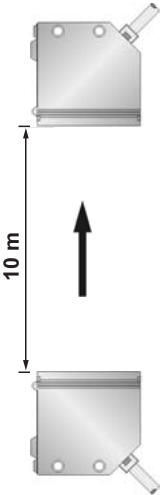



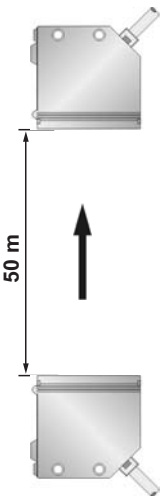



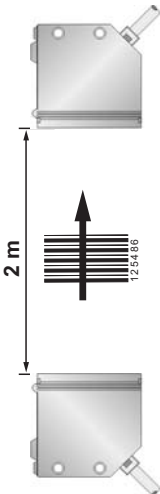



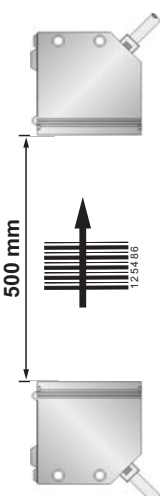





Thru-beam Mode (Standard Type)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
 <p>Standard Range Sensing Distance 10 m Light source: Infrared</p>	2m Cable 	10-30V DC	Emitter	<u>RP35-T010MD-EY9C2L2</u>
			NPN	<u>RP35-T010MN-CY9C3U2</u>
			PNP	<u>RP35-T010MP-CY9C3U2</u>
	Quick Disconnect (Pico style) 	10-30V DC	Emitter	<u>RP35-T010MD-EY9Q4LP</u>
			NPN	<u>RP35-T010MN-CY9Q4UP</u>
			PNP	<u>RP35-T010MP-CY9Q4UP</u>
	6" Pigtail (Pico style) 	10-30V DC	Emitter	<u>RP35-T010MD-EY9P4LP</u>
			NPN	<u>RP35-T010MN-CY9P4UP</u>
			PNP	<u>RP35-T010MP-CY9P4UP</u>
 <p>Long Sensing Range Sensing distance 50 m Light source: Infrared</p>	2m Cable 	10-30V DC	Emitter	<u>RP35-T050MD-EY9C2L2</u>
			NPN	<u>RP35-T050MN-CY9C3U2</u>
			PNP	<u>RP35-T050MP-CY9C3U2</u>
	Quick Disconnect (Pico style) 	10-30V DC	Emitter	<u>RP35-T050MD-EY9Q4LP</u>
			NPN	<u>RP35-T050MN-CY9Q4UP</u>
			PNP	<u>RP35-T050MP-CY9Q4UP</u>
	6" Pigtail (Pico style) 	10-30V DC	Emitter	<u>RP35-T050MD-EY9P4LP</u>
			NPN	<u>RP35-T050MN-CY9P4UP</u>
			PNP	<u>RP35-T050MP-CY9P4UP</u>

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

Thru-beam Mode for Mark Sensing (Standard Type)

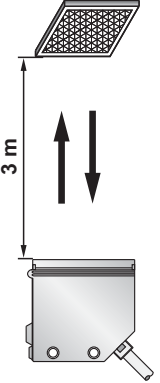



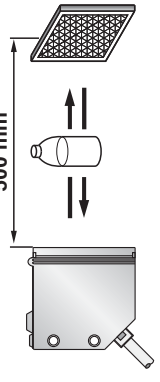



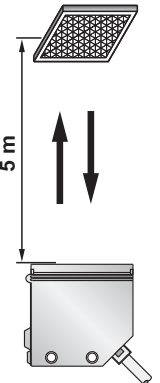



Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
 <p>2 m</p> <p>For Mark Sensing Sensing Distance 2 m Light source: Red Light</p>	2m Cable 	10-30V DC	Emitter	<u>RP35-T2000D-EY6G2L2-K</u>
			NPN	<u>RP35-T2000N-CY6G3U2-K</u>
			PNP	<u>RP35-T2000P-CY6G3U2-K</u>
	Quick Disconnect (Pico style) 	10-30V DC	Emitter	<u>RP35-T2000D-EY6Q4LP-K</u>
			NPN	<u>RP35-T2000N-CY6Q4UP-K</u>
			PNP	<u>RP35-T2000P-CY6Q4UP-K</u>
	6" Pigtail (Pico style) 	10-30V DC	Emitter	<u>RP35-T2000D-EY6P4LP-K</u>
			NPN	<u>RP35-T2000N-CY6P4UP-K</u>
			PNP	<u>RP35-T2000P-CY6P4UP-K</u>
 <p>500 mm</p> <p>For Mark Sensing Sensing Distance 500mm Light source: Green Light</p>	2m Cable 	10-30V DC	Emitter	<u>RP35-T0500D-EY5G2L2-K</u>
			NPN	<u>RP35-T0500N-CY5G3U2-K</u>
			PNP	<u>RP35-T0500P-CY5G3U2-K</u>
	Quick Disconnect (Pico style) 	10-30V DC	Emitter	<u>RP35-T0500D-EY5Q4LP-K</u>
			NPN	<u>RP35-T0500N-CY5Q4UP-K</u>
			PNP	<u>RP35-T0500P-CY5Q4UP-K</u>
	6" Pigtail (Pico style) 	10-30V DC	Emitter	<u>RP35-T0500D-EY5P4LP-K</u>
			NPN	<u>RP35-T0500N-CY5P4UP-K</u>
			PNP	<u>RP35-T0500P-CY5P4UP-K</u>

Note:

Coming Soon : Part numbers with underline

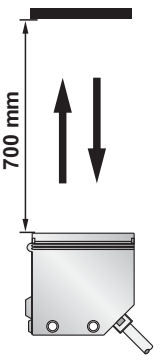



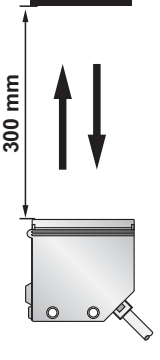



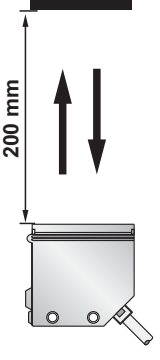



In Preparation: Part numbers with a line through the middle

Retroreflective Mode (Standard Type)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
 <p>3 m</p> <p>With Polarizing Filter</p> <p>Sensing Range: 0.1 to 3 m (Note)</p> <p>Light source: Red Light</p>	2m Cable 	10-30V DC	NPN	<u>RP35-L3000N-CY6C3U2-PF</u>
				PNP
	Quick Disconnect (Pico style) 	10-30V DC	NPN	<u>RP35-L3000N-CY6Q4UP-PF</u>
				PNP
	6" Pigtail (Pico style) 	10-30V DC	NPN	<u>RP35-L3000N-CY6P4UP-PF</u>
 <p>500 mm</p> <p>Clear Object Detector</p> <p>Sensing Range: 500 mm (Note)</p> <p>Light source: Red Light</p>	2m Cable 	10-30V DC	NPN	<u>RP35-S0500N-CY6C3U2</u>
				PNP
	Quick Disconnect (Pico style) 	10-30V DC	NPN	<u>RP35-S0500N-CY6Q4UP</u>
				PNP
	6" Pigtail (Pico style) 	10-30V DC	NPN	<u>RP35-S0500N-CY6P4UP</u>
 <p>5 m</p> <p>Standard Type</p> <p>Sensing Range: 0.1 to 5 m (Note)</p> <p>Light source: Infrared</p>	2m Cable 	10-30V DC	NPN	<u>RP35-L5000N-CY9C3U2</u>
				PNP
	Quick Disconnect (Pico style) 	10-30V DC	NPN	<u>RP35-L5000N-CY9Q4UP</u>
				PNP
	6" Pigtail (Pico style) 	10-30V DC	NPN	<u>RP35-L5000N-CY9P4UP</u>

