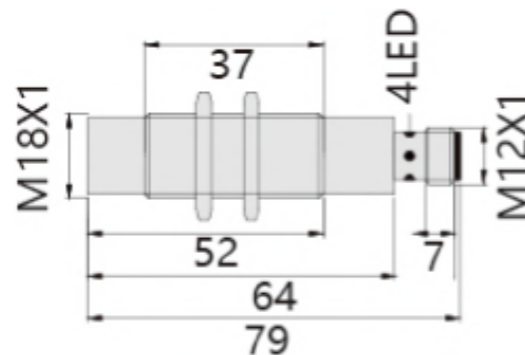
GR18-16 Non-Flush Mounting with Integral Cable




GR18-08/12 Non-Flush Mounting with Connector





GR18-16 Non-Flush Mounting with Connector



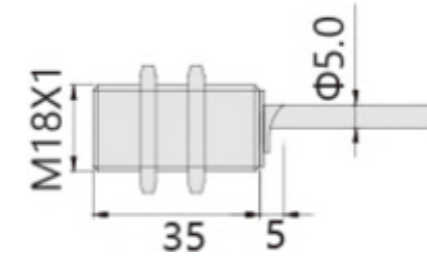
Type	Short Body		
Appearance			
Model	NPN NO	GS18-08NOF	GS18-12NOF
	NPN NC	GS18-08NCF	GS18-12NCF
	PNP NO	GS18-08POF	GS18-12POF
	PNP NC	GS18-08PCF	GS18-12PCF
Mounting Method	Flush Mounting with Integral Cable		
Dimensions (mm)	M18*35		
Sensing Distance (mm)	8.0	12.0	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	3000	800	
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	≤2.0V		
Max. Load Current	200mA		
No-Load Current Consumption	≤10mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25°C~70°C		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:POM Main Body:Nickel-Copper Alloy		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	2m PVC cable, 3*0.35mm ²		

Type	Short Body	
Appearance		
Model	NPN NO	GS18-08NOF-M12 GS18-12NOF-M12
	NPN NC	GS18-08NCF-M12 GS18-12NCF-M12
	PNP NO	GS18-08POF-M12 GS18-12POF-M12
	PNP NC	GS18-08PCF-M12 GS18-12PCF-M12
Mounting Method	Flush Mounting with Connector	
Dimensions (mm)	M18*48	
Sensing Distance (mm)	8.0	12.0
Repeatability	<1.0%(Sr)	
Hysteresis (Differential Distance)	<15%(Sr)	
Response Frequency (Hz)	3000	800
Operating Voltage	DC 10~30V ±10%	
Residual Voltage (Voltage Drop)	≤2.0V	
Max. Load Current	200mA	
No-Load Current Consumption	≤10mA	
Leakage Current	≤0.01mA	
Ambient Temperature	-25°C~70°C	
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection	
Protection Class	IP67	
Material	Sensing Face:POM Main Body:Nickel-Copper Alloy	
Indicator	With LED Indicator (Illuminates When Active)	
Connection Method	M12 Male 3-Pin Connector	

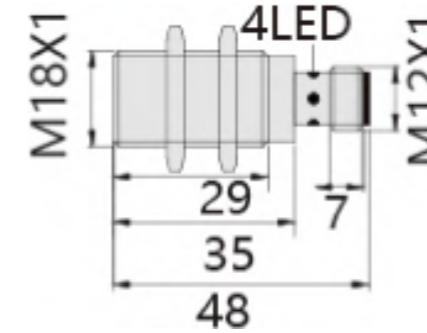
Type	Short Body	
Appearance		
Model	NPN NO	GS18-16NON GS18-20NON
	NPN NC	GS18-16NCN GS18-20NCN
	PNP NO	GS18-16PON GS18-20PON
	PNP NC	GS18-16PCN GS18-20PCN
Mounting Method	Non-Flush Mounting with Integral Cable	
Dimensions (mm)	M18*40	
Sensing Distance (mm)	16.0	20.0
Repeatability	<1.0%(Sr)	
Hysteresis (Differential Distance)	<15%(Sr)	
Response Frequency (Hz)	500	400
Operating Voltage	DC 10~30V ±10%	
Residual Voltage (Voltage Drop)	≤2.0V	
Max. Load Current	200mA	
No-Load Current Consumption	≤10mA	
Leakage Current	≤0.01mA	
Ambient Temperature	-25°C~70°C	
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection	
Protection Class	IP67	
Material	Sensing Face:POM Main Body:Nickel-Copper Alloy	
Indicator	With LED Indicator (Illuminates When Active)	
Connection Method	2m PVC cable, 3*0.35mm ²	

Type	Short Body		
Appearance			
Model	NPN NO	GS18-16NON-M12	GS18-20NON-M12
	NPN NC	GS18-16NCN-M12	GS18-20NCN-M12
	PNP NO	GS18-16PON-M12	GS18-20PON-M12
	PNP NC	GS18-16PCN-M12	GS18-20PCN-M12
Mounting Method	Non-Flush Mounting with Connector		
Dimensions (mm)	M18*53		
Sensing Distance (mm)	16.0	20.0	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	500	400	
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	≤2.0V		
Max. Load Current	200mA		
No-Load Current Consumption	≤10mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25°C~70°C		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:POM Main Body:Nickel-Copper Alloy		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	M12 Male 3-Pin Connector		

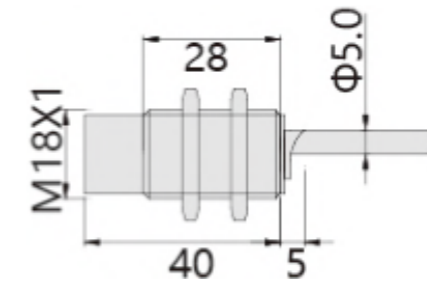
GS18-08/12 Flush Mounting with Integral Cable



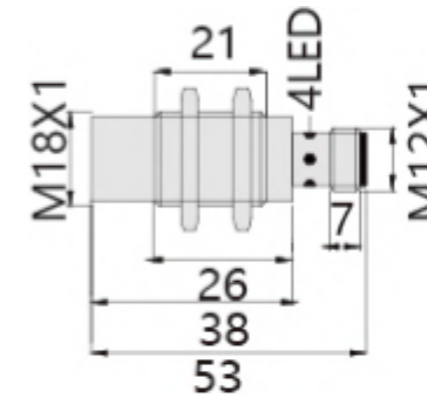
GS18-08/12 Flush Mounting with Connector



GS18-16/20 Non-Flush Mounting with Integral Cable





GS18-16/20 Non-Flush Mounting with Connector



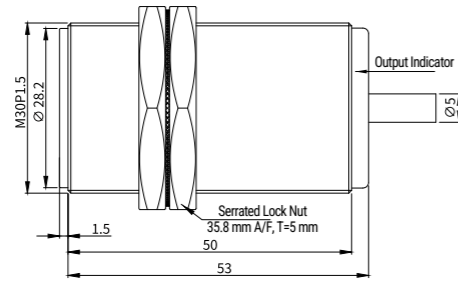
Type		Standard Version		
Appearance				
Model	NPN NO	GR30-10NOF	GR30-15NOF	GR30-22NOF
	NPN NC	GR30-10NCF	GR30-15NCF	GR30-22NCF
	PNP NO	GR30-10POF	GR30-15POF	GR30-22POF
	PNP NC	GR30-10PCF	GR30-15PCF	GR30-22PCF
Mounting Method		Flush Mounting with Integral Cable		
Dimensions (mm)		M30*55		
Sensing Distance (mm)		10.0	15.0	22.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		300	150	100
Operating Voltage		DC 10~30V ±10%		
Residual Voltage (Voltage Drop)		≤2.0V		
Max. Load Current		200mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face: PBT Main Body: Nickel-Copper Alloy (ASTM B164 C70600)		
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		Standard 2 m 3-core cable (5.0 mm ±0.1 mm diameter), custom lengths available		
Cable Specification		Oil-Immersion Tested Optional (R)		

Type		Standard Version		
Appearance				
Model	NPN NO	GR30-10NOF-M12	GR30-15NOF-M12	GR30-22NOF-M12
	NPN NC	GR30-10NCF-M12	GR30-15NCF-M12	GR30-22NCF-M12
	PNP NO	GR30-10POF-M12	GR30-15POF-M12	GR30-22POF-M12
	PNP NC	GR30-10PCF-M12	GR30-15PCF-M12	GR30-22PCF-M12
Mounting Method		Flush Mounting with Integral Cable		
Dimensions (mm)		M30*53		M30*79
Sensing Distance (mm)		10.0	15.0	22.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		300	150	100
Operating Voltage		DC 10~30V ±10%		
Residual Voltage (Voltage Drop)		≤2.0V		
Max. Load Current		200mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face: PBT Main Body: Nickel-Copper Alloy (ASTM B164 C70600)		
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		M12 Male 3-Pin Connector		
Cable Specification		Oil-Immersion Tested Optional (R)		

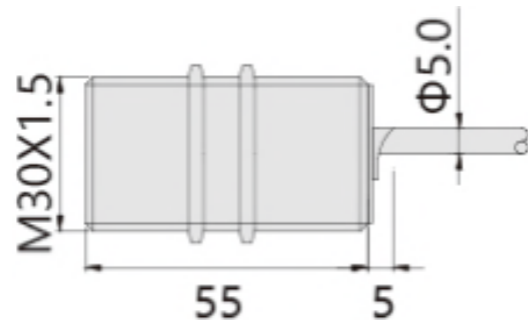
Type		Standard Version		
Appearance				
Model	NPN NO	GR30-15NON	GR30-25NON	GR30-40NON
	NPN NC	GR30-15NCN	GR30-25NCN	GR30-40NCN
	PNP NO	GR30-15PON	GR30-25PON	GR30-40PON
	PNP NC	GR30-15PCN	GR30-25PCN	GR30-40PCN
Mounting Method		Non-Flush Mounting with Integral Cable		
Dimensions (mm)		M30*65		M30*55
Sensing Distance (mm)		15.0	25.0	40.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		150	100	
Operating Voltage		DC 10~30V ±10%		
Residual Voltage (Voltage Drop)		≤2.0V		
Max. Load Current		200mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face: PBT Main Body: Nickel-Copper Alloy (ASTM B164 C70600)		
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		Standard 2 m 3-core cable (5.0 mm ±0.1 mm diameter), custom lengths available		
Cable Specification		Oil-Immersion Tested Optional (R)		

Type		Standard Version		
Appearance				
Model	NPN NO	GR30-15NON-M12	GR30-25NON-M12	GR30-40NON-M12
	NPN NC	GR30-15NCN-M12	GR30-25NCN-M12	GR30-40NCN-M12
	PNP NO	GR30-15PON-M12	GR30-25PON-M12	GR30-40PON-M12
	PNP NC	GR30-15PCN-M12	GR30-25PCN-M12	GR30-40PCN-M12
Mounting Method		Non-Flush Mounting with Connector		
Dimensions (mm)		M30*63		M30*79
Sensing Distance (mm)		15.0	25.0	40.0
Repeatability		<3%(Sr)		<1.0%(Sr)
Hysteresis (Differential Distance)		<15%(Sr)		
Response Frequency (Hz)		150	100	
Operating Voltage		DC 10~30V ±10%		
Residual Voltage (Voltage Drop)		≤2.0V		
Max. Load Current		200mA		
No-Load Current Consumption		≤10mA		
Leakage Current		≤0.01mA		
Ambient Temperature		Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity		35%-85% RH (non-condensing)		
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class		IP67		
Material		Sensing Face: PBT Main Body: Nickel-Copper Alloy		
Withstand Voltage		AC 1000V, 50/60Hz, 1 min		
Vibration Resistance		10-55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)		
Indicator		Red LED Indicator During Detection		
Connection Method		M12 Male 3-Pin Connector		
Cable Specification		Oil-Immersion Tested Optional (R)		

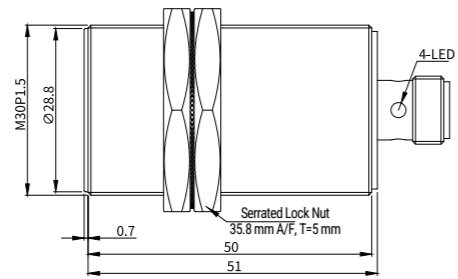
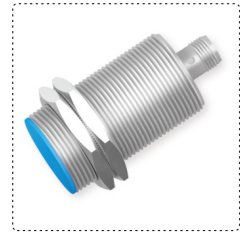
GR30-10/15 Flush Mounting with Integral Cable



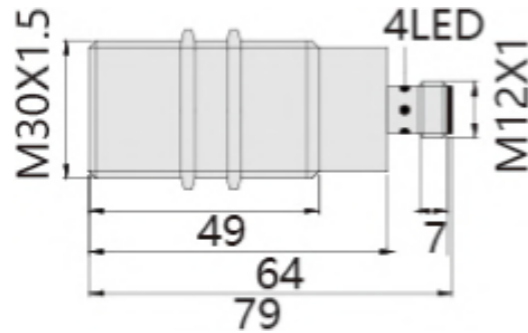
GR30-22 Flush Mounting with Integral Cable



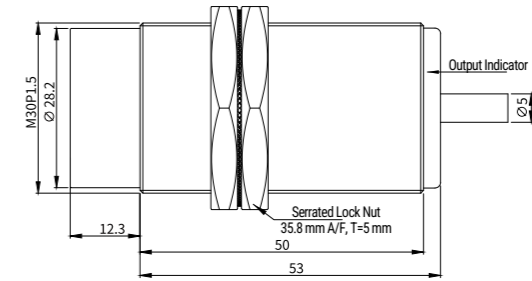
GR30-10/15 Flush Mounting with Connector



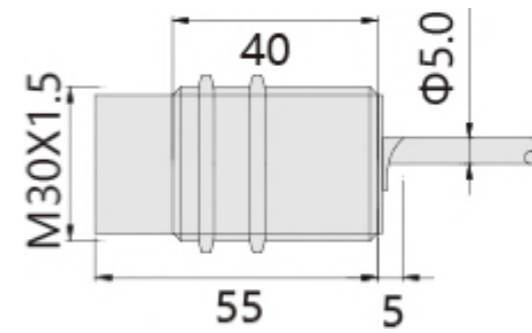
GR30-22 Flush Mounting with Connector



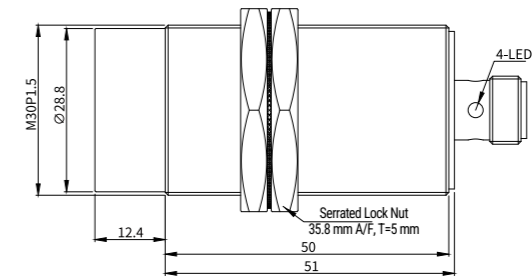
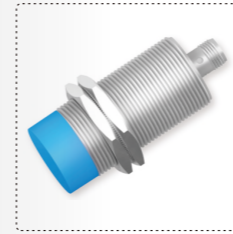
GR30-15/25 Non-Flush Mounting with Integral Cable



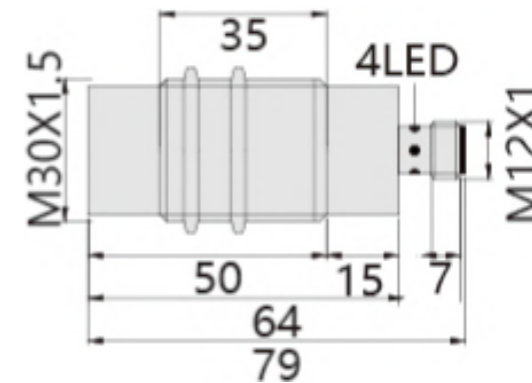
GR30-40 Non-Flush Mounting with Integral Cable





GR30-15/25 Non-Flush Mounting with Connector



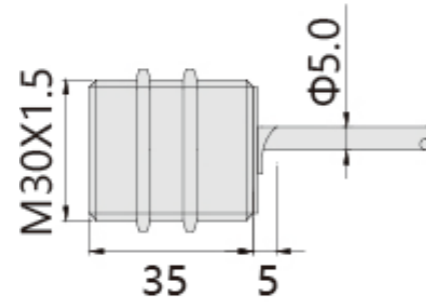
GR30-40 Non-Flush Mounting with Connector



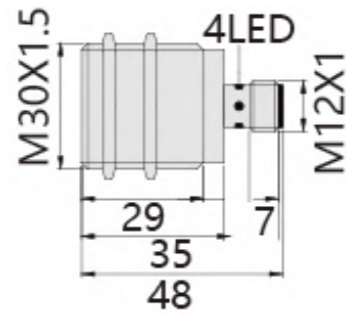
Type		Short Body	
Appearance			
Model	NPN NO	GS30-10NOF	GS30-15NON
	NPN NC	GS30-10NCF	GS30-15NCN
	PNP NO	GS30-10POF	GS30-15PON
	PNP NC	GS30-10PCF	GS30-15PCN
Mounting Method		Flush Mounting with Integral Cable	Non-Flush Mounting with Integral Cable
Dimensions (mm)		M30*35	M30*40
Sensing Distance (mm)		10.0	15.0
Repeatability		<1.0%(Sr)	
Hysteresis (Differential Distance)		<15%(Sr)	
Response Frequency (Hz)		300	
Operating Voltage		DC 10~30V ±10%	
Residual Voltage (Voltage Drop)		≤2.0V	
Max. Load Current		200mA	
No-Load Current Consumption		≤10mA	
Leakage Current		≤0.01mA	
Ambient Temperature		-25°C~70°C	
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection	
Protection Class		IP67	
Material		Sensing Face:PBT Main Body:Nickel-Copper Alloy	
Indicator		With LED Indicator (Illuminates When Active)	
Connection Method		2m PVC cable, 3*0.35mm ²	

Type		Short Body	
Appearance			
Model	NPN NO	GS30-10NOF-M12	GS30-15NON-M12
	NPN NC	GS30-10NCF-M12	GS30-15NCN-M12
	PNP NO	GS30-10POF-M12	GS30-15PON-M12
	PNP NC	GS30-10PCF-M12	GS30-15PCN-M12
Mounting Method		Flush Mounting with Connector	Non-Flush Mounting with Connector
Dimensions (mm)		M30*48	M30*53
Sensing Distance (mm)		10.0	15.0
Repeatability		<1.0%(Sr)	
Hysteresis (Differential Distance)		<15%(Sr)	
Response Frequency (Hz)		300	
Operating Voltage		DC 10~30V ±10%	
Residual Voltage (Voltage Drop)		≤2.0V	
Max. Load Current		200mA	
No-Load Current Consumption		≤10mA	
Leakage Current		≤0.01mA	
Ambient Temperature		-25°C~70°C	
Switch Protection		Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection	
Protection Class		IP67	
Material		Sensing Face: PBT Main Body: Nickel-Copper Alloy	
Indicator		With LED Indicator (Illuminates When Active)	
Connection Method		M12 Male 3-Pin Connector	

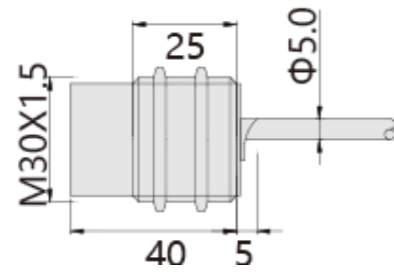
GS30-10 Flush Mounting with Integral Cable



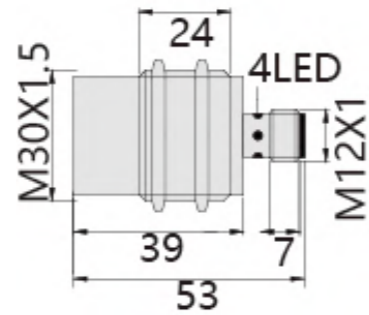
GS30-10 Flush Mounting with Connector



GS30-15 Non-Flush Mounting with Integral Cable

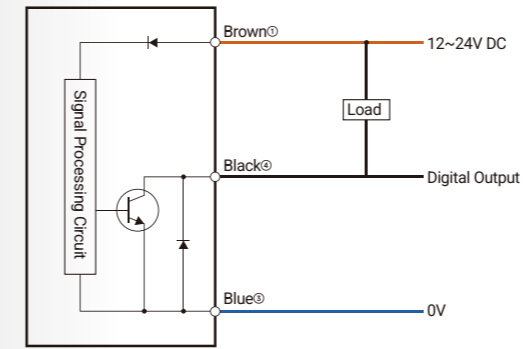


GS30-15 Non-Flush Mounting with Connector

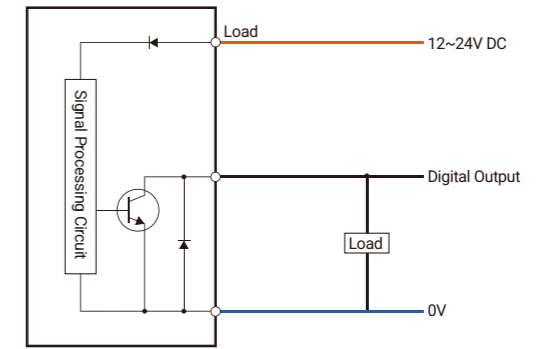


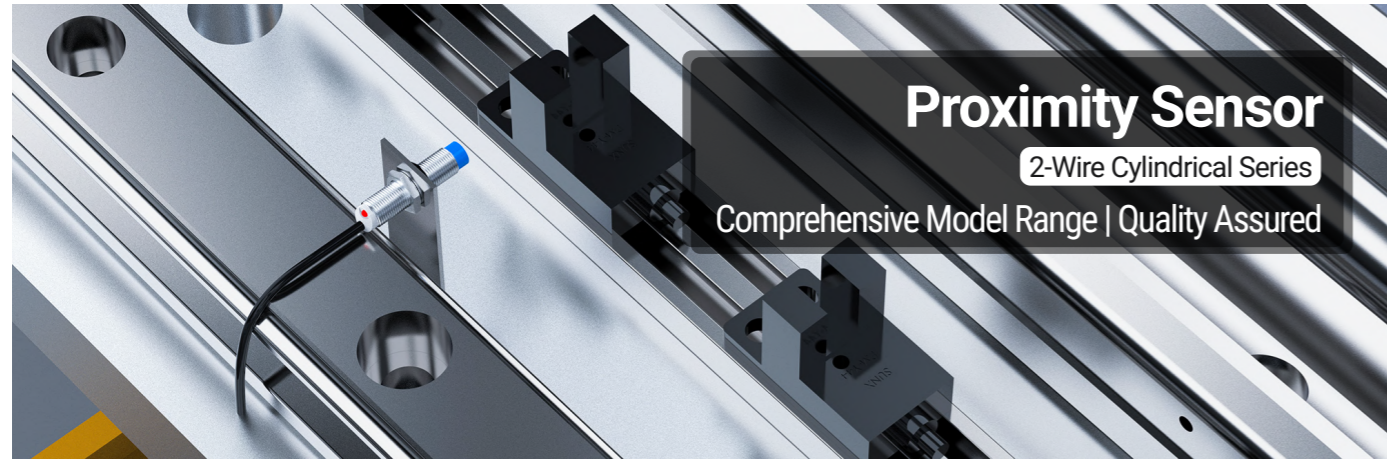
Cylindrical Series Wiring Diagram

NPN Output

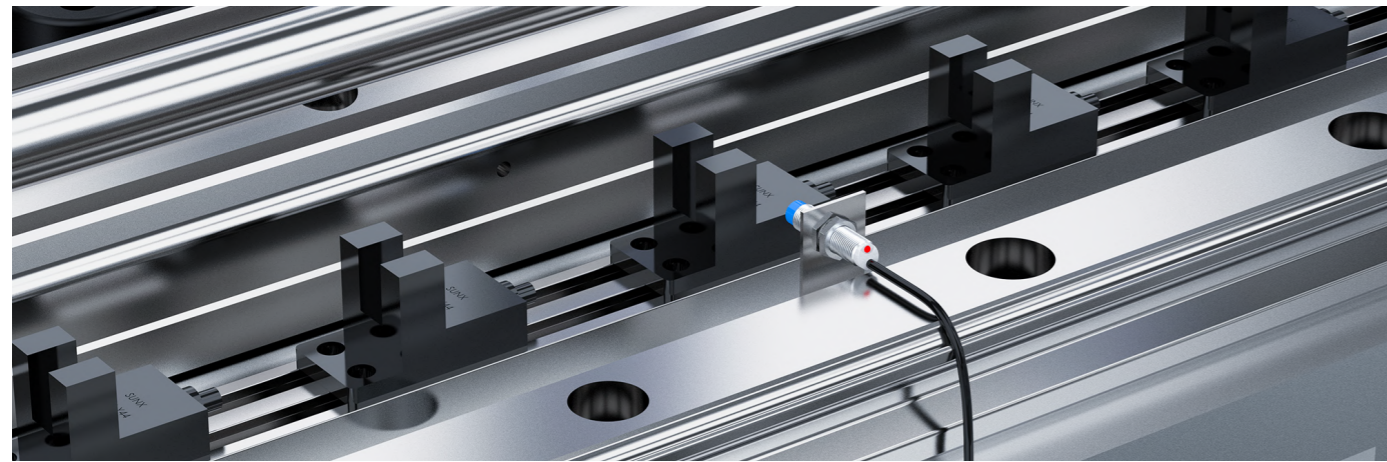


PNP Output







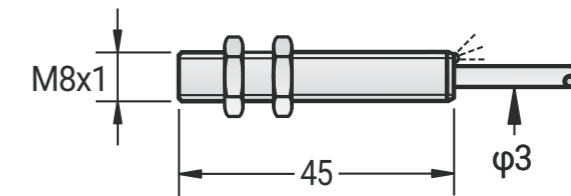
Application Examples



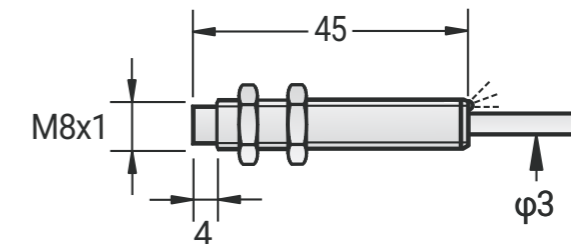
- Standard 2 m Flexible Cable (Custom Lengths Available; Continuous-Flexing Chain Cable Optional)
- 3 kHz Response Frequency for High-Speed Operation
- Non-Contact Detection Ensures Zero Wear/Damage to Target Objects
- Solid-State Output Extends Service Life (No Contact Degradation)
- Wide Operating Temperature Range (-25°C to +70°C)
- Detects Physical Property Variations (Immune to Surface Color/Finish)
- IP68/IP69K Rated for Reliable Operation in Water/Oil Environments (Unaffected by Contaminants)

Type	2-Wire Configuration				
Appearance					
Model	Normally Open (NO)	GR08-01HOF	GR08-02HOF	GR08-02HON	GR08-04HON
	Normally Closed (NC)	GR08-01HCF	GR08-02HCF	GR08-02HCN	GR08-04HCN
Mounting Method	Flush Mounting with Integral Cable		Non-Flush Mounting with Integral Cable		
Dimensions (mm)	M8*45				
Sensing Distance (mm)	1.0	2.0		4.0	
Standard Target Object	8*8*1mm (Fe)	8*8*1mm (Fe)		12*12*1mm (Fe)	
Repeatability	<3.0%(Sr)	<3.0%(Sr)		<5.0%(Sr)	
Switching Frequency (Hz)	2000	1500	2000	800	
Hysteresis (Differential Distance)	<15%(Sr)				
Operating Voltage	DC 10~30V				
Residual Voltage (Voltage Drop)	<4V				
Operating Current	3~100mA				
Leakage Current	<0.8mA				
Ambient Temperature	-25°C~70°C				
Protection Circuit	Reverse Polarity Protection / Surge Protection / Short-Circuit Protection				
Material	Sensing Face: PBT Main Body: Nickel-Copper Alloy				
Indicator	With LED Indicator (Illuminates When Active)				
Connection Method	2m PVC Cable, 2*0.15mm ²				

GR08-01/02 Flush

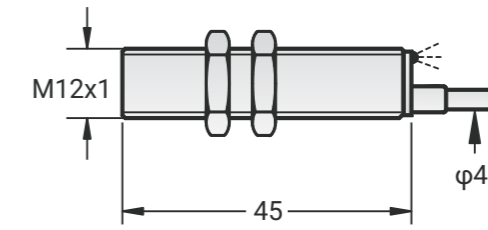


GR08-02/04 Non-Flush

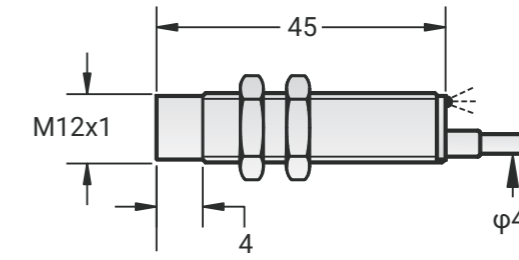


Type	2-Wire Configuration				
Appearance					
Model	Normally Open (NO)	GR12-02HOF	GR12-04HOF	GR12-04HON	GR12-08HON
	Normally Closed (NC)	GR12-02HCF	GR12-04HCF	GR12-04HCN	GR12-08HCN
Mounting Method	Flush Mounting with Integral Cable		Non-Flush Mounting with Integral Cable		
Dimensions (mm)	M12*45	M12*45		M12*55	
Sensing Distance (mm)	2.0	4.0		8.0	
Standard Target Object	12*12*1mm (Fe)	12*12*1mm (Fe)		24*24*1mm (Fe)	
Repeatability	<3.0%(Sr)	<5.0%(Sr)	<3.0%(Sr)	<5.0%(Sr)	
Switching Frequency (Hz)	300	200	300	100	
Hysteresis (Differential Distance)	<15%(Sr)				
Operating Voltage	DC 10~30V				
Residual Voltage (Voltage Drop)	<6V				
Operating Current	3~100mA				
Leakage Current	<0.8mA				
Ambient Temperature	-25°C~70°C				
Protection Circuit	Surge Protection / Short-Circuit Protection				
Material	Sensing Face: PBT Main Body: Nickel-Copper Alloy				
Indicator	With LED Indicator (Illuminates When Active)				
Connection Method	2m PVC Cable, 2*0.15mm ²				

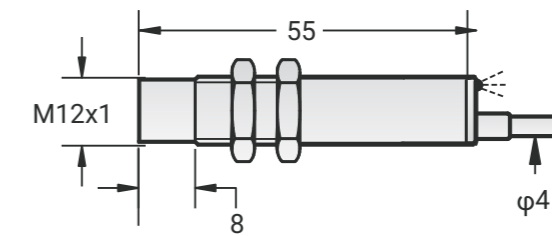
GR12-02/04 Flush Mounting with Integral Cable



GR12-04 Non-Flush Mounting with Integral Cable

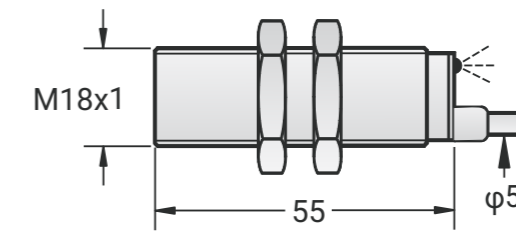


GR12-08 Non-Flush Mounting with Integral Cable

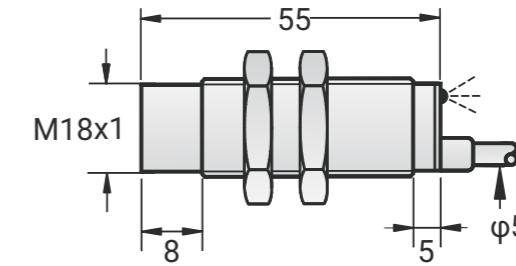


Type	2-Wire Configuration				
Appearance					
Model	Normally Open (NO)	GR18-05HOF	GR18-08HOF	GR18-08HON	GR18-12HON
	Normally Closed (NC)	GR18-05HCF	GR18-08HCF	GR18-08HCN	GR18-12HCN
Mounting Method	Flush Mounting with Integral Cable		Non-Flush Mounting with Integral Cable		
Dimensions (mm)	M18*55	M18*55		M18*60	
Sensing Distance (mm)	5.0	8.0		12.0	
Standard Target Object	24*24*1mm (Fe)	24*24*1mm (Fe)		36*36*1mm (Fe)	
Repeatability	<3.0%(Sr)	<5.0%(Sr)	<3.0%(Sr)	<5.0%(Sr)	
Switching Frequency (Hz)	300	150	300	200	
Hysteresis (Differential Distance)	<15%(Sr)				
Operating Voltage	DC 10~30V				
Residual Voltage (Voltage Drop)	<6V				
Operating Current	3~100mA				
Leakage Current	<0.8mA				
Ambient Temperature	-25°C~70°C				
Protection Circuit	Surge Protection / Short-Circuit Protection				
Material	Sensing Face: PBT Main Body: Nickel-Copper Alloy				
Indicator	With LED Indicator (Illuminates When Active)				
Connection Method	2m PVC Cable, 2*0.33mm ²				

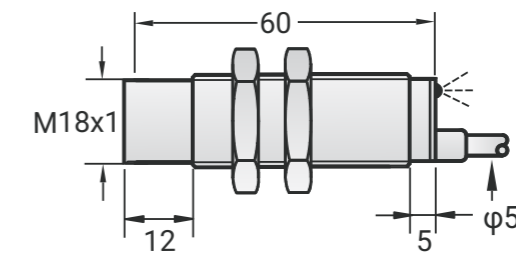
GR18-05/08 Flush Mounting with Integral Cable



