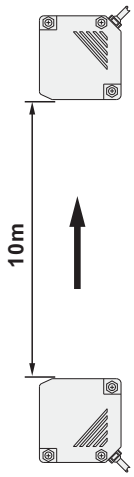
Opposed Mode (Standard Range)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Opposed Mode Sensing Distance: 10m Light Source: Red LED 	2m Cable 	10-30V DC	Emitter	RP50-T010MD-EY6C2L2
			NPN	RP50-T010MN-CY6C4U2
			PNP	RP50-T010MP-CY6C4U2
			NPN/PNP	RP50-T010MD-CY6C4U2
		12-240V DC/ 24-240V AC	Emitter (2-wire)	~~RP50-T010MC-EY6C2L2~~
			SPDT Relay (5-wire)	~~RP50-T010MR-CY6C5L2~~
			SPST solid-state Light-ON (2-wire)	~~RP50-T010MC-LY6C2U2~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-T010MC-DY6C2U2~~
	5m Cable 	10-30V DC	Emitter	RP50-T010MD-EY6C2L5
			NPN	RP50-T010MN-CY6C4U5
			PNP	RP50-T010MP-CY6C4U5
			NPN/PNP	RP50-T010MD-CY6C4U5
		12-240V DC/ 24-240V AC	Emitter (2-wire)	~~RP50-T010MC-EY6C2L5~~
			SPDT Relay (5-wire)	~~RP50-T010MR-CY6C5L5~~
			SPST solid-state Light-ON (2-wire)	~~RP50-T010MC-LY6C2U5~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-T010MC-DY6C2U5~~
	Quick Disconnect (swivel 90°) 	10-30V DC (Euro-style)	Emitter	RP50-T010MD-EY6Q4LE-S
			NPN	RP50-T010MN-CY6Q4UE-S
			PNP	RP50-T010MP-CY6Q4UE-S
			NPN/PNP	RP50-T010MD-CY6Q4UE-S
		12-240V DC/ 24-240V AC (Micro-style)	Emitter (2-wire)	~~RP50-T010MC-EY6Q3LM-S~~
			SPDT Relay (5-wire)	~~RP50-T010MR-CY6Q5LM-S~~
			SPST solid-state Light-ON (2-wire)	~~RP50-T010MC-LY6Q3UM-S~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-T010MC-DY6Q3UM-S~~
	6" Pigtail 	10-30V DC (Euro-style)	Emitter	RP50-T010MD-EY6P4LE
			NPN	RP50-T010MN-CY6P4UE
			PNP	RP50-T010MP-CY6P4UE
			NPN/PNP	RP50-T010MD-CY6P4UE
		12-240V DC/ 24-240V AC (Micro-style)	Emitter (2-wire)	~~RP50-T010MC-EY6P3LM~~
			SPDT Relay (5-wire)	~~RP50-T010MR-CY6P5LM~~
			SPST solid-state Light-ON (2-wire)	~~RP50-T010MC-LY6P3UM~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-T010MC-DY6P3UM~~

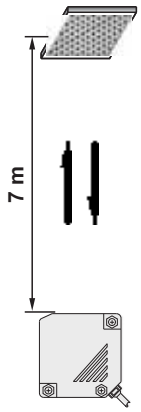
Note:
Coming Soon : Part numbers with underline
In Preparation: Part numbers with a line through the middle

Opposed Mode (Long sensing range)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Opposed Mode Light Source: Infrared LED Sensing Distance: 30m 30m	2m Cable 	10-30V DC	Emitter	RP50-T030MD-EY9C2L2
			NPN	RP50-T030MN-CY9C4U2
			PNP	RP50-T030MP-CY9C4U2
			NPN/PNP	~~RP50-T030MD-CY9C4U2~~
		12-240V DC/ 24-240V AC	Emitter (2-wire)	~~RP50-T030MC-EY9C2L2~~
			SPDT Relay (5-wire)	~~RP50-T030MR-CY9C5L2~~
			SPST solid-state Light-ON (2-wire)	~~RP50-T030MC-LY9C2U2~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-T030MC-DY9C2U2~~
	5m Cable 	10-30V DC	Emitter	RP50-T030MD-EY9C2L5
			NPN	RP50-T030MN-CY9C4U5
			PNP	RP50-T030MP-CY9C4U5
			NPN/PNP	~~RP50-T030MD-CY9C4U5~~
		12-240V DC/ 24-240V AC	Emitter (2-wire)	~~RP50-T030MC-EY9C2L5~~
			SPDT Relay (5-wire)	~~RP50-T030MR-CY9C5L5~~
			SPST solid-state Light-ON (2-wire)	~~RP50-T030MC-LY9C2U5~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-T030MC-DY9C2U5~~
	Quick Disconnect (swivel 90°) 	10-30V DC (Euro-style)	Emitter	RP50-T030MD-EY9Q4LE-S
			NPN	RP50-T030MN-CY9Q4UE-S
			PNP	RP50-T030MP-CY9Q4UE-S
			NPN/PNP	~~RP50-T030MD-CY9Q4UE-S~~
		12-240V DC/ 24-240V AC (Micro-style)	Emitter (2-wire)	~~RP50-T030MC-EY9Q3LM-S~~
			SPDT Relay (5-wire)	~~RP50-T030MR-CY9Q5LM-S~~
			SPST solid-state Light-ON (2-wire)	~~RP50-T030MC-LY9Q3UM-S~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-T030MC-DY9Q3UM-S~~
	6" Pigtail 	10-30V DC (Euro-style)	Emitter	RP50-T030MD-EY9P4LE
			NPN	RP50-T030MN-CY9P4UE
			PNP	RP50-T030MP-CY9P4UE
			NPN/PNP	~~RP50-T030MD-CY9P4UE~~
		12-240V DC/ 24-240V AC (Micro-style)	Emitter (2-wire)	~~RP50-T030MC-EY9P3LM~~
			SPDT Relay (5-wire)	~~RP50-T030MR-CY9P5LM~~
			SPST solid-state Light-ON (2-wire)	~~RP50-T030MC-LY9P3UM~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-T030MC-DY9P3UM~~