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

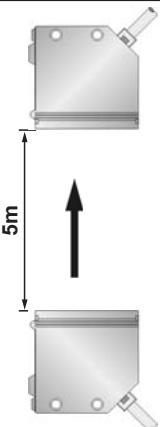



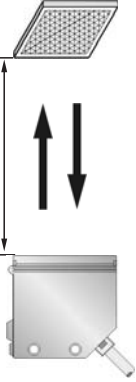



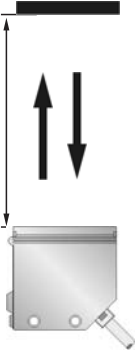



Diffuse Mode (Standard Type)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
 <p>Long Sensing Range Sensing Range: 700mm Light source: Infrared</p>	2m Cable 	10-30V DC	NPN	<u>RP35-D0700N-CY9C3U2</u>
			PNP	<u>RP35-D0700P-CY9C3U2</u>
	Quick Disconnect (Pico style) 	10-30V DC	NPN	<u>RP35-D0700N-CY9Q4UP</u>
			PNP	<u>RP35-D0700P-CY9Q4UP</u>
	6" Pigtail (Pico style) 	10-30V DC	NPN	<u>RP35-D0700N-CY9P4UP</u>
			PNP	<u>RP35-D0700P-CY9P4UP</u>
 <p>Wide-View Type Sensing Range: 300mm Light source: Infrared</p>	2m Cable 	10-30V DC	NPN	<u>RP35-D0300N-CY9C3U2-W</u>
			PNP	<u>RP35-D0300P-CY9C3U2-W</u>
	Quick Disconnect (Pico style) 	10-30V DC	NPN	<u>RP35-D0300N-CY9Q4UP-W</u>
			PNP	<u>RP35-D0300P-CY9Q4UP-W</u>
	6" Pigtail (Pico style) 	10-30V DC	NPN	<u>RP35-D0300N-CY9P4UP-W</u>
			PNP	<u>RP35-D0300P-CY9P4UP-W</u>
 <p>Narrow-View Type Sensing Range: 200mm Light source: Red Light</p>	2m Cable 	10-30V DC	NPN	<u>RP35-D0200N-CY6C3U2-N</u>
			PNP	<u>RP35-D0200P-CY6C3U2-N</u>
	Quick Disconnect (Pico style) 	10-30V DC	NPN	<u>RP35-D0200N-CY6Q4UP-N</u>
			PNP	<u>RP35-D0200P-CY6Q4UP-N</u>
	6" Pigtail (Pico style) 	10-30V DC	NPN	<u>RP35-D0200N-CY6P4UP-N</u>
			PNP	<u>RP35-D0200P-CY6P4UP-N</u>

Note:

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

DC 2-wire Type





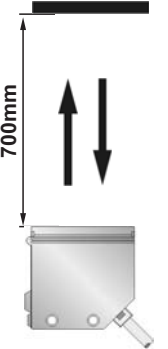



Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
 <p>Thru-beam Mode Sensing distance 5 m Light source: Infrared</p>	2m Cable 	10-30V DC	Emitter	<u>RP35C-T5000D-EY9C2L2</u>
			Non Contact DC 2-wire type	<u>RP35C-T5000D-CY9C2U2</u>
	Quick-Disconnect (Pico-style) 	10-30V DC	Emitter	<u>RP35C-T5000D-EY9Q4LP</u>
			Non Contact DC 2-wire type	<u>RP35C-T5000D-CY9Q4UP</u>
	6" Pigtail (Pico-style) 	10-30V DC	Emitter	<u>RP35C-T5000D-EY9P4LP</u>
			Non Contact DC 2-wire type	<u>RP35C-T5000D-CY9P4UP</u>
 <p>Retroreflective Mode (with polarizing filter) Sensing Range: 0.1 to 2 m (Note) Light source: Red Light</p>	2m Cable 	10-30V DC	Non Contact DC 2-wire type	<u>RP35C-L2000D-CY6C2U2-PF</u>
			---	---
	Quick Disconnect (Pico style) 	10-30V DC	Non Contact DC 2-wire type	<u>RP35C-L2000D-CY6Q4UP-PF</u>
			---	---
	6" Pigtail (Pico style) 	10-30V DC	Non Contact DC 2-wire type	<u>RP35C-L2000D-CY6P4UP-PF</u>
			---	---
 <p>Diffuse Mode Sensing distance 300mm Light source: Infrared</p>	2m Cable 	10-30V DC	Non Contact DC 2-wire type	<u>RP35C-D0300D-CY9C2U2</u>
			---	---
	Quick Disconnect (Pico style) 	10-30V DC	Non Contact DC 2-wire type	<u>RP35C-D0300D-CY9Q4UP</u>
			---	---
	6" Pigtail (Pico style) 	10-30V DC	Non Contact DC 2-wire type	<u>RP35C-D0300D-CY9P4UP</u>
			---	---

Note: Used with RE-6152 (supplied with sensor) reflector.

Coming Soon : Part numbers with underline

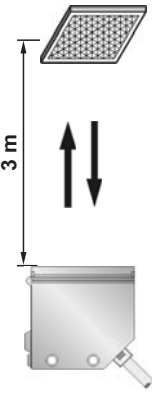





In Preparation: Part numbers with a line through the middle

Thru-beam Mode / Diffuse Mode (Intelligent Type)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
 <p>Thru-beam Mode</p> <p>Sensing Distance 10 m</p> <p>Light source: Infrared</p>	2m Cable 	10-30V DC	Emitter	<u>RP35A-T010MD-EY9G2L2</u>
			NPN	<u>RP35A-T010MN-CY9G5U2</u>
			PNP	<u>RP35A-T010MP-CY9G5U2</u>
	Quick Disconnect (Pico style) 	10-30V DC	Emitter	<u>RP35A-T010MD-EY9Q4LP</u>
			NPN	<u>RP35A-T010MN-CY9Q5UP</u>
			PNP	<u>RP35A-T010MP-CY9Q5UP</u>
	6" Pigtail (Pico style) 	10-30V DC	Emitter	<u>RP35A-T010MD-EY9P4LP</u>
			NPN	<u>RP35A-T010MN-CY9P5UP</u>
			PNP	<u>RP35A-T010MP-CY9P5UP</u>
 <p>Diffuse Mode</p> <p>Sensing distance 700 mm</p> <p>Light source: Infrared</p>	2m Cable 	10-30V DC	NPN	<u>RP35A-D0700N-CY9G5U2</u>
			PNP	<u>RP35A-D0700P-CY9G5U2</u>
			—	—
	Quick Disconnect (Pico style) 	10-30V DC	NPN	<u>RP35A-D0700N-CY9Q5UP</u>
			PNP	<u>RP35A-D0700P-CY9Q5UP</u>
			—	—
	6" Pigtail (Pico style) 	10-30V DC	NPN	<u>RP35A-D0700N-CY9P5UP</u>
			PNP	<u>RP35A-D0700P-CY9P5UP</u>
			—	—