GR18-08 Non-Flush Mounting with Integral Cable

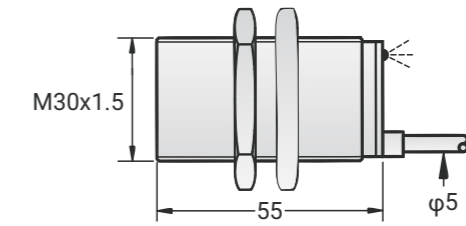


GR18-12 Non-Flush Mounting with Integral Cable

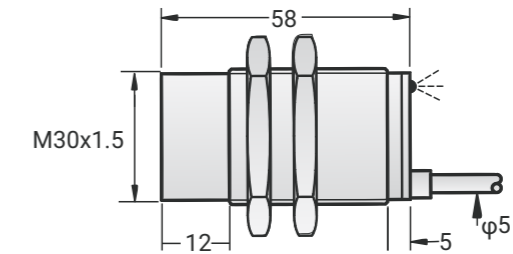


Type		2-Wire Configuration			
Appearance					
Model	Normally Open (NO)	GR30-10HOF	GR30-16HOF	GR30-15HON	GR30-25HON
	Normally Closed (NC)	GR30-10HCF	GR30-16HCF	GR30-15HCN	GR30-25HCN
Mounting Method		Flush Mounting with Integral Cable		Non-Flush Mounting with Integral Cable	
Dimensions (mm)		M30*55	M30*55	M30*58	M30*60
Sensing Distance (mm)		10.0	16.0	15.0	25.0
Standard Target Object		30*30*1mm (Fe)	48*48*1mm (Fe)	45*45*1mm (Fe)	75*75*1mm (Fe)
Repeatability		<3.0%(Sr)	<5.0%(Sr)	<3.0%(Sr)	<5.0%(Sr)
Switching Frequency (Hz)		250	150	200	100
Hysteresis (Differential Distance)		<15%(Sr)			
Operating Voltage		DC 10~30V			
Residual Voltage (Voltage Drop)		<6V			
Operating Current		3~100mA			
Leakage Current		<0.8mA			
Ambient Temperature		-25°C~70°C			
Protection Circuit		Surge Protection / Short-Circuit Protection			
Material		Sensing Face: PBT Main Body: Nickel-Copper Alloy			
Indicator		With LED Indicator (Illuminates When Active)			
Connection Method		2m PVC Cable, 2*0.33mm ²			

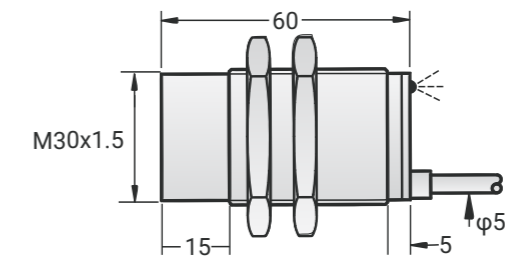
GR30-10/16 Flush Mounting with Integral Cable



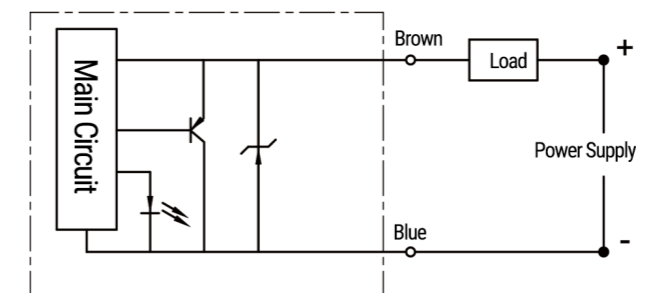
GR30-15 Non-Flush Mounting with Integral Cable

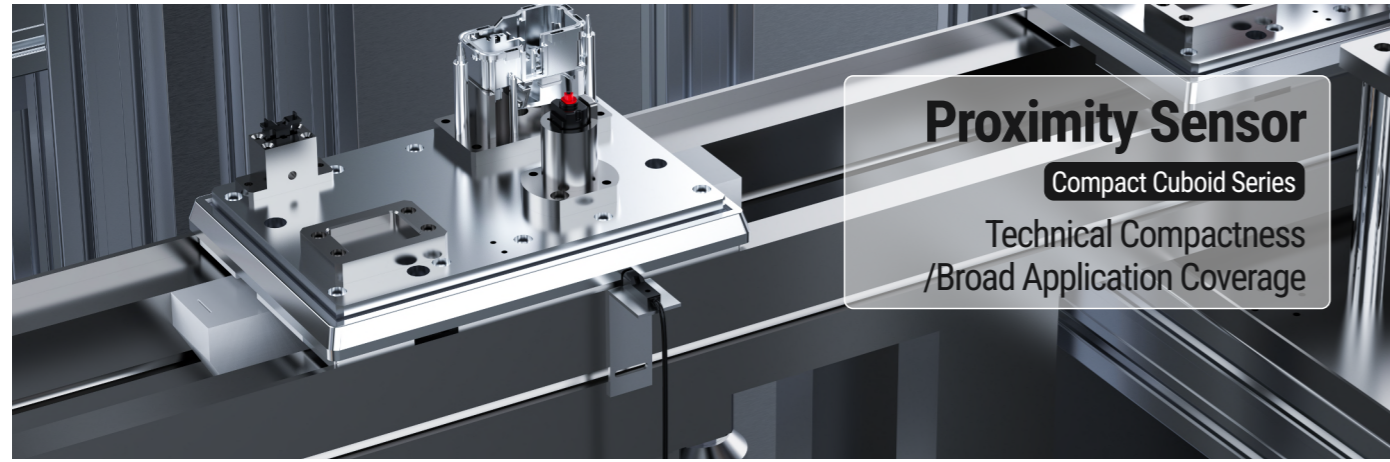


GR30-25 Non-Flush Mounting with Integral Cable

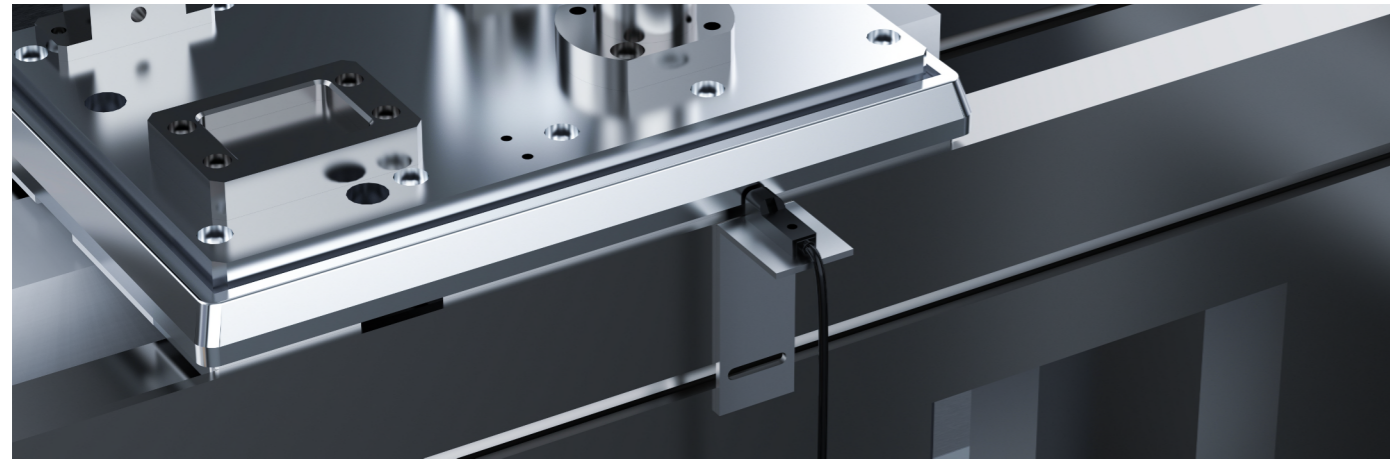


2-Wire Cylindrical Series Wiring Diagram





Application Examples



• Standard 2 m Flexible Cable (Custom Lengths Available; PUR Jacket, 10M Bend Cycles)

• Comprehensive Model Range: Front-Face / Top-Face Detection Options



• Non-Contact Detection Ensures Zero Wear/Damage to Targets


• Solid-State Output Extends Service Life (No Contact Degradation)



• Ultra-Compact Design (30×30×15 mm) for Confined Space Installation



• Detects Physical Property Variations (Immune to Surface Color/Finish)

IP68 Rated for Reliable Operation in Water/Oil Environments (Unaffected by Contaminants)

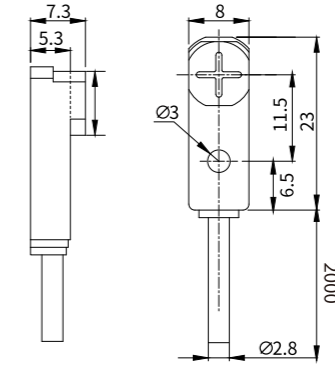
Type	Compact Cuboid		
Appearance			
Model	NPN NO	GQ08F-2.5NOF	GQ08H-2.5NOF
	NPN NC	GQ08F-2.5NCF	GQ08H-2.5NCF
	PNP NO	GQ08F-2.5POF	GQ08H-2.5POF
	PNP NC	GQ08F-2.5PCF	GQ08H-2.5PCF
Mounting Method	Non-Flush		
Sensing Face	Front Face	Head	
Sensing Distance (mm)	2.5		
Repeatability	<3%(Sr)		
Hysteresis (Differential Distance)	<20%(Sr)		
Response Frequency (Hz)	500		
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	<1.0V		
Max. Load Current	100mA		
No-Load Current Consumption	<15mA		
Leakage Current	<0.01mA		
Ambient Temperature	Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity	35%-85% RH (non-condensing)		
Protection Circuit	Reverse Polarity Protection / Surge Protection / Short-Circuit Protection		
Protection Class	IP67		
Material	PBT		
Withstand Voltage	AC 1000V 50/60Hz 1min		
Vibration Resistance	10~55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance	500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance	50 MΩ (measured with DC 500V megohmmeter)		
Indicator	Red LED Indicator During Detection		
Connection Method	Standard 2 m 3-core cable (3.0 mm diameter), custom lengths available		

Type	Compact Cuboid	
Appearance		
Model	NPN NO	GQ10F-04NOF
	NPN NC	GQ10F-04NCF
	PNP NO	GQ10F-04POF
	PNP NC	GQ10F-04PCF
Mounting Method	Non-Flush	
Sensing Distance	4mm ±10%	
Reliable Sensing Distance	0~3.2mm	
Repeatability	<3%(Sr)	
Hysteresis (Differential Distance)	<15%(Sr)	
Switching Frequency	1KHz	
Response Time	0.2ms	
Operating Voltage	DC 10~30V	
Residual Voltage (Voltage Drop)	<1.5V	
Max. Load Current	150mA	
No-Load Current Consumption	<10mA	
Overload Current Protection Threshold	220mA	
Temperature Drift	<10%(Sr)	
Leakage Current	<0.01mA	
Ambient Temperature	Operating Temperature: -25°C~70°C	
Protection Circuit	Short-Circuit Protection	
Protection Class	IP67	
Material	Housing	Plastic
	Sensing Face	ABS
Indicator	Amber LED Indicator During Detection	
Connection Method	φ3.0mm 2m PVC Cable 3*0.15mm2	
Weight	Approx. 30g	

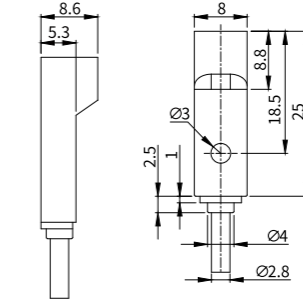
Type	Compact Cuboid		
Appearance			
Model	NPN NO	GQ12F-04NOF	GQ12H-04NOF
	NPN NC	GQ12F-04NCF	GQ12H-04NCF
	PNP NO	GQ12F-04POF	GQ12H-04POF
	PNP NC	GQ12F-04PCF	GQ12H-04PCF
	Mounting Method	Non-Flush	
Sensing Face	Front Face	Head	
Sensing Distance (mm)	4.0		
Repeatability	<3%(Sr)		
Hysteresis (Differential Distance)	<20%(Sr)		
Response Frequency (Hz)	500		
Operating Voltage	DC 10~30V±10%		
Residual Voltage (Voltage Drop)	<1.0V		
Max. Load Current	100mA		
No-Load Current Consumption	<15mA		
Leakage Current	<0.01mA		
Ambient Temperature	Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity	35%-85% RH (non-condensing)		
Protection Circuit	Reverse Polarity Protection / Surge Protection / Short-Circuit Protection		
Protection Class	IP67		
Material	PBT		
Withstand Voltage	AC 1000V 50/60Hz 1min		
Vibration Resistance	10~55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance	500 m/s², 10 impacts each on X/Y/Z axes		
Insulation Resistance	50 MΩ (measured with DC 500V megohmmeter)		
Indicator	Red LED Indicator During Detection		
Connection Method	Standard 2 m 3-core cable (3.0 mm diameter), custom lengths available		

Type	Compact Cuboid		
Appearance			
Model	NPN NO	GQ15F-05NOF	GQ15H-05NOF
	NPN NC	GQ15F-05NCF	GQ15H-05NCF
	PNP NO	GQ15F-05POF	GQ15H-05POF
	PNP NC	GQ15F-05PCF	GQ15H-05PCF
Mounting Method	Non-Flush		
Sensing Face	Front Face	Head	
Sensing Distance (mm)	5.0		
Repeatability	<3%(Sr)		
Hysteresis (Differential Distance)	<20%(Sr)		
Response Frequency (Hz)	500		
Operating Voltage	DC 10~30V±10%		
Residual Voltage (Voltage Drop)	<1.0V		
Max. Load Current	100mA		
No-Load Current Consumption	<15mA		
Leakage Current	<0.01mA		
Ambient Temperature	Operating Temperature: -25°C to 75°C Storage Temperature: -40°C to 85°C (non-freezing)		
Ambient Humidity	35%-85% RH (non-condensing)		
Protection Circuit	Reverse Polarity Protection / Surge Protection / Short-Circuit Protection		
Protection Class	IP67		
Material	PBT		
Withstand Voltage	AC 1000V 50/60Hz 1min		
Vibration Resistance	10~55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes		
Shock Resistance	500 m/s ² , 10 impacts each on X/Y/Z axes		
Insulation Resistance	50 MΩ (measured with DC 500V megohmmeter)		
Indicator	Red LED Indicator During Detection		
Connection Method	Standard 2 m 3-core cable (3.0 mm diameter), custom lengths available		

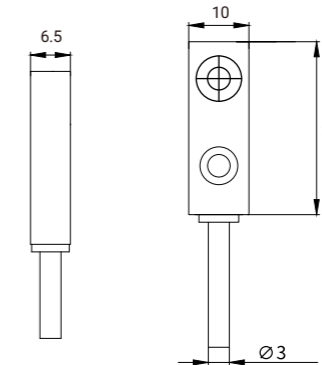
GQ08F



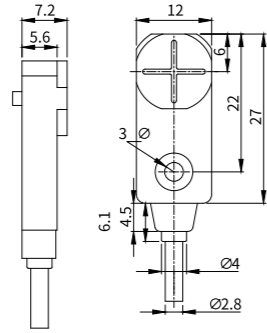
GQ08H



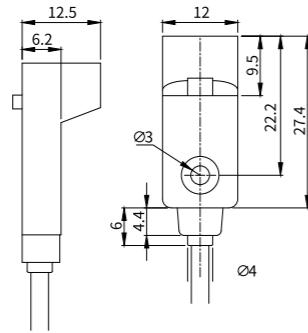
GQ10F



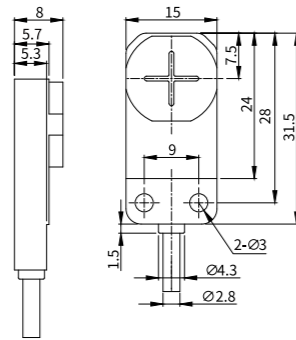
GQ12F



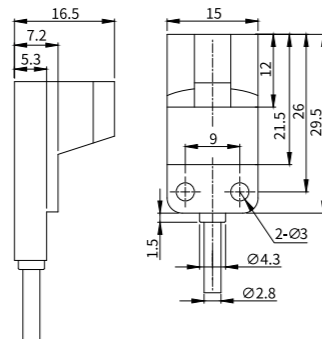
GQ12H



GQ15F

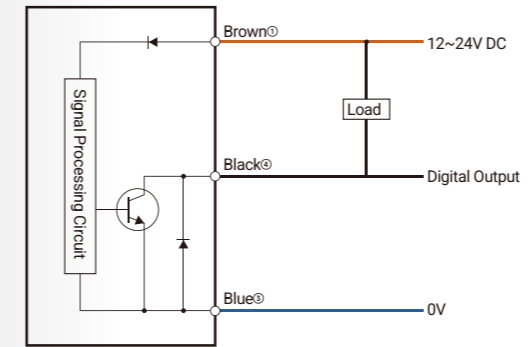


GQ15H

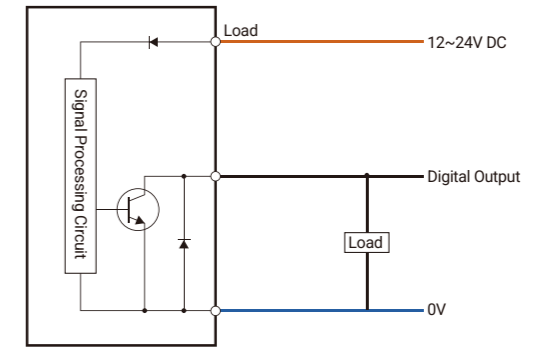


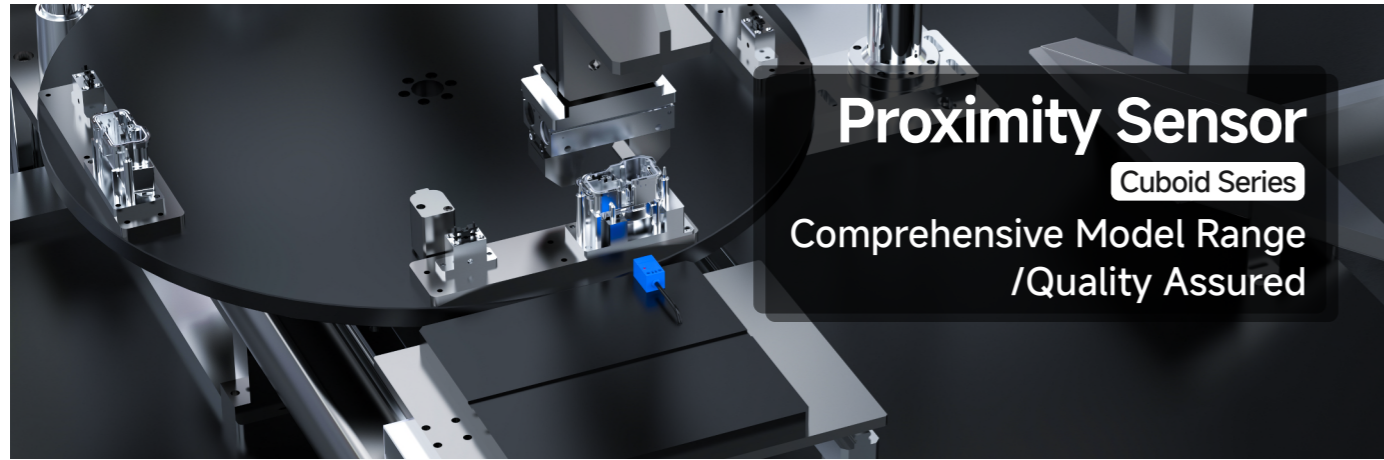
Compact Cuboid Series Wiring Diagram

NPN Output

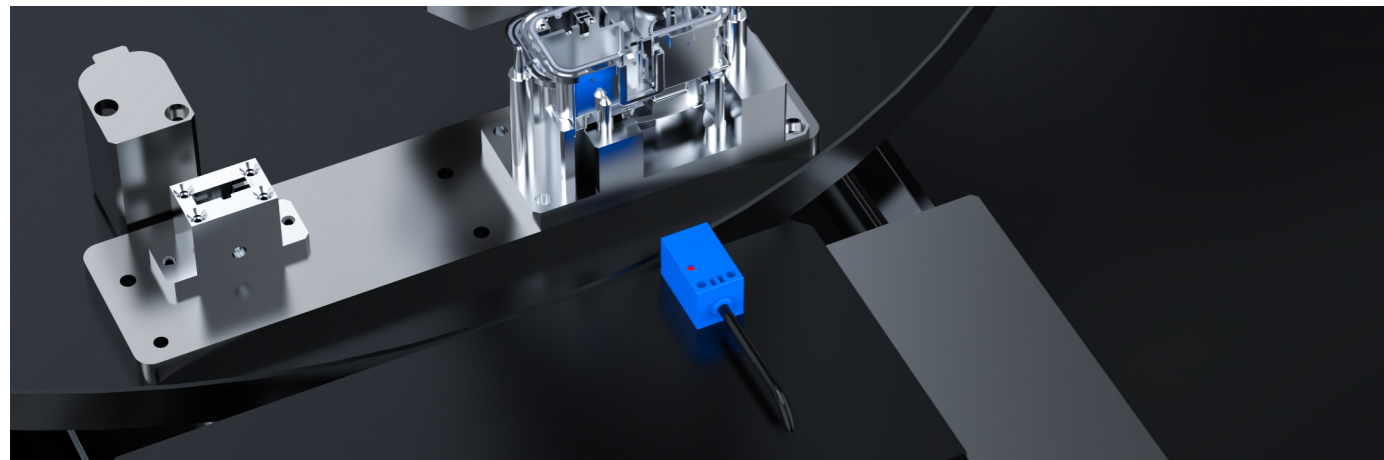


PNP Output










Application Examples



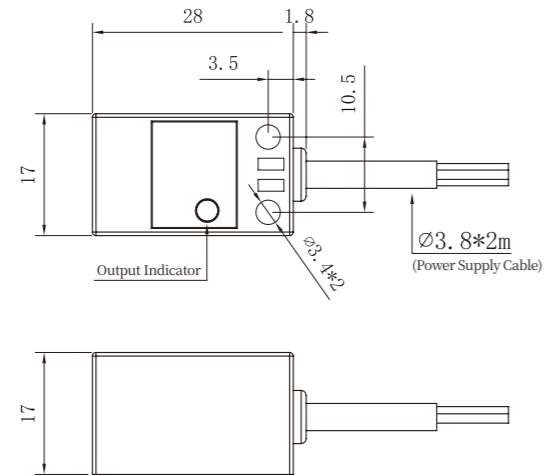
- Extensive Variants: Full-range models for position limit control, counting control, and industrial automation (select by application requirements)
- Quality Assurance: Application-Specific IC (ASIC) architecture extends service life (MTBF >200,000 hrs @ 25°C)
- Tool-Free Installation: Compatible with high-speed pulse generators (≤ 5 kHz) and rotary encoders (max. 30,000 RPM)
- Cost Efficiency: Premium performance proximity sensors with optimized TCO (Total Cost of Ownership)
- Cable Configuration: Standard 2 m Continuous-Flexing Cable (PUR jacket, 15M bend cycles)

Type	Standard Cuboid		
Appearance			
Model	NPN NO	GQ17H-05NOF	GQ17H-08NOF
	NPN NC	GQ17H-05NCF	GQ17H-08NCF
	PNP NO	GQ17H-05POF	GQ17H-08POF
	PNP NC	GQ17H-05PCF	GQ17H-08PCF
Mounting Method	Non-Flush		
Sensing Face	Head		
Sensing Distance	5mm	8mm	
Standard Target Object	17*17*1mm(Fe)	24*24*1mm(Fe)	
Operating Voltage	10~30V DC		
Residual Voltage	<1.5V		
Max. Load Current	150mA		
No-Load Current Consumption	<10mA		
Sourcing Current	<0.01mA		
Switching Frequency	1000Hz	500Hz	
Response Time	0.2ms	0.3ms	
Repeatability	<3.0%(Sr)		
Hysteresis	<15%(Sr)		
Operating Temperature	-25°C~+70°C		
Overload Current Protection	340mA		
Protection Circuit	Short-Circuit Protection		
IP Rating	IP67		
Indicator	Red LED Indicator		
Material	Sensing Face:ABS Main Body: Plastic		
Connection Method	Φ4mm 2m PVC Cable, 3*0.15mm ²		
Weight	Approx. 53.5g		

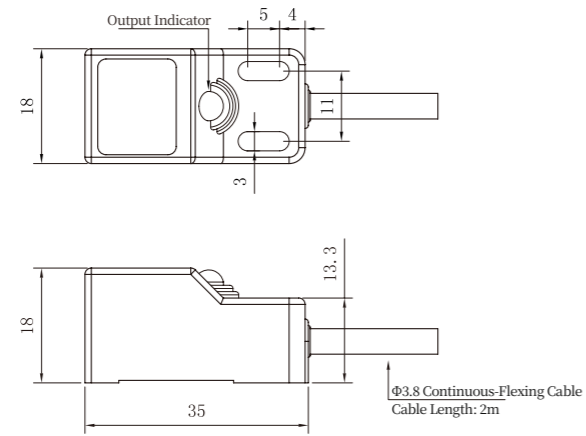
Type	Standard Cuboid				
Appearance					
Model	NPN NO	GQ18H-05NOF	GQ18H-08NOF	GQ18F-05NOF	GQ18F-08NOF
	NPN NC	GQ18H-05NCF	GQ18H-08NCF	GQ18F-05NCF	GQ18F-08NCF
	PNP NO	GQ18H-05POF	GQ18H-08POF	GQ18F-05POF	GQ18F-08POF
	PNP NC	GQ18H-05PCF	GQ18H-08PCF	GQ18F-05PCF	GQ18F-08PCF
Mounting Method	Non-Flush				
Sensing Face	Head		Front Face		
Sensing Distance	5mm	8mm	5mm	8mm	
Standard Target Object	18*18*1mm(Fe)	24*24*1mm(Fe)	18*18*1mm(Fe)	24*24*1mm(Fe)	
Operating Voltage	10~30V DC				
Residual Voltage	<1.5V				
Max. Load Current	150mA				
No-Load Current Consumption	<10mA				
Sourcing Current	<0.01mA				
Switching Frequency	1000Hz	500Hz	1000Hz	500Hz	
Response Time	0.2ms	0.3ms	0.2ms	0.3ms	
Repeatability	<3.0%(Sr)				
Hysteresis	<15%(Sr)				
Operating Temperature	-25°C~+70°C				
Overload Current Protection	340mA				
Protection Circuit	Short-Circuit Protection				
IP Rating	IP67				
Indicator	Red LED Indicator				
Material	Sensing Face:ABS Main Body: Plastic				
Connection Method	Φ4mm 2m PVC Cable, 3*0.15mm ²				
Weight	Approx. 55.5g		Approx. 46.6g		

Type	Standard Cuboid		
Appearance			
Model	NPN NO	GQ25H-10NOF	GQ30H-15NOF
	NPN NC	GQ25H-10NCF	GQ30H-15NCF
	PNP NO	GQ25H-10POF	GQ30H-15POF
	PNP NC	GQ25H-10PCF	GQ30H-15PCF
Mounting Method	Non-Flush		
Sensing Face	Head		
Sensing Distance	10mm	15mm	
Standard Target Object	30*30*1mm(Fe)	45*45*1mm(Fe)	
Operating Voltage	10~30V DC		
Residual Voltage	<1.5V		
Max. Load Current	150mA		
No-Load Current Consumption	<10mA		
Sourcing Current	<0.01mA		
Switching Frequency	300Hz	400Hz	
Repeatability	<3.0%(Sr)	<5.0%(Sr)	
Response Time	0.5ms		
Hysteresis	<15%(Sr)		
Operating Temperature	-25°C~+70°C		
Overload Current Protection	340mA		
Protection Circuit	Short-Circuit Protection		
IP Rating	IP67		
Indicator	Red LED Indicator		
Material	Sensing Face:ABS Main Body: Plastic		
Connection Method	Φ5mm 2m PVC Cable, 3*0.33mm ²		
Weight	Approx. 105.3g	Approx. 140.5g	

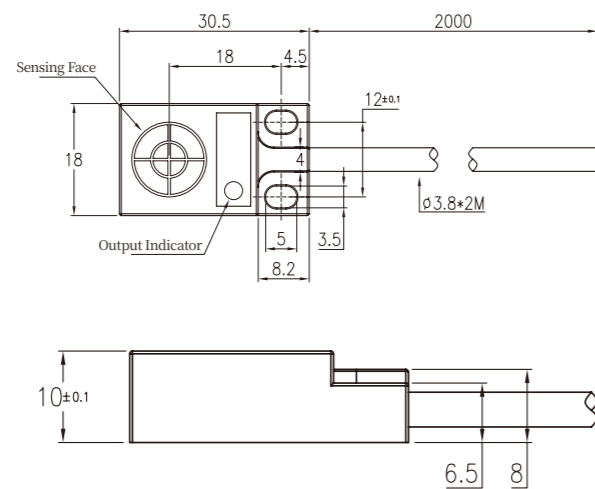
GQ17H



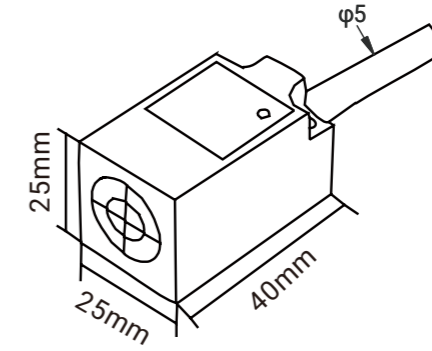
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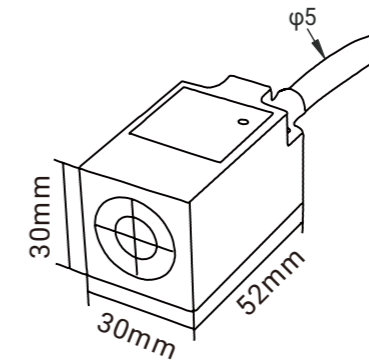
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GQ25H

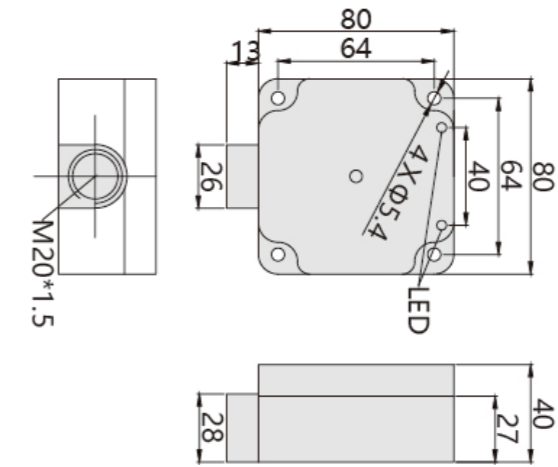
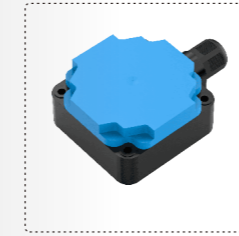


GQ30H



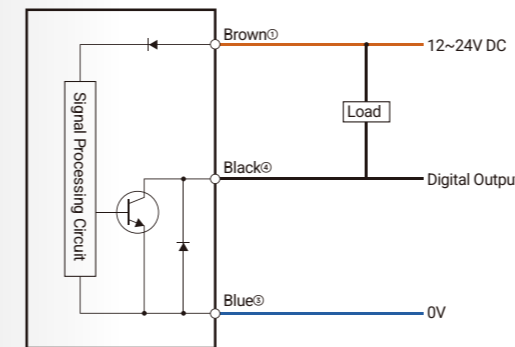
Type	Standard Cuboid	
Appearance		
Model	NPN NO	GQ80F-50NOF
	NPN NC	GQ80F-50NCF
	PNP NO	GQ80F-50POF
	PNP NC	GQ80F-50PCF
Mounting Method	Non-Flush	
Sensing Distance	50mm	
Switching Frequency	25Hz/25Hz AC;40Hz DC	
Operating Voltage	20...250V AC/20...250V AC/DC	
Voltage Drop	≤8V AC/≤10V AC,8V DC	
Load Current	Max.load:400mA;min.Load:5mA	
	Max.load:200mA;min.Load:5mA	
Residual Voltage	≤1.8mA/≤2.5mA	
Hysteresis	<15%(Sr)	
Repeatability	<1.0%(Sr)	
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection	
LED Indicator During Detection	With LED Indicator (Illuminates When Active)	
Ambient Temperature	-25~70°C	
IP Rating	IP67	
Housing Material	PBT	
Sensing FaceMaterial	PBT	
Connection Method	Terminal Block Connection, 2.5mm ²	
Accessories	None	