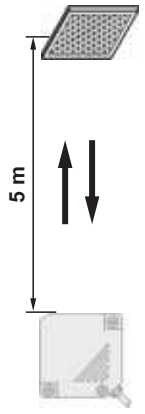
Note:
Coming Soon : Part numbers with underline
In Preparation: Part numbers with a line through the middle

Retroreflective Mode

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Light Source: Infrared LED  Retroreflective Mode Sensing Distance: 7 m (Note)	2m Cable 	10-30V DC	NPN	~~RP50-L7000N-CY9C4U2~~
			PNP	~~RP50-L7000P-CY9C4U2~~
			NPN/PNP	~~RP50-L7000D-CY9C4U2~~
		12-240V DC/ 24-240V AC	SPDT Relay (5-wire)	~~RP50-L7000R-CY9C5L2~~
			SPST solid-state Light-ON (2-wire)	~~RP50-L7000C-LY9C2U2~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-L7000C-DY9C2U2~~
	5m Cable 	10-30V DC	NPN	~~RP50-L7000N-CY9C4U5~~
			PNP	~~RP50-L7000P-CY9C4U5~~
			NPN/PNP	~~RP50-L7000D-CY9C4U5~~
		12-240V DC/ 24-240V AC	SPDT Relay (5-wire)	~~RP50-L7000R-CY9C5L5~~
			SPST solid-state Light-ON (2-wire)	~~RP50-L7000C-LY9C2U5~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-L7000C-DY9C2U5~~
	Quick Disconnect (swivel 90°) 	10-30V DC (Euro-style)	NPN	~~RP50-L7000N-CY9Q4UE-S~~
			PNP	~~RP50-L7000P-CY9Q4UE-S~~
			NPN/PNP	~~RP50-L7000D-CY9Q4UE-S~~
		12-240V DC/ 24-240V AC (Micro-style)	SPDT Relay (5-wire)	~~RP50-L7000R-CY9Q5LM-S~~
			SPST solid-state Light-ON (2-wire)	~~RP50-L7000C-LY9Q3UM-S~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-L7000C-DY9Q3UM-S~~
	6" Pigtail 	10-30V DC (Euro-style)	NPN	~~RP50-L7000N-CY9P4UE~~
			PNP	~~RP50-L7000P-CY9P4UE~~
			NPN/PNP	~~RP50-L7000D-CY9P4UE~~
		12-240V DC/ 24-240V AC (Micro-style)	SPDT Relay (5-wire)	~~RP50-L7000R-CY9P5LM~~
			SPST solid-state Light-ON (2-wire)	~~RP50-L7000C-LY9P3UM~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-L7000C-DY9P3UM~~

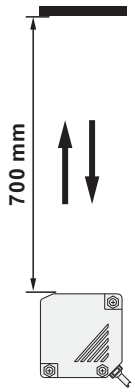
Note: Used with **RE-6152** (supplied with sensor) reflector.
Coming Soon : Part numbers with underline
In Preparation: Part numbers with a line through the middle

Retroreflective Mode with Polarizing Filter

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Retroreflective Mode with Polarizing Filter Sensing Distance: 5 m (Note) Light Source: Red LED 	2m Cable 	10-30V DC	NPN	~~RP50-L5000N-CY6C4U2-PF~~
			PNP	~~RP50-L5000P-CY6C4U2-PF~~
			NPN/PNP	~~RP50-L5000D-CY6C4U2-PF~~
		12-240V DC/ 24-240V AC	SPDT Relay (5-wire)	~~RP50-L5000R-CY6C5L2-PF~~
			SPST solid-state Light-ON (2-wire)	~~RP50-L5000C-LY6C2U2-PF~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-L5000C-DY6C2U2-PF~~
	5m Cable 	10-30V DC	NPN	~~RP50-L5000N-CY6C4U5-PF~~
			PNP	~~RP50-L5000P-CY6C4U5-PF~~
			NPN/PNP	~~RP50-L5000D-CY6C4U5-PF~~
		12-240V DC/ 24-240V AC	SPDT Relay (5-wire)	~~RP50-L5000R-CY6C5L5-PF~~
			SPST solid-state Light-ON (2-wire)	~~RP50-L5000C-LY6C2U5-PF~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-L5000C-DY6C2U5-PF~~
	Quick Disconnect (swivel 90°) 	10-30V DC (Euro-style)	NPN	~~RP50-L5000N-CY6Q4UE-PS~~
			PNP	~~RP50-L5000P-CY6Q4UE-PS~~
			NPN/PNP	~~RP50-L5000D-CY6Q4UE-PS~~
		12-240V DC/ 24-240V AC (Micro-style)	SPDT Relay (5-wire)	~~RP50-L5000R-CY6Q5LM-PS~~
			SPST solid-state Light-ON (2-wire)	~~RP50-L5000C-LY6Q3UM-PS~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-L5000C-DY6Q3UM-PS~~
	6" Pigtail 	10-30V DC (Euro-style)	NPN	~~RP50-L5000N-CY6P4UE-PF~~
			PNP	~~RP50-L5000P-CY6P4UE-PF~~
			NPN/PNP	~~RP50-L5000D-CY6P4UE-PF~~
		12-240V DC/ 24-240V AC (Micro-style)	SPDT Relay (5-wire)	~~RP50-L5000R-CY6P5LM-PF~~
			SPST solid-state Light-ON (2-wire)	~~RP50-L5000C-LY6P3UM-PF~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-L5000C-DY6P3UM-PF~~