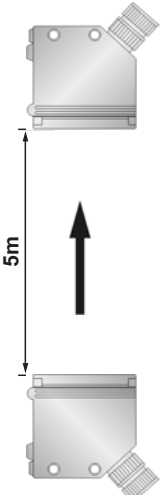



Note:
 Coming Soon : Part numbers with underline
 In Preparation: Part numbers with a line through the middle

Polarized Retroreflective Mode / Clear Object Detector (Intelligent Type)

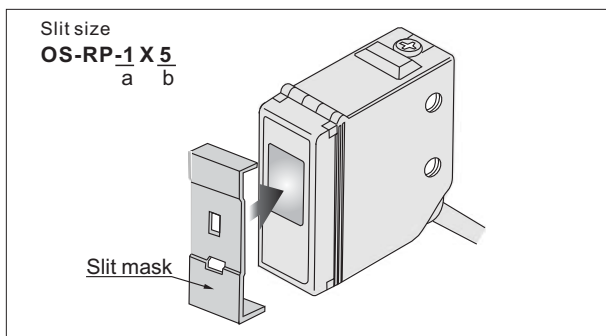
Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number	
 <p>Retroreflective Mode (with polarizing filter)</p> <p>Sensing Distance: 0.1 to 3m(Note)</p> <p>Light source: Red Light</p>	2m Cable 	10-30V DC	NPN	<u>RP35A-L3000N-CY6C5U2-PF</u>	
			PNP	<u>RP35A-L3000P-CY6C5U2-PF</u>	
			—	—	
	Quick Disconnect (Pico style) 	10-30V DC	NPN	<u>RP35A-L3000N-CY6Q5UP-PF</u>	
			PNP	<u>RP35A-L3000P-CY6Q5UP-PF</u>	
			—	—	
	Clear Object Detector <p>Sensing Distance: 500 mm (Note)</p> <p>Light source: Red Light</p>	2m Cable 	10-30V DC	NPN	<u>RP35A-S0500N-CY6C5U2</u>
				PNP	<u>RP35A-S0500P-CY6C5U2</u>
				—	—
Quick Disconnect (Pico style) 		10-30V DC	NPN	<u>RP35A-S0500N-CY6Q5UP</u>	
			PNP	<u>RP35A-S0500P-CY6Q5UP</u>	
			—	—	
6" Pigtail (Pico style) 	10-30V DC	NPN	<u>RP35A-S0500N-CY6P5UP</u>		
		PNP	<u>RP35A-S0500P-CY6P5UP</u>		
		—	—		

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

Thru-beam Mode (Heavy Duty Type)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
 <p>Thru-beam Mode Sensing Distance 5 m Light source: Infrared</p>	2m Cable 	10-30V DC	Emitter	RP35B-T5000D-EY9C2L2
			NPN	RP35B-T5000N-CY9C3U2
			PNP	RP35B-T5000P-CY9C3U2
	3m Cable 	10-30V DC	Emitter	RP35B-T5000D-EY9C2L3
			NPN	RP35B-T5000N-CY9C3U3
			PNP	RP35B-T5000P-CY9C3U3
	5m Cable 	10-30V DC	Emitter	RP35B-T5000D-EY9C2L5
			NPN	RP35B-T5000N-CY9C3U5
			PNP	RP35B-T5000P-CY9C3U5

Slit Mask (Optional)



- Fitted on the front face of the sensor with one touch.

OS-RP-1x5(Slit size:1x5 mm) OS-RP-5x1(Slit size:5x1 mm)

Slit on emitter	Sensing range: 3.8 m (RP35-T010M... & RP35A-T010M...) 1.9 m (RP35-T5000...) Min.Sensing object: ϕ 8 mm
Slit on emitter	Sensing range: 2.8 m (RP35-T010M... & RP35A-T010M...) 1.4 m (RP35-T5000...) Min.Sensing object: ϕ 6 mm
Slit on emitter	Sensing range: 0.8 m (RP35-T010M... & RP35A-T010M...) 0.4m (RP35-T5000...) Min.Sensing object: 1x5 mm

OS-RP-0.5x5(Slit size:0.5x5mm) OS-RP-5x0.5(Slit size:5x0.5mm)

Slit on emitter	Sensing range: 2.7 m (RP35-T010M... & RP35A-T010M...) 1.4 m (RP35-T5000...) Min. Sensing object: ϕ 8mm
Slit on emitter	Sensing range: 1.9 m (RP35-T010M... & RP35A-T010M...) 1 m (RP35-T5000...) Min.Sensing object: ϕ 6mm
Slit on emitter	Sensing range: 0.4 m (RP35-T010M... & RP35A-T010M...) 0.2 m (RP35-T5000...) Min.Sensing object: 0.5x5 mm

OS-RP-3x5(Slit size:3x5 mm) OS-RP-5x3(Slit size:5x3 mm)

Slit on emitter	Sensing range: 7 m (RP35-T010M... & RP35A-T010M...) 3.5 m (RP35-T5000...) Min.Sensing object: ϕ 8mm
Slit on emitter	Sensing range: 4.9 m (RP35-T010M... & RP35A-T010M...) 2.5 m (RP35-T5000...) Min.Sensing object: ϕ 6mm
Slit on emitter	Sensing range: 2.6 m (RP35-T010M... & RP35A-T010M...) 1.3 m (RP35-T5000...) Min.Sensing object: 3x5 mm

Specifications (Standard Type)