GQ80F

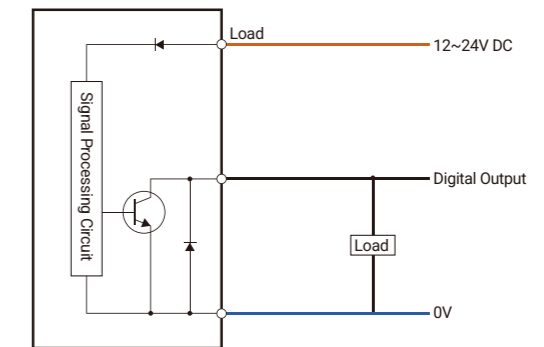


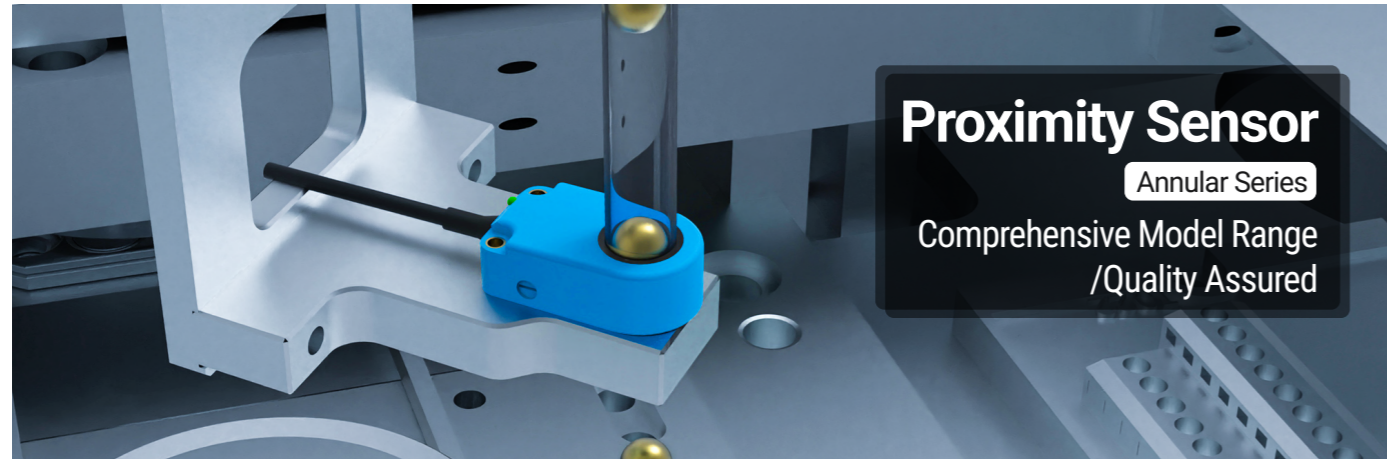
Standard Cuboid Series Wiring Diagram

NPN Output



PNP Output







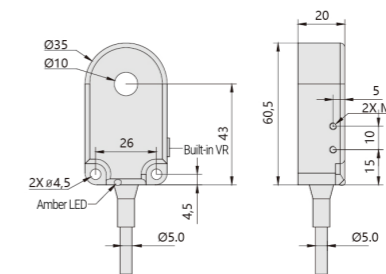
Application Examples



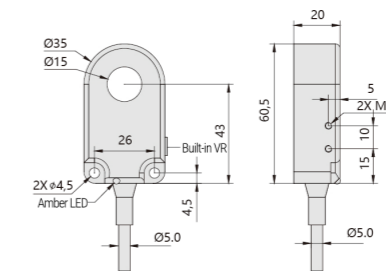
- Standard 2 m Flexible Cable (Custom Lengths Available; Continuous-Flexing Chain Cable Optional)
- 3 kHz Response Frequency for High-Speed Operation
- Non-Contact Detection Ensures Zero Wear/Damage to Target Objects
- Solid-State Output Extends Service Life (No Contact Degradation)
- Wide Operating Temperature Range (-40°C to +85°C)
- Detects Physical Property Variations (Immune to Surface Color/Finish)
- IP68/IP69K Rated for Reliable Operation in Water/Oil Environments (Unaffected by Contaminants)



Type	Annular		
Appearance			
Model	NPN NO	GRH-10NO	GRH-15NO
	NPN NC	GRH-10NC	GRH-15NC
	PNP NO	GRH-10PO	GRH-15PO
	PNP NC	GRH-10PC	GRH-15PC
Detection Aperture	10mm	15mm	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	1000Hz		
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	≤3.0V		
Max. Load Current	200mA		
No-Load Current Consumption	≤20mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25°C~70°C		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:ABS Main Body:POM		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	2m PVC Cable,3*0.35mm ²		

GRH-10

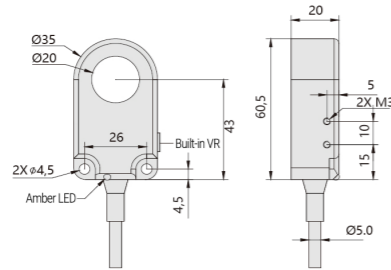


GRH-15

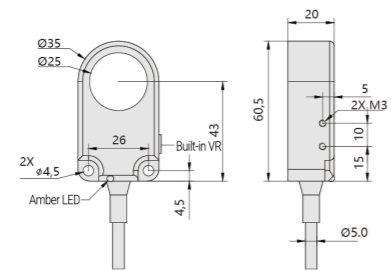


Type	Annular		
Appearance			
Model	NPN NO	GRH-20NO	GRH-25NO
	NPN NC	GRH-20NC	GRH-25NC
	PNP NO	GRH-20PO	GRH-25PO
	PNP NC	GRH-20PC	GRH-25PC
Detection Aperture	20mm	25mm	
Repeatability	<1.0%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency (Hz)	1000Hz		
Operating Voltage	DC 10~30V±10%		
Residual Voltage (Voltage Drop)	≤3.0V		
Max. Load Current	200mA		
No-Load Current Consumption	≤20mA		
Leakage Current	≤0.01mA		
Ambient Temperature	-25°C~70°C		
Switch Protection	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP67		
Material	Sensing Face:ABS Main Body:POM		
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	2m PVC Cable,3*0.35mm ²		

GRH-20

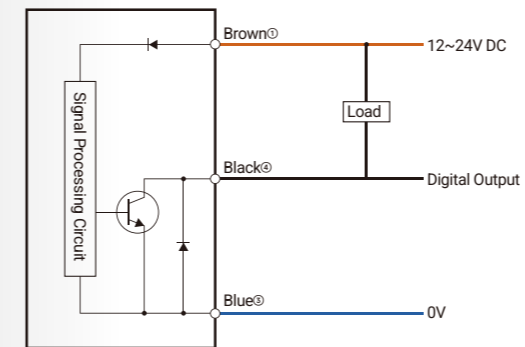


GRH-25

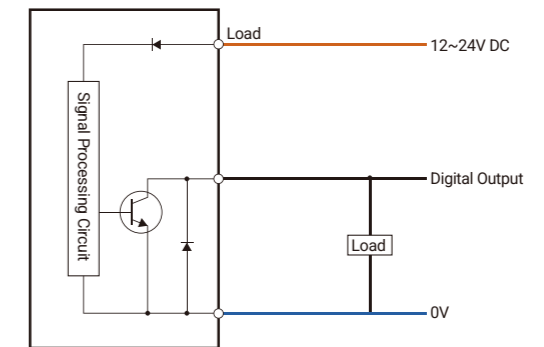


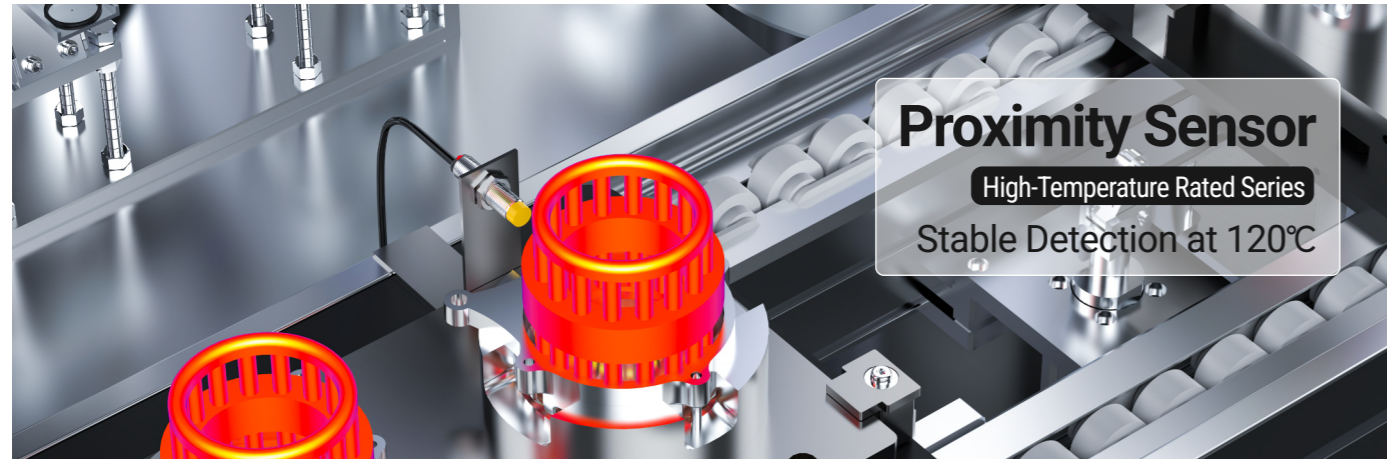
Annular Series Wiring Diagram

NPN Output

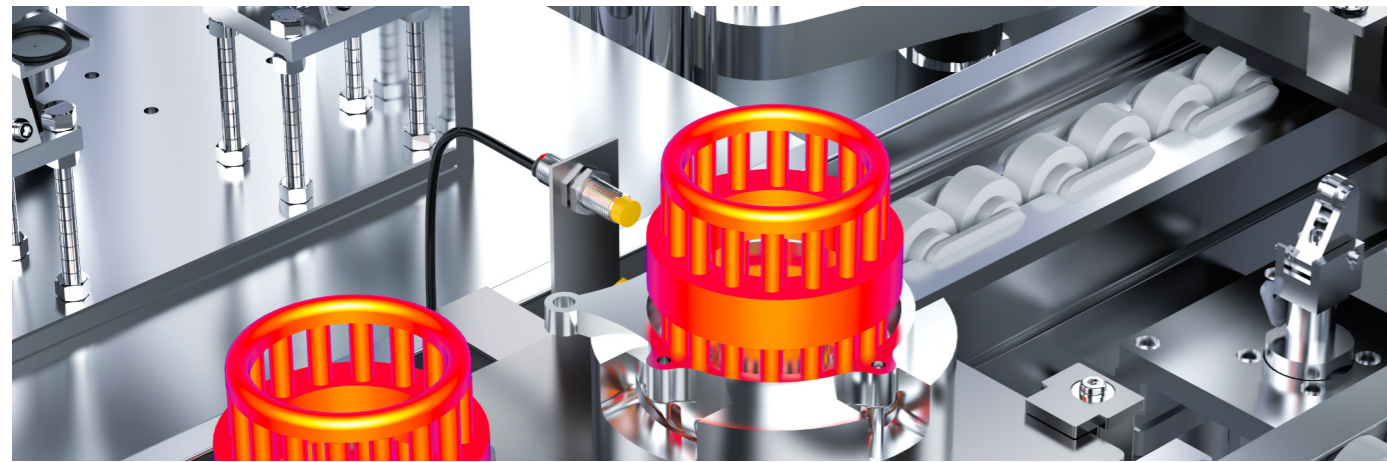


PNP Output



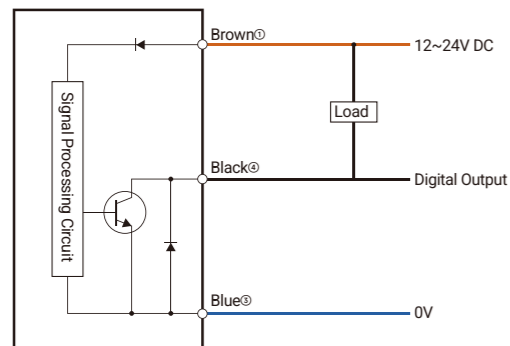


Application Examples

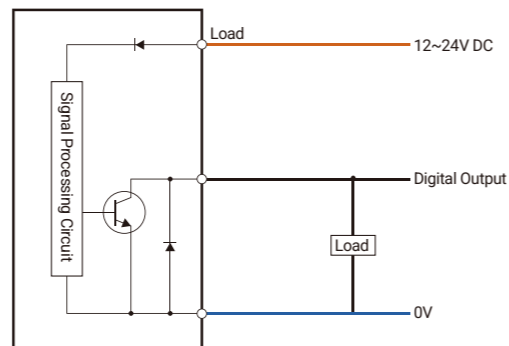


Wiring Diagram

NPN Output



PNP Output



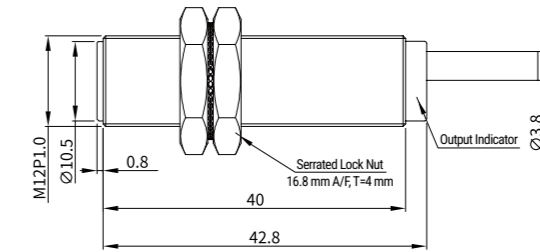
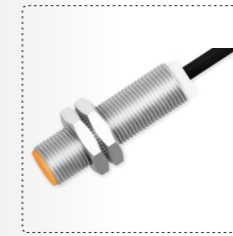
· M12/M18/M30 Integral Cable or Connector Variants

· Stable Detection at 120°C

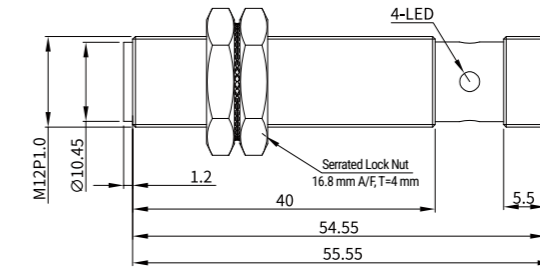
Type	High-Temperature Rated				
Appearance					
Model	NPN NO	GT12-02NOF	GT12-04NOF	GT12-04NON	GT12-08NON
	NPN NC	GT12-02NCF	GT12-04NCF	GT12-04NCN	GT12-08NCN
	PNP NO	GT12-02POF	GT12-04POF	GT12-04PON	GT12-08PON
	PNP NC	GT12-02PCF	GT12-04PCF	GT12-04PCN	GT12-08PCN
Mounting Method	Flush Mounting with Integral Cable		Non-Flush Mounting with Integral Cable		
Dimensions	M12*44		M12*48		
Sensing Distance	2.0	4.0	4.0	8.0	
Repeatability	<3%(Sr)				
Hysteresis (Differential Distance)	<20%(Sr)				
Response Frequency (Hz)	1000	800	1200	1000	
Operating Voltage	DC 10~30V ±10%				
Residual Voltage (Voltage Drop)	<2.0V				
Max. Load Current	<200mA				
No-Load Current Consumption	<15mA				
Leakage Current	<0.01mA				
Ambient Temperature	-25°C~120°C				
Ambient Humidity	35%-85% RH (non-condensing)				
Protection Circuit	Reverse Polarity Protection / Surge Protection / Short-Circuit Protection				
Protection Class	IP67				
Material	Sensing Face:PBT Main Body:Nickel-Copper Alloy				
Withstand Voltage	AC 1000V 50/60Hz 1min				
Vibration Resistance	10~55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes				
Shock Resistance	500 m/s ² , 10 impacts each on X/Y/Z axes				
Insulation Resistance	50 MΩ (measured with DC 500V megohmmeter)				
Indicator	Red LED Indicator During Detection				
Connection Method	Standard 2 m 3-core cable (3.8 mm diameter), custom lengths available				

Type	High-Temperature Rated				
Appearance					
Model	NPN NO	GT12-02NOF-M12	GT12-04NOF-M12	GT12-04NON-M12	GT12-08NON-M12
	NPN NC	GT12-02NCF-M12	GT12-04NCF-M12	GT12-04NCN-M12	GT12-08NCN-M12
	PNP NO	GT12-02POF-M12	GT12-04POF-M12	GT12-04PON-M12	GT12-08PON-M12
	PNP NC	GT12-02PCF-M12	GT12-04PCF-M12	GT12-04PCN-M12	GT12-08PCN-M12
Mounting Method	Flush Mounting with Connector		Non-Flush Mounting with Connector		
Dimensions	M12*57		M12*61		
Sensing Distance	2.0	4.0	4.0	8.0	
Repeatability	<3%(Sr)				
Hysteresis (Differential Distance)	<20%(Sr)				
Response Frequency (Hz)	1000	800	1200	1000	
Operating Voltage	DC 10~30V±10%				
Residual Voltage (Voltage Drop)	<2.0V				
Max. Load Current	<200mA				
No-Load Current Consumption	<15mA				
Leakage Current	<0.01mA				
Ambient Temperature	-25°C~120°C				
Ambient Humidity	35%-85% RH (non-condensing)				
Protection Circuit	Reverse Polarity Protection / Surge Protection / Short-Circuit Protection				
Protection Class	IP67				
Material	Sensing Face:PBT Main Body:Nickel-Copper Alloy				
Withstand Voltage	AC 1000V 50/60Hz 1min				
Vibration Resistance	10~55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes				
Shock Resistance	500 m/s ² , 10 impacts each on X/Y/Z axes				
Insulation Resistance	50 MΩ (measured with DC 500V megohmmeter)				
Indicator	Red LED Indicator During Detection				
Connection Method	M12 Male 3-Pin Connector				

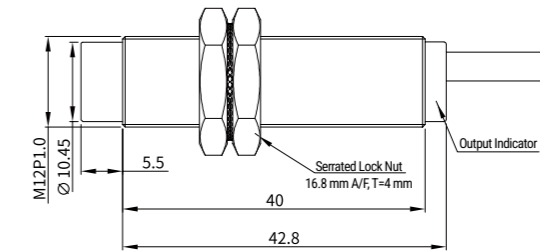
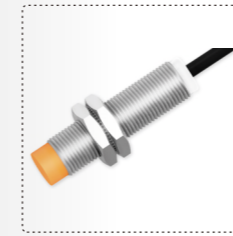
GT12-02/04 Flush Mounting with Integral Cable



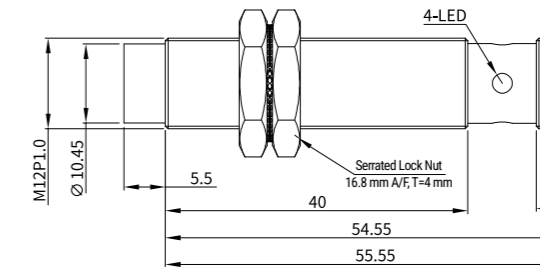
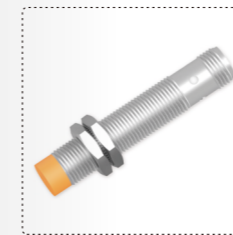
GT12-02/04 Flush Mounting with Connector







GT12-04/08 Non-Flush Mounting with Integral Cable



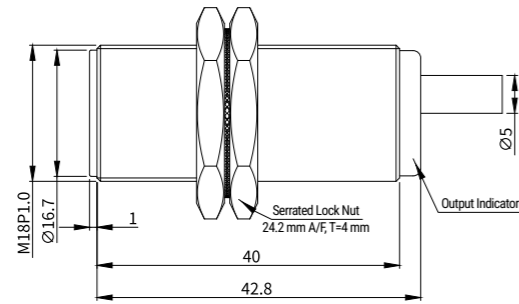
GT12-04/08 Non-Flush Mounting with Connector



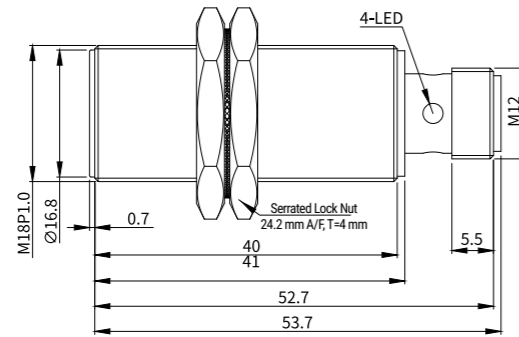
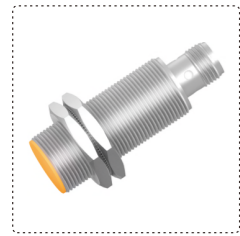
Type		High-Temperature Rated			
Appearance					
Model	NPN NO	GT18-05NOF	GT18-08NOF	GT18-08NON	GT18-12NON
	NPN NC	GT18-05NCF	GT18-08NCF	GT18-08NCN	GT18-12NCN
	PNP NO	GT18-05POF	GT18-08POF	GT18-08PON	GT18-12PON
	PNP NC	GT18-05PCF	GT18-08PCF	GT18-08PCN	GT18-12PCN
Mounting Method		Flush Mounting with Integral Cable		Non-Flush Mounting with Integral Cable	
Dimensions		M18*44		M18*52	
Sensing Distance		5.0	8.0	8.0	12.0
Repeatability		<3%(Sr)			
Hysteresis (Differential Distance)		<20%(Sr)			
Response Frequency (Hz)		1000	500	500	150
Operating Voltage		DC 10~30V±10%			
Residual Voltage (Voltage Drop)		<2.0V			
Max. Load Current		200mA			
No-Load Current Consumption		<15mA			
Leakage Current		<0.01mA			
Ambient Temperature		-25°C~120°C			
Ambient Humidity		35%-85% RH (non-condensing)			
Protection Circuit		Reverse Polarity Protection / Surge Protection / Short-Circuit Protection			
Protection Class		IP67			
Material		Sensing Face:PBT Main Body:Nickel-Copper Alloy			
Withstand Voltage		AC 1000V 50/60Hz 1min			
Vibration Resistance		10~55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes			
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes			
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)			
Indicator		Red LED Indicator During Detection			
Connection Method		Standard 2 m 3-core cable (5 mm diameter), custom lengths available			

Type		High-Temperature Rated			
Appearance					
Model	NPN NO	GT18-05NOF-M12	GT18-08NOF-M12	GT18-08NON-M12	GT18-12NON-M12
	NPN NC	GT18-05NCF-M12	GT18-08NCF-M12	GT18-08NCN-M12	GT18-12NCN-M12
	PNP NO	GT18-05POF-M12	GT18-08POF-M12	GT18-08PON-M12	GT18-12PON-M12
	PNP NC	GT18-05PCF-M12	GT18-08PCF-M12	GT18-08PCN-M12	GT18-12PCN-M12
Mounting Method		Flush Mounting with Connector		Non-Flush Mounting with Connector	
Dimensions		M18*54		M18*63	
Sensing Distance		5.0	8.0	8.0	12.0
Repeatability		<3%(Sr)			
Hysteresis (Differential Distance)		<20%(Sr)			
Response Frequency (Hz)		1000	500	500	150
Operating Voltage		DC 10~30V±10%			
Residual Voltage (Voltage Drop)		<2.0V			
Max. Load Current		200mA			
No-Load Current Consumption		<15mA			
Leakage Current		<0.01mA			
Ambient Temperature		-25°C~120°C			
Ambient Humidity		35%-85% RH (non-condensing)			
Protection Circuit		Reverse Polarity Protection / Surge Protection / Short-Circuit Protection			
Protection Class		IP67			
Material		Sensing Face:PBT Main Body:Nickel-Copper Alloy			
Withstand Voltage		AC 1000V 50/60Hz 1min			
Vibration Resistance		10~55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes			
Shock Resistance		500 m/s ² , 10 impacts each on X/Y/Z axes			
Insulation Resistance		50 MΩ (measured with DC 500V megohmmeter)			
Indicator		Red LED Indicator During Detection			
Connection Method		M12 Male 3-Pin Connector			

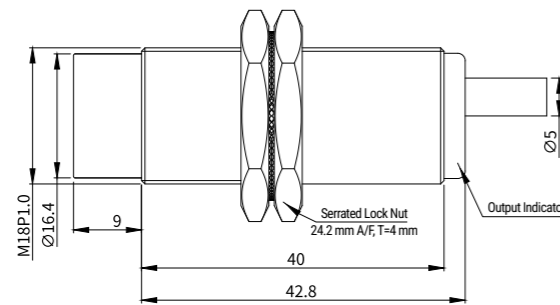
GT18-05/08 Flush Mounting with Integral Cable



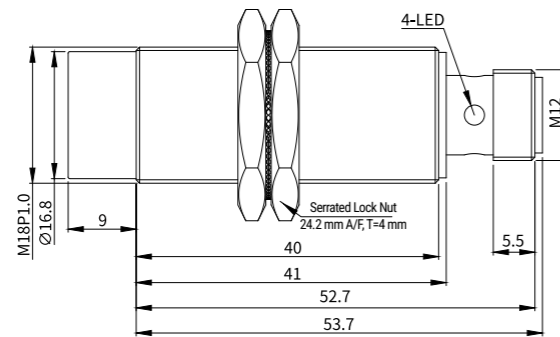
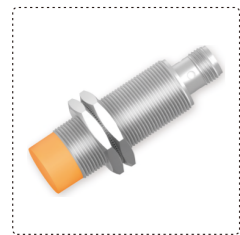
GT18-05/08 Flush Mounting with Connector



GT18-08/12 Non-Flush Mounting with Integral Cable



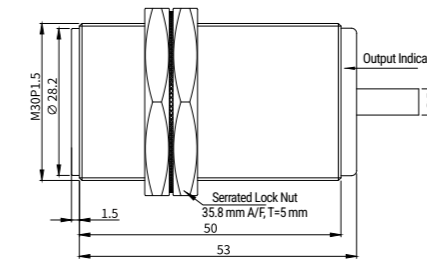
GT18-08/12 Non-Flush Mounting with Connector



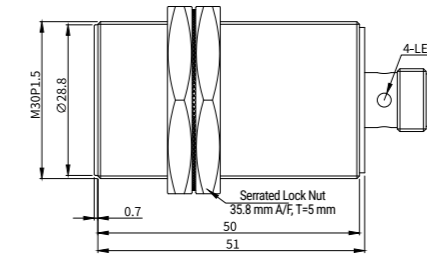
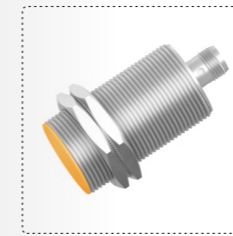
Type	High-Temperature Rated				
Appearance					
Model	NPN NO	GT30-10NOF	GT30-15NOF	GT30-15NON	GT30-25NON
	NPN NC	GT30-10NCF	GT30-15NCF	GT30-15NCN	GT30-25NCN
	PNP NO	GT30-10POF	GT30-15POF	GT30-15PON	GT30-25PON
	PNP NC	GT30-10PCF	GT30-15PCF	GT30-15PCN	GT30-25PCN
Mounting Method	Flush Mounting with Integral Cable		Non-Flush Mounting with Integral Cable		
Dimensions	M30*55mm		M30*65mm		
Sensing Distance	10mm	15mm	15mm	25mm	
Repeatability	<3%(Sr)				
Hysteresis (Differential Distance)	<20%(Sr)				
Response Frequency (Hz)	300Hz	150Hz	150Hz	100Hz	
Operating Voltage	DC 10~30V±10%				
Residual Voltage (Voltage Drop)	<2.0V				
Max. Load Current	200mA				
No-Load Current Consumption	<15mA				
Leakage Current	<0.01mA				
Ambient Temperature	-25°C~120°C				
Ambient Humidity	35%-85% RH (non-condensing)				
Protection Circuit	Reverse Polarity Protection / Surge Protection / Short-Circuit Protection				
Protection Class	IP67				
Material	Sensing Face:PBT Main Body:Nickel-Copper Alloy				
Withstand Voltage	AC 1000V 50/60Hz 1min				
Vibration Resistance	10~55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes				
Shock Resistance	500 m/s², 10 impacts each on X/Y/Z axes				
Insulation Resistance	50 MΩ (measured with DC 500V megohmmeter)				
Indicator	Red LED Indicator During Detection				
Connection Method	Standard 2 m 3-core cable (5 mm diameter), custom lengths available				

Type	High-Temperature Rated				
Appearance					
Model	NPN NO	GT30-10NOF-M12	GT30-15NOF-M12	GT30-15NON-M12	GT30-25NON-M12
	NPN NC	GT30-10NCF-M12	GT30-15NCF-M12	GT30-15NCN-M12	GT30-25NCN-M12
	PNP NO	GT30-10POF-M12	GT30-15POF-M12	GT30-15PON-M12	GT30-25PON-M12
	PNP NC	GT30-10PCF-M12	GT30-15PCF-M12	GT30-15PCN-M12	GT30-25PCN-M12
Mounting Method	Flush Mounting with Connector		Non-Flush Mounting with Connector		
Dimensions	M30*52mm		M30*63mm		
Sensing Distance	10mm	15mm	15mm	25mm	
Repeatability	<3%(Sr)				
Hysteresis (Differential Distance)	<20%(Sr)				
Response Frequency (Hz)	300Hz	150Hz	150Hz	100Hz	
Operating Voltage	DC 10~30V±10%				
Residual Voltage (Voltage Drop)	<2.0V				
Max. Load Current	200mA				
No-Load Current Consumption	<15mA				
Leakage Current	<0.01mA				
Ambient Temperature	-25°C~120°C				
Ambient Humidity	35%-85% RH (non-condensing)				
Protection Circuit	Reverse Polarity Protection / Surge Protection / Short-Circuit Protection				
Protection Class	IP67				
Material	Sensing Face:PBT Main Body:Nickel-Copper Alloy				
Withstand Voltage	AC 1000V 50/60Hz 1min				
Vibration Resistance	10~55 Hz, Double Amplitude 1.5 mm, 2 hours each on X/Y/Z axes				
Shock Resistance	500 m/s ² , 10 impacts each on X/Y/Z axes				
Insulation Resistance	50 MΩ (measured with DC 500V megohmmeter)				
Indicator	Red LED Indicator During Detection				
Connection Method	M12 Male 3-Pin Connector				

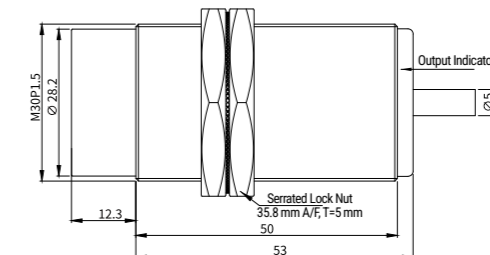
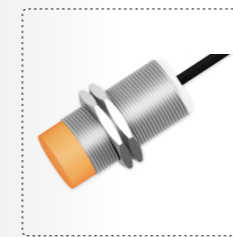
GT30-10/15 Flush Mounting with Integral Cable



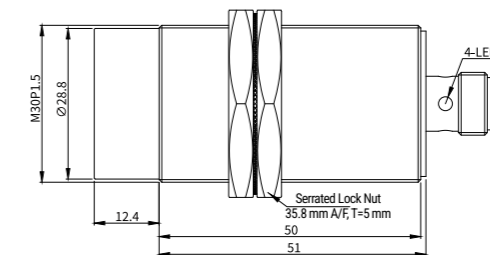
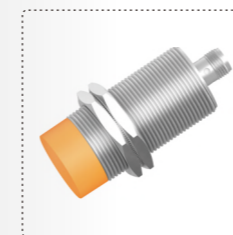
GT30-10/15 Flush Mounting with Connector



GT30-15/25 Non-Flush Mounting with Integral Cable



GT30-15/25 Non-Flush Mounting with Connector





Proximity Sensor

capitive Series

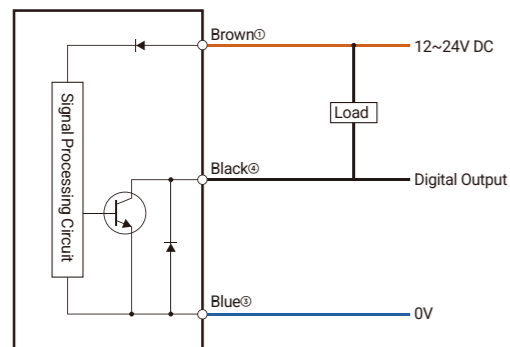
Broad Detection Capability
/High Adaptability

Application Examples

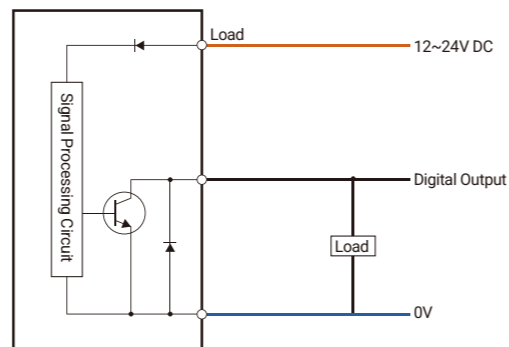


Wiring Diagram

NPN Output





PNP Output





· Standard 2m Flexible Cable (Custom Lengths Available)

· Ultra-Compact Design for Confined Space Installation

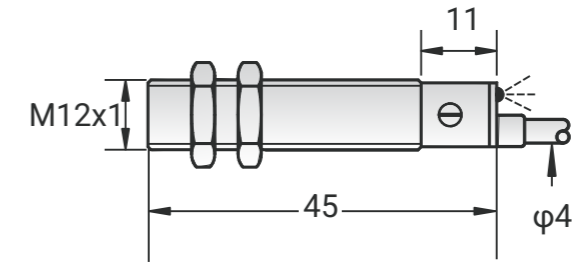
Type	Capacitive		
Appearance			
Model	NPN NO	CR08-01NOF	CR08-02NON
	NPN NC	CR08-01NCF	CR08-02NCN
	PNP NO	CR08-01POF	CR08-02PON
	PNP NC	CR08-01PCF	CR08-02PCN
Mounting Method	Flush Mounting with Integral Cable	Non-Flush Mounting with Integral Cable	
Dimensions	M8*45mm	M8*45mm	
Sensing Distance	1mm	2mm	
Repeatability	<5%(Sr)		
Hysteresis (Differential Distance)	<20%(Sr)		
Response Frequency	100Hz	80Hz	
Response Time	<1.5ms		
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	<1.5V		
Max. Load Current	200mA		
No-Load Current Consumption	<15mA		
Leakage Current	<0.01mA		
Temperature Drift	<15%		
Ambient Temperature	Operating Temperature:-25°C~75°C Storage Temperature: -40°C~85°C (non-freezing)		
Ambient Humidity	35%-85% RH (non-condensing)		
Protection Circuit	Reverse Polarity Protection / Surge Protection / Short-Circuit Protection		
Protection Class	IP65		
Material	Sensing Face:PBT Main Body:Stainless Steel		
Indicator	Amber LED Indicator During Detection		
Connection Method	Standard 2 m 3-core cable (3.0 mm diameter), custom lengths available		
Weight	Approx. 32.3g	Approx. 32.2g	