Note: Used with **RE-6152** (supplied with sensor) reflector.
In Preparation: Part numbers with a line through the middle

Diffuse Mode

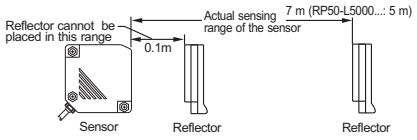
Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Diffuse Mode Sensing Distance: 700 mm Light Source: Infrared LED 	2m Cable 	10-30V DC	NPN	RP50-D0700N-CY9C4U2
			PNP	RP50-D0700P-CY9C4U2
			NPN/PNP	RP50-D0700D-CY9C4U2
		12-240V DC/ 24-240V AC	SPDT Relay (5-wire)	~~RP50-D0700R-CY9C5L2~~
			SPST solid-state Light-ON (2-wire)	~~RP50-D0700C-LY9C2U2~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-D0700C-DY9C2U2~~
	5m Cable 	10-30V DC	NPN	RP50-D0700N-CY9C4U5
			PNP	RP50-D0700P-CY9C4U5
			NPN/PNP	RP50-D0700D-CY9C4U5
		12-240V DC/ 24-240V AC	SPDT Relay (5-wire)	~~RP50-D0700R-CY9C5L5~~
			SPST solid-state Light-ON (2-wire)	~~RP50-D0700C-LY9C2U5~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-D0700C-DY9C2U5~~
	Quick Disconnect (swivel 90°) 	10-30V DC (Euro-style)	NPN	RP50-D0700N-CY9Q4UE-S
			PNP	RP50-D0700P-CY9Q4UE-S
			NPN/PNP	RP50-D0700D-CY9Q4UE-S
		12-240V DC/ 24-240V AC (Micro-style)	SPDT Relay (5-wire)	~~RP50-D0700R-CY9Q5LM-S~~
			SPST solid-state Light-ON (2-wire)	~~RP50-D0700C-LY9Q3UM-S~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-D0700C-DY9Q3UM-S~~
	6" Pigtail 	10-30V DC (Euro-style)	NPN	RP50-D0700N-CY9P4UE
			PNP	RP50-D0700P-CY9P4UE
			NPN/PNP	RP50-D0700D-CY9P4UE
		12-240V DC/ 24-240V AC (Micro-style)	SPDT Relay (5-wire)	~~RP50-D0700R-CY9P5LM~~
			SPST solid-state Light-ON (2-wire)	~~RP50-D0700C-LY9P3UM~~
			SPST solid-state Dark-ON (2-wire)	~~RP50-D0700C-DY9P3UM~~

Note:
Coming Soon : Part numbers with underline
In Preparation: Part numbers with a line through the middle

Specifications (DC)