Type		Thru-beam Mode				Retroreflective Mode			Diffuse Mode				
		Infrared		Red	Green	Red (with polarizing filter)		Infrared (Long Range)	Infrared		Red		
Item	Model NO.	Long Range				RP35-T010M...	RP35-T050M...		RP35-T2000...	RP35-T0500...		RP35-L3000...	RP35-L0500...
		RP35-T010M...	RP35-T050M...	RP35-L3000...	RP35-L0500...			RP35-L5000...			RP35-D0700...		
Sensing range		10 m	50 m	2 m	500 mm	0.1 to 3m (Note)	500mm (Note)	0.1 to 5m (Note)	700 mm	300 mm	200 mm		
Sensing object		φ 10 mm or more opaque object.				φ 50 mm or more opaque, translucent or specular object	φ 50 mm or more opaque, translucent or transparent object	φ 50 mm or more opaque, translucent object	Opaque, translucent or transparent object (Min. sensing object: φ 0.5 mm copper wire)				
Hysteresis		—————							15% or less of operation distance				
Repeatability		0.5mm or less			1mm or less	0.2mm or less	1mm or less	0.5mm or less					
Supply voltage		10 to 30V DC Ripple P-P 10% or less											
Current consumption		Emitter:< 25mA, Receiver:< 25mA 40mA or less											
Sensing output		NPN open-collector transistor Maximum sink current: 100mA Applied voltage: 30V DC or less (between output and 0V) Residual voltage: 1.5V or less (at 100mA sink current)						PNP open-collector transistor Maximum source current: 100mA Applied voltage: 30V DC or less (between output and 0V) Residual voltage: 1.5V or less (at 100mA source current)					
Utilization category		DC-12 or DC-13											
Output operation		Switchable either Light-ON or Dark-ON											
Short-circuit protection		Incorporated											
Response time		1 ms or less											
Operation indicator		Red LED (lights up when the sensing output is ON)											
Stability indicator		Green LED (lights up under stable light received condition or stable dark condition)											
Sensitivity adjuster		Continuously variable adjuster											
Automatic interference prevention function		—————				Incorporated (Two units of sensors can be mounted closely)							
Environmental resistance	Pollution degree	3 (Industrial environment)											
	Protection	IP 67 (IEC)											
	Ambient temperature	-25 to +60°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: 11000 lx at the light receiving face, Incandescent light: 3500 lx 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	1000 V AC for one min. Between all supply terminals connected together and enclosure.											
	Insulation resistance	20M Ω ,or more, with 250V DC megger between all supply terminals connected together and enclosure											
	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		Infrared LED (modulated)	Red LED (modulated)	Green LED (modulated)	Red LED (modulated)	Infrared LED (modulated)			Red LED (modulated)				
Material		Enclosure: Die-cast zinc alloy, Indicator cover: Polyethersulphone, Lens: Polycarbonate (retroreflective type: Acrylic)											
Cable		0.15mm ² 3-core(emitter of thru-beam mode:2-core) oil, heat and cold resistant cabtyre cable, 2m long											
Cable extension		Extension up to total 100m is possible with 0.3mm ² , or more, cable(thru-beam type: both emitter and receiver)											
Pigtail type		See Pigtail Series or our Cables & Connectors catalogue.											
Connector type		Pico style (M8) 4pin											
Weight		75g approx.											
Accessories		MB-4537 (Sensor mounting bracket): 2 set. Adjusting screwdriver: 1 pc.				MB-4537 (Sensor mounting bracket):1set RE-6152 (reflector): 1 pc. Adjusting screwdriver: 1 pc.			MB-4537 (Sensor mounting bracket):1set Adjusting screwdriver: 1pc.				

Note: Used with RE-6152 (supplied with sensor) reflector.

Specifications (DC 2-wire type)

Type	Thru-beam Mode	Retroreflective Mode (with polarizing filter)	Diffuse Mode
Item Model NO.	RP35-T5000D-CY9C2U2	RP35-L2000D-CY6C2U2-PF	RP35-D0300D-CY9C2U2
Sensing range	5 m	0.1 to 2m (Note)	300 mm
Sensing object	φ 10 mm or more opaque object.	φ 50mm or more opaque, translucent or specular object	Opaque, translucent and transparent object
Hysteresis	—————		15% or less of operation distance
Repeatability	0.5mm or less	1mm or less	0.5mm or less
Supply voltage	10 to 30V DC Ripple P-P 10% or less		
Current consumption	Emitter:8mA or less, Receiver:0.8 mA or less	1 mA or less	
Sensing output	Non Contact DC 2-wire type Load Current: 5 to 100mA Residual voltage: 4V or less		
Output operation	Switchable either Light-ON or Dark-ON		
Short-circuit protection	Incorporated		
Response time	3 ms or less		
Operation indicator	Red LED (lights up when the sensing output is ON)		
Stability indicator	Green LED (Light-ON mode: Lights up under stable light received condition) Dark-ON mode: Lights up under stable dark condition		
Sensitivity adjuster	Continuously variable adjuster		
Environmental resistance	Protection	IP 67 (IEC)	
	Ambient temperature	-25 to +60°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: 11000 lx at the light receiving face, Incandescent light: 3500 lx 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	1000 V AC for one min. Between all supply terminals connected together and enclosure.	
	Insulation resistance	20M Ω ,or more, with 250V DC megger between all supply terminals connected together and enclosure	
	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	Infrared LED (modulated)	Red LED (modulated)	Infrared LED (modulated)
Material	Enclosure: Die-cast zinc alloy, Indicator cover: Polyethersulphone, Lens: Polycarbonate		
Cable	0.15mm ² 2-core oil, heat and cold resistant cabtyre cable, 2m long		
Cable extension	—————		
Pigtail type	See Pigtail Series or our Cables & Connectors catalogue.		
Connector type	Pico style (M8) 4pin		
Weight	75g approx.		
Accessories	MB-4537 (Sensor mounting bracket): 2 set. Adjusting screwdriver: 1 pc.	MB-4537 (Sensor mounting bracket):1set RE-6152 (Reflector): 1 pc. Adjusting screwdriver: 1 pc.	MB-4537 (Sensor mounting bracket):1set Adjusting screwdriver: 1pc.

Note: Used with **RE-6152** (supplied with sensor) reflector.

Specifications (Intelligent Type)

Type		Thru-beam Mode	Retroreflective Mode (with polarizing filter)		Diffuse Mode
			Clear Object Detector		
Item	Model NO.	RP35A-T010MN(P)...	RP35A-L3000N(P)...	RP35A-S0500N...	RP35A-D0700N(P)...
Sensing range		10 m	0.1 to 3m (Note)	500 mm (Note)	700 mm
Sensing object		φ 10 mm or more opaque object.	φ 50mm or more opaque, translucent or specular object		Opaque, translucent & transparent object
Hysteresis		—————			15% or less of operation distance
Repeatability		0.5mm or less	1mm or less	0.2 mm or less	0.5mm or less
Supply voltage		10 to 30V DC Ripple P-P 10% or less			
Current consumption		Emitter: 20mA or less Receiver: 45mA or less	40mA or less		
Sensing output		NPN open-collector transistor Maximum sink current: 100mA Applied voltage: 30V DC or less(between output and 0V) Residual voltage: 1.5V or less (at 100mA sink current)		PNP open-collector transistor Maximum source current: 100mA Applied voltage: 30V DC or less(between output and 0V) Residual voltage: 1.5V or less (at 100mA source current)	
		Output operation		Switchable either Light-ON or Dark-ON	
		Short-circuit protection		Incorporated	
Self-diagnosis output		NPN open-collector transistor Maximum sink current: 100mA Applied voltage: 30V DC or less(between output and 0V) Residual voltage: 1 V or less (at 100mA sink current)		PNP open-collector transistor Maximum source current: 100mA Applied voltage: 30V DC or less(between output and 0V) Residual voltage: 1 V or less (at 100mA source current)	
		Output operation		ON under unstable sensing or the sensor circuit failure conditions	
		Short-circuit protection		—————	
Response time		3 ms or less			
Test input		Incorporated			
Operation indicator		Red LED (lights up when the sensing output is ON, blinks when the sensor circuit has failed)			
Stability indicator		Green LED (lights up when the sensing output wire is disconnected, lights up under stable received condition or stable dark condition, and blinks under unstable sensing condition)			
Emitting indicator		Red LED (lights up during beam emission)	—————		
Stability indicator		Continuously variable adjuster			
Automatic interference prevention function		—————	Incorporated (Two units of sensors can be mounted closely)		
Self-diagnosis unction		Self-diagnosis of incident light intensity and internal circuit failure			
Environmental resistance	Protection	IP 67 (IEC)			
	Ambient temperature	-25 to +60°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: 11000 lx at the light receiving face, Incandescent light: 3500 lx 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	1000 V AC for one min. Between all supply terminals connected together and enclosure.			
	Insulation resistance	20MΩ ,or more, with 250V DC megger between all supply terminals connected together and enclosure			
	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		Infrared LED (modulated)	Red LED (modulated)		Infrared LED (modulated)
Material		Enclosure: Die-cast zinc alloy, Indicator cover: Polyethersulphone, Lens: Polycarbonate (retroreflective type: Acrylic)			
Cable		0.15mm ² 5-core(thru-beam type: 4-core) oil, heat and cold resistant cabtyre cable, 2m long			
Cable extension		Extension up to total 100m is possible with 0.3mm ² , or more, cable(thru-beam type: both emitter and receiver)			
Pigtail type		See Pigtail Series or our Cables & Connectors catalogue.			
Connector type		Pico style (M8) 4pin			
Weight		75g approx.			
Accessories		MB-4537 (Sensor mounting bracket): 2 set. Adjusting screwdriver: 1 pc.	MB-4537(Sensor mounting bracket):1set RE-6152 (Reflector): 1 pc. Adjusting screwdriver: 1 pc.	MB-4537 (Sensor mounting bracket):1set Adjusting screwdriver: 1pc.	