Type		Capacitive	
Appearance			
Model	NPN NO	CR12-03NOF	CR12-06NON
	NPN NC	CR12-03NCF	CR12-06NCN
	PNP NO	CR12-03POF	CR12-06PON
	PNP NC	CR12-03PCF	CR12-06PCN
Mounting Method		Flush Mounting with Integral Cable	Non-Flush Mounting with Integral Cable
Dimensions		M12*56mm	M12*62mm
Sensing Distance		Adjustable Range: 1~3mm	Adjustable Range: 1~6mm
Repeatability		<5%(Sr)	
Hysteresis (Differential Distance)		<15%(Sr)	
Response Frequency		50Hz	
Response Time		<1.5ms	
Operating Voltage		DC 10~30V±10%	
Residual Voltage (Voltage Drop)		<1.5V	
Max. Load Current		150mA	
No-Load Current Consumption		<10mA	
Overload Current Protection Threshold		240mA	
Leakage Current		<0.01mA	
Temperature Drift		<20%	
Ambient Temperature		-25°C~70°C	
Protection Circuit		Reverse Polarity Protection / Surge Protection / Short-Circuit Protection	
Protection Class		IP65	
Material		Sensing Face: PBT Main Body: Plastic	
Indicator		Amber LED Indicator During Detection	
Connection Method		Standard 2 m 3-core cable (4 mm diameter), custom lengths available	
Weight		Approx. 50.8g	Approx. 49.7g

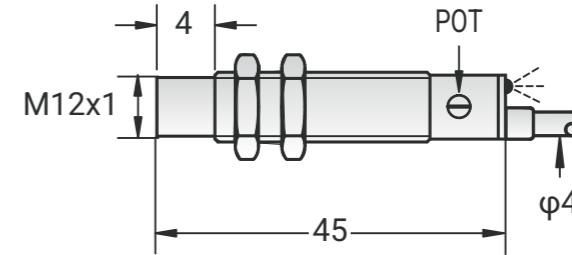
Type		Capacitive	
Appearance			
Model	NPN NO	CR18-08NOF	CR18-15NON
	NPN NC	CR18-08NCF	CR18-15NCN
	PNP NO	CR18-08POF	CR18-15PON
	PNP NC	CR18-08PCF	CR18-15PCN
Mounting Method		Flush Mounting with Integral Cable	Non-Flush Mounting with Integral Cable
Dimensions		M18*72mm	M18*78mm
Sensing Distance		Adjustable Range: 2~8mm	Adjustable Range: 2~15mm
Repeatability		<5%(Sr)	
Hysteresis (Differential Distance)		<15%(Sr)	
Response Frequency		50Hz	
Response Time		<1.5ms	
Operating Voltage		DC 10~30V ±10%	
Residual Voltage (Voltage Drop)		<1.5V	
Max. Load Current		150mA	
No-Load Current Consumption		<10mA	
Leakage Current		<0.01mA	
Temperature Drift		<20%	
Ambient Temperature		Operating Temperature: -25°C~70°C Storage Temperature: -40°C~85°C (non-freezing)	
Ambient Humidity		35%-85% RH (non-condensing)	
Protection Circuit		Reverse Polarity Protection / Surge Protection / Short-Circuit Protection	
Protection Class		IP67	
Material		Sensing Face: PBT Main Body: Plastic	
Indicator		Amber LED Indicator During Detection	
Connection Method		Standard 2 m 3-core cable (5 mm diameter), custom lengths available	
Weight		Approx. 92.0g	Approx. 93.4g

Type		Capacitive	
Appearance			
Model	NPN NO	CR30-20NOF	CR30-30NON
	NPN NC	CR30-20NCF	CR30-30NCN
	PNP NO	CR30-20POF	CR30-30PON
	PNP NC	CR30-20PCF	CR30-30PCN
Mounting Method		Flush Mounting with Integral Cable	Non-Flush Mounting with Integral Cable
Dimensions		M30*87mm	M30*86mm
Sensing Distance		Adjustable Range: 2~20mm	Adjustable Range: 2~30mm
Repeatability		<5%(Sr)	
Hysteresis (Differential Distance)		<15%(Sr)	
Response Frequency		50Hz	
Response Time		<1.5ms	
Operating Voltage		DC 10~30V±10%	
Residual Voltage (Voltage Drop)		<1.5V	
Max. Load Current		150mA	
No-Load Current Consumption		<10mA	
Overload Current Protection Threshold		240mA	
Leakage Current		<0.01mA	
Temperature Drift		<20%	
Ambient Temperature		-25°C~70°C	
Protection Circuit		Reverse Polarity Protection / Surge Protection / Short-Circuit Protection	
Protection Class		IP65	
Material		Sensing Face: PBT Main Body: Plastic	
Indicator		Amber LED Indicator During Detection	
Connection Method		Standard 2 m 3-core cable (5 mm diameter), custom lengths available	
Weight		Approx. 139.2g	Approx. 143.4g

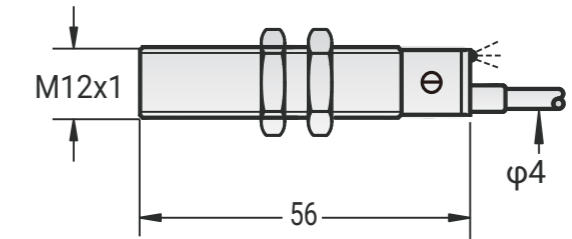
CR08-01



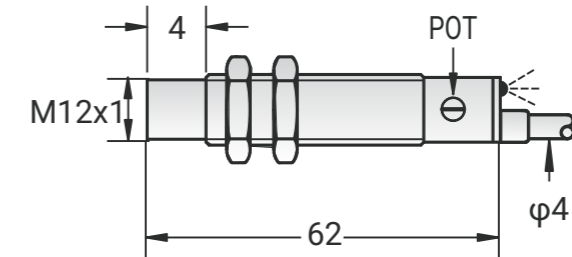
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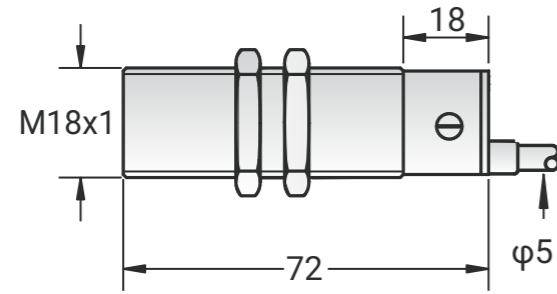
CR12-03



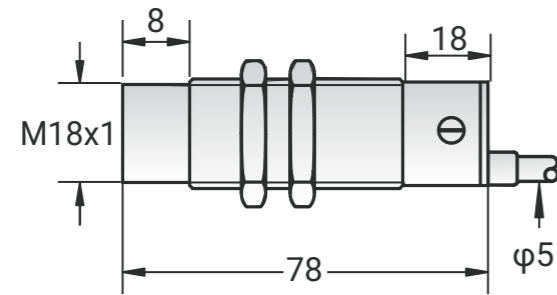
CR12-06



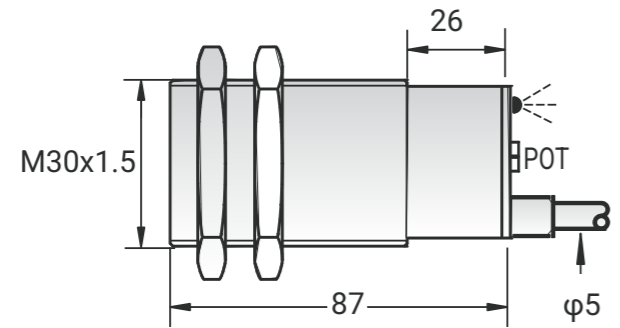
CR18-08



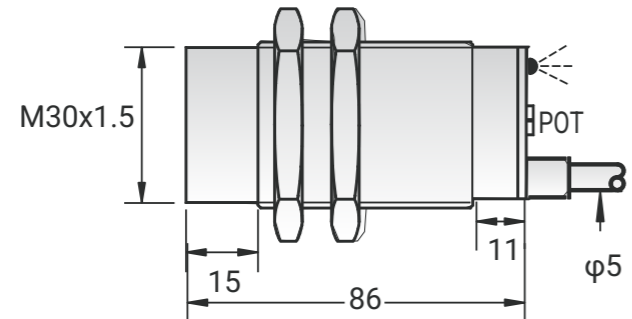
CR18-15




CR30-20



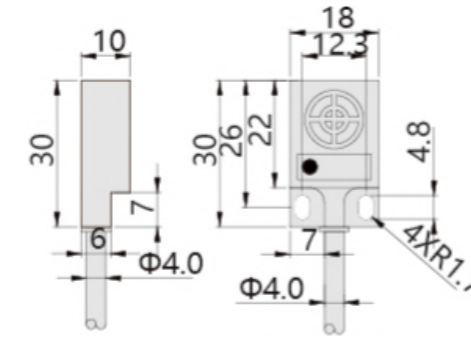
CR30-30



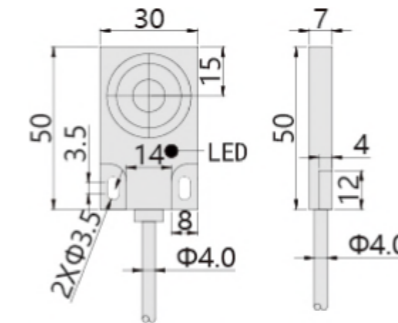
Type	Capacitive		
Appearance			
Model	NPN NO	CQ18F-04NON	CQ30F-10NON
	NPN NC	CQ18F-04NCN	CQ30F-10NCN
	PNP NO	CQ18F-04PON	CQ30F-10PON
	PNP NC	CQ18F-04PCN	CQ30F-10PCN
Mounting Method	Non-Flush Mounting with Integral Cable		
Dimensions	30*18*10mm	50*30*7mm	
Sensing Distance	4mm	10mm	
Repeatability	<5%(Sr)		
Hysteresis (Differential Distance)	<15%(Sr)		
Response Frequency	100Hz		
Operating Voltage	DC 10~30V ±10%		
Residual Voltage (Voltage Drop)	≤2.5V	≤2V	
Max. Load Current	200mA		
No-Load Current Consumption	≤10mA		
Sensitivity Adjustment	Multi-Turn Potentiometer		
Ambient Temperature	-25°C~70°C		
Protection Circuit	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection		
Protection Class	IP65		
Material	Sensing Face:ABS Main Body: ABS	Sensing Face:PBT Main Body:PBT	
Indicator	With LED Indicator (Illuminates When Active)		
Connection Method	2m PVC Cable, 3*0.25mm ²		

Type	Capacitive	
Appearance		
Model	NPN NO	CQ50F-10NON
	NPN NC	CQ50F-10NCN
	PNP NO	CQ50F-10PON
	PNP NC	CQ50F-10PCN
Mounting Method	Non-Flush Mounting with Integral Cable	
Dimensions	50*20*10.2mm	
Sensing Distance	10mm	
Repeatability	<5%(Sr)	
Hysteresis(Hysteresis (Differential Distance))	<15%(Sr)	
Response Frequency	100Hz	
Operating Voltage	DC 10~30V ±10%	
Residual Voltage (Voltage Drop)	≤2V	
Max. Load Current	100mA	
No-Load Current Consumption	≤10mA	
Sensitivity Adjustment	Multi-Turn Potentiometer	
Ambient Temperature	-25°C~70°C	
Protection Circuit	Short-Circuit Protection, Reverse Polarity Protection, Power-On Protection	
Protection Class	IP65	
Material	Sensing Face:ABS Main Body: ABS	
Indicator	With LED Indicator (Illuminates When Active)	
Connection Method	2m PVC Cable, 3*0.25mm ²	

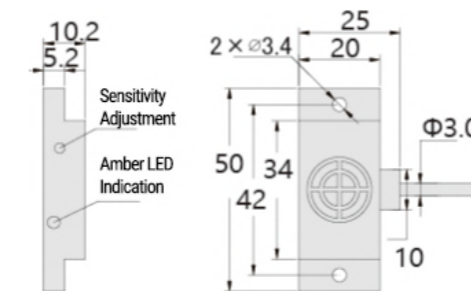
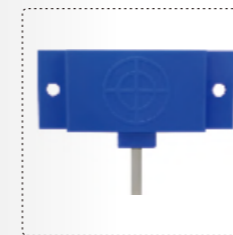
CQ18F-04



CQ30F-10



CQ50F-10







Applications

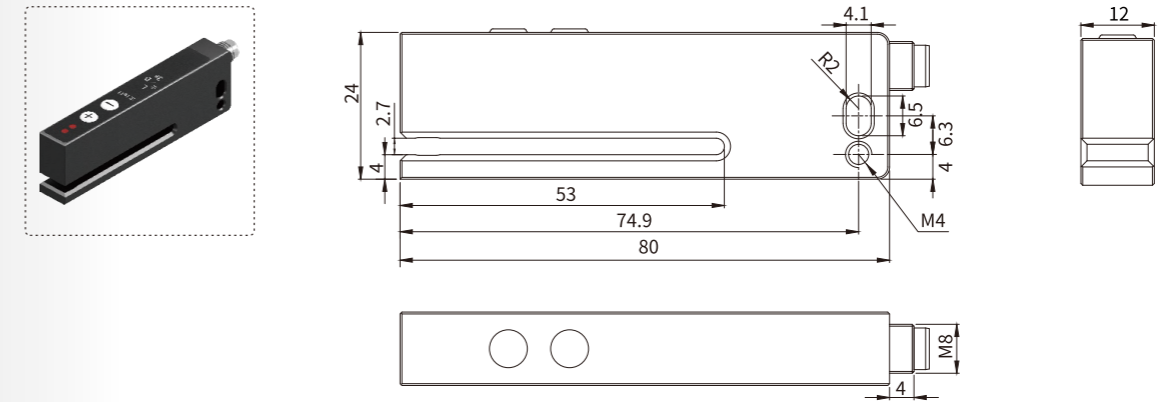


- Capacitive label sensors can reliably detect both transparent and non-transparent labels
- Metal frame and beveled edges provide excellent label drag detection
- Slim design allows flexible installation near label peelers, ensuring higher process accuracy
- Compact housing saves installation space, with simple calibration for easy and quick startup
- Fast response time up to 50µs ensures precise detection even at high web speeds
- Switching frequency up to 10KHz
- NO/NC freely switchable (Normally Open/Normally Closed)
- Power reverse polarity protection, output short-circuit protection, and interference suppression

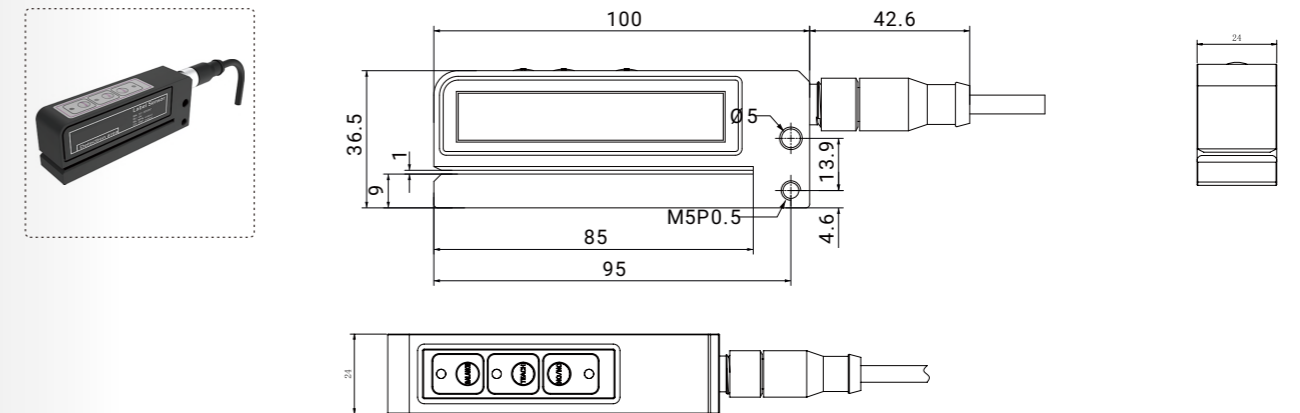
Type	Plug-in Type
Appearance	
Model	GUf-100NP-M8
Detection Method	Photoelectric through-beam
Slot Width	2.7mm
Slot Depth	53mm
Window Size	D3mm non-transparent labels
Standard Detection Object	Φ3mm non-transparent object
Repeatability	±0.5mm
Sensitivity Adjustment	Button learning, ± key fine adjustment
Output Mode	NPN and PNP dual outputs simultaneously
Switch Mode	Light on (light-activated)/Dark on (dark-activated) switchable
Response Time	<100µs
Response Frequency	1000Hz
Light Source	940nm visible red light
Operating Voltage	DC12~24V±10%
Residual Voltage	<1.5V (at 100mA load current, 2m cable)
Maximum Load Current	100mA
Current Consumption	<20mA
Ambient Temperature	Operating: -10°C~55°C; Storage: -25°C~70°C, no freezing
Ambient Humidity	Operating: 35%~85%RH; Storage: 35%~95%RH, no condensation
Protection Circuit	Reverse polarity protection/surge protection/short circuit protection
Protection Class (IP Rating)	IP65
Vibration Resistance	10~55Hz, double amplitude 1.0mm, 30 minutes each in X/Y/Z directions
Shock Resistance	300m/s ² , 3 times each in X/Y/Z directions
Indicator Lights	Red: function indicator, Green: output indicator
Connection Method	M8, 4-pin connector
Housing	Aluminum alloy + anodized

Type	Plug-in Type
Appearance	
Model	GUFF-200NP
Detection Method	Capacitive Sensing
Slot Width	0.35 mm
Slot Depth	85 mm
Standard Detection Object	Compatible with transparent and non-transparent labels
Repeatability	<5%
Sensitivity Adjustment	Adjustable via button
Output Mode	Simultaneous NPN and PNP dual outputs
Switch Mode	Normally Open / Normally Closed switchable
Response Time	<1 ms
Response Frequency	2000 Hz
Operating Voltage	DC 12~24 V ±10%
Residual Voltage	<2 V (at load current of 100 mA, cable length 2 m)
Maximum Load Current	100 mA
Current Consumption	<40 mA
Ambient Temperature	Operating temperature: -10°C to 55°C; Storage temperature: -25°C to 70°C, no freezing
Ambient Humidity	Operating humidity: 35% to 85% RH; Storage humidity: 35% to 95% RH, no condensation
Protection Circuit	Polarity reversal protection / surge protection / short-circuit protection
Protection Class (IP Rating)	IP65
Vibration Resistance	Vibration: 10~55 Hz, double amplitude 1.0 mm, 30 minutes in X/Y/Z directions
Shock Resistance	Shock: 300 m/s ² , 3 pulses in X/Y/Z directions
Indicator Lights	Indicator lights: Red = Function indicator, Green = Output indicator
Connection Method	M12, 4-pin connector
Housing	Aluminum alloy + anodized finish

GUF-100NP-M8 Dimension Drawing

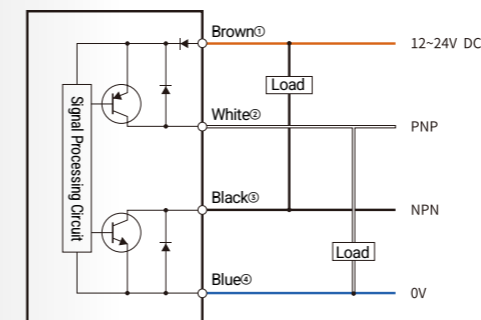


GUF-200NP Dimension Drawing



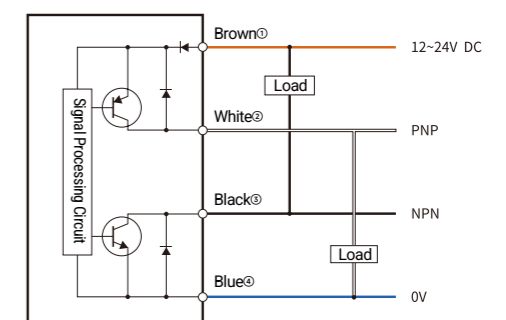
GUF-100NP-M8 Wiring Diagram

NPN/PNP



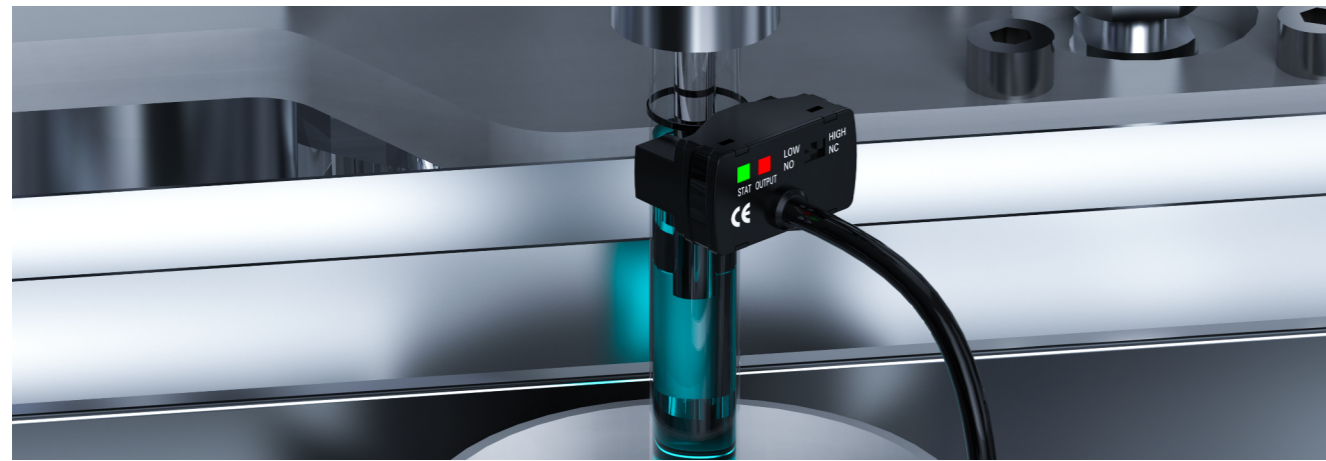
GUF-200NP Wiring Diagram

NPN/PNP







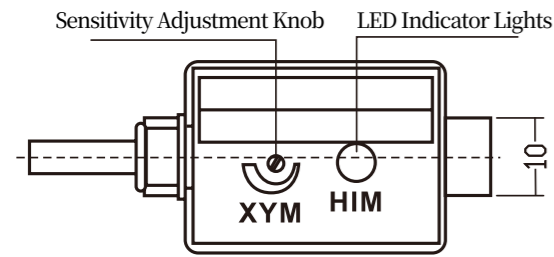
Application Scenarios



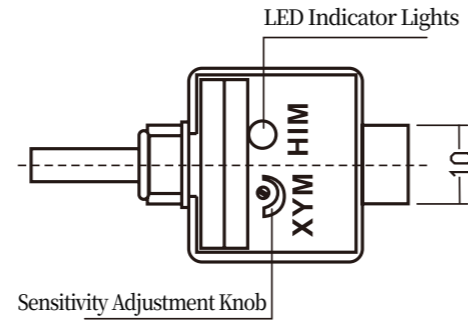
- Suitable for a wide range of pipe diameters
- Built-in amplifier type saves installation space
- Penetration intensity adjustable according to pipe wall thickness
- Easily installed by securing to pipes with cable ties
- Unaffected by liquid color; detects liquid levels for various fluids
- Provides millimeter-level measurement accuracy, ensuring precise process control
- Delivers continuous liquid level data for real-time production process adjustments

Type		Cable Outlet Type	
Appearance			
Model	NPN Output	YW15N	YW30N
Sensing Object		Liquid	
Applicable Pipe Outer Diameter		Wall thickness below 1.5mm, $\Phi 6\sim\Phi 13\text{mm}$	Wall thickness below 2mm, $\Phi 14\sim\Phi 26\text{mm}$
Repeatability of Sensing Distance		$\pm 0.2\text{mm}$ or less	
Hysteresis <small>(Parameter values vary depending on pipe dimensions and solution)</small>		0.6~5mm	0.3~3mm
Power Supply Voltage		10-30V	
Current Consumption		12mA or less	
Control Output	Switching Capacity	100mA or less	
	Residual Voltage	1V or less (at load current of 100mA, cable length 2m)	
Indicator Lights		Red	
Ambient Temperature		Operating: 0~55°C; Storage: -10~+65°C (no freezing, no condensation)	
Ambient Humidity		Operating and storage: 25-85%RH each (no condensation)	
Temperature Influence		Within temperature range of 0~55°C, at 23°C: detection level $\pm 4\text{mm}$ (pure water and 20% saline solution)	
Voltage Influence		Within $\pm 10\%$ of rated power supply voltage range: +0.5mm from detection level at rated power supply voltage	
Protection Circuits		Surge protection / Short-circuit protection / Reverse polarity protection	
Degree of Protection		IP66	
Insulation Resistance		50M Ω or more (DC500V megohmmeter) between entire charged parts and housing	
Withstand Voltage		AC500V 50/60Hz 1min between charged parts and housing	
Vibration Resistance		10-55Hz, amplitude 1.5mm vertical, X/Y/Z directions each 2 hours	
Shock Resistance		500m/S ² , X/Y/Z directions each 3 times	
Housing Material		Cable outlet type (standard cable length 2m)	
Connection Method		Heat-resistant ABS	

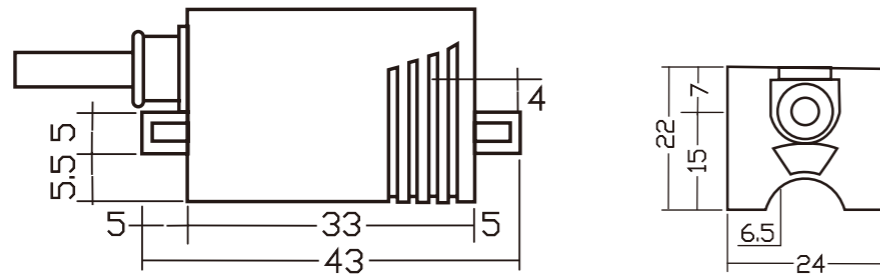
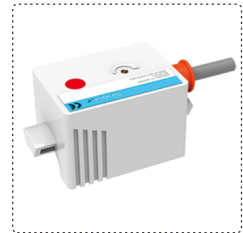
YW15N



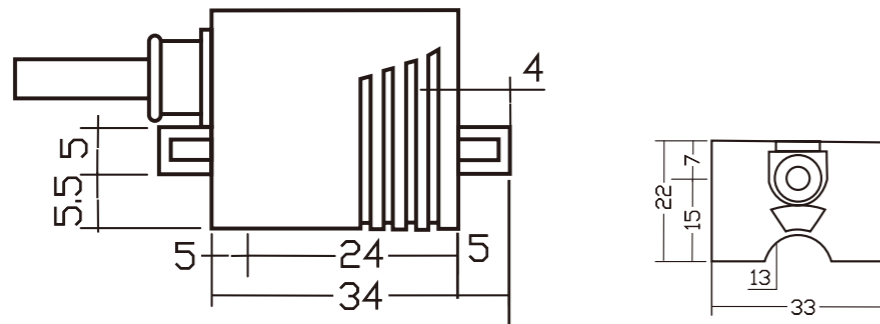
YW30N



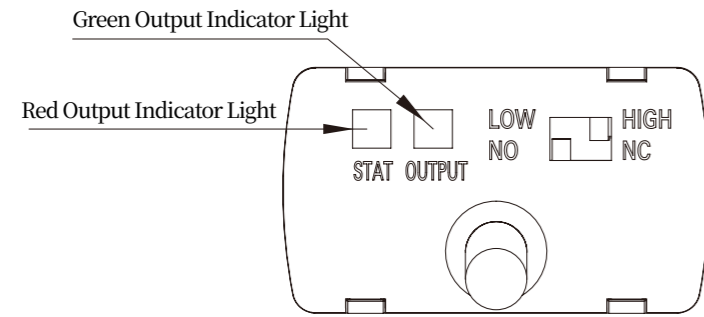
YW15N Dimensional Drawing



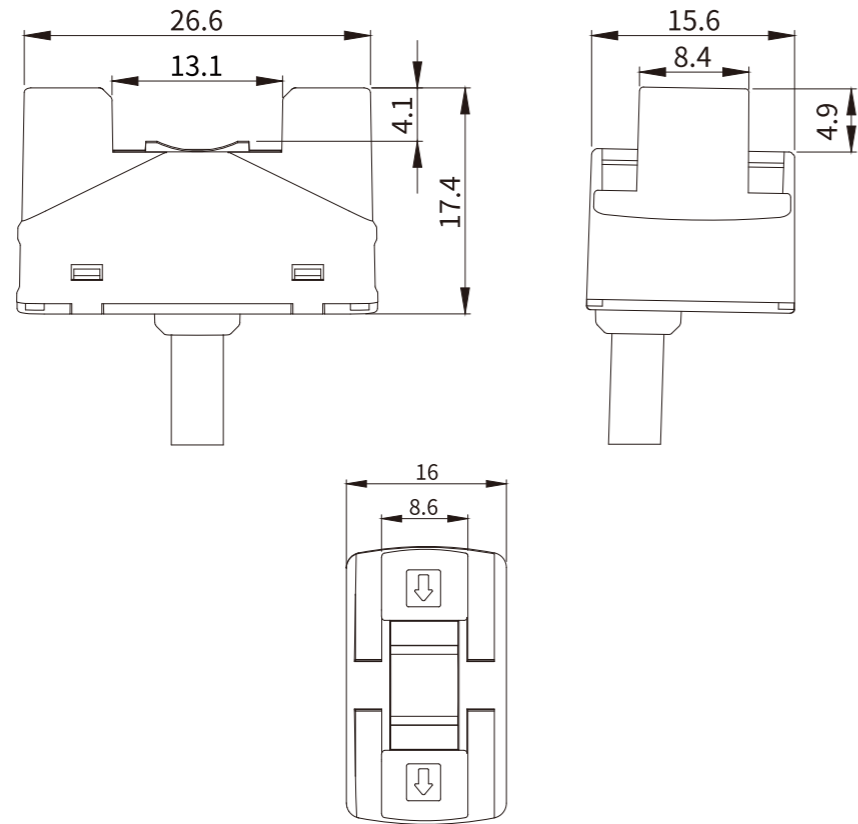
YW30N Dimensional Drawing



Type	Cable Outlet Type	
Appearance		
Model Number	NPN Output	YW-613
Detection Target	Liquid (if liquid viscosity is high or contains suspended solids, detection may not be possible)	
Applicable Pipe Outer Diameter	Transparent conduit with outer diameter $\Phi 6-13\text{mm}$ (wall thickness 1mm)	
Power Supply Voltage	12-24V DC	
Current Consumption	Average current consumption: 30mA or less; Maximum: 80mA or less	
Light Source	GaAs infrared LED (940nm)	
Indicator Lights	Red status indicator light; Green output indicator light	
Operation Mode	Operation modes: ON when light blocked / ON when light received / Switch mode	
Output Mode	NPN open collector output type	
Ambient Illuminance	Incandescent lamp/sunlight: 3000 Lux or less each	
Ambient Temperature	Operating temperature: $-10\sim+55^{\circ}\text{C}$; Storage temperature: $-25\sim+65^{\circ}\text{C}$ (no freezing, no condensation)	
Ambient Humidity	Operating humidity: 5-85%RH; Storage humidity: 5-95%RH (no condensation)	
Control Output	Load power supply voltage: DC12~24V; Load current: 100mA or less	
	Leakage current: 0.5mA or less; Residual voltage: 0.8V or less (at load current 100mA)	
	Residual voltage: 0.4V or less (at load current 40mA)	
Vibration Resistance	Vibration resistance: 10~500Hz, single amplitude 1.0mm	
Shock Resistance	Shock resistance: 500m/S ² , X, Y, Z directions each 3 times	
Protection Rating	IEC standard IP50	
Housing Material	Polycarbonate	
Connection Method	Cable lead type (standard cable length 2m)	

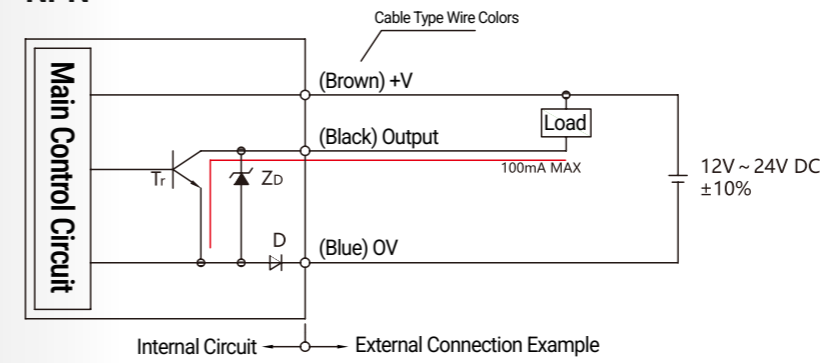


YW-613 Dimensional Drawing



YW15N & YW30N Wiring Diagram

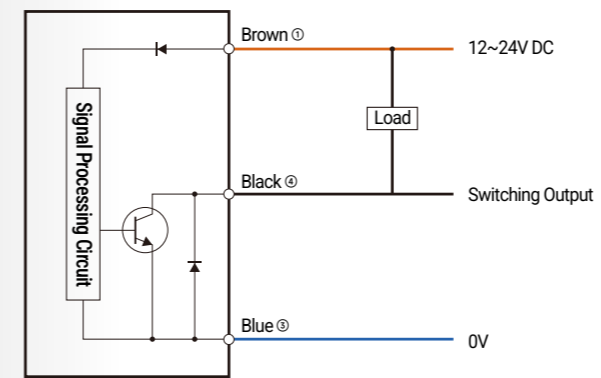
NPN



Symbols:
 Tr: NPN Output Transistor
 ZD: Zener Diode for Surge Voltage Absorption
 D: Diode for Power Supply/Output Reverse Polarity Protection