Item \ Type	Retroreflective Mode (with polarizing filters)	Retroreflective Mode Long sensing range	Diffuse Mode	Opposed Mode Standard	Opposed Mode Long sensing range
Model No.	**RP50-L5000...**	**RP50-L7000...**	**RP50-D0700...**	**RP50-T010M...**	**RP50-T030M...**
Sensing range	**0.1 to 5 m** (Note1)	**0.1 to 7 m** (Note1)	**700 mm** (Note2)	**10 m**	**30m**
Sensing object	Φ50mm or more opaque translucent or specular object	Φ50mm or more opaque or translucent object	Opaque, translucent or transparent object	Φ20mm or more opaque object (if slit masks are fitted, an object as small as 3x6 mm can be detected)	
Hysteresis	———		15% or less of sensing distance	———	
Supply voltage	10 to 30V DC				
Current consumption	<35 mA				
Output Type	PNP, NPN, PNP/NPN				
Output Voltage High	PNP: Vs - (<=1.5V); NPN: approx. Vs.				
Output Voltage Low	PNP: approx. 0V; NPN: <=1.5V.				
Output Current Max.	100 mA				
Operation Mode	Selectable either Light-on Dark-on by the control input wire				
Response time	10 ms or less				
Operation indicator	Red LED (lights up under stable light received condition or stable dark condition)				
Stability indicator	Green LED (lights up under stable light received condition or stable dark condition)				
Power indicator	———				Red LED (lights up when the power is ON)
Sensitivity adjuster	Continuously variable adjuster	———	Continuously variable adjuster	Continuously variable adjuster	———
Interference immunity	Incorporated (Two units of sensors can be mounted closely.)			(Use optional interference prevention filters)	———
Pollution degree	3 (Industrial environment)				
Enclose category	IP 66 (IEC)				
Ambient temperature	-20 to +55°C (No dew condensation or icing allowed), storage: -30 to +70°C				
Ambient humidity	35 to 85 % RH, storage:35 to 85% RH				
Ambient illuminance	Sunlight: 11,000 x at the light receiving face, Incandescent light: 3000 x at the light-receiving face.				
EMC	IEC 60947-5-2, Parts 7.2.6.1.2.3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV(contact)				
Voltage withstandability	IEC 60947-5-2 Parts 8.3.3.4, or 500V DC for one min between all supply terminals connected together and enclosure				
Insulation resistance	20MΩ,or more, with 500V DC megger between all supply terminals				
Vibration resistance	IEC 60947-5-2, Part 7.4.2 or 10-55HZ, 1.0mm amplitude In X, Y and Z directions for 30 min				
Shock resistance	IEC 60947-5-2, Part 7.4.1 or 30g,11ms in X,Y and Z directions for six times each				
Emitting element	Red LED (modulated)	Infrared LED (modulated)		Red LED (modulated)	Infrared LED(modulated)
Material	Enclosure: Acrylonitrile Butadine Styrene (ABS), Lens: Polycarbonate, Cover: Acrylonitrile Butadine Styrene (ABS), Front cover: Acrylic (retroreflective type sensor only)				
Cable	0.3mm² 5-core (thru-beam emitter: 2-core) cabtyre cable, 2m long				
Cable Length	Extension up to total 100m is possible with 0.3mm², or more, cable (thru-beam type: both emitter and receiver)				
Pigtail type	See **Pigtail Series** or our **Cables & Connectors** catalogue.				
Connector type	M12 (Euro-style) connector				
Weight	140g approx.			Emitter: 100g approx. Receiver: 140g approx.	Emitter: 125g approx. Receiver: 140g approx.

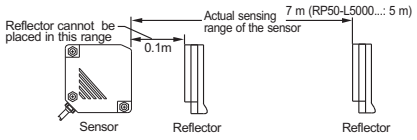
Notes: 1) Used with **RE-6152** (supplied with sensor) reflector.
The sensing range and the sensing object of the retroreflective mode sensor is specified for the reflector. Further, the sensing range is the possible setting range for the reflector
2) The sensing range of the diffuse mode sensor is specified for white non-glossy paper (200 x 200 mm) as the object.



Specifications (AC/DC)

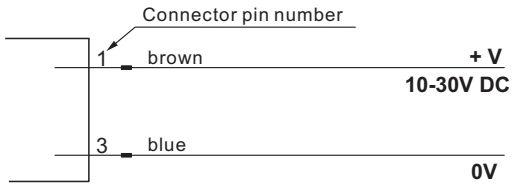
Item \ Type	Retroreflective Mode		Diffuse Mode	Opposed Mode	
				Standard	Long sensing range
Model No.	(with polarizing filters) RP50-L5000...	Long sensing range RP50-L7000...	RP50-D0700...	RP50-T010M...	RP50-T030M...
Sensing range	**0.1 to 5 m** (Note1)	**0.1 to 7 m** (Note1)	**700 mm** (Note2)	**10 m**	**30m**
Sensing object	ϕ50mm or more opaque translucent or specular object	ϕ50mm or more opaque or translucent object	Opaque, translucent or transparent object	ϕ20mm or more opaque object (if slit masks are fitted, an object as small as 3x6 mm can be detected)	
Hysteresis	———		15% or less of sensing distance	———	
Repeatability	0.2mm or less		0.3mm or less	0.1mm or less	0.2mm or less
Supply voltage	12 to 240V DC 10% or 24 to 240V AC 10% Ripple P-P 10% or less				
Current consumption	2 VA or less			Emitter: 1VA or less Receiver: 2VA or less	Emitter: 1.5VA or less Receiver: 2VA or less
Output	**Relay contact 1c** ● Switching capacity:250V AC 1A (resistive load) 30V DC 2A (resistive load) ● Electrical life:100,000 or more operations (at rated AC load) 500,000 or more operations (at rated DC load) ● Mechanical life:100,000,000 or more operations				
Light/Dark Operation	Relay Oouput: Light-ON or Dark-ON selectable via control wire , SPST Solid state: Either Light-ON or Dark-ON				
Response time	10 ms or less				
Operation indicator	Red LED (lights up under stable light received condition or stable dark condition)				
Stability indicator	Green LED (lights up under stable light received condition or stable dark condition)				
Power indicator	———				Red LED (lights up when the power is ON)
Sensitivity adjuster	Continuously variable adjuster	———	Continuously variable adjuster	Continuously variable adjuster	———
Interference immunity	Incorporated (Two units of sensors can be mounted closely.)			(Use optional interference prevention filters)	———
Pollution degree	3 (Industrial environment)				
Enclose category	IP 66 (IEC)				
Ambient temperature	-20 to +55°C (No dew condensation or icing allowed), storage: -30 to +70°C				
Ambient humidity	35 to 85 % RH, storage:35 to 85% RH				
Ambient illuminance	Sunlight: 11,000 x at the light receiving face, Incandescent light: 3000 x at the light-receiving face.				
EMC	IEC 60947-5-2, Parts 7.2.6.1.2.3 or RFI>3V/m(in 30-1000MHZ), EFT>1KV, ESD>4KV(contact)				
Voltage withstandability	IEC 60947-5-2 Parts 8.3.3.4, or 500V DC for one min between all supply terminals connected together and enclosure				
Insulation resistance	20MΩ ,or more, with 500V DC megger between all supply terminals				
Vibration resistance	IEC 60947-5-2, Part 7.4.2 or 10-55HZ, 1.0mm amplitude In X, Y and Z directions for 30 min				
Shock resistance	IEC 60947-5-2, Part 7.4.1 or 30g,11ms in X,Y and Z directions for six times each				
Emitting element	Red LED (modulated)	Infrared LED (modulated)		Red LED (modulated)	Infrared LED(modulated)
Material	Enclosure: Acrylonitrile Butadine Styrene (ABS), Lens: Polycarbonate, Cover: Acrylonitrile Butadine Styrene (ABS), Front cover: Acrylic (retroreflective type sensor only)				
Cable	0.3mm² 5-core (thru-beam emitter: 2-core) cabtyre cable, 2m long				
Cable Length	Extension up to total 100m is possible with 0.3mm², or more, cable (thru-beam type: both emitter and receiver)				
Pigtail type	See **Pigtail Series** or our **Cables & Connectors** catalogue.				
Connector type	M12 (Micro style) connector				
Weight	140g approx.			Emitter: 100g approx. Receiver: 140g approx.	Emitter: 125g approx. Receiver: 140g approx.