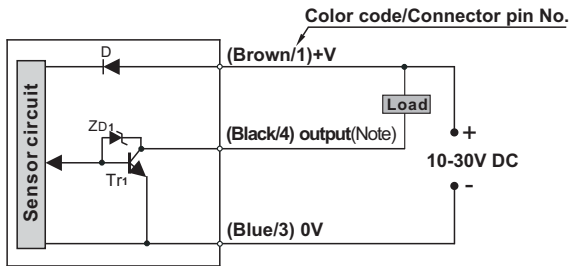
Note: Used with RE-6152 (supplied with sensor) reflector.

Specifications (Heavy duty type)

Type		Thru-beam Mode		
		Cable length 2m	Cable length 3m	Cable length 5m
Item	Model NO.	RP35B-T5000N(P)-CY9C3U2	RP35B-T5000N(P)-CY9C3U3	RP35B-T5000N(P)-CY9C3U5
Sensing range		5 m		
Sensing object		φ 10 mm or more opaque object.		
Repeatability		0.5mm or less		
Supply voltage		10 to 30V DC Ripple P-P 10% or less		
Current consumption		Emitter:20mA or less, Receiver:25 mA or less		
Sensing output		NPN Open-collector transistor Maximum sink Current: 100mA Applied voltage: 30V DC or less (between output and 0V) Residual voltage: 1.5V or less (at 100mA sink current)		
		PNP Open-collector transistor Maximum source Current: 100mA Applied voltage: 30V DC or less (between output and 0V) Residual voltage: 1.5V or less (at 100mA source current)		
Output operation		Switchable either Light-ON or Dark-ON		
Short-circuit protection		Incorporated		
Response time		1 ms or less		
Test input		Incorporated		
Operation indicator		Red LED (lights up when the sensing output is ON)		
Stability indicator		Green LED(Lights up under stable light received condition or stable dark condition)		
Emitting indicator		Red LED (lights up during beam emission)		
Stability indicator		Continuously variable adjuster		
Environmental resistance	Protection	IP 67 (IEC), IP67g(JEM)		
	Ambient temperature	-25 to +60°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: 11000 lx at the light receiving face, Incandescent light: 3500 lx 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	1000 V AC for one min. Between all supply terminals connected together and enclosure.		
	Insulation resistance	20MΩ ,or more, with 250V DC megger between all supply terminals connected together and enclosure		
	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		Infrared LED (modulated)		
Material		Enclosure: Die-cast zinc alloy(Fluorine resin coating) , Indicator cover: Polyethersulphone, Lens: Polycarbonate, Protective tube sheath: Oil resistant PVC		
Cable		0.15mm ² 5-core(thru-beam type:3-core) oil, heat and cold resistant cabtyre cable		
Protective tube length		1 m	2 m	4 m
Cable extension		Extension up to total 100m is possible for both emitter and receiver with 0.3mm ² ,or more, cable		
Weight		Emitter: 175 g approx., Receiver: 175g approx.	Emitter: 265 g approx., Receiver: 265g approx.	Emitter: 495 g approx., Receiver: 495g approx.
Accessories		MB-5737 (Sensor mounting bracket): 2 sets, Adjusting screwdriver: 1pc.		

Connection Diagrams

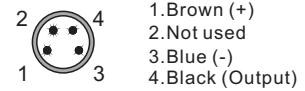
Standard Type & Heavy Duty Type Sensor



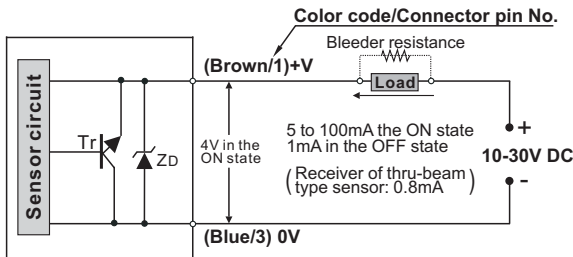
Symbols...D :Reverse supply polarity protection diode
 ZD1: Surge absorption zener diode
 Tr: NPN output transistor.
 Note: The emitter of the thru-beam type sensor without output

Connector pin position

Pico-Style



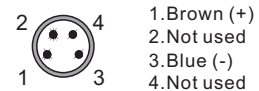
DC 2-wire Type Sensor



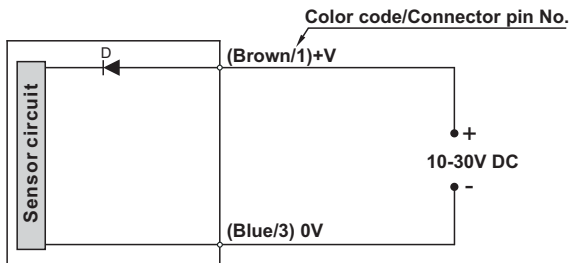
Symbols...D:Reverse supply polarity protection diode
 ZD:Surge absorption zener diode
 Tr :PNP output transistor

Connector pin position

Pico-Style

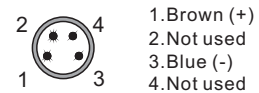


Emitter of Thru-beam Mode (DC 2-wire type)

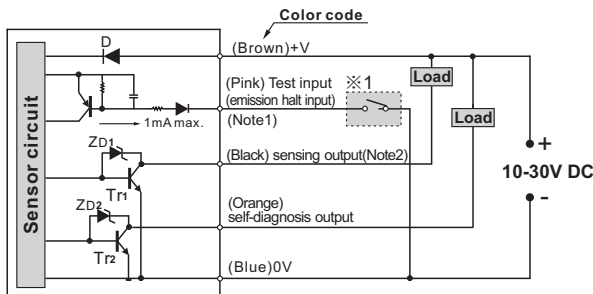


Connector pin position

Pico-Style



Intelligent Type Sensor



Symbols...D : Reverse supply polarity protection diode
 Zd1 : Surge absorption zener diode
 Tr1, Tr2 : NPN output transistor

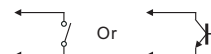
Notes:
 (1) The receiver of the thru-beam type sensor does not incorporate the test input (emission halt input).
 (2) The emitter of the thru-beam type sensor does not incorporate the sensing output.