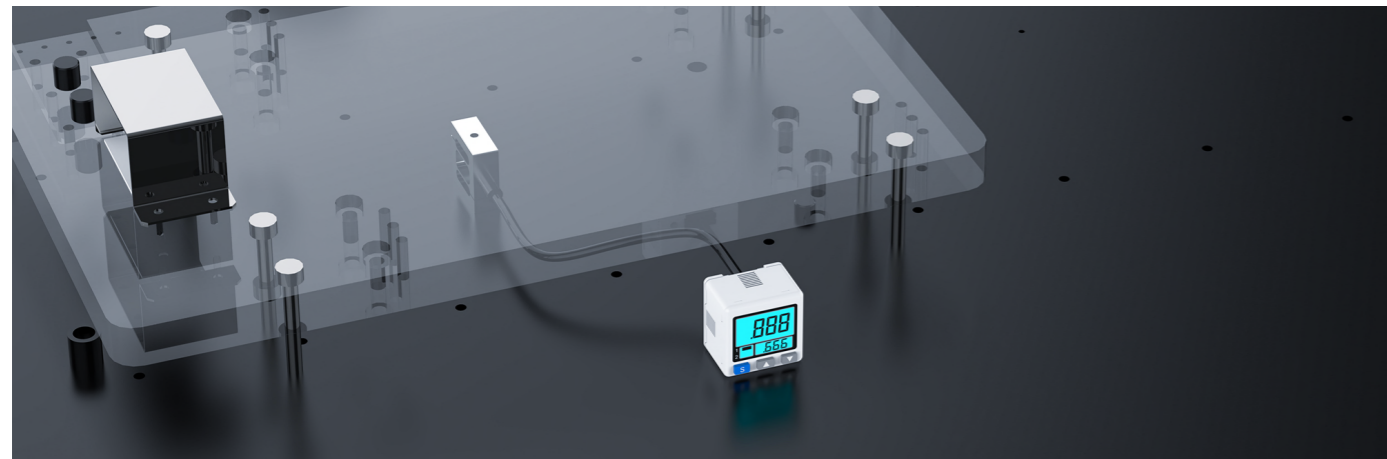
YW-613 Wiring Diagram

NPN






Product Details

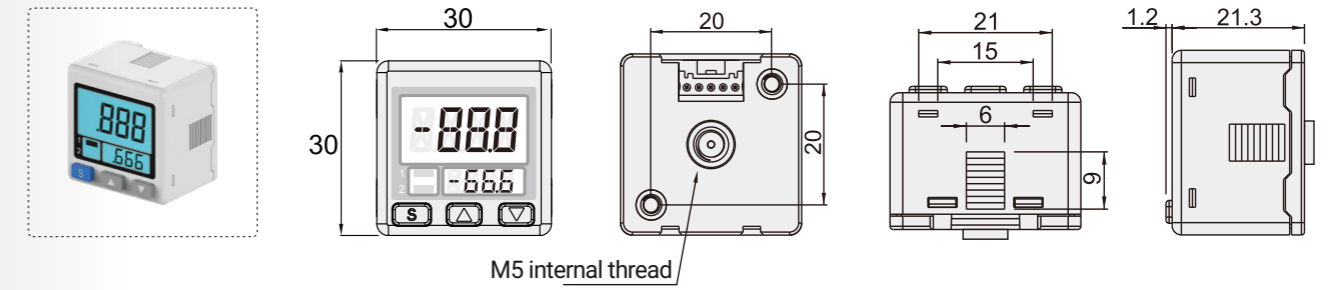


- Switching and analog output modes optional
- Multiple modes optional (EASY/RUN/PRO, etc.)
- Multiple pressure port specifications available
- Remote zero calibration function (limited to analog output)
- Auto reference function (limited to analog output)
- Provides precise measurement results and maintains stable performance even after long-term use
- Responds quickly to pressure changes, facilitating real-time monitoring and control

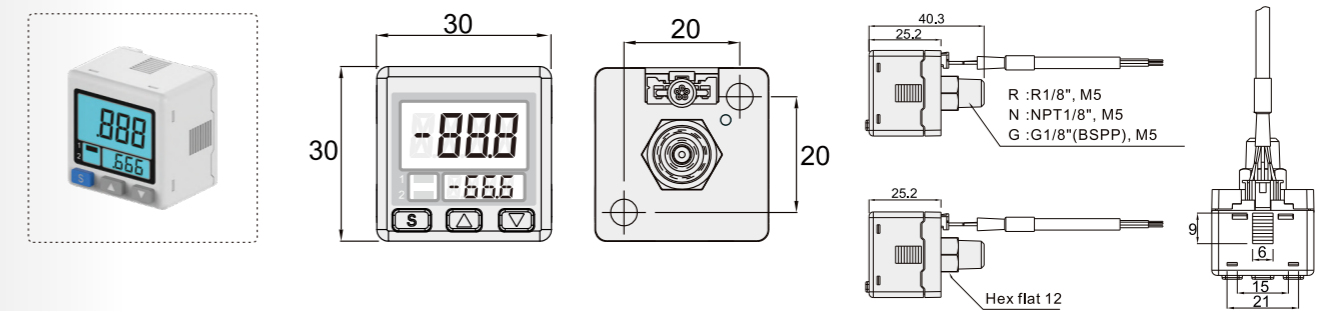
Type	Economy type				
Appearance					
Model	NPN	PG-01LN-M	PG-01LN-R	PG-01HN-M	PG-01HN-R
	PNP	PG-01LP-M	PG-01LP-R	PG-01HP-M	PG-01HP-R
Type	Low pressure type			High pressure type	
Rated Pressure Range	-101.3~101.3KPa			-0.101~1.000MPa	
Set Pressure Range	-105.0~105.0KPa			-0.105~1.000MPa	
Withstand Pressure	500KPa			1.5MPa	
Interface Type	M5 internal thread	R1/8+M5 internal thread		M5 internal thread	R1/8+M5 internal thread
Applicable Fluid	Non-corrosive gas, non-flammable gas, compliant with ISO 8573-1:2010 [7:4:4]				
Power Supply Voltage	12~24V DC±10%				
Current Consumption	45mA or less (no load)				
NPN Output	Load Current	<100mA			
	Load Voltage	<30V DC			
	Voltage Drop	<1.5V			
PNP Output	Load Current	<100mA			
	Load Voltage	<24V DC			
	Voltage Drop	<1.5V			
Display Accuracy	±2% F.S. ±1 digit (operating temperature 25±3°C)				
Repeatability	±0.2% F.S. ±2 digits				
Response Time	2ms, 50ms, 100ms, 250ms, 500ms, 2000ms selectable				
Indicator Light	3-color (red, orange, yellow-green) display (sampling rate: 4 times/second)				
Temperature Characteristics	Within ±2% F.S., reference temperature 25°C (within 0~50°C operating range)				
Ambient Temperature	Operating: 0~50°C (no condensation, no freezing); 35~85% RH (no water condensation)				
	Storage: -10~50°C (no condensation, no freezing); 35~85% RH (no water condensation)				
Protection Rating	IP40				
Weight	Approximately 55g (including power cable)				

Type	Standard type		
Appearance			
Model	NPN + Analog Voltage	PG-10LNV-R	PG-10HNV-R
	NPN + Analog Current	PG-10LNA-R	PG-10HNA-R
	PNP + Analog Voltage	PG-10LPV-R	PG-10HPV-R
	PNP + Analog Current	PG-10LPA-R	PG-10HPA-R
Type	Low pressure type	High pressure type	
Rated Pressure Range	-101.3~101.3KPa	-0.101~1.000MPa	
Set Pressure Range	-105.0~105.0KPa	-0.105~1.000MPa	
Withstand Pressure	500KPa	1.5MPa	
Connection Type	R1/8 + M5 internal thread		
Compatible Fluid	Non-corrosive gas, non-flammable gas, compliant with ISO 8573-1:2010 [7:4:4]		
Power Supply Voltage	12~24V DC±10%		
Current Consumption	45mA or less (no load)		
NPN Output	Load Current	<100mA	
	Load Voltage	<30V DC	
	Voltage Drop	<1.5V	
PNP Output	Load Current	<100mA	
	Load Voltage	<24V DC	
	Voltage Drop	<1.5V	
Voltage Type Analog Output	Output Voltage	1~5V±2.5%F.S.	
	Linearity	±1%F.S.	
	Output Impedance	Approximately 1KΩ	
Current Type Analog Output	Output Voltage	4~20mA ±2.5% F.S.	
	Linearity	±1% F.S.	
	Output Impedance	Minimum 50Ω; Maximum 300Ω @12V; 600Ω @24V	
Display Accuracy	±2% F.S. ±1 digit (operating temperature 25±3°C)		
Repeatability	±0.2% F.S. ±2 digits		
Response Time	1ms, 2ms, 50ms, 100ms, 250ms, 500ms, 2000ms selectable	2ms, 50ms, 100ms, 250ms, 500ms, 2000ms selectable	
Indicator Light	3-color (red, orange, yellow-green) display (sampling rate: 4 times/second)		
Temperature Characteristics	Within ±2% F.S., comparison reference temperature 25°C (within 0~50°C operating range)		
Ambient Temperature	Operating: 0~50°C (no condensation, no freezing); 35~85% RH (no water condensation) Storage: -10~50°C (no condensation, no freezing); 35~85% RH (no water condensation)		
Protection Rating	IP40		
Weight	Approximately 85g (including power cable)		

PG-01 Dimensional Drawing

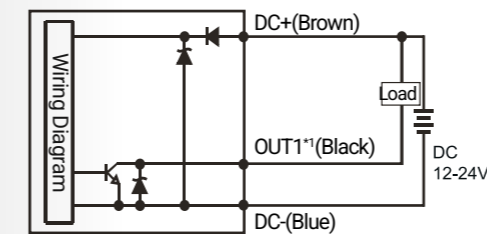


PG-10 Dimensional Drawing

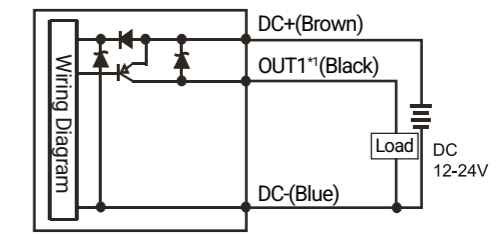


PG-01 Wiring Diagram

NPN

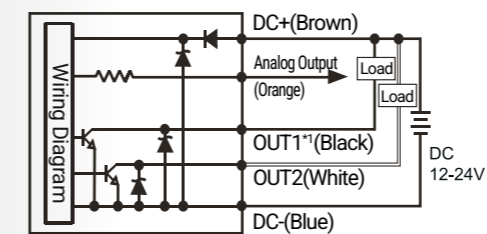


PNP

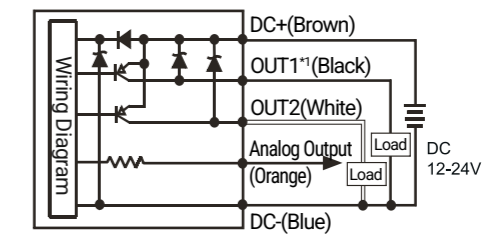



PG-10 Wiring Diagram

NPN

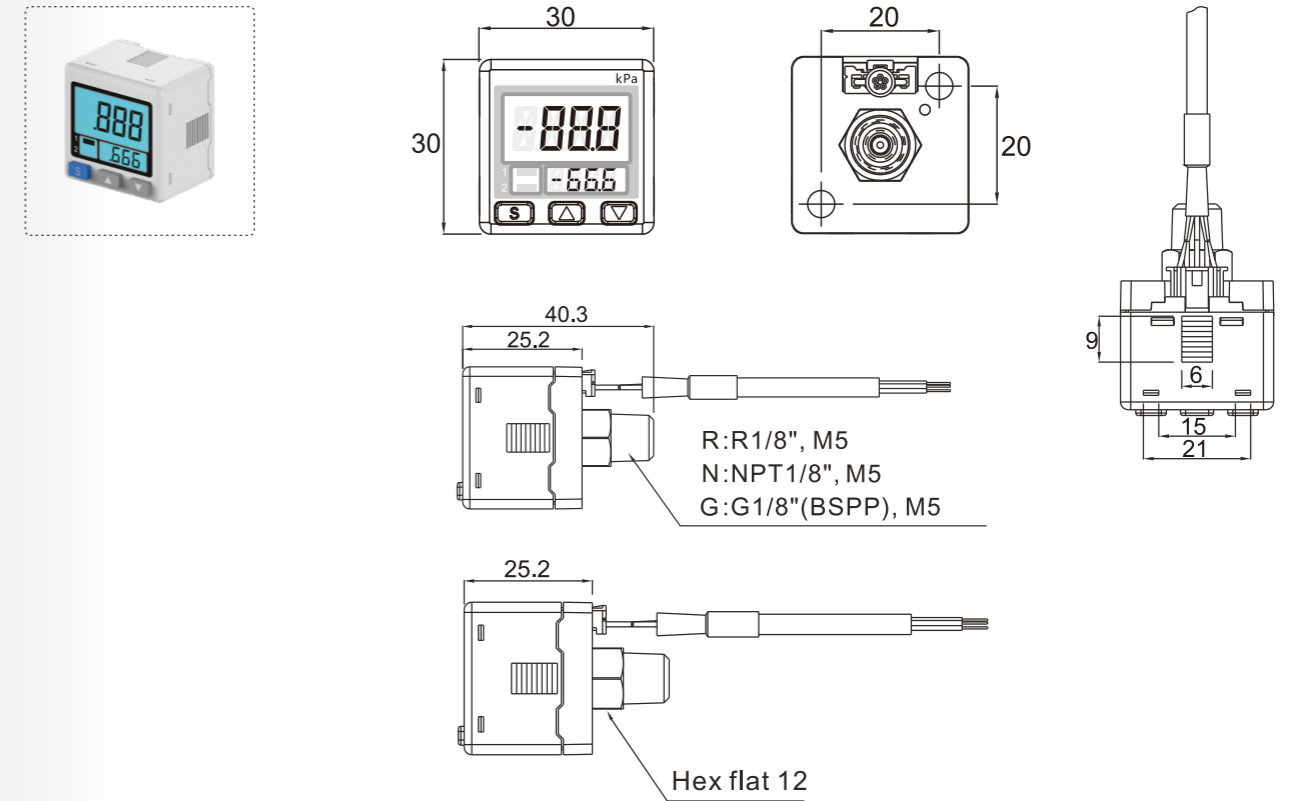


PNP



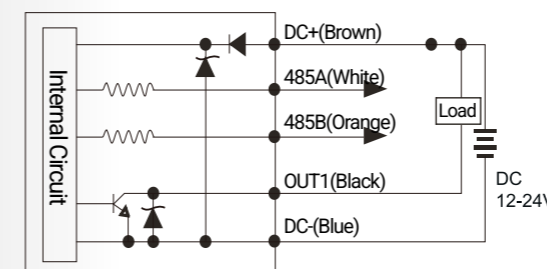
Type	Communication type		
Appearance			
Model	NPN + RS485 communication	PG-15LNM-R	PG-15HNM-R
	PNP + RS485 communication	PG-15LPM-R	PG-15HPM-R
Type	Low pressure type	High pressure type	
Rated Pressure Range	-101.3~101.3KPa	-0.101~1.000MPa	
Set Pressure Range	-105.0~105.0KPa	-0.105~1.000MPa	
Withstand Pressure	500KPa	1.5MPa	
Interface Type	RR1/8 + M5 internal thread		
Applicable Fluid	Non-corrosive gas, non-flammable gas, compliant with ISO 8573-1:2010 [7:4:4]		
Power Supply Voltage	12~24V DC±10%		
Current Consumption	45mA or less (no load)		
NPN Output	Load Current	<100mA	
	Load Voltage	<30V DC	
	Voltage Drop	<1.5V	
PNP Output	Load Current	<100mA	
	Load Voltage	<24V DC	
	Voltage Drop	<1.5V	
Display Accuracy	±2% F.S. ±1 digit (operating temperature 25±3°C)		
Repeatability	±0.2% F.S. ±2 digits		
Response Time	2ms, 50ms, 100ms, 250ms, 500ms, 2000ms selectable		
Indicator Light	3-color (red, orange, yellow-green) display (sampling rate: 4 times/second)		
Temperature Characteristics	Within ±2% F.S., comparison reference temperature 25°C (within 0~50°C operating range)		
Ambient Temperature	Operating: 0~50°C (no condensation, no freezing); 35~85% RH (no water condensation) Storage: -10~50°C (no condensation, no freezing); 35~85% RH (no water condensation)		
Protection Rating	IP40		
Weight	Approximately 85g (including power cable)		

PG-15 Dimensional Drawing

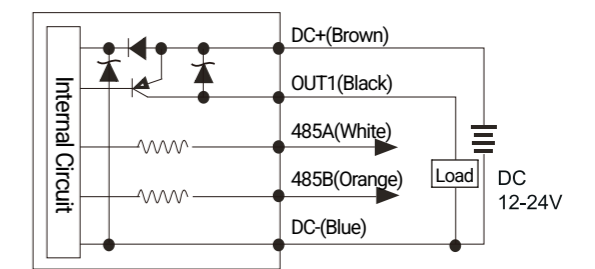


PG-15 Wiring Diagram

NPN+RS485



PNP+RS485

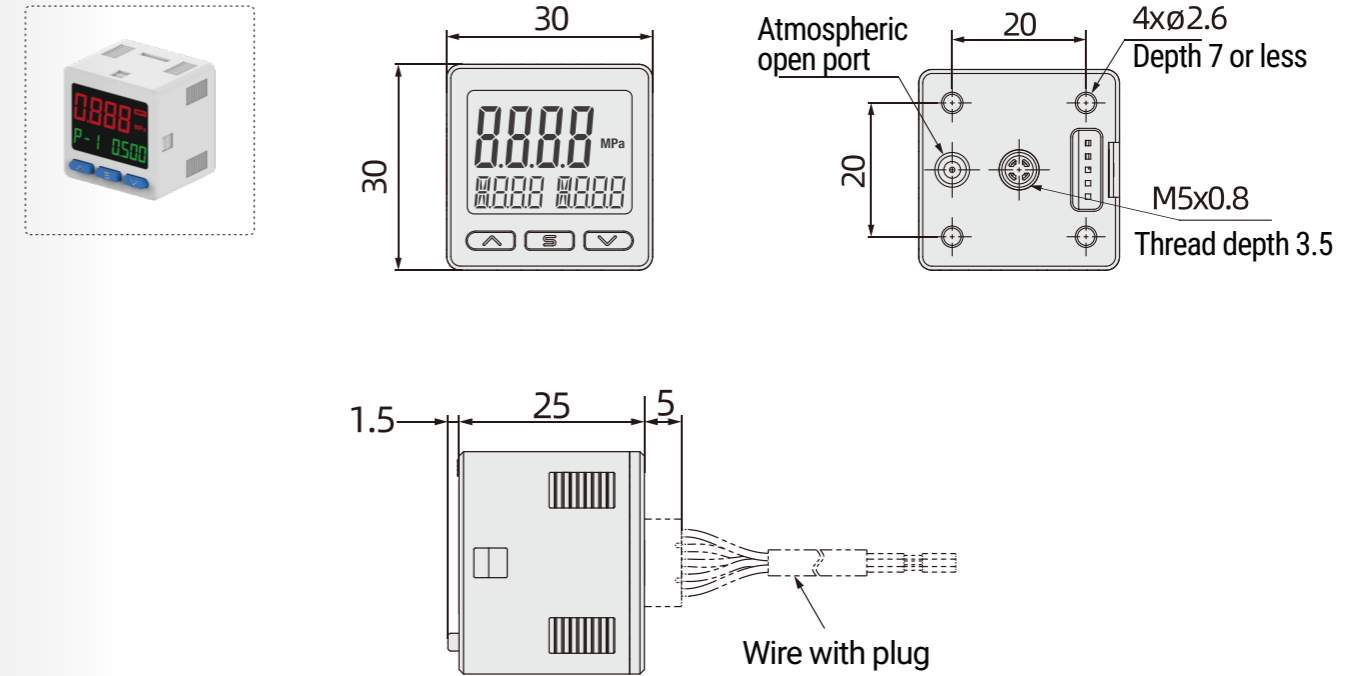


Accessories Selection Catalog

Accessory Model	Specification	Compatible products
XP-BT-01	L-shaped metal mounting bracket	PG-01,PG-10,PG-15 series
XP-BT-02	Z-shaped metal mounting bracket	PG-01,PG-10,PG-15 series
XP-PA-01	Panel mounting bracket	PG-01,PG-10,PG-15 series

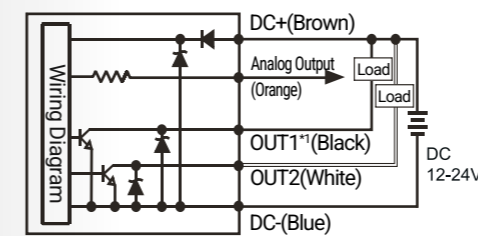
Type		High protection type			
Appearance					
Model	NPN + Analog Voltage	PG-20LNV-M	PG-20LNV-R	PG-20HNV-M	PG-20HNV-R
	NPN + Analog Current	PG-20LNA-M	PG-20LNA-R	PG-20HNA-M	PG-20HNA-R
	PNP + Analog Voltage	PG-20LPV-M	PG-20LPV-R	PG-20HPV-M	PG-20HPV-R
	PNP + Analog Current	PG-20LPA-M	PG-20LPA-R	PG-20HPA-M	PG-20HPA-R
Type	Low pressure type		High pressure type		
Rated Pressure Range	-101.3~101.3KPa		-0.101~1.000MPa		
Set Pressure Range	-105.0~105.0KPa		-0.105~1.000MPa		
Withstand Pressure	500KPa		1.5MPa		
Connection Type	M5 internal thread	R1/8+M5 internal thread	M5 internal thread	R1/8+M5 internal thread	
Compatible Fluid	Non-corrosive gas, non-flammable gas, compliant with ISO 8573-1:2010 [7:4:4]				
Power Supply Voltage	12~24V DC±10%				
Current Consumption	45mA or less (no load)				
NPN Output	Load Current	<100mA			
	Load Voltage	<30V DC			
	Voltage Drop	<1.5V			
PNP Output	Load Current	<100mA			
	Load Voltage	<24V DC			
	Voltage Drop	<1.5V			
Voltage Type Analog Output	Output Voltage	1~5V±2.5%F.S.			
	Linearity	±1%F.S.			
	Output Impedance	Approximately 1KΩ			
Current Type Analog Output	Output Voltage	4~20mA±2.5%F.S.			
	Linearity	±1%F.S.			
	Output Impedance	Minimum 50Ω; Maximum 300Ω @12V; 600Ω @24V			
Display Accuracy	±2% F.S. ±1 digits (operating temperature 25±3°C)				
Repeatability	±0.2% F.S. ±2 digits				
Response Time	2ms, 50ms, 100ms, 250ms, 500ms, 2000ms selectable				
Indicator Light	3-color (red, orange, yellow-green) display (sampling rate: 4 times/second)				
Temperature Characteristics	Within ±2% F.S., comparison reference temperature 25°C (within 0~50°C operating range)				
Ambient Temperature	Operating: 0~50°C (no condensation, no freezing); 35~85% RH (no water condensation) Storage: -10~50°C (no condensation, no freezing); 35~85% RH (no water condensation)				
Protection Rating	IP65				
Weight	70g				

PG-20 Dimensional Drawing

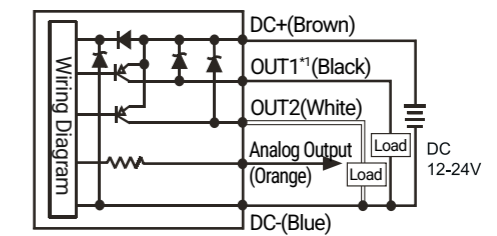



PG-20 Wiring Diagram

NPN+RS485

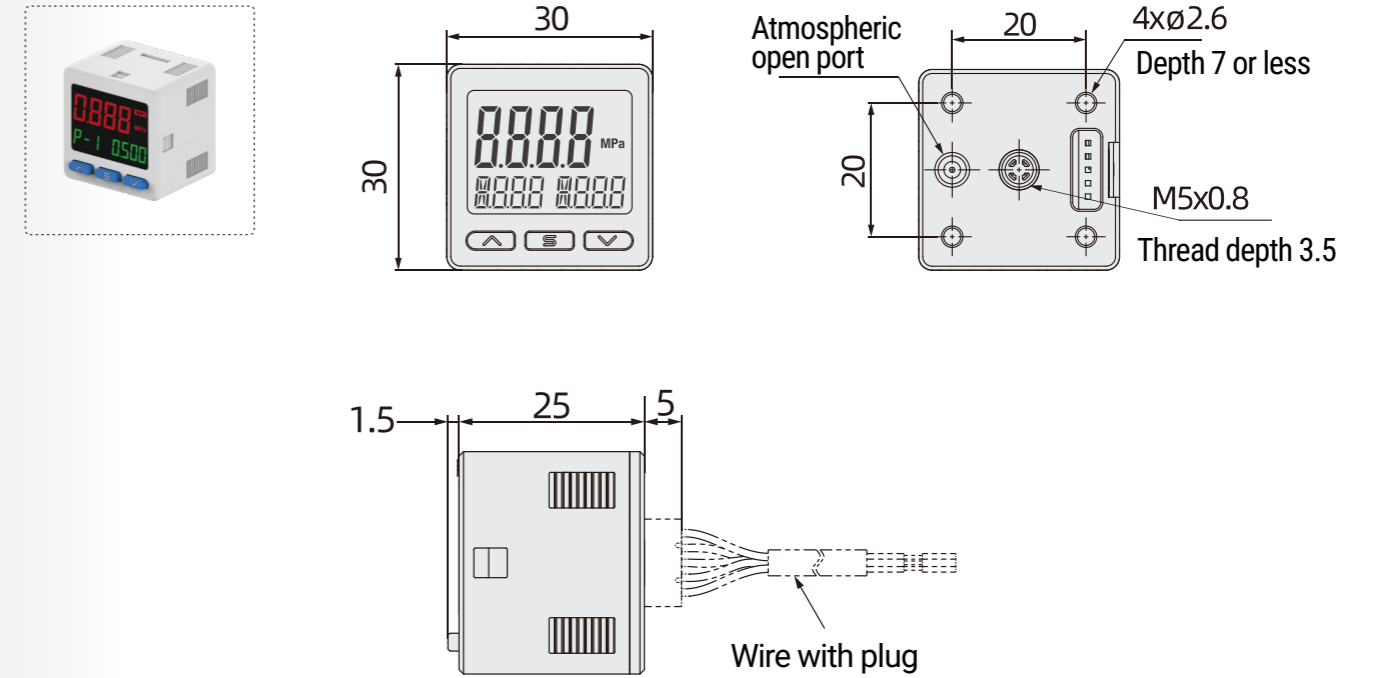


PNP+RS485



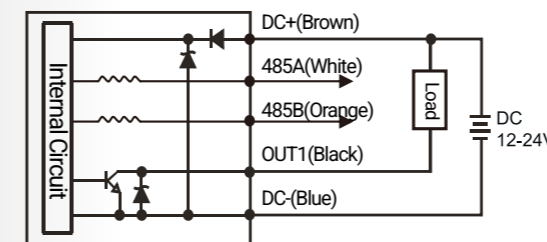
Type	High protection type				
Appearance					
Model	NPN + RS485 communication	PG-25LNM-M	PG-25LNM-R	PG-25HNM-M	PG-25HNM-R
	PNP + RS485 communication	PG-25LRM-M	PG-25LRM-R	PG-25HRM-M	PG-25HRM-R
Type	Low pressure type		High pressure type		
Rated Pressure Range	-101.3~101.3KPa		-0.101~1.000MPa		
Set Pressure Range	-105.0~105.0KPa		-0.105~1.000MPa		
Withstand Pressure	500KPa		1.5MPa		
Interface Type	M5 internal thread	R1/8+M5 internal thread	M5 internal thread	R1/8+M5 internal thread	
Applicable Fluid	Non-corrosive gas, non-flammable gas, compliant with ISO 8573-1:2010 [7:4:4]				
Power Supply Voltage	12~24V DC±10%				
Current Consumption	45mA or less (no load)				
NPN Output	Load Current	<100mA			
	Load Voltage	<30V DC			
	Voltage Drop	<1.5V			
PNP Output	Load Current	<100mA			
	Load Voltage	<24V DC			
	Voltage Drop	<1.5V			
Display Accuracy	±2% F.S. ±1 digit (operating temperature 25±3°C)				
Repeatability	±0.2% F.S. ±2 digits				
Response Time	2ms, 50ms, 100ms, 250ms, 500ms, 2000ms, 3000ms, 5000ms selectable				
Indicator Light	3-color (red, orange, yellow-green) display (sampling rate: 4 times/second)				
Temperature Characteristics	Within ±2% F.S., comparison reference temperature 25°C (within 0~50°C operating range)				
Ambient Temperature	Operating: 0~50°C (no condensation, no freezing); 35~85% RH (no water condensation) Storage: -10~50°C (no condensation, no freezing); 35~85% RH (no water condensation)				
Protection Rating	IP65				
Weight	70g				

PG-25 Dimensional Drawing

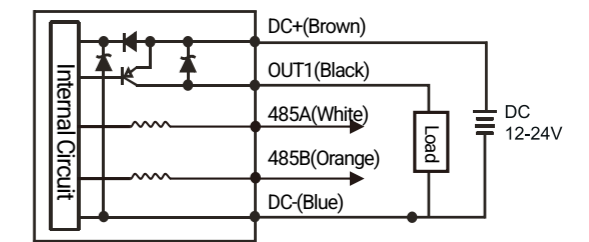


PG-25 Wiring Diagram

NPN+RS485




PNP+RS485

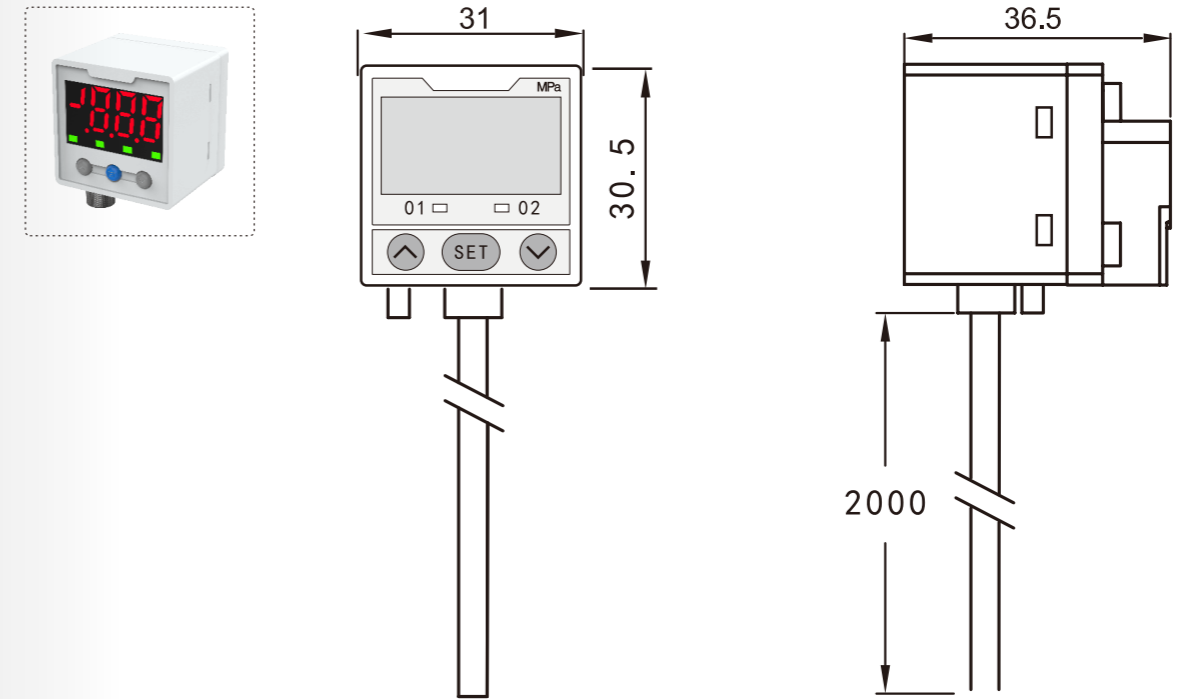


Accessories Selection Catalog

Accessory Model	Specification	Compatible products
XP-BT-04	L-shaped metal mounting bracket	PG - 20,PG - 25 series
XP-BT-05	Z-shaped metal mounting bracket	PG - 20,PG - 25 series
XP-PA-03	Panel mounting bracket	PG - 20,PG - 25 series

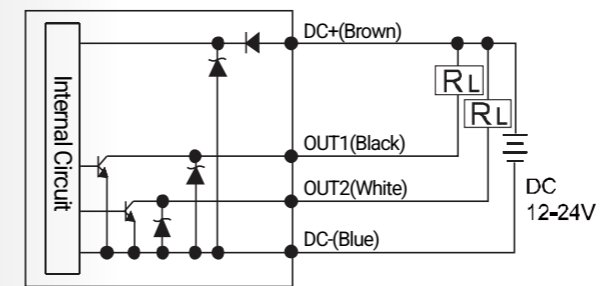
Type	Enhanced Protection Type		
Appearance			
Model	NPN	PG-30LN2-S	PG-30HN2-S
	PNP	PG-30LP2-S	PG-30HP2-S
Type	Low pressure type	High pressure type	
Rated Pressure Range	-100.0~100kPa	-0.100~1.000MPa	
Set Pressure Range	-103.0~103kPa	-0.1030~1.003MPa	
Proof Pressure	500kPa	1.5MPa	
Interface Type	RC 1/8		
Compatible Fluids	Non-corrosive Gases, Non-flammable Gases, Compliant with ISO 8573-1:2010 [Class 7:4:4]		
Supply Voltage	12-24V DC $\pm 10\%$		
Current Consumption	$\leq 40\text{mA}$ (No Load)		
NPN Output	Load Current	$< 200\text{mA}$	
	Load Voltage	$< 30\text{V DC}$	
	Voltage Drop	$< 1.0\text{V}$	
PNP Output	Load Current	$< 200\text{mA}$	
	Load Voltage	$< 24\text{V DC}$	
	Voltage Drop	$< 1.0\text{V}$	
Display Accuracy	$\pm 1\%$ F.S. ± 1 digit (at $25\pm 3^\circ\text{C}$)		
Repeatability	$\pm 0.3\%$ F.S. ± 1 digits		
Response Time	$\leq 2.5\text{ms}$ (configurable: 25, 100, 250, 500, 1000, 1500ms)		
Indicator	3-color (Red, Orange, Yellow-Green) Display (Sampling Rate: 4/s)		
Temperature Characteristics	$\pm 3\%$ F.S. max, referenced to 25°C (within $0\text{-}50^\circ\text{C}$ operating range)		
Ambient Temperature	Operating: $0\text{-}50^\circ\text{C}$ (non-condensing, non-freezing); 35-85% RH (no dew) Storage: $-10\text{-}50^\circ\text{C}$ (non-condensing, non-freezing); 35-85% RH (no dew)		
IP Rating	IP65		
Weight	Approx. 108g		

PG-30 Dimensional Drawing

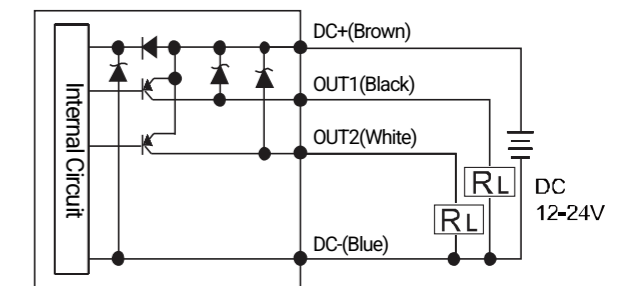


PG-30 Wiring Diagram

NPN



PNP





Instructions for Use

1. The sensor must not be dropped, subjected to collision, or exposed to excessive impact.
2. The sensor cable should be kept stationary as much as possible and not move with the cylinder.
3. It is recommended to apply a pre-tightening torque of 0.15~0.20Nm; the maximum torque must not exceed 0.25Nm to prevent product damage.
4. Install at the middle position of the operating range.
5. Sensor wiring:
 - A. The cable must not be subjected to repeated bending and stretching; please connect the load before powering on;
 - B. Maintain good insulation of the cable;
 - C. Do not route alongside power cables or high-voltage cables, nor use the same conduit;
 - D. Please wire correctly according to the wiring schematic diagram.
6. Perform regular maintenance and inspection in the following aspects:
 - A. Confirm the sensor is not loose;
 - B. Confirm the cable is undamaged;
 - C. Confirm the indicator light correctly shows the piston movement position.
7. Operating environment:
 - A. Prohibited for use in explosive gas environments;
 - B. Do not use in environments with magnetic fields;
 - C. Waterproof types should not be used long-term in water-submerged environments or environments frequently exposed to water;
 - D. Do not use in environments with oil or chemical substances;
 - E. Do not use in environments with temperature cycling;
 - F. Do not use in environments with electrical pulse interference sources;
 - G. Avoid environments with accumulated iron powder or dense magnetic materials as much as possible.
 - G. Minimize exposure to environments with high concentrations of iron powder or magnetic materials.