Notes: 1) Used with **RE-6152** (supplied with sensor) reflector.
The sensing range and the sensing object of the retroreflective mode sensor is specified for the reflector. Further, the sensing range is the possible setting range for the reflector
2) The sensing range of the diffuse mode sensor is specified for white non-glossy paper (200 x 200 mm) as the object.



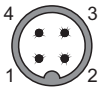
Connection Diagrams (DC)

Emitter of Thru-beam Mode



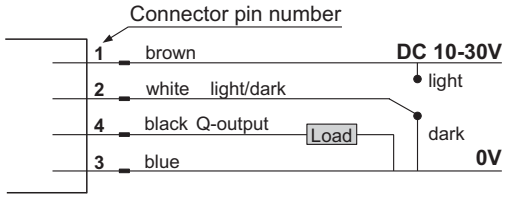
Connector pin position

Euro-style



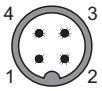
1.Brown (+)
2.Not used
3.Blue (-)
4.Not used

PNP output type



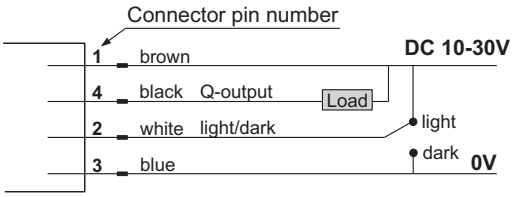
Connector pin position

Euro-style



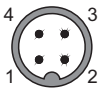
1.Brown (+)
2.White (Light/Dark control)
3.Blue (-)
4.Black (Output)

NPN output type



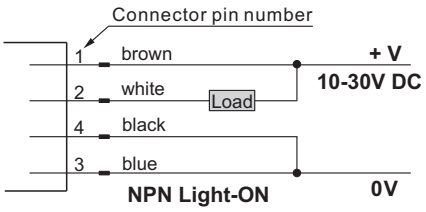
Connector pin position

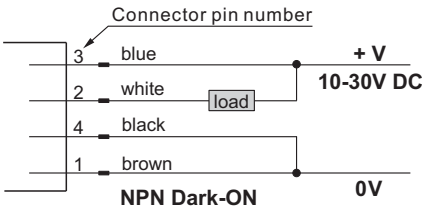
Euro-style

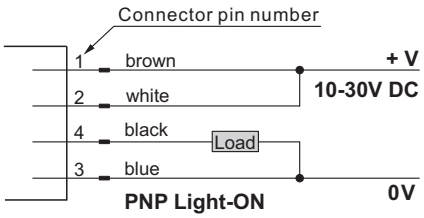


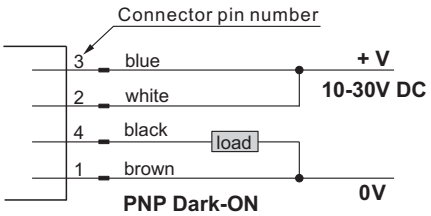
1.Brown (+)
2.White (Light/Dark control)
3.Blue (-)
4.Black (Output)

NPN/PNP output type



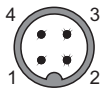






Connector pin position

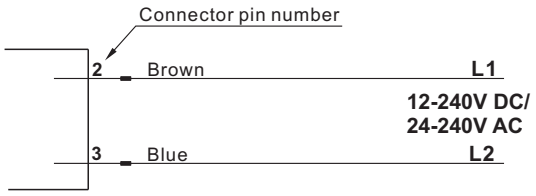
Euro-style



1.Brown
2.White
3.Blue
4.Black

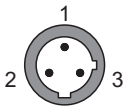
Connection Diagrams (AC/DC)