Connector pin position

Pico-Style



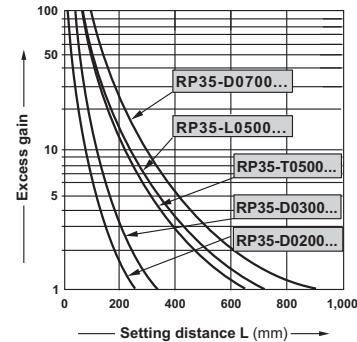
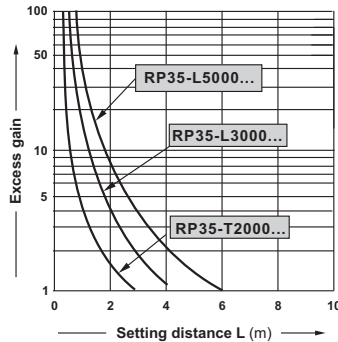
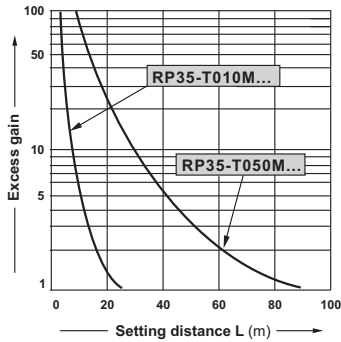
※1 Non-voltage contact or NPN open-collector transistor



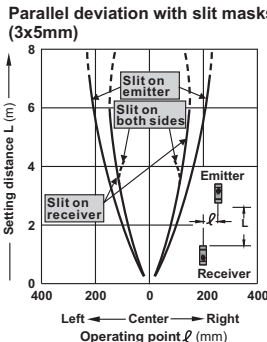
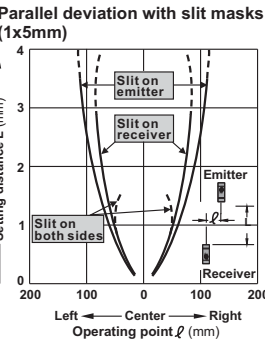
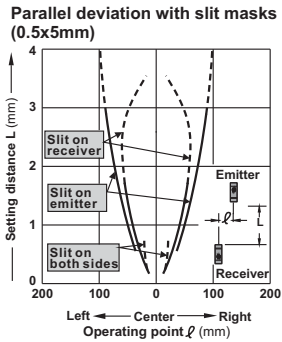
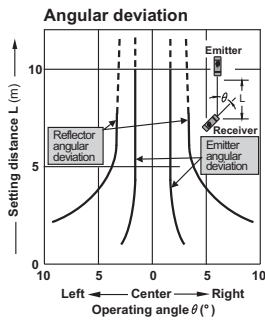
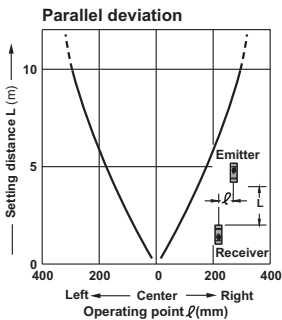
(Supply voltage -2.5V) or more (4.5V or more for the RP3 model): **emission**
 (Supply voltage -3.3V) or less (2.5V or less for the RP3 model): **emission stopped**

Sensing Characteristics (Typical)

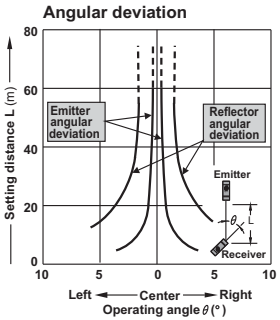
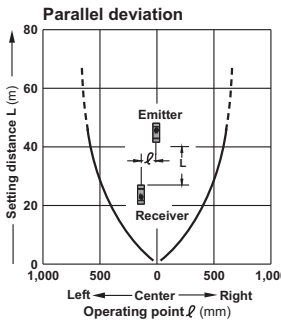
All Models



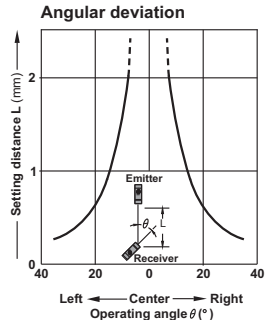
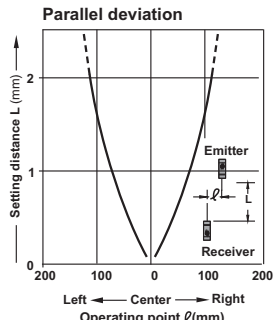
RP35-T010MD..., RP35A-T010MN... (Thru-beam type)



RP35-T050MD...(Thru-beam type)



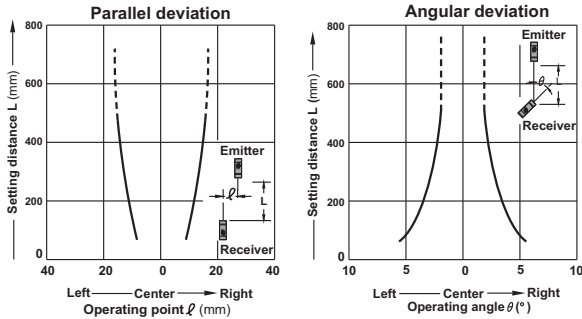
RP35-T2000D...-K(Thru-beam type)



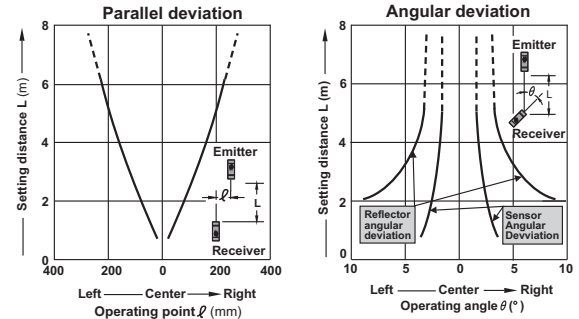
As: RP35 SERIES

Sensing Characteristics (Typical)

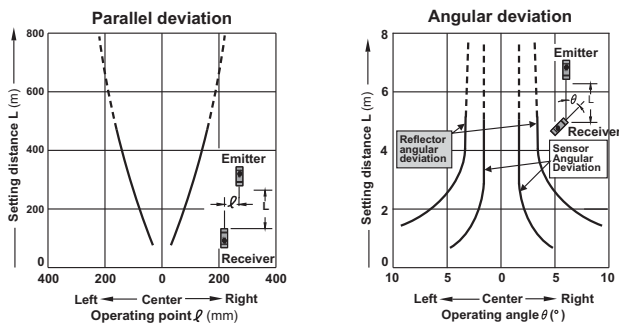
RP35-T0500N...-K(Thru-bem type)