· Ultra-compact dimensions, low power consumption, high sensitivity

· IP67 protection rating with surge protection absorption

· High-flexibility cable with enhanced SR (strain relief) anti-flexure structure

· High installation flexibility for cylinders, made with impact-resistant engineering materials

· DMS and CMS series products are compatible with F-MQ port and F-SC port SH connectors, suitable for various types of cylinders

· QMS series is designed for single-phase AC welding machines

Type	Magnetic sensor		
Appearance			
Category	DMS: General Electronic Sensor		
Type	Two-wire	NPN three-wire	PNP three-wire
Housing shell	Plastic housing: PBT (off-white)/Metal housing		
Residual pressure drop	2.8V Max.@50mA DC	1.0V Max.@100mA DC	
Cable specifications	Φ2.0, 2 cores (blue brown)	Φ2.0, 3 cores (blue brown black)	
Cable material	Standard type: Standard PVC (gray) cable / R: Highly flexible drag chain cable / U: Oil-resistant PUR cable		
Voltage range	10-30V DC		
Switch current	50mA or less	100mA or less	
Current consumption	5mA or less	10mA or less	
leakage current	0.1mA Max.@24V		
Indicator light	Red LED		
Sensitivity	30~1000 Gauss		
Switch frequency	1000Hz		
Protection circuit	Surge absorption protection		
Impact resistant	60G		
Protection level	IP67		


Specification Selection

Product series	Specification code	Output type	Cable length	Cable material	Shell length	Housing material	Wiring method
DMS	G	N	020				M12

Product series	DMS: General-type electronic sensor
Specification code	G: H: E: J: GL: HL:
Output type	Blank: Two-wire type N: NPN normally open NC: NPN normally closed P: PNP normally open PC: PNP normally closed
Cable length	020: 2m wire length 030: 3m wire length 050: 5m wire length 100: 10m wire length
Cable material	Blank: Standard type R: Drag chain cable U: Oil-resistant cable
Shell length	Blank: Standard model X: Custom model
Housing material	Blank: Default plastic material B: Metal material
Wiring method	Blank: Spool type M12: Tail type: 2m + M12 connector M8: Tail type: 2m + M8 connector







Selection Example

Type D; Normally Open; Cable Length 2m; M12; General Electronic Sensor; Correct Product Order Code: DMSG-N020-M12.

Type	Magnetic sensor		
Appearance			
Category	CMS: Waterproof and Oil-Resistant Electronic Sensor		
Type	Two-wire	NPN three-wire	PNP three-wire
Housing shell	Plastic housing: PBT (off-white)/Metal housing		
Residual pressure drop	2.8V Max.@50mA DC	1.0V Max.@100mA DC	
Cable specifications	Φ2.0, 2 cores (blue brown)	Φ2.0, 3 cores (blue brown black)	
Cable material	Standard type: Standard PVC (gray) cable / R: Highly flexible drag chain cable / U: Oil-resistant PUR cable		
Voltage range	10-30V DC		
Switch current	50mA or less	100mA or less	
Current consumption	5mA or less	10mA or less	
leakage current	0.1mA Max.@24V		
Indicator light	Red LED		
Sensitivity	30~1000 Gauss		
Switch frequency	1000Hz		
Protection circuit	Surge absorption protection		
Impact resistant	60G		
Protection level	IP68		

Specification Selection

Product series	Specification code	Output type	Cable length	Cable material	Shell length	Housing material	Wiring method
CMS	G - N	020	□ - □	□			M12

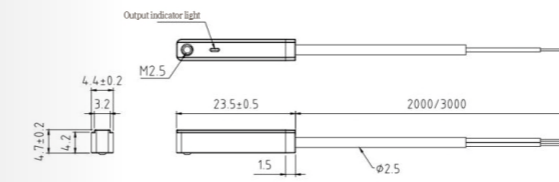
Product series	CMS: Waterproof and Oil-Resistant Electronic Sensor
Specification code	G:  H:  E:  J:  GL:  HL: 
Output type	Blank: Two-wire type N: NPN normally open NC: NPN normally closed P: PNP normally open PC: PNP normally closed
Cable length	020: 2m wire length 030: 3m wire length 050: 5m wire length 100: 10m wire length
Cable material	Blank: Standard type R: Drag chain cable U: Oil-resistant cable
Shell length	Blank: Standard model X: Custom model
Housing material	Blank: Default plastic material B: Metal material
Wiring method	Blank: Spool type M12: Tail type: 2m + M12 connector M8: Tail type: 2m + M8 connector

Selection Example

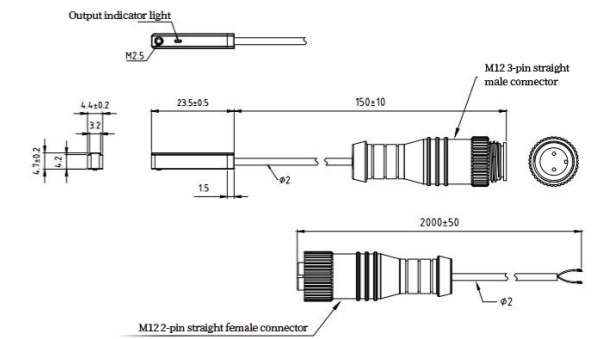
TType C; Normally Open; 2-meter wire length; M12; General-type electronic sensor; Correct product order code: CMSG-N020-M12.

DMSG/CMSG Product size diagram

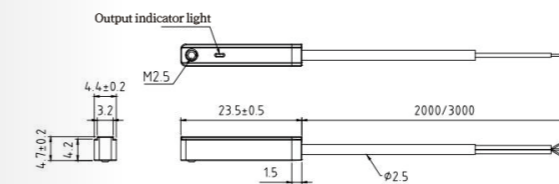
Two-line type



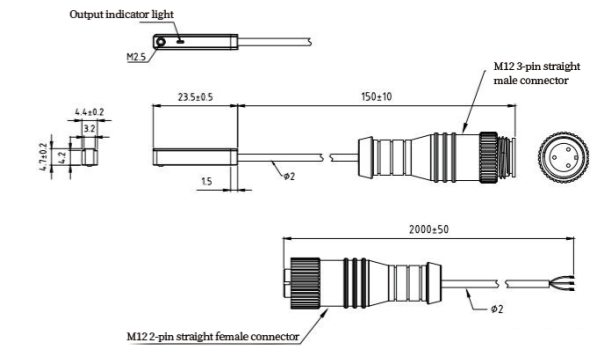
Pigtail type



Three-line type

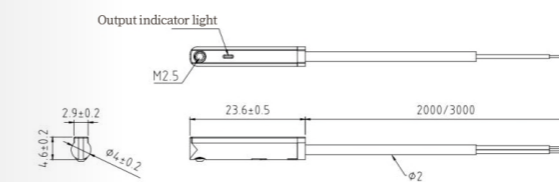


Pigtail type

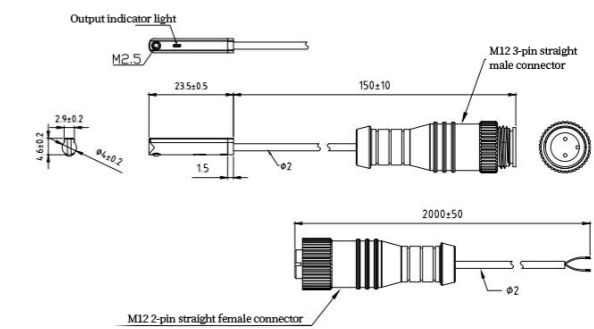


DMSH/CMSH Product size diagram

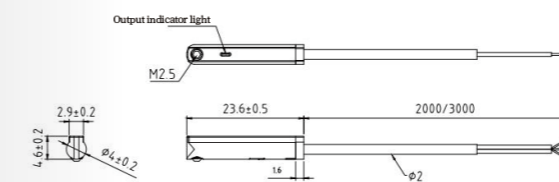
Two-line type



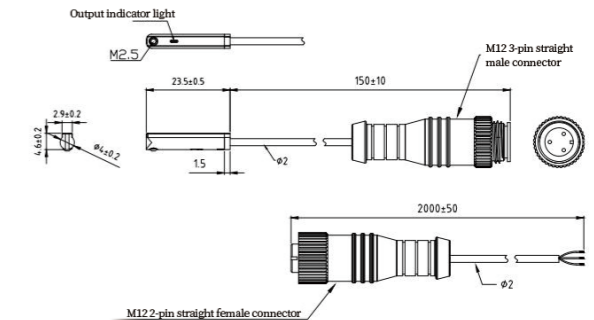
Pigtail type



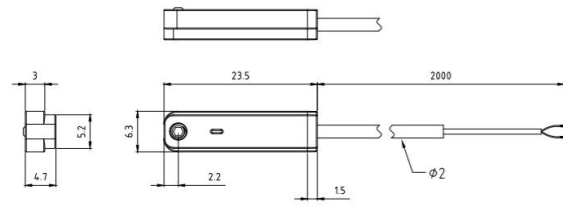
Three-line type



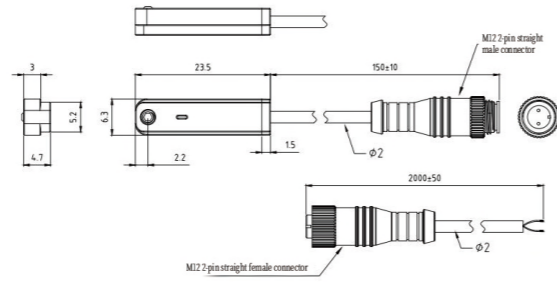
Pigtail type



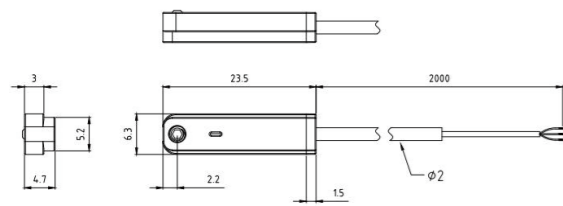
Two-line type



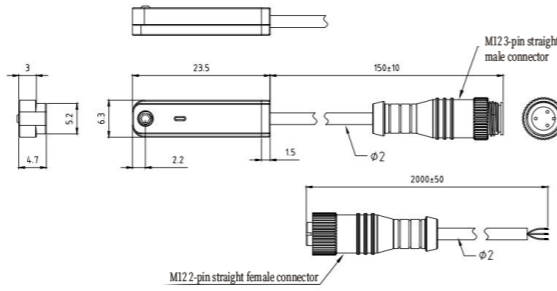
Pigtail type



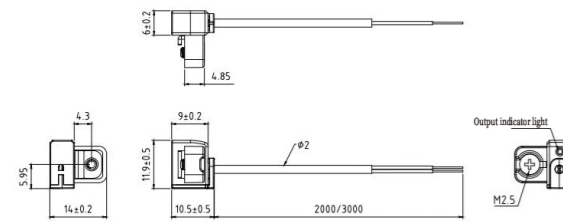
Three-line type



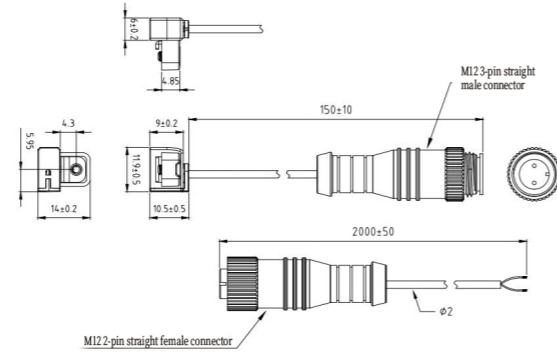
Pigtail type



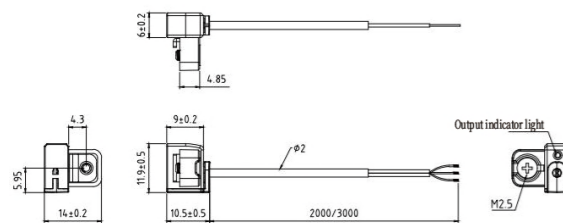
Two-line type



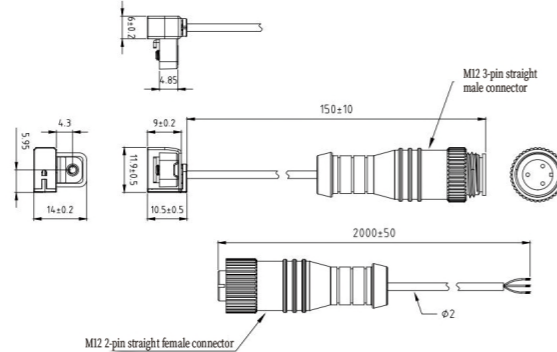
Pigtail type



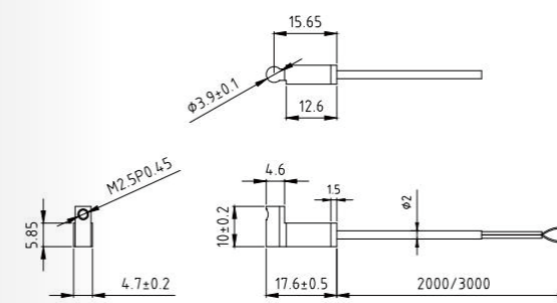
Three-line type



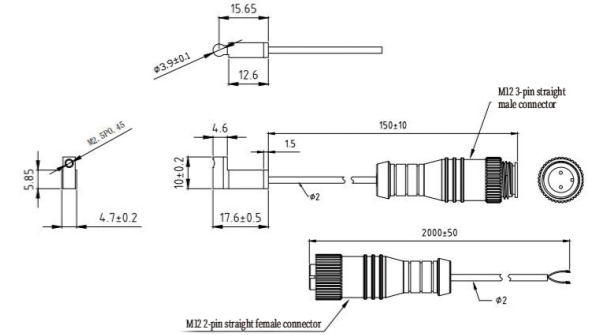
Pigtail type



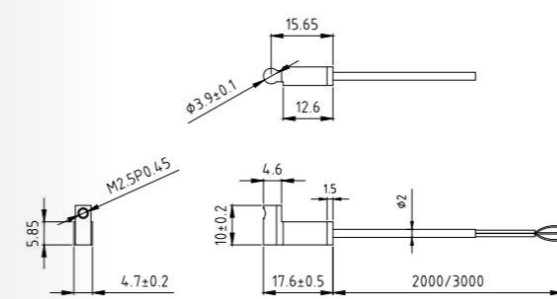
Two-line type



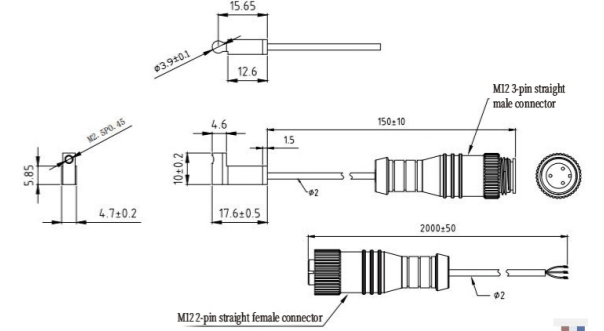
Pigtail type



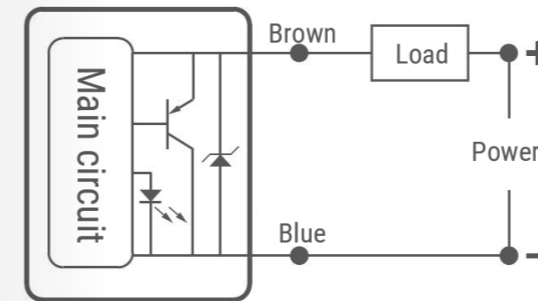
Three-line type



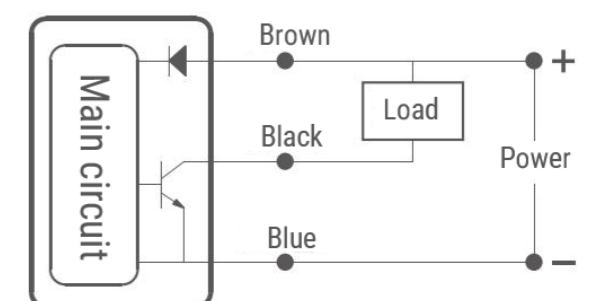
Pigtail type



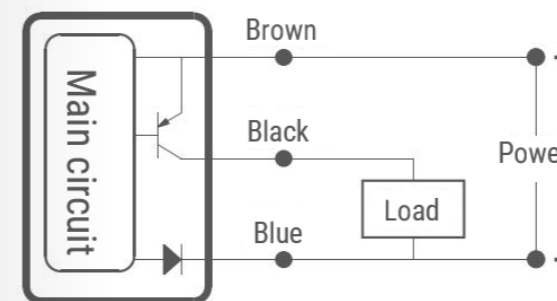
Two-line type



Pigtail type NPN output




Three-line type NPN output



Sensor model	Installation steps		
DMSG/CMMSG/EMSG	<p>1</p>	<p>2</p>	<p>3</p>
DMSE/CMSE	<p>1</p>	<p>2</p>	<p>3</p>
DMSH/CMSH/EMSH	<p>1</p>	<p>2</p>	<p>3</p>
DMSJ/CMSJ	<p>1</p>	<p>2</p>	<p>3</p>


The "cross-type" cylinders of WCSI and WCSU series will be replaced by the new WCSAI and WCSAU series. The accompanying sensors will also be adjusted accordingly. For specific details, please refer to the table below:

	New Series (WCSAI Series)	Old Series (WCSI Series)
Cylinder and Accompanying Sensors	<p>Cylinder</p> <p>Sensor</p> <p>CMSE/DMSE</p>	<p>Cylinder</p> <p>Sensor</p> <p>CS1B1/DS1B1 CS1B2/DS1B2 CS1B3/DS1B3 CS1B4/DS1B4 CS1B5/DS1B5 CS1B6/DS1B6 CS1B7/DS1B7</p> <p>CS1F/DS1F/CS1U/DS1U + F-WCSI32H/F-WCSI40H F-WCSI50H/F-WCSI63H F-WCSI80H/F-WCSI100H F-WCSI125H/F-WCSI160H F-WCSI200H</p>
Installation Diagram		
Cylinder and Accompanying Sensors	<p>Cylinder</p> <p>Sensor</p> <p>DMSG/CMMSG/EMSG</p>	<p>Cylinder</p> <p>Sensor</p> <p>CS1B1/DS1B1 CS1B2/DS1B2 CS1B3/DS1B3 CS1B4/DS1B4</p> <p>CS1F/DS1F/CS1U/DS1U + F-WCSU32H/F-WCSU40H F-WCSU50H/F-WCSU63H F-WCSU80H/F-WCSU100H</p>
Installation Diagram		

Type	Magnetic sensor
Appearance	
Item	QMS: Strong Magnetic Field Resistant Sensor
Model	QMSH
Wiring Method	2-wire
Output Contact Form	Contactless Normally Open
Power Supply Voltage	10~30V DC
Maximum Switching Current	5~100mA
Maximum Contact Capacity	3W
Internal Consumption Current	/
Internal Voltage Drop	<5V
Maximum Switching Frequency	8Hz
Operating Temperature	-10~60°C
Impact Resistance	50G
Vibration Resistance	9G
Protection Rating	EN60529 IP67
Protective Circuit	Polarity reverse protection / surge absorption protection
Indicator Light	Unstable sensing range: Red LED; Stable sensing range: Green LED
Wire Specification	Φ4.8, grey oil-resistant PVC
High Magnetic Resistance	1. For single-phase AC welding machines; 2. In cases where the AC welding current is less than 16000A, it can be used with a spot welding gun (welding conductor or cable) at a distance of 0mm.

Specification Selection

Product series	Specification Code	Output type	Wiring method	Cable length
QMS	H	N	M12	020

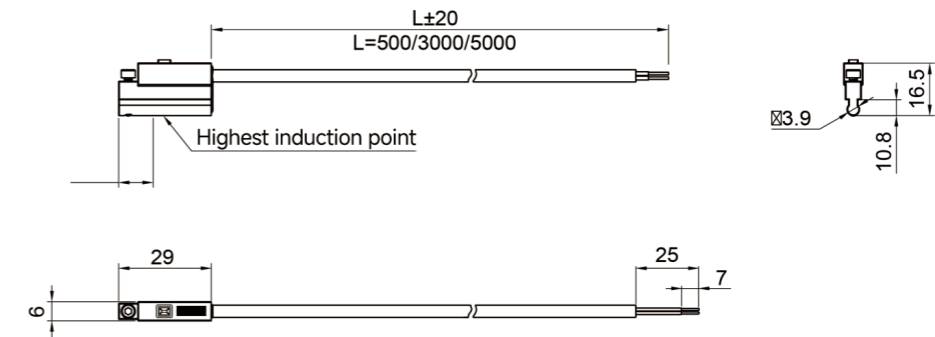
Product series	Specification Code	Output type	Wiring method	Cable length
QMS	H: 	Blank: Two-wire N: NPN three-wire P: PNP three-wire	Blank: No quick coupling M12: M12 quick male connector, 4 pins	020: Line length 2m 030: Line length 3m 050: Line length 5m 100: Line length 10m

Selection Example

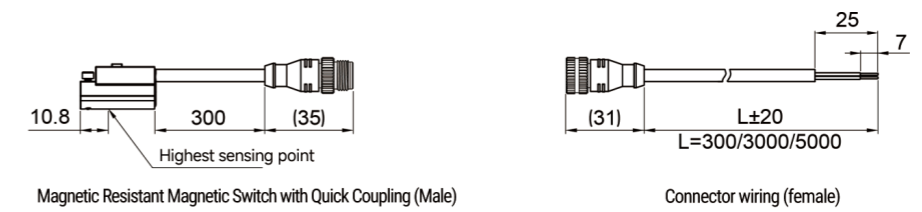
Ordering Code: H; Output Type: NPN three-wire; Connection Type: M12 quick connector, 4-core; QMS series sensor with 2m wire length.
Correct Product Ordering Code: QMSH-NM12020

Product size diagram

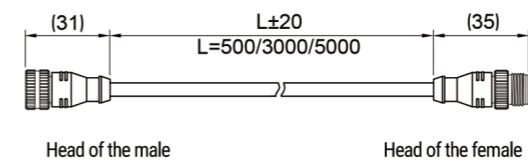
Basic type



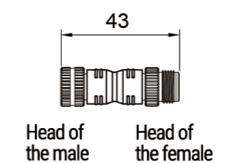
Quick connector type



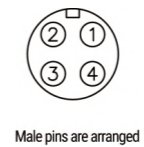
Converter cable



Connector adapter

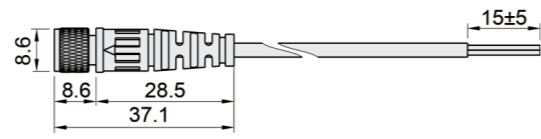
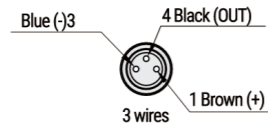
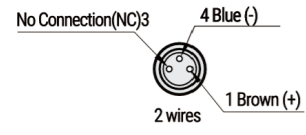


Wiring and splicing definitions

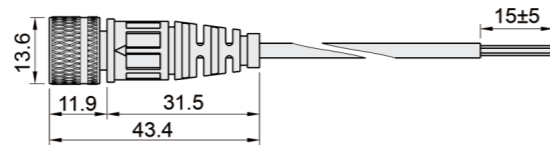
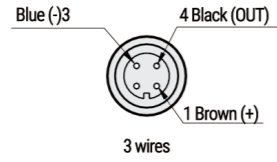
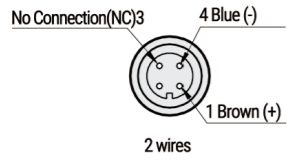


Model	Wire color				Meaning of plug serial number			
	1 stitches	2 stitches	3 stitches	4 stitches	1 stitches	2 stitches	3 stitches	4 stitches
SE	Brown	—	—	Blue	OUT(+)	—	—	OUT(±)
SC	—	—	Brown	Blue	—	—	OUT(±)	OUT(±)

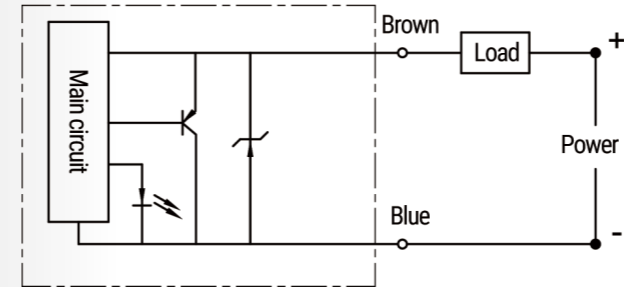
M8 female connector



M12 female connector



2-wire make contact normally open type





Product Advantages

Built upon advanced full-scenario computer vision capabilities as its technical foundation, leveraging extensive experience across various specialized vertical industries to empower sectors and drive industrial digitalization, automation, and intelligent transformation.



Material Recognition and Classification



Object Detection and Recognition



Object Saliency Analysis



Dimension and Distance Measurement




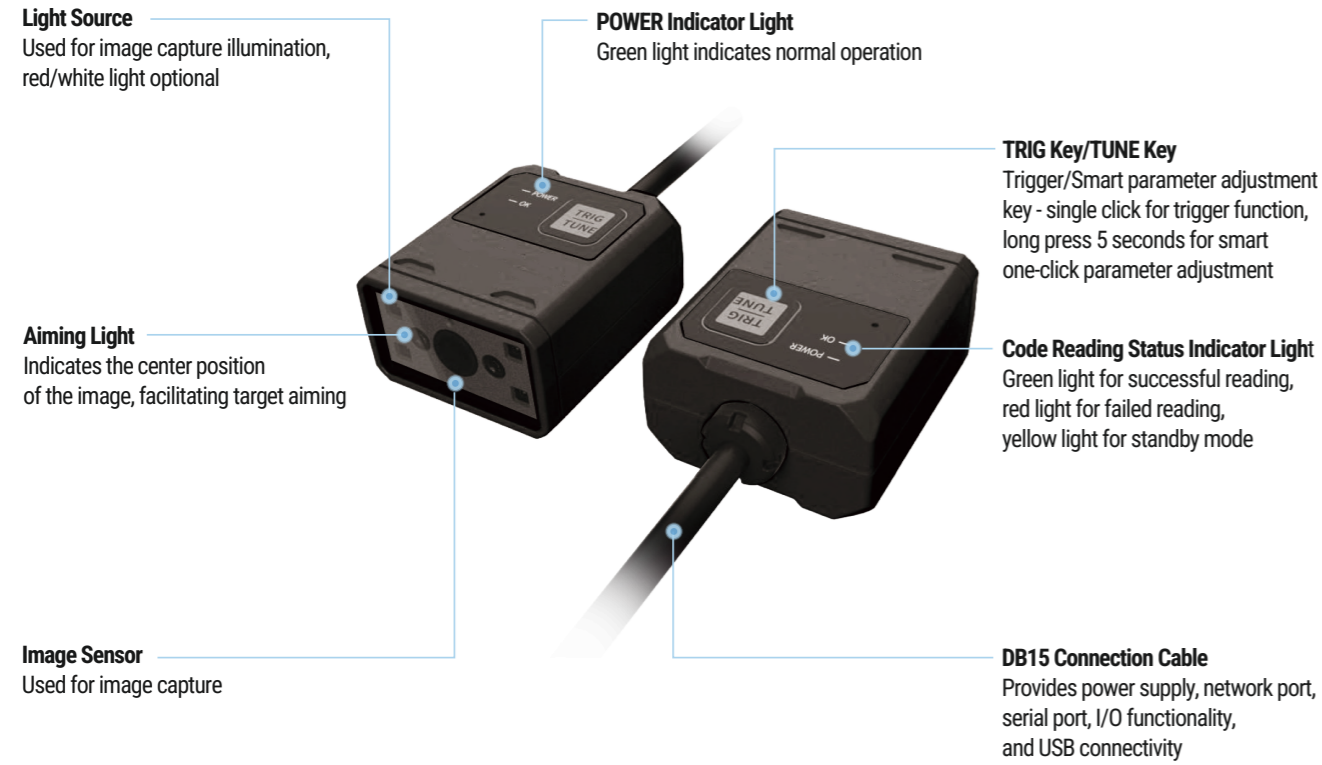
Defect Localization, Recognition, and Analysis



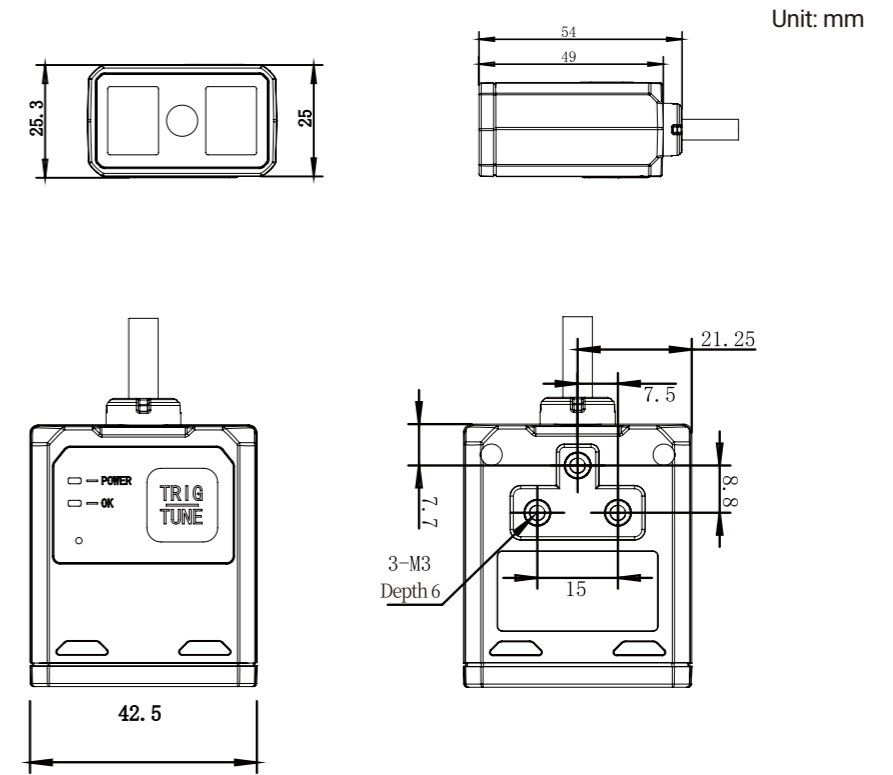
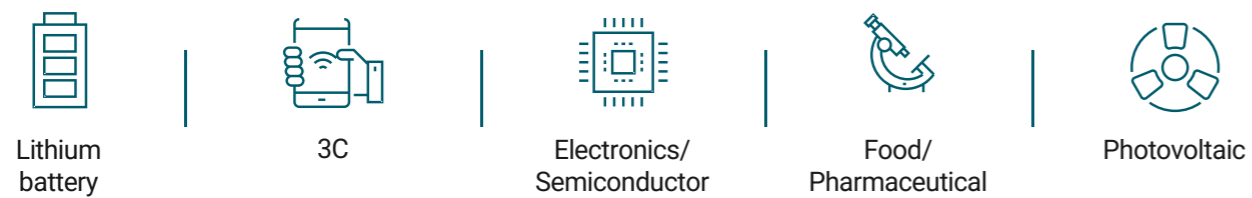
Comprehensive Industrial OCR

- Compact size, ideal for installation in confined spaces
- Plug-and-play design with no complex operations, zero learning curve, and convenient installation and debugging
- Rich interface design supporting network port, serial port, USB, and IO connections
- Provides red and white dual-color light sources, and polarized light source options for complex scenarios
- Custom high depth-of-field lens with ultra-wide installation distance range
- Supports entry-level DPM (Direct Part Marking) code reading applications

Type	Intelligent Barcode Reader		
Appearance			
Model	GVS600-SR Standard Series	GVS600-NR Close-range Series	GVS600-HD High-density Series
Resolution	1280*800		
Frame Rate	60fps		
Color/Monochrome	Monochrome		
Shutter	Global shutter		
Exposure Time	20μs~100000μs		
Pixel Size	3μm*3μm		
Focusing Method	Fixed focus		
Reading Distance	Code 39(5 mil): 85~220mm Code 128(10 mil): 51~415mm QR Code(15 mil): 42~313mm Data Matrix(10 mil): 60~150mm	Code39(3 mil):58-112mm Code128(10 mil):30-205mm QR Code(10mil):30-167mm Data Matrix(5 mil):55-80mm	Code 39(3 mil): 30~60mm code 128(10 mil): 40~122mm QR Code(5 mil): 30~80mm Data Matrix(5 mil):35~74mm
Barcode Type	1D codes: Code39, Code93, Code128, EAN-8, EAN-13, Interleaved 2 of 5, UPC 2D codes: Pharmacode, Micro QR, QR code, DataMatrix, PDF417		
Position Indicator	2 green light dots indicate the center area of scanning position		
Status Indicator	2 status LEDs and buzzer		
Polarizing Filter	Polarization supported		
Light Source	Red/white light source options available		
Input Control	Two non-isolated inputs		
Output Control	Two non-isolated outputs		
Communication Protocol	TCP Server, TCP Client, ModBusTCP, ModBus RTU, Profinet, Ethernet/IP, MELSEC/SLMP, Fins, Serial		
Communication Interface	RS232, RJ45, USB		
Power Supply Input	24V DC/USB 5V		
Power Consumption	5W		
Operating Temperature	0~45°C		
Storage Temperature	-20~70°C		
Operating Humidity	5%~95%RH(non-condensing)		
Protection Rating	IP54		
External Dimensions	49*25*42.5mm		
Weight	Approx. 80g		



Application Industries



Accessories List

Cables	Power Supply	L-shaped mounting bracket
M12-17PIN connector cable	24V power adapter	L-shaped mounting bracket + screws
		



Product Advantages

Built upon advanced full-scenario computer vision capabilities as its technical foundation, leveraging extensive experience across various specialized vertical industries to empower sectors and drive industrial digitalization, automation, and intelligent transformation.