Emitter of Thru-beam Mode



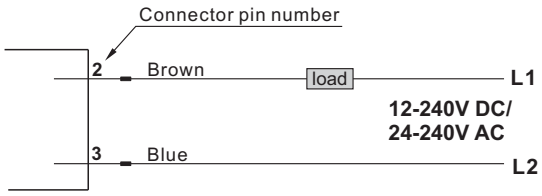
Connector face view

Micro-style



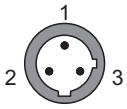
1.Not used
2.Red/black (L1)
3.Red/white (L2)

SPST Solid-state output type



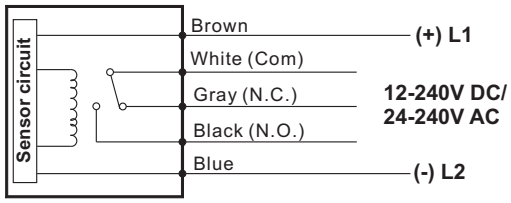
Connector face view

Micro-style



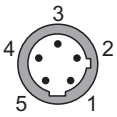
1.Not used
2.Red/black (L1)
3.Red/white (L2)

SPDT Relay output



Connector face view

Micro-style



1.Red/white(L1)
2.Red (L2)
3.Green (Common)
4.Red/yellow (N.O.)
5.Red/black (N.C.)

SPDT Relay Output operation

Sensing Mode		Thru-beam & Retroreflective type				Diffuse type			
		Light-ON type		Dark-ON type		Light-ON type		Dark-ON type	
Output		NO (Black cable)	NC (Gray cable)	NO (Black cable)	NO (Gray cable)	NO (Black cable)	NC (Gray cable)	NO (Black cable)	NO (Gray cable)
Output Condition	Power OFF	Open	Close	Open	Close	Open	Close	Open	Close
	Beam-received	Close	Open	Open	Close	Close	Open	Open	Close
	Beam-interrupted	Open	Close	Close	Open	Open	Close	Close	Open

Object detected state

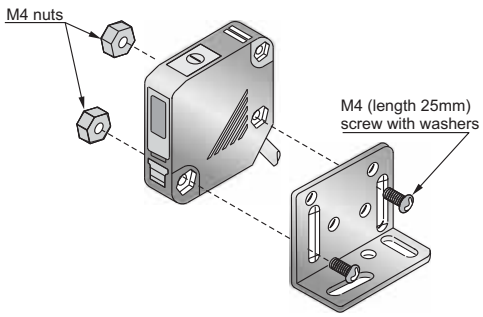
Precautions For Proper Use

Cautions:

Don't use the sensor for a safety aim, because it's only designed for a normal object detection

Mounting

The tightening torque should be 0.8N.m or less.

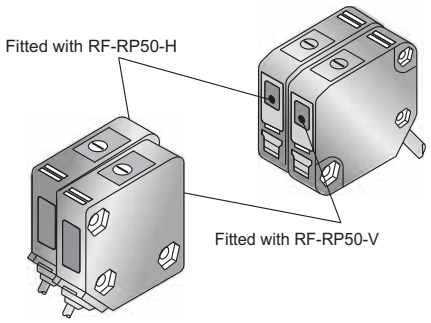


Others

Do not use during the initial transient time (50ms) after the power supply is switched on.

Interference prevention filter (exclusively for RP50-T010M...)

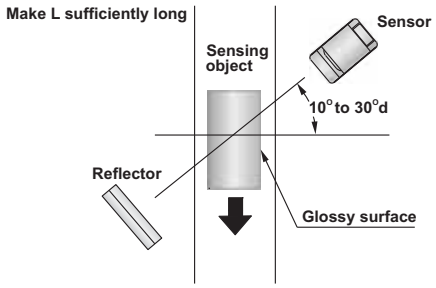
Use the interference prevention filters (optional)when two units of thru-beam type sensors are mounted closely.



There are two types of interference prevention filters. The two sets of thru-beam type sensors should be fitted with different types of interference prevention filters.

Retroreflective type sensor (RP50-L7000R-CY9C5L2)

- **Please take care of the following points when detecting materials having a gloss.**
  - Make L,shown in the diagram, sufficiently long. Install at an angle of 10 to 30 degrees to the sensing object.
    RP50-L5000R-LY6C5L2-PF;
    does not need the above adjustment.



Retroreflective type sensor with polarizing filters (RP50-L5000R-CY6C5L2-PF)

- If a shiny object is covered or wrapped with a transparent film, such as those described below, the retroreflective type sensor with polarizing filters may not be able to detect it.
- In that case, follow the steps given below.

Example of sensing objects

- Can wrapped by clear film
- Aluminum sheet covered by plastic film
- Gold or silver color (glossy) label or wrapping paper

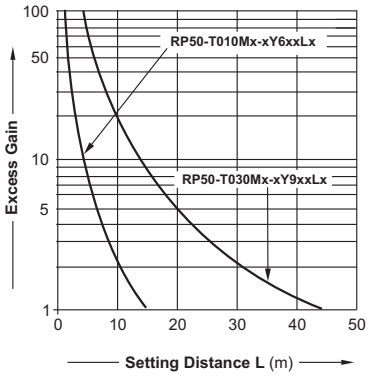
Steps

- Tilt the sensor with respect to the sensing object while fitting.
- Reduce the sensitivity.
- Mcrease the distance between the sensor and the sensing object..