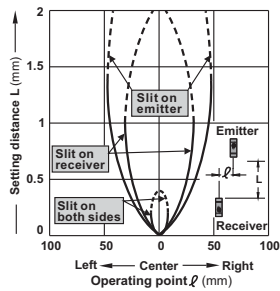
RP35-T5000D...(Thru-bem type)



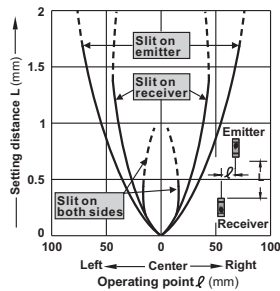
RP35-T5000N...(Thru-bem type)



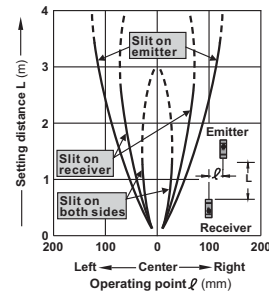
Parallel deviation with slit masks (0.5x5mm)



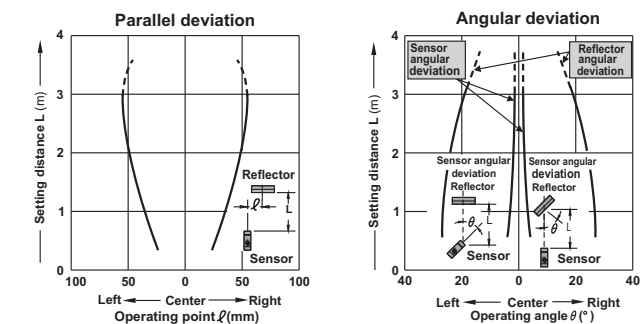
Parallel deviation with slit masks (1x5mm)



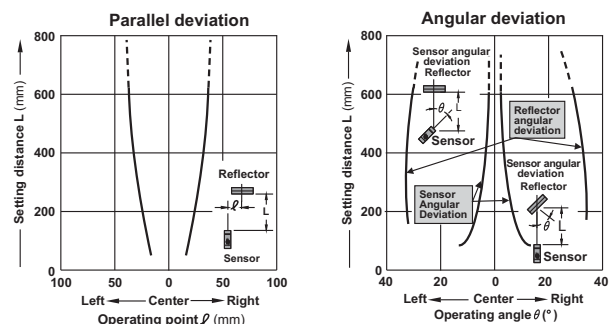
Parallel deviation with slit masks (3x5mm)



RP35-L3000N... (Polarized Retroreflective type)

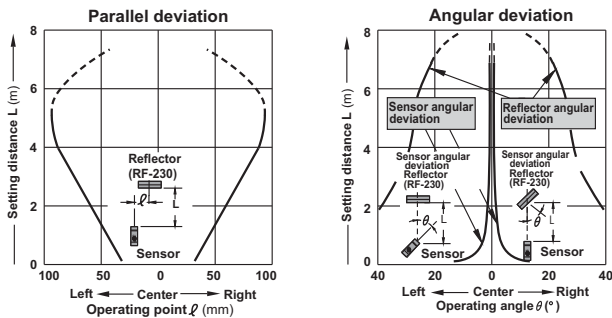


RP35-S0500D... (Clear object detector type)

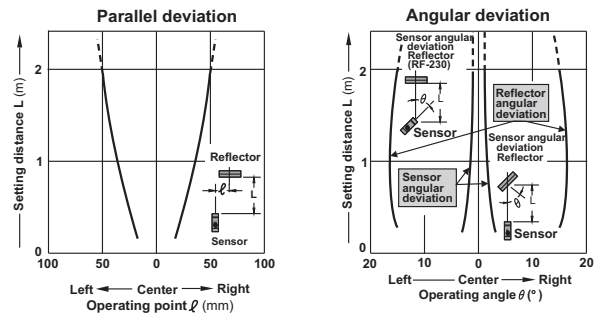


Sensing Characteristics (Typical)

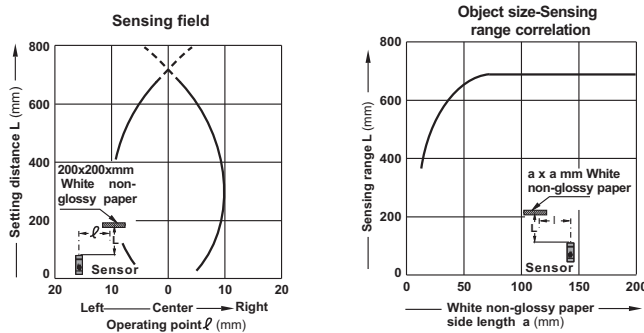
RP35-L5000N...(Retroreflective Mode: Sn=5m)



RP35-L2000N...(Retroreflective Mode: Sn=2m)



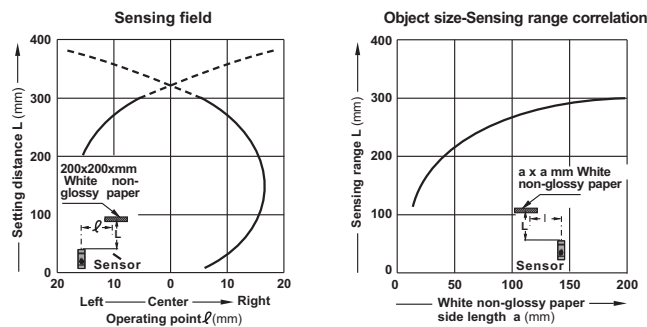
RP35-D0700N..., RP35A-D0700N...(Diffuse Mode: Sn=700mm)



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 200 x 200mm white non-glossy paper is just detectable at a distance of 700mm.)

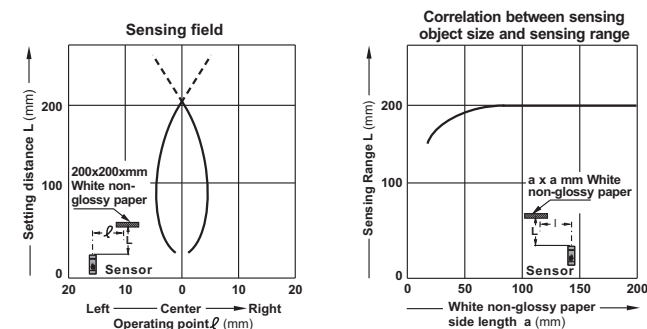
RP35-D0300N... (Diffuse Mode: Sn=300mm)



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 200 x 200mm white non-glossy paper is just detectable at a distance of 300mm.)