Material Recognition and Classification



Object Detection and Recognition



Object Saliency Analysis



Dimension and Distance Measurement




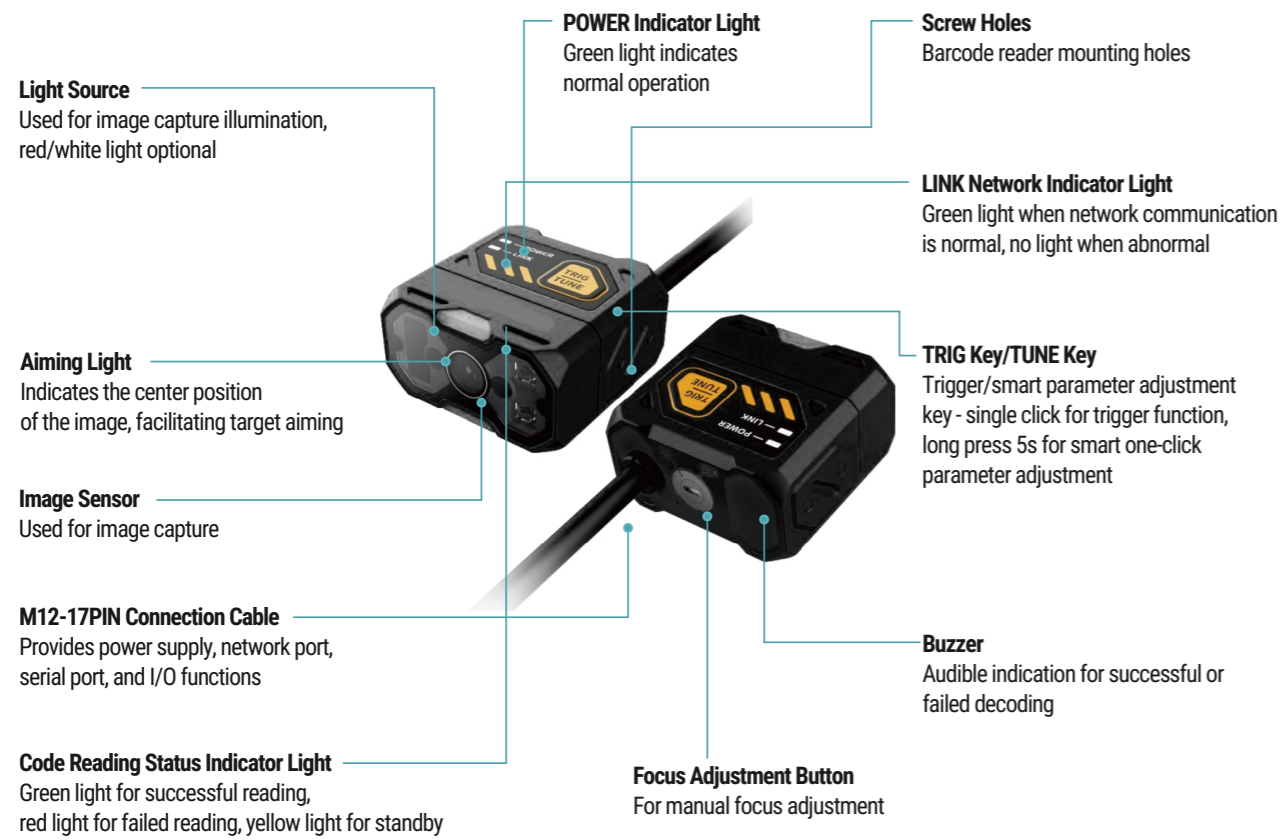
Defect Localization, Recognition, and Analysis



Comprehensive Industrial OCR

- Compact size, suitable for installation in narrow spaces
- Equipped with liquid lens and built-in self-developed Cube A Technology focusing algorithm, enabling high-speed zoom
- On-body TUNE button allows one-click automatic parameter adjustment, saving on-site debugging time
- Provides red and white dual-color light sources, with polarized light source options for complex scenarios
- IP67 protection rating, effectively withstands various harsh environments with extended service life
- M12-17PIN aviation plug design, single cable connection for simplified wiring

Type	Intelligent Barcode Reader	
Appearance		
Model	GVS800P Liquid Focus Series	GVS800P Manual Focus Series
Resolution	1280*800	
Frame Rate	60fps	
Color/Monochrome	Monochrome	
Shutter	Global shutter	
Exposure Time	20μs~1sec	
Pixel Size	3μm*3μm	
Sensor Size	1/4"	
Focusing Method	Liquid Focus	Mechanical Focus
Focal Length	6mm,16mm	6mm
Reading Distance	40-300mm(@6mm) 100-400mm(@16mm)	30-300mm
Barcode Type	1D codes: Code39,Code93,Code128,EAN-8,EAN-13,Interleaved 2 of 5,UPC 2D codes:QR code, DataMatrix	
Position Indicator	2 green light dots indicate the center area of scanning position	
Status Indicator	3 status LEDs and buzzer	
Polarizing Filter	Polarizing filter optional	
Light Source	Red/white light source optional	
Input Control	Two optically isolated inputs, supports NPN and PNP types	
Output Control	Three non-isolated outputs	
Communication Protocol	TCP Server, TCP Client, ModBusTCP, ModBus RTU, Profinet Ethernet/IP, MELSEC/SLMP, Fins, Serial	
Communication Interface	RS232, Ethernet	
Power Supply Input	24VDC	
Power Consumption	5W	
Operating Temperature	0~45°C	
Storage Temperature	-20~70°C	
Operating Humidity	5%~95%RH(non-condensing)	
Protection Rating	IP67	
External Dimensions	47*25*43mm	
Weight	Approx. 100g	



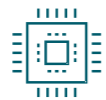
Application Industries



Lithium battery



3C



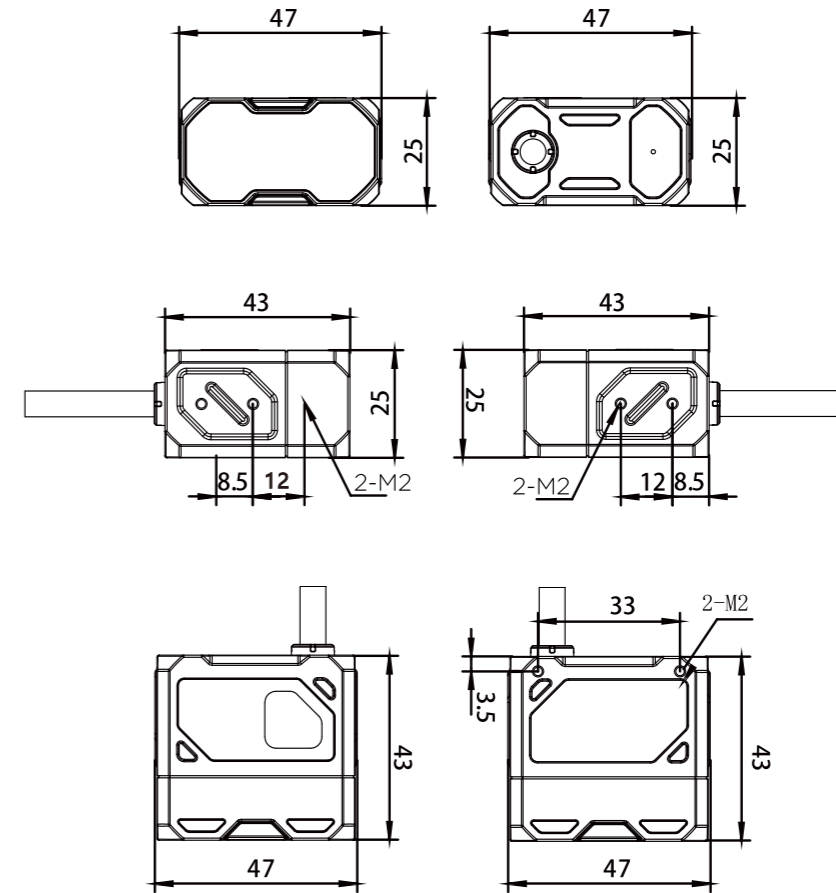
Electronics/
Semiconductor



Food/
Pharmaceutical



Photovoltaic



Accessories List

Cables

M12-17PIN connector cable



Power Supply

24V power adapter



L-shaped mounting bracket

L-shaped mounting bracket + screws





Product Advantages

Built upon advanced full-scenario computer vision capabilities as its technical foundation, leveraging extensive experience across various specialized vertical industries to empower sectors and drive industrial digitalization, automation, and intelligent transformation.



Material Recognition and Classification



Object Detection and Recognition



Object Saliency Analysis



Dimension and Distance Measurement



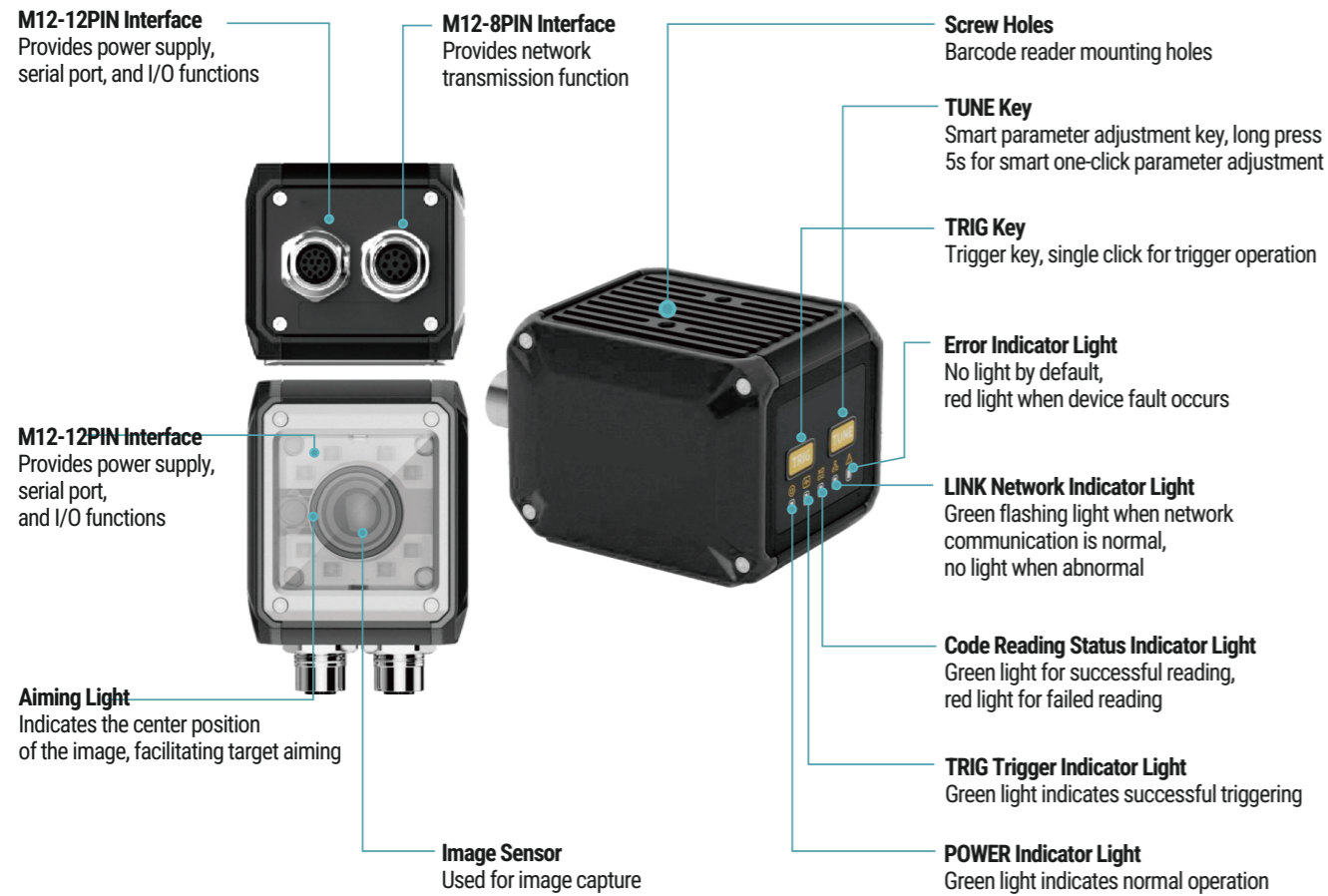
Defect Localization, Recognition, and Analysis



Comprehensive Industrial OCR

- Integrated deep learning decoding algorithms, supporting barcode reading in complex industrial scenarios
- Supports 100mm-1000mm working distance, meeting application requirements for different installation spaces
- Supports one-click parameter adjustment, automatically completing functions such as focusing, exposure, gain, light source adjustment, and code type search
- 1.3MP & 2.3MP high-performance image sensors, adapting to different small and medium field-of-view code reading scenarios
- Supports multiple focal length lenses, 8/12/16mm optional
- Provides red/white dual-color light sources, 4 groups of independently controlled light sources offering 16 lighting schemes, and polarized light sources

Type	Intelligent Barcode Reader	
Appearance		
Model	GVS1000P 1MP Series	GVS1000P 2MP Series
Resolution	1280*800	1920*1080
Frame Rate	60fps	
Color/Monochrome	Monochrome	
Shutter	Global shutter	
Exposure Time	20μs~1sec	
Pixel Size	3μm*3μm	
Sensor Size	1/4"	1/2.6"
Focusing Method	Mechanical Focus	
Focal Length	8/12/16mm	
Reading Distance	100-1000mm	
Barcode Type	1D codes: Code39, Code93, Code128, EAN-8, EAN-13, Interleaved 2 of 5, UPC 2D codes: QR code, DataMatrix	
Position Indicator	1 green light dot indicates the center area of scanning position	
Status Indicator	5 status LEDs and buzzer	
Polarizing Filter	Non-polarized and semi-polarized options available	
Light Source	Red/white light source options available	
Input Control	Two input controls, optically isolated - supports NPN, PNP types	
Output Control	Three output controls, optically isolated	
Communication Protocol	TCP Server, TCP Client, ModBusTCP, ModBus RTU, Profinet Ethernet/IP, MELSEC/SLMP, Fins, Serial	
Communication Interface	RS232, Ethernet	
Power Supply Input	24VDC	
Power Consumption	5W	
Operating Temperature	0~45°C	
Storage Temperature	-20~70°C	
Operating Humidity	5%~95%RH(non-condensing)	
Protection Rating	IP67	
External Dimensions	58*53.5*69mm	
Weight	Approx. 220g	



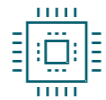
Application Industries



Lithium battery



3C



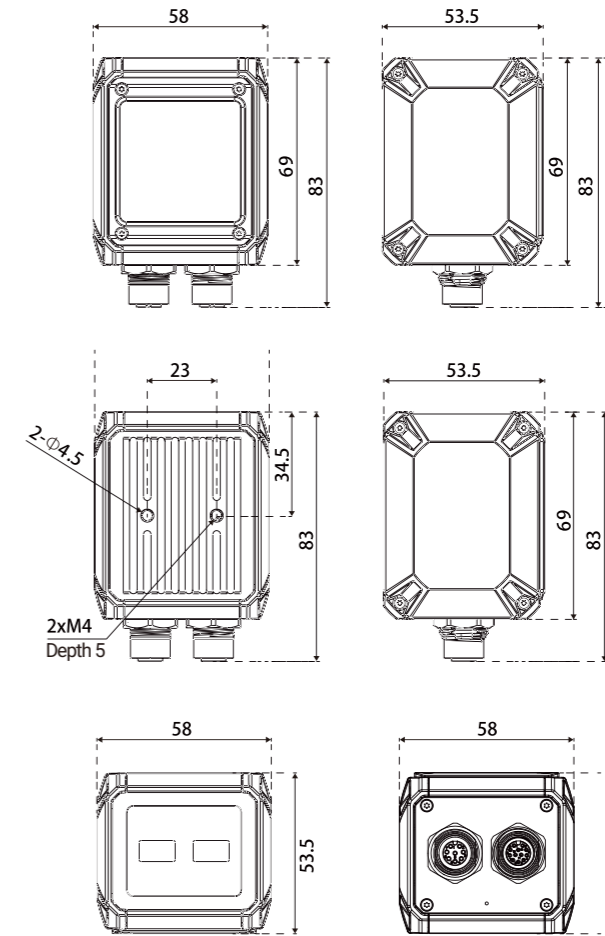
Electronics/
Semiconductor



Food/
Pharmaceutical



Photovoltaic



Accessories List

Cables	Cables	Power Supply	L-shaped mounting bracket
M12-17PIN connector cable	M12-8PIN connector cable	24V power adapter	L-shaped mounting bracket + screws



Product Advantages

Built upon advanced full-scenario computer vision capabilities as its technical foundation, leveraging extensive experience across various specialized vertical industries to empower sectors and drive industrial digitalization, automation, and intelligent transformation.



Material Recognition and Classification



Object Detection and Recognition



Object Saliency Analysis



Dimension and Distance Measurement



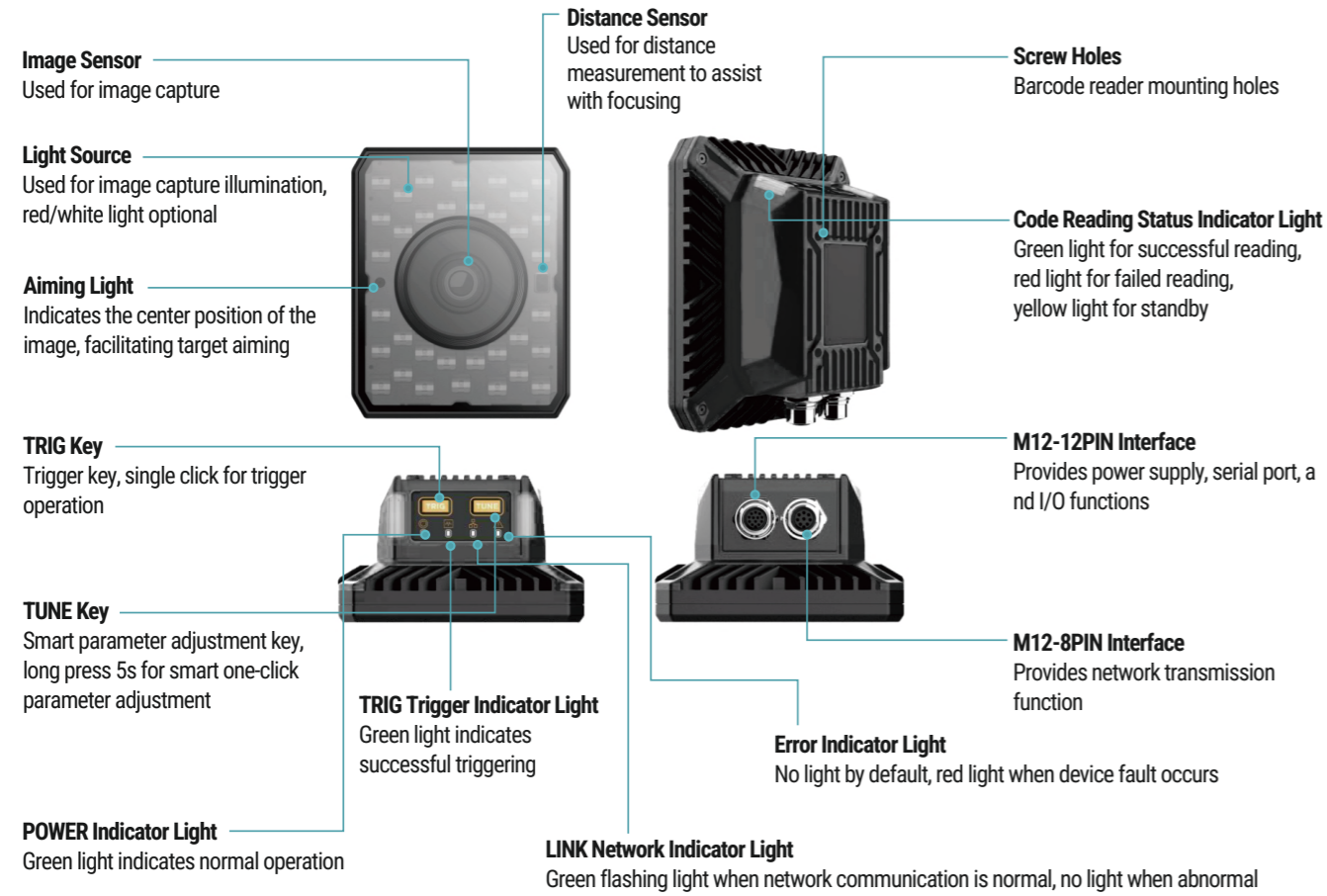
Defect Localization, Recognition, and Analysis



Comprehensive Industrial OCR

- Equipped with 5~20MP large pixel, high-performance image sensors, meeting large field-of-view barcode reading requirements
- Integrated high-performance deep decoding algorithms, satisfying full-scenario reading demands including multi-code per screen and large field-of-view applications
- Equipped with distance sensing unit, capable of detecting precise distance from target object to lens, enabling fast focusing
- Modular detachable design, offering 16/32LED different light source module options, supporting up to 6 channels of independent control
- Rich lens interface design, supporting M/C type lens mounts, with M-mount covering 8/12/16/25mm focal lengths
- IP67 protection rating, effectively withstanding various harsh environments with extended service life

Type	Intelligent Barcode Reader	
Appearance		
Model	GVS2000 5MP Series	GVS2000 20MP Series
Resolution	2448*2048	5120*3840
Frame Rate	30fps	15fps
Color/Monochrome	Monochrome	Monochrome
Shutter	Global shutter	Rolling shutter
Exposure Time	20μs~1sec	20μs~1sec
Pixel Size	2.74μm*2.74μm	1.4μm*1.4μm
Sensor Size	1/1.8"	1/1.8"
Focus Mode	Focus Mode: Mechanical/Liquid Lens/C-mount	C-mount
Focal Length	M-mount: 8/12/16/25mm Liquid Lens: 16mm C-mount: Varies by application	Varies by application
Decoding Distance	100-2000mm(@8/12/16mm) 200-2000mm(@25mm)	To be determined by selected lens
Barcode Type	1D Barcodes: Code39, Code93, Code128, EAN-8, EAN-13, Interleaved 2 of 5, UPC 2D Barcodes: QR Code, DataMatrix	
Position Indicator	Green Light Spot for Scanning Center Distance Sensor for Auxiliary Focusing	/
Status Indicator	5 Status LEDs and Buzzer	
Polarizer	Standard Illumination: Unpolarized/Semi-polarized Options High-brightness Illumination: Unpolarized Only	/
Light Source	Selectable Red/White Light Sources	/
Input Control	Two-channel Optically Isolated Input Control (NPN/PNP Compatible)	
Output Control	Three-channel Optically Isolated Output Control	
Communication Protocol	TCP Server, TCP Client, ModBusTCP, ModBus RTU, Profinet Ethernet/IP, MELSEC/SLMP, Fins, Serial	
Communication Interface	RS232, Ethernet	
Power Supply	24VDC	
Power Consumption	5W	
Operating Temperature	0~45°C	
Storage Temperature	-20~70°C	
Operating Humidity	5%~95%RH(non-condensing)	
IP Rating	IP67	
Dimensions	100.5*74.5*47.6mm 100.5x74.5x93.1mm(With Lens Hood)	100.5x74.5x93.1mm(With Lens Hood)
Weight	Standard Illumination: approx. 550g High Power Illumination: approx. 750g C-mount: approx. 450g	approx. 450g



Application Industries



Lithium battery



Automotive



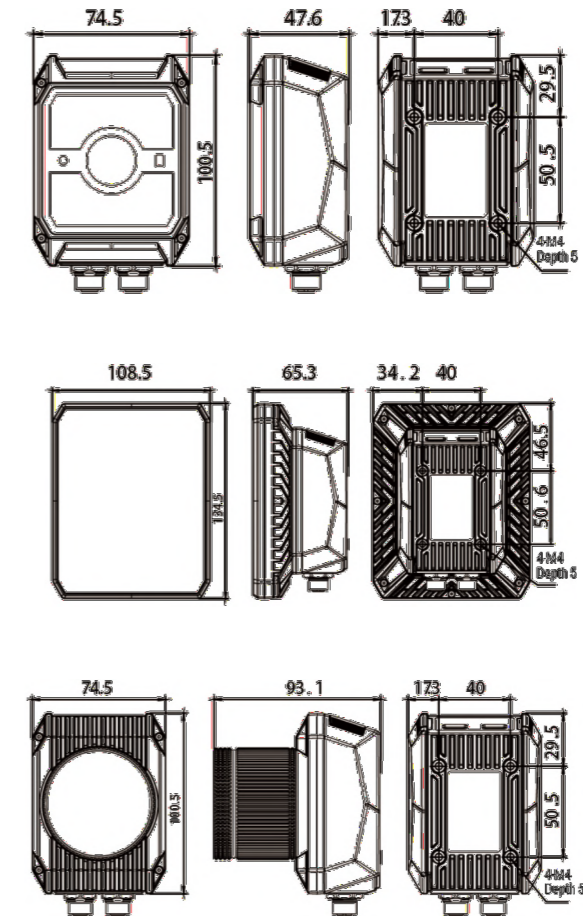
Logistics



Food/
Pharmaceutical

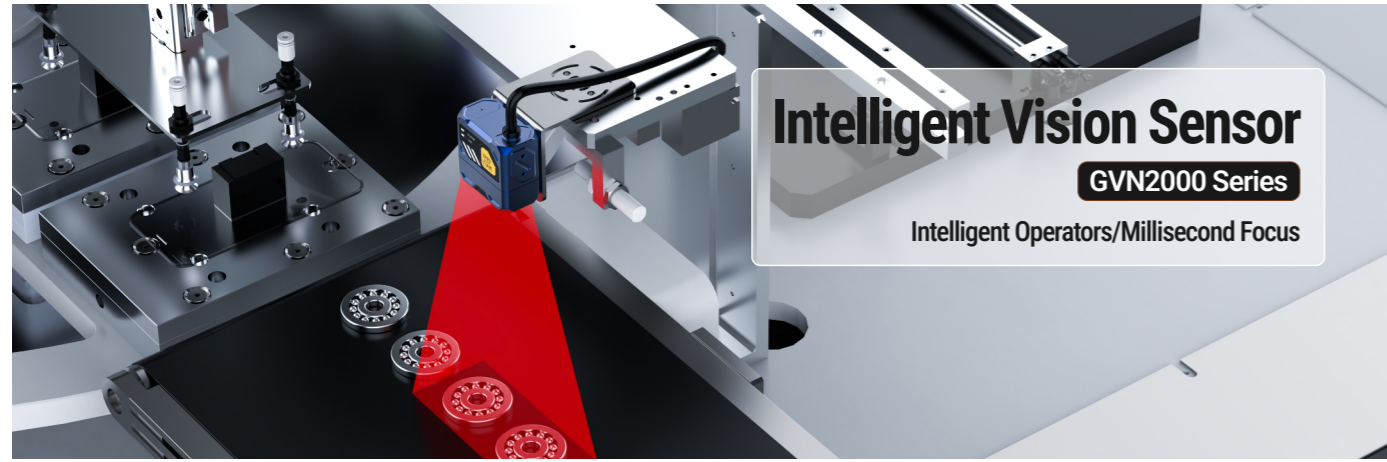


Warehousing



Accessories List

Cables	Cables	Power Supply	L-shaped mounting bracket
M12-17PIN connector cable	M12-8PIN connector cable	24V power adapter	L-shaped mounting bracket + screws



Product Advantages

With full-scenario computer vision advanced professional capabilities as the technical foundation, leveraging rich experience across various specialized vertical fields to empower industries and facilitate digital, automated, and intelligent industrial transformation.