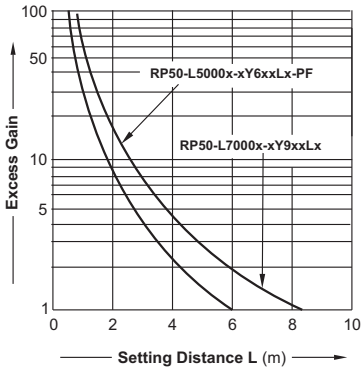
Sensing Characteristics (Typical)

All Models

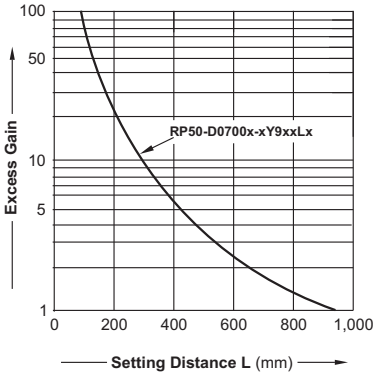
Opposed Mode



Retroreflective Mode

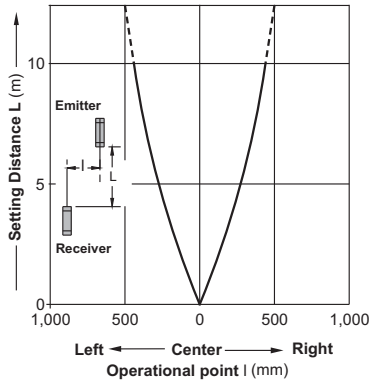


Diffuse Mode

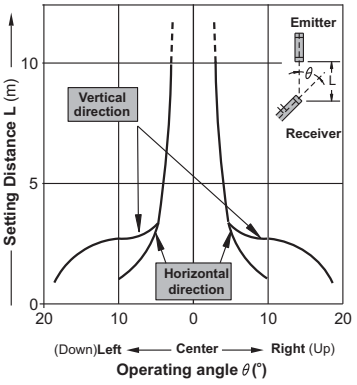


Opposed mode sensor (sensing range=10m)

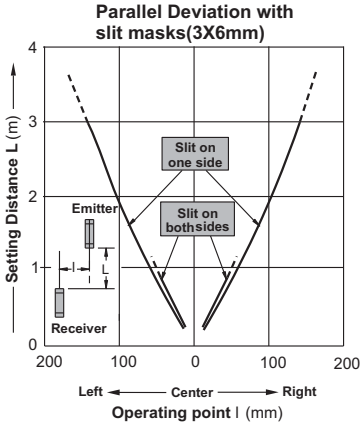
Parallel Deviation



Angular Deviation

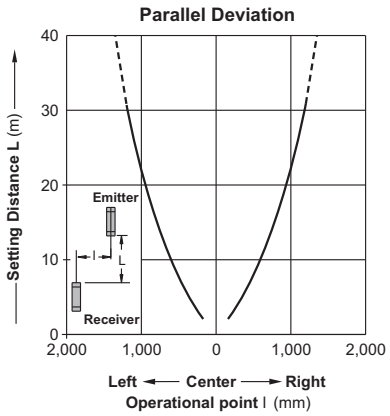


Parallel Deviation with slit masks(3X6mm)

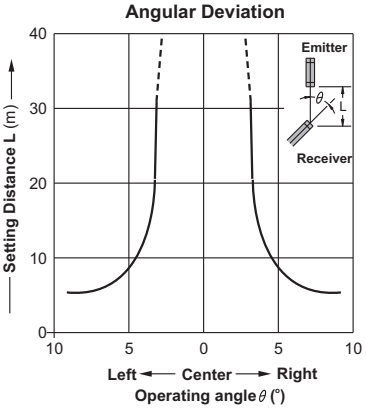


Opposed mode sensor (sensing range=30m)

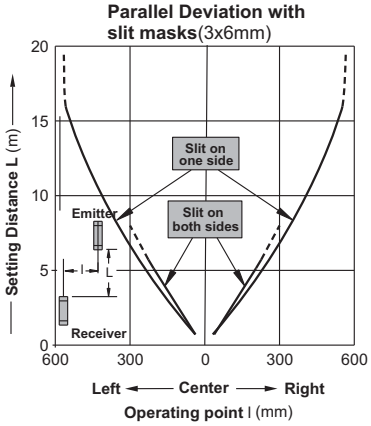
Parallel Deviation



Angular Deviation

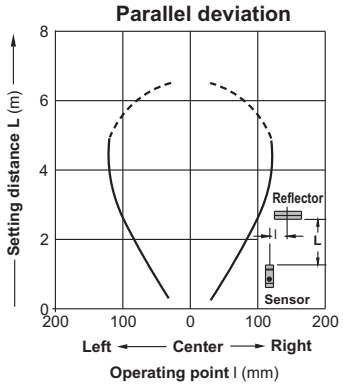


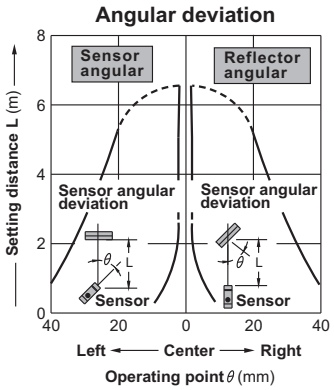
Parallel Deviation with slit masks(3x6mm)