Rich visual algorithms



Flexible lighting system



Liquid focus technology



Zero-code operator solution




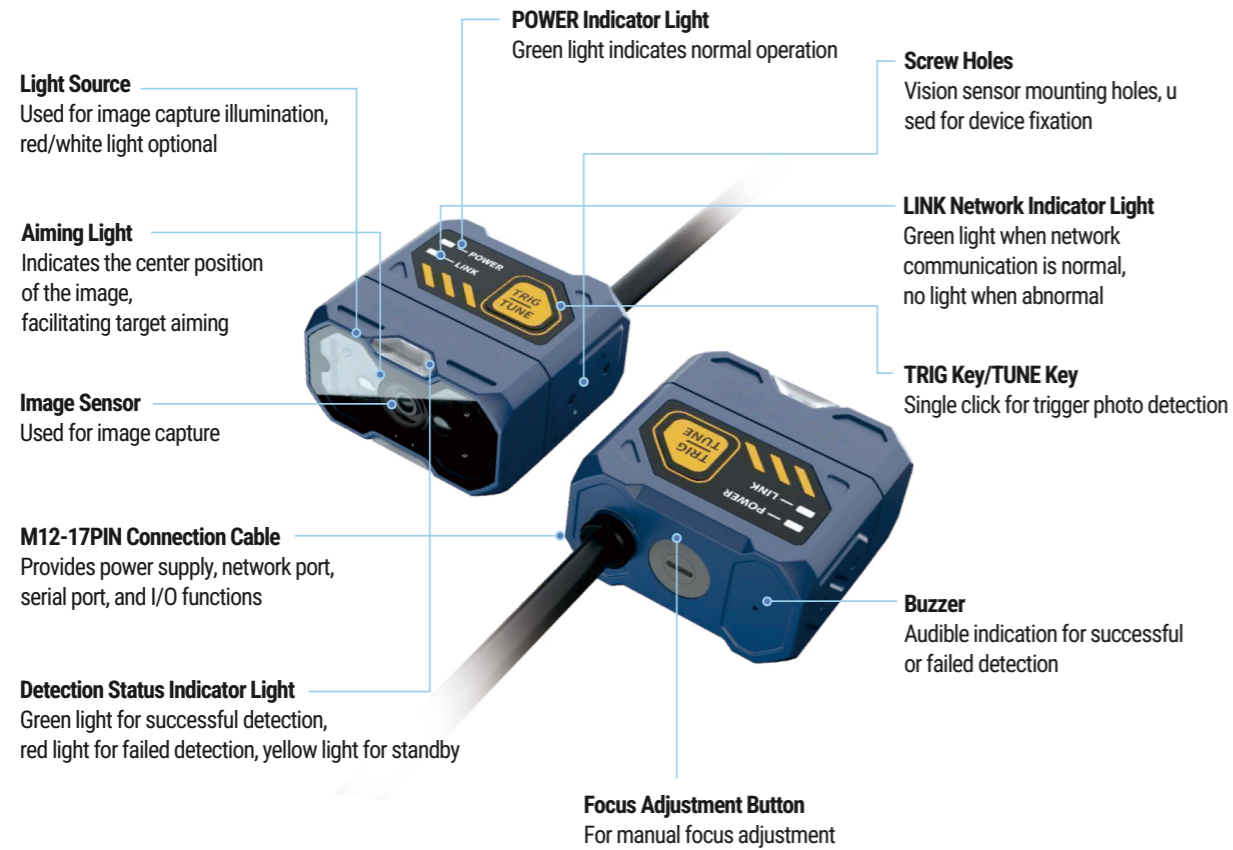
High stability and high reliability



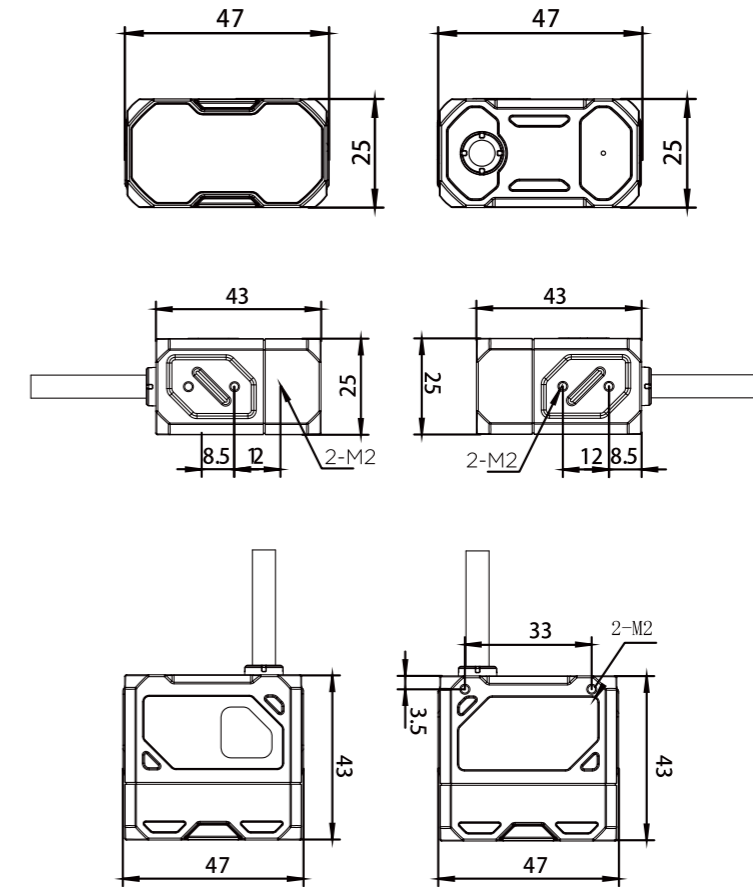
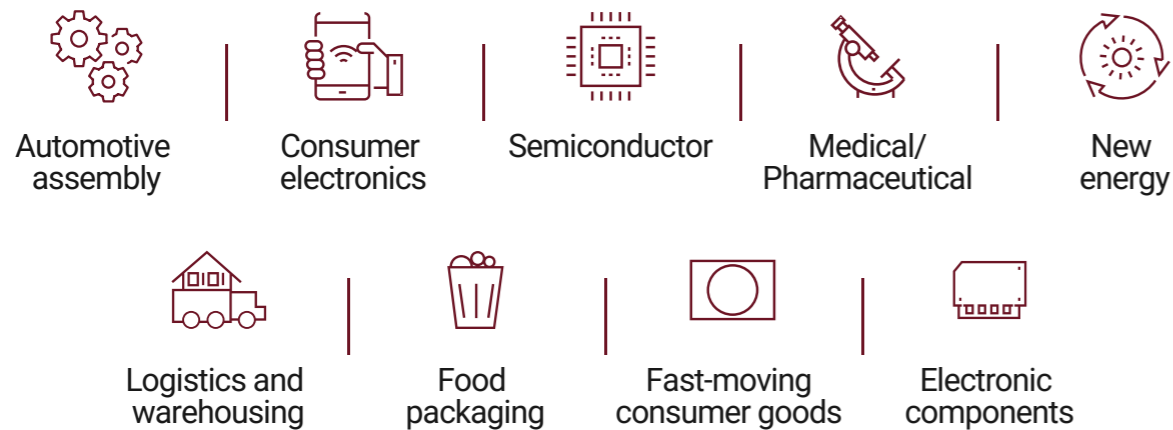
Compact integrated body

- Built-in rich visual operators, supporting presence/absence detection, counting, orientation verification, and other error-proofing scenarios
- Equipped with self-developed Cube-A Technology focusing algorithm, achieving single-time millisecond-level focus speed
- Supports one-click parameter adjustment, automatically completing functions such as focusing, exposure, gain, and lighting adjustment
- Visual operation software for easy application setup
- Supports working distance of 40mm-300mm, providing flexible visual inspection application scenarios
- Rich IO interfaces, enabling real-time communication with other devices through IO signals

Type	Vision Sensor	
Appearance		
Model Number	GVN2000 Liquid Focus Series	GVN2000 Manual Focus Series
Vision Tools	Presence/Absence Detection: Spot presence/absence, Pattern presence/absence, Edge presence/absence, Circle presence/absence	
Resolution	1280*800	
Frame Rate	60fps	
Color/Monochrome	Monochrome	
Shutter	Global Shutter	
Exposure Time	20µs~10000µs	
Gain	0dB~256dB	
Pixel Size	3µm*3µm	
Imaging Area Size	1/4"	
Focusing Method	Liquid Focus	Mechanical Focus
Focal Length	6mm,16mm	6mm
Working Distance	40-300mm(@6mm) 100-400mm(@16mm)	30-300mm
Algorithm Category	Position Correction Pattern Presence/Absence, Spot Presence/Absence, Edge Presence/Absence, Circle Presence/Absence Pattern Counting, Spot Counting, Edge Counting Area Measurement, Width Measurement	
Position Indicator	2 green light points indicate the center area of detection position	
Status Indicator	3 status LEDs and buzzer	
Polarizing Filter	Optional non-polarized and semi-polarized models available	
Light Source	Red/white light source options available	
Input Control	Two optically isolated inputs, supports NPN and PNP types	
Output Control	Three non-isolated outputs	
Communication Protocol	TCP Server, TCP Client, ModBusTCP, ModBus RTU, Profinet Ethernet/IP, MELSEC/SLMP, Fins, Serial	
Communication Interface	RS232, Ethernet	
Power Supply Input	24V DC	
Power Consumption	5W	
Operating Temperature	0~45°C	
Storage Temperature	-20~70°C	
Operating Humidity	5%~95%RH (non-condensing)	
Protection Rating	IP67	
External Dimensions	47*25*43mm	
Weight	Approx. 100g	



Application Industries



Accessories List

Cables	Power Supply	L-shaped mounting bracket
M12-17PIN connector cable	24V power adapter	L-shaped mounting bracket + screws



Product Advantages

With full-scenario computer vision advanced professional capabilities as the technical foundation, leveraging rich experience across various specialized vertical fields to empower industries and facilitate digital, automated, and intelligent industrial transformation.



Rich visual algorithms



Flexible lighting system



Liquid focus technology



Zero-code operator solution




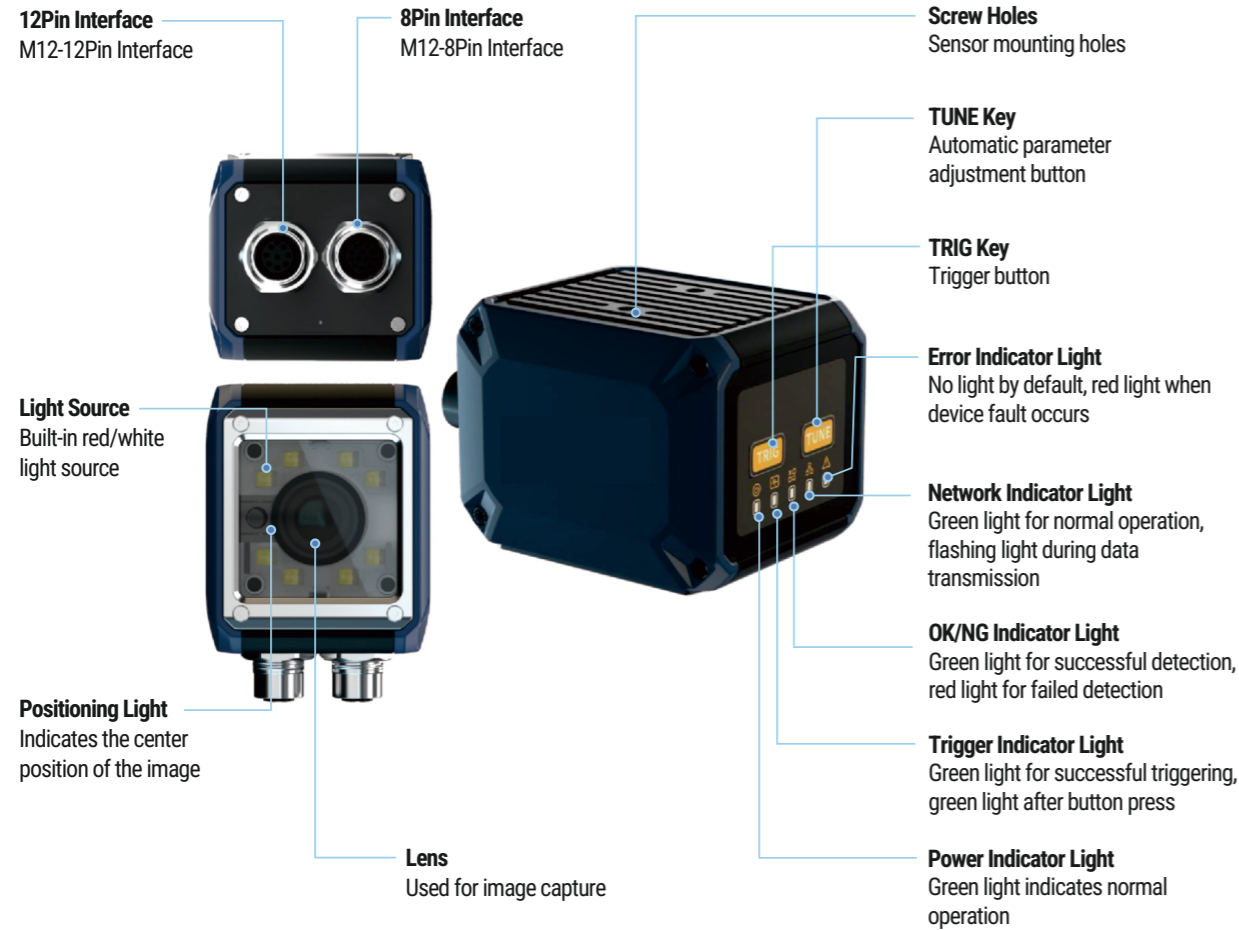
High stability and high reliability



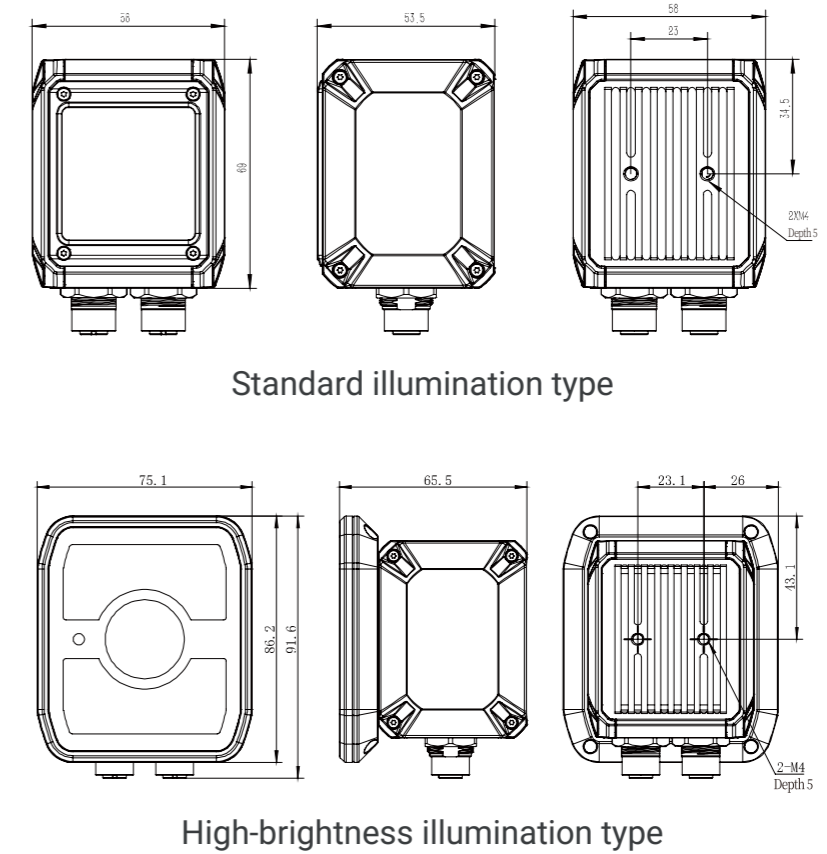
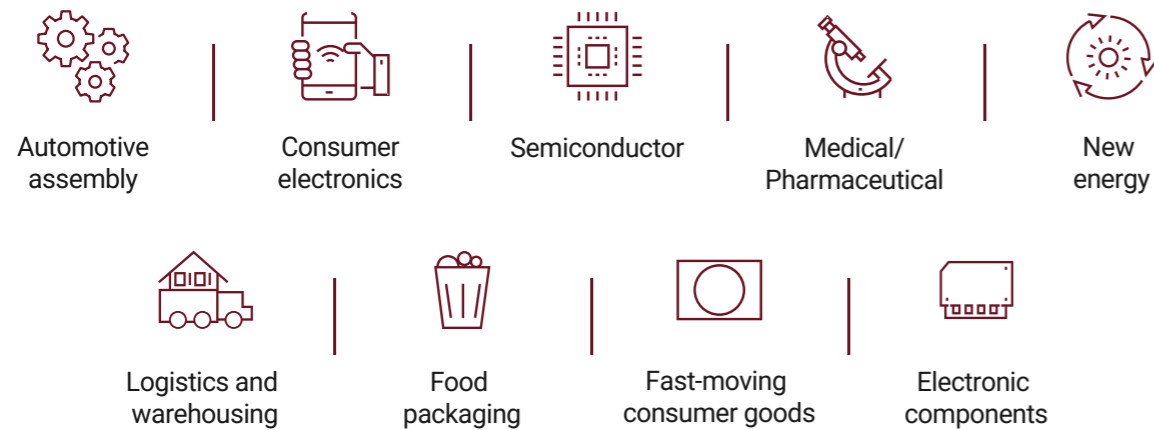
Compact integrated body

- Integrated deep learning algorithms - only requires learning from a small number of samples, no configuration or parameter tuning needed, can satisfy visual inspection requirements
- Supports working distances of 100mm-1000mm, meeting application requirements for different installation spaces
- Supports one-click parameter adjustment, automatically completing functions such as focusing, exposure, gain, and light source calibration
- Provides red/white dual-color light sources, 4 groups of independently controlled light sources offering 16 lighting illumination schemes, and polarized light sources
- Rich IO interfaces, enabling real-time communication with other devices through IO signals
- IP67 protection rating, effectively handling various harsh environments with extended service life

Type	Vision Sensor		
Appearance			
Model	GVN4000 1MP Series	GVN4000 2MP Series	GVN4000CL 5MP Series
Resolution	1280*800	1920*1080	2600*1952
Frame Rate	60fps		30fps
Color/Monochrome	Monochrome		Color
Shutter	Global Shutter		Rolling Shutter
Exposure Time	20μs~10000μs		20μs - 100ms
Pixel Size	3μm*3μm		2.2μm x 2.2μm
Sensor Size	1/4"	1/2.6"	1/2.5"
Focusing Method	Mechanical Focus		Mechanical Focus
Focal Length	8/12/16mm		8/12/16mm
Working Distance	100-1000mm		100-2000mm
Algorithm Category	Positioning: Position correction Presence/Absence: Pattern presence/absence, Spot presence/absence, Edge presence/absence, Circle presence/absence Counting: Pattern counting, Spot counting, Edge counting Detection: Width detection, Spot detection, Grayscale area Recognition: Character recognition, Code reading, Classification Logic: Logical judgment, Numerical ranking		Positioning: Position correction Presence/Absence: Pattern presence/absence, Spot presence/absence, Edge presence/absence, Circle presence/absence Counting: Pattern counting, Spot counting, Edge counting Detection: Width detection, Spot detection, Color area Recognition: Character recognition, Code reading, Classification Logic: Logical judgment, Numerical ranking
Position Indicator	1 green light dot indicates the center area of detection position		
Status Indicator	5 status LEDs and buzzer		
Polarizing Filter	Non-polarized and semi-polarized options available		
Light Source	Standard light source (8LED), red/white light source options available		White light/high brightness options available
Input Control	Two input controls, optically isolated - supports NPN, PNP types		
Output Control	Three output controls, optically isolated		
Communication Protocol	TCP Server, TCP Client, ModBusTCP, ModBus RTU, Profinet Ethernet/IP, MELSEC/SLMP, Fins, Serial		
Communication Interface	RS232, Ethernet		
Power Supply Input	24VDC		
Power Consumption	5W		
Operating Temperature	0~45°C		
Storage Temperature	-20~70°C		
Operating Humidity	5%~95%RH (non-condensing)		
Protection Rating	IP67		
External Dimensions	58*53.5*69mm	75.1*65.5*91.6mm(high brightness light source type)	
Weight	Approx. 220g	Approx. 380g (high brightness light source type)	



Application Industries



Accessories List

Cables	Cables	Power Supply	L-shaped mounting bracket
M12-17PIN connector cable	M12-8PIN connector cable	24V power adapter	L-shaped mounting bracket + screws

GVS600 Series Intelligent Code Reader Selection Catalog					
Product Model	Light Source	Type	polarized	Pixels	Focusing Method
GVS600-NR-NW	White	Near Range	unpolarized	1MP(1280*800)	Fixed Focus
GVS600-NR-NWP	White	Near Range	polarized	1MP(1280*800)	Fixed Focus
GVS600-NR-NR	Red	Near Range	unpolarized	1MP(1280*800)	Fixed Focus
GVS600-NR-NRP	Red	Near Range	polarized	1MP(1280*800)	Fixed Focus
GVS600-SR-NW	White	Standard	unpolarized	1MP(1280*800)	Fixed Focus
GVS600-SR-NWP	White	Standard	polarized	1MP(1280*800)	Fixed Focus
GVS600-SR-NR	Red	Standard	unpolarized	1MP(1280*800)	Fixed Focus
GVS600-SR-NRP	Red	Standard	polarized	1MP(1280*800)	Fixed Focus
GVS600-HD-NW	White	High Density	unpolarized	1MP(1280*800)	Fixed Focus
GVS600-HD-NWP	White	High Density	polarized	1MP(1280*800)	Fixed Focus
GVS600-HD-NR	Red	High Density	unpolarized	1MP(1280*800)	Fixed Focus
GVS600-HD-NRP	Red	High Density	polarized	1MP(1280*800)	Fixed Focus

GVS800 Series Intelligent Code Reader Selection Catalog					
Product Model	Light Source	Focal Length	polarized	Pixels	Focusing Method
GVS800P-100-W00	White	6mm Focal Length	unpolarized	1MP(1280*800)	Manual Focus
GVS800P-100-W01	Red	6mm Focal Length	unpolarized	1MP(1280*800)	Manual Focus
GVS800P-100-W02	Red	6mm Focal Length	polarized	1MP(1280*800)	Manual Focus
GVS800P-100-W03	White	6mm Focal Length	polarized	1MP(1280*800)	Manual Focus
GVS800P-100-W30	White	6mm Focal Length	unpolarized	1MP(1280*800)	Liquid Lens Focus
GVS800P-100-W31	Red	6mm Focal Length	unpolarized	1MP(1280*800)	Liquid Lens Focus
GVS800P-100-W32	Red	6mm Focal Length	polarized	1MP(1280*800)	Liquid Lens Focus
GVS800P-100-W33	White	6mm Focal Length	polarized	1MP(1280*800)	Liquid Lens Focus
GVS800P-103-W30	White	16mm Focal Length	unpolarized	1MP(1280*800)	Liquid Lens Focus
GVS800P-103-W31	Red	16mm Focal Length	unpolarized	1MP(1280*800)	Liquid Lens Focus
GVS800P-103-W32	Red	16mm Focal Length	polarized	1MP(1280*800)	Liquid Lens Focus
GVS800P-103-W33	White	16mm Focal Length	polarized	1MP(1280*800)	Liquid Lens Focus

GVS1000P Series Intelligent Code Reader Selection Catalog					
Product Model	Light Source	Focal Length	polarized	Pixels	Focusing Method
GVS1000P-111-N22	Red	8mm Focal Length	polarized	1MP(1280*800)	Mechanical Focus
GVS1000P-112-N22	Red	12mm Focal Length	polarized	1MP(1280*800)	Mechanical Focus
GVS1000P-113-N22	Red	16mm Focal Length	polarized	1MP(1280*800)	Mechanical Focus
GVS1000P-111-N20	White	8mm Focal Length	unpolarized	1MP(1280*800)	Mechanical Focus
GVS1000P-112-N20	White	12mm Focal Length	unpolarized	1MP(1280*800)	Mechanical Focus
GVS1000P-113-N20	White	16mm Focal Length	unpolarized	1MP(1280*800)	Mechanical Focus
GVS1000P-111-N23	White	8mm Focal Length	polarized	1MP(1280*800)	Mechanical Focus
GVS1000P-112-N23	White	12mm Focal Length	polarized	1MP(1280*800)	Mechanical Focus
GVS1000P-113-N23	White	16mm Focal Length	polarized	1MP(1280*800)	Mechanical Focus
GVS1000P-211-N21	Red	8mm Focal Length	unpolarized	2.3MP(1920*1200)	Mechanical Focus
GVS1000P-212-N21	Red	12mm Focal Length	unpolarized	2.3MP(1920*1200)	Mechanical Focus
GVS1000P-213-N21	Red	16mm Focal Length	unpolarized	2.3MP(1920*1200)	Mechanical Focus
GVS1000P-211-N22	Red	8mm Focal Length	polarized	2.3MP(1920*1200)	Mechanical Focus
GVS1000P-212-N22	Red	12mm Focal Length	polarized	2.3MP(1920*1200)	Mechanical Focus
GVS1000P-213-N22	Red	16mm Focal Length	polarized	2.3MP(1920*1200)	Mechanical Focus
GVS1000P-211-N20	White	8mm Focal Length	unpolarized	2.3MP(1920*1200)	Mechanical Focus
GVS1000P-212-N20	White	12mm Focal Length	unpolarized	2.3MP(1920*1200)	Mechanical Focus
GVS1000P-213-N20	White	16mm Focal Length	unpolarized	2.3MP(1920*1200)	Mechanical Focus
GVS1000P-211-N23	White	8mm Focal Length	polarized	2.3MP(1920*1200)	Mechanical Focus
GVS1000P-212-N23	White	12mm Focal Length	polarized	2.3MP(1920*1200)	Mechanical Focus
GVS1000P-213-N23	White	16mm Focal Length	polarized	2.3MP(1920*1200)	Mechanical Focus

GVS2000 Series Intelligent Code Reader Selection Catalog					
Product Model	Light Source	Focal Length	polarized	Pixels	Focusing Method
GVS2000-521-N20	White	8mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-521-N21	Red	8mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-521-N22	Red	8mm Focal Length	polarized	5MP(2448*2048)	Mechanical Focus
GVS2000-521-N23	White	8mm Focal Length	polarized	5MP(2448*2048)	Mechanical Focus
GVS2000-521-N26	White (High Power)	8mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-521-N27	Red(High Power)	8mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-522-N20	White	12mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-522-N21	Red	12mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-522-N22	Red	12mm Focal Length	polarized	5MP(2448*2048)	Mechanical Focus
GVS2000-522-N23	White	12mm Focal Length	polarized	5MP(2448*2048)	Mechanical Focus
GVS2000-522-N26	White (High Power)	12mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-522-N27	Red(High Power)	12mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-523-N20	White	16mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-523-N21	Red	16mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-523-N22	Red	16mm Focal Length	polarized	5MP(2448*2048)	Mechanical Focus
GVS2000-523-N23	White	16mm Focal Length	polarized	5MP(2448*2048)	Mechanical Focus
GVS2000-523-N26	White (High Power)	16mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-523-N27	Red(High Power)	16mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-524-N20	White	25mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-524-N21	Red	25mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-524-N22	Red	25mm Focal Length	polarized	5MP(2448*2048)	Mechanical Focus
GVS2000-524-N23	White	25mm Focal Length	polarized	5MP(2448*2048)	Mechanical Focus
GVS2000-524-N26	White (High Power)	25mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-524-N27	Red(High Power)	25mm Focal Length	unpolarized	5MP(2448*2048)	Mechanical Focus
GVS2000-523-N30	White	16mm Focal Length	unpolarized	5MP(2448*2048)	Liquid Lens Focus
GVS2000-523-N31	Red	16mm Focal Length	unpolarized	5MP(2448*2048)	Liquid Lens Focus
GVS2000-523-N32	Red	16mm Focal Length	polarized	5MP(2448*2048)	Liquid Lens Focus
GVS2000-523-N33	White	16mm Focal Length	polarized	5MP(2448*2048)	Liquid Lens Focus
GVS2000-523-N36	White (High Power)	16mm Focal Length	unpolarized	5MP(2448*2048)	Liquid Lens Focus
GVS2000-523-N37	Red(High Power)	16mm Focal Length	unpolarized	5MP(2448*2048)	Liquid Lens Focus
GVS2000-52C	C-Mount	/	/	5MP(2448*2048)	/
GVS2000-202C	C-Mount	/	/	20MP(5120*3840)	/

GVS2000 Series Intelligent Code Reader Selection Catalog					
Product Model	Light Source	Focal Length	polarized	Pixels	Focusing Method
GVN2000-100-W00	White	6mm Focal Length	unpolarized	1MP(1280*800)	Manual Focus
GVN2000-100-W01	Red	6mm Focal Length	unpolarized	1MP(1280*800)	Manual Focus
GVN2000-100-W02	Red	6mm Focal Length	polarized	1MP(1280*800)	Manual Focus
GVN2000-100-W03	White	6mm Focal Length	polarized	1MP(1280*800)	Manual Focus
GVN2000-100-W30	White	6mm Focal Length	unpolarized	1MP(1280*800)	Liquid Lens Focus
GVN2000-100-W31	Red	6mm Focal Length	unpolarized	1MP(1280*800)	Liquid Lens Focus
GVN2000-100-W32	Red	6mm Focal Length	polarized	1MP(1280*800)	Liquid Lens Focus
GVN2000-100-W33	White	6mm Focal Length	polarized	1MP(1280*800)	Liquid Lens Focus
GVN2000-103-W30	White	16mm Focal Length	unpolarized	1MP(1280*800)	Liquid Lens Focus
GVN2000-103-W31	Red	16mm Focal Length	unpolarized	1MP(1280*800)	Liquid Lens Focus
GVN2000-103-W32	Red	16mm Focal Length	polarized	1MP(1280*800)	Liquid Lens Focus
GVN2000-103-W33	White	16mm Focal Length	polarized	1MP(1280*800)	Liquid Lens Focus

GVN4000 Series Intelligent Vision Sensor Selection Catalog					
Product Model	Light Source	Focal Length	polarized	Pixels	Focusing Method
GVN4000-101-W21	Red	8mm Focal Length	unpolarized	1MP(1280*800)	Mechanical Focus
GVN4000-102-W21	Red	12mm Focal Length	unpolarized	1MP(1280*800)	Mechanical Focus
GVN4000-103-W21	Red	16mm Focal Length	unpolarized	1MP(1280*800)	Mechanical Focus
GVN4000-101-W22	Red	8mm Focal Length	polarized	1MP(1280*800)	Mechanical Focus
GVN4000-102-W22	Red	12mm Focal Length	polarized	1MP(1280*800)	Mechanical Focus
GVN4000-103-W22	Red	16mm Focal Length	polarized	1MP(1280*800)	Mechanical Focus
GVN4000-101-W20	White	8mm Focal Length	unpolarized	1MP(1280*800)	Mechanical Focus
GVN4000-102-W20	White	12mm Focal Length	unpolarized	1MP(1280*800)	Mechanical Focus
GVN4000-103-W20	White	16mm Focal Length	unpolarized	1MP(1280*800)	Mechanical Focus
GVN4000-101-W23	White	8mm Focal Length	polarized	1MP(1280*800)	Mechanical Focus
GVN4000-102-W23	White	12mm Focal Length	polarized	1MP(1280*800)	Mechanical Focus
GVN4000-103-W23	White	16mm Focal Length	polarized	1MP(1280*800)	Mechanical Focus
GVN4000-201-W21	Red	8mm Focal Length	unpolarized	2.3MP(1920*1200)	Mechanical Focus
GVN4000-202-W21	Red	12mm Focal Length	unpolarized	2.3MP(1920*1200)	Mechanical Focus
GVN4000-203-W21	Red	16mm Focal Length	unpolarized	2.3MP(1920*1200)	Mechanical Focus
GVN4000-201-W22	Red	8mm Focal Length	polarized	2.3MP(1920*1200)	Mechanical Focus
GVN4000-202-W22	Red	12mm Focal Length	polarized	2.3MP(1920*1200)	Mechanical Focus
GVN4000-203-W22	Red	16mm Focal Length	polarized	2.3MP(1920*1200)	Mechanical Focus
GVN4000-201-W20	White	8mm Focal Length	unpolarized	2.3MP(1920*1200)	Mechanical Focus
GVN4000-202-W20	White	12mm Focal Length	unpolarized	2.3MP(1920*1200)	Mechanical Focus
GVN4000-203-W20	White	16mm Focal Length	unpolarized	2.3MP(1920*1200)	Mechanical Focus
GVN4000-201-W23	White	8mm Focal Length	polarized	2.3MP(1920*1200)	Mechanical Focus
GVN4000-202-W23	White	12mm Focal Length	polarized	2.3MP(1920*1200)	Mechanical Focus
GVN4000-203-W23	White	16mm Focal Length	polarized	2.3MP(1920*1200)	Mechanical Focus
GVN4000CL-501-N26	White Light/High Brightness	8mm Focal Length	unpolarized	5MP(2600*1952)	Mechanical Focus
GVN4000CL-502-N26	White Light/High Brightness	12mm Focal Length	unpolarized	5MP(2600*1952)	Mechanical Focus
GVN4000CL-503-N26	White Light/High Brightness	16mm Focal Length	unpolarized	5MP(2600*1952)	Mechanical Focus
GVN4000CL-501-N2B	White Light/High Brightness	8mm Focal Length	Semi-polarized	5MP(2600*1952)	Mechanical Focus
GVN4000CL-502-N2B	White Light/High Brightness	12mm Focal Length	Semi-polarized	5MP(2600*1952)	Mechanical Focus
GVN4000CL-503-N2B	White Light/High Brightness	16mm Focal Length	Semi-polarized	5MP(2600*1952)	Mechanical Focus

Accessories Selection Catalog		
Accessory Model	Specification	Compatible Products
HDB15P-M-ETH-3M	3m Ethernet/Serial Cable	GVS600 Series
HDB15P-M-ETH-5M	5m Ethernet/Serial Cable	GVS600 Series
HDB15P-M-ETH-10M	10m Ethernet/Serial Cable	GVS600 Series
HDB15P-M-USB-3M	3m USB Cable	GVS600 Series
M12-8PIN-3M	M12-8PIN-3M drag chain dedicated network cable (8-pin M12 straight male plug - RJ45 connector - CAT5E 24AWG/4PRS SFTP cable - 3 meters long)	GVS1000/2000 Series GVN4000
M12-8PIN-5M	M12-8PIN-5M drag chain dedicated network cable (8PIN M12 straight male plug - RJ45 connector - CAT5E 24AWG/4PRS SFTP cable - 5 meters long)	GVS1000/2000 Series GVN4000
M12-8PIN-10M	M12-8PIN-10M drag chain dedicated network cable (8PIN M12 straight male plug - RJ45 connector - CAT5E 24AWG/4PRS SFTP cable - 10 meters long)	GVS1000/2000 Series GVN4000
M12-12PIN-3M	M12-12PIN-3M drag chain dedicated data cable (12PIN M12 straight female plug - 5.5*2.5MM Shanyuan socket - RS232 dedicated DB9 female connector - shielded cable - 3 meters long)	GVS1000/2000 Series GVN4000
M12-12PIN-5M	M12-12PIN-5M drag chain dedicated data cable (12PIN M12 straight female plug - 5.5*2.5MM Shanyuan socket - RS232 dedicated DB9 female connector - shielded cable - 5 meters long)	GVS1000/2000 Series GVN4000
M12-12PIN-10M	M12-12PIN-10M drag chain dedicated data cable (12PIN M12 straight female plug - 5.5*2.5MM Shanyuan socket - RS232 dedicated DB9 female connector - shielded cable - 10 meters long)	GVS1000/2000 Series GVN4000
M12-17PIN-PC-3M	M12-17PIN-PC-3M dedicated data cable (17PIN M12 straight male plug - 5.5*2.5MM power socket - RS232 dedicated DB9 male connector - drag chain shielded cable - 3 meters long)	GVS800 Series GVN2000 Series
M12-17PIN-PC-5M	M12-17PIN-PC-5M dedicated data cable (17PIN M12 straight male plug - 5.5*2.5MM power socket - RS232 dedicated DB9 male connector - drag chain shielded cable - 5 meters long)	GVS800 Series GVN2000 Series
M12-17PIN-PC-10M	M12-17PIN-PC-10M dedicated data cable (17PIN M12 straight male plug - 5.5*2.5MM power socket - RS232 dedicated DB9 male connector - drag chain shielded cable - 10 meters long)	GVS800 Series GVN2000 Series
24V power adapter	M12-17PIN-PC-3M dedicated data cable (17PIN M12 straight male plug - 5.5*2.5MM power socket - RS232 dedicated DB9 male connector - drag chain shielded cable - 10 meters long)	Full Series