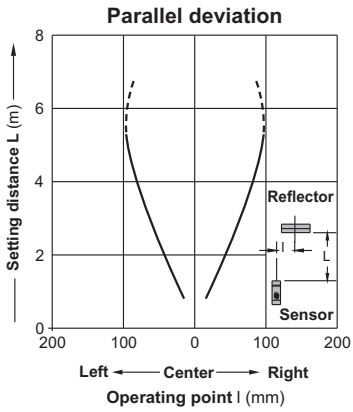
Sensing Characteristics (Typical)

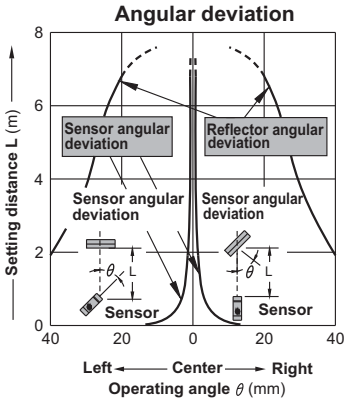
Polarized retroreflective mode sensor (Sensing Range=5m)



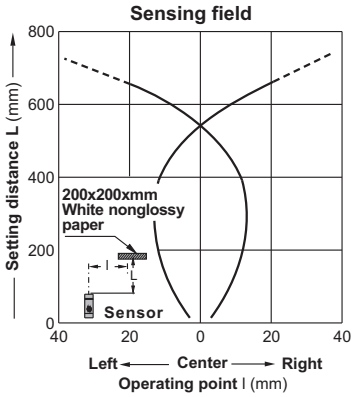


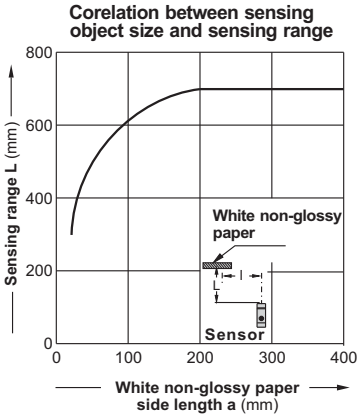
Long range retroreflective mode sensor (Sensing Range=7m)





Diffuse mode sensor (Sensing rang=700mm)



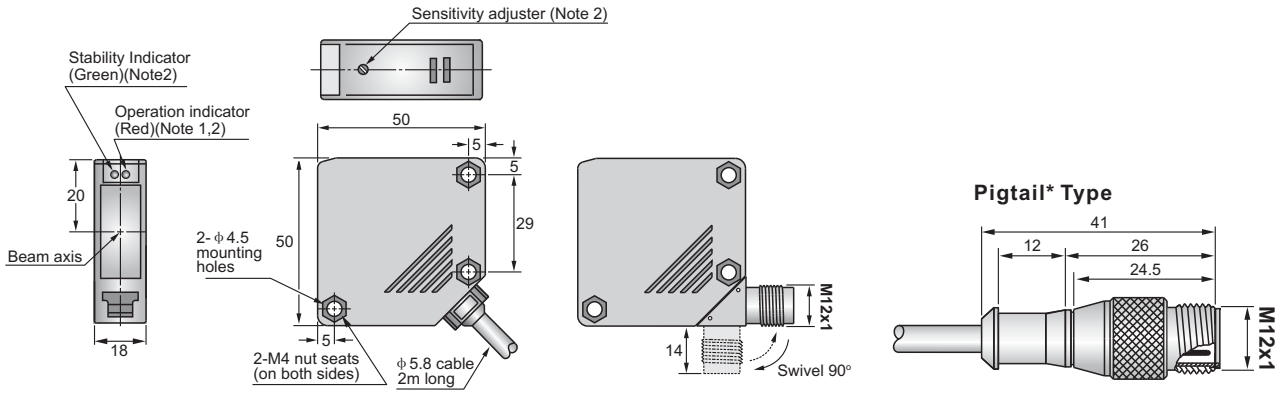


As the sensing object size becomes smaller than the standard size (white non-glossy paper 200X200mm),the sensing range shortens, as shown in the left graph.

For plotting the left graph,the sensitivity has been set such that a 200X200mm white nonglossy paper is just detectable at a distance of 700mm.

Dimensions (Unit: mm)

Sensor Type

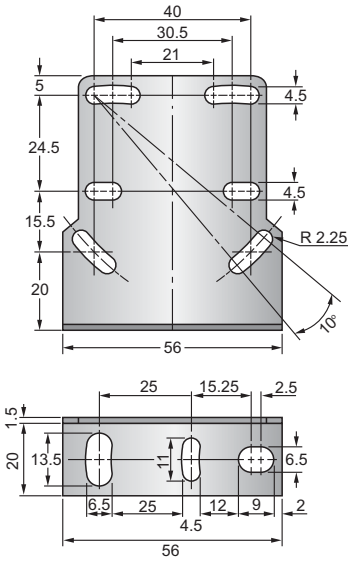


Cable type | Connector type

*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

Notes: 1) It is the power indicator(red) on the emitter of thru-beam mode.
2) Not incorporated on the emitter of thru-beam mode.

MB-6556 (optional)



MB-5035 (optional)