RP35-D0200N...(Diffuse Mode: Sn=200mm)

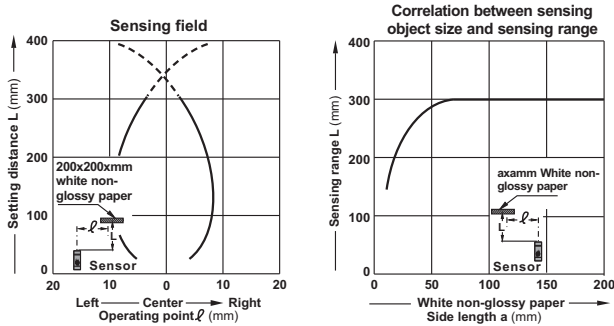


As the sensing object size becomes smaller than the standard size (white non-glossy paper 200x200mm), the sensing range shortens, as shown in the left graph.

(For plotting the left graph, the sensitivity has been set such that a 200 x 200mm white non-glossy paper is just detectable at a distance of 200mm.)

Sensing Characteristics (Typical) / Precautions For Proper Use

RP35-D0300D...(Diffuse type)



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 200 x 200mm white non-glossy paper is just detectable at a distance of 300mm.)

Precautions For Proper Use

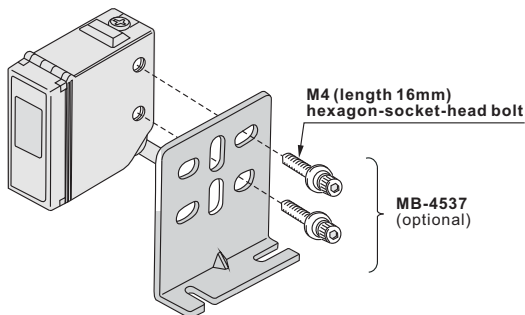
All Models



This product is not a safety sensor. Its use is not intended or designed to protect life and prevent body injury or property damage from dangerous parts of machinery. It is a normal object detection sensor.

Mounting

- The tightening torque should be 1.17N·m or less.



Wiring

The self-diagnosis output is not incorporated with a short-circuit protection circuit. Do not connect it directly to a power supply or a capacitive load.

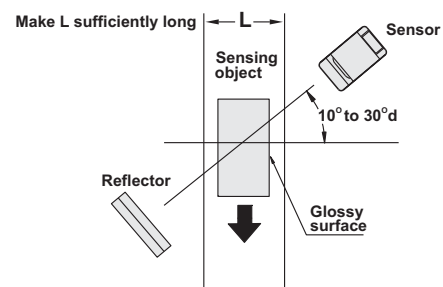
Others

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

RP35-L5000

Glossy object sensing

- 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.



RP35-L3000N RP35-L0500N RP35-L2000N

Retroreflective type sensor with polarizing filters

- 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

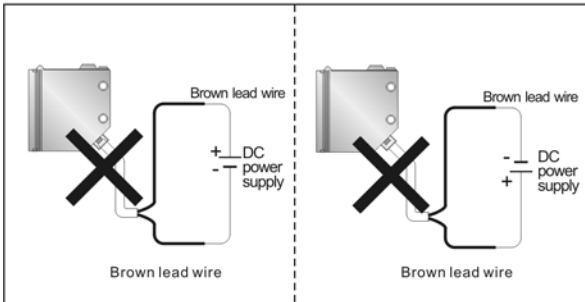
Steps

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

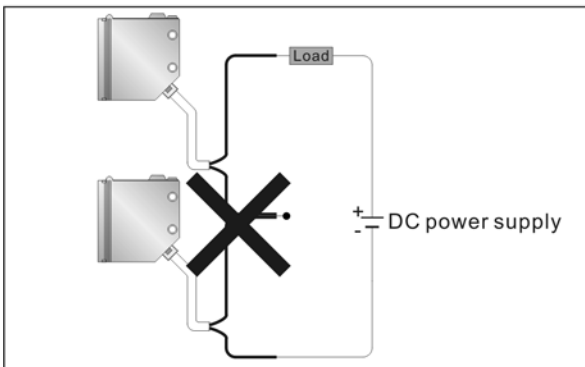
Precautions For Proper Use (DC 2-wire type sensor)

Wiring

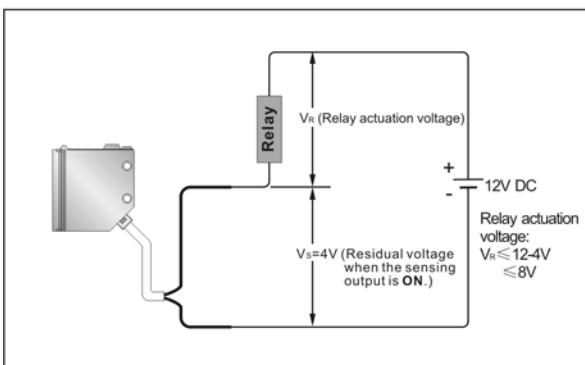
- Always connect the sensor to the power supply through a load. If the sensor is connected to the power supply directly, the short-circuit protection makes the sensor inoperable (The output stays in the OFF state and no indicator lights up). If this happens, connect the sensor to the power supply through a load. Further, note that the sensor will be damaged if the power supply is connected in reverse without a load.



- Do not connect sensors in series (and circuit)



- The residual voltage of the sensor is 4V. Before connecting to a relay, be aware of the actuation voltage of the relay. (Not all 12V relays may be connected as the load.)

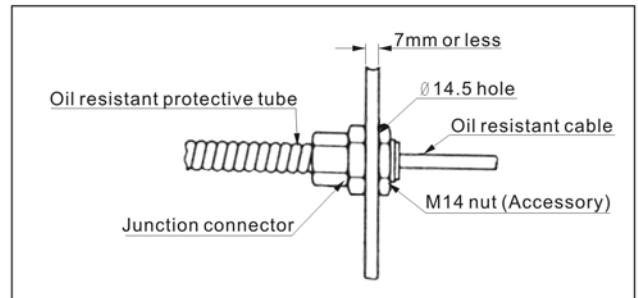


Heavy duty type

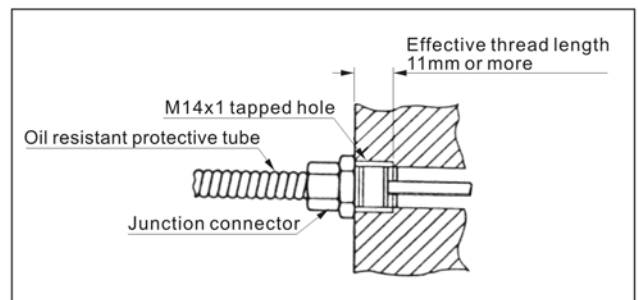
- Connection of protective tube connector**

Connect the junction connector securely as shown below. The tightening torque should be 0.98N · m or less.

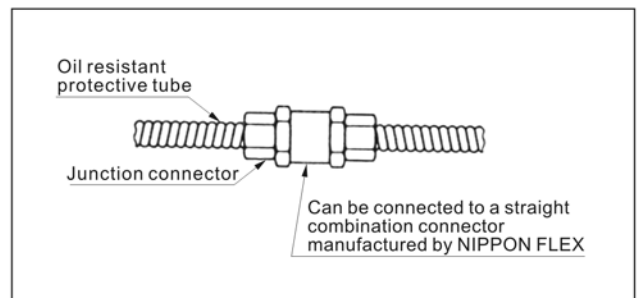
- When mounted on a plate**



- When mounted with a female screw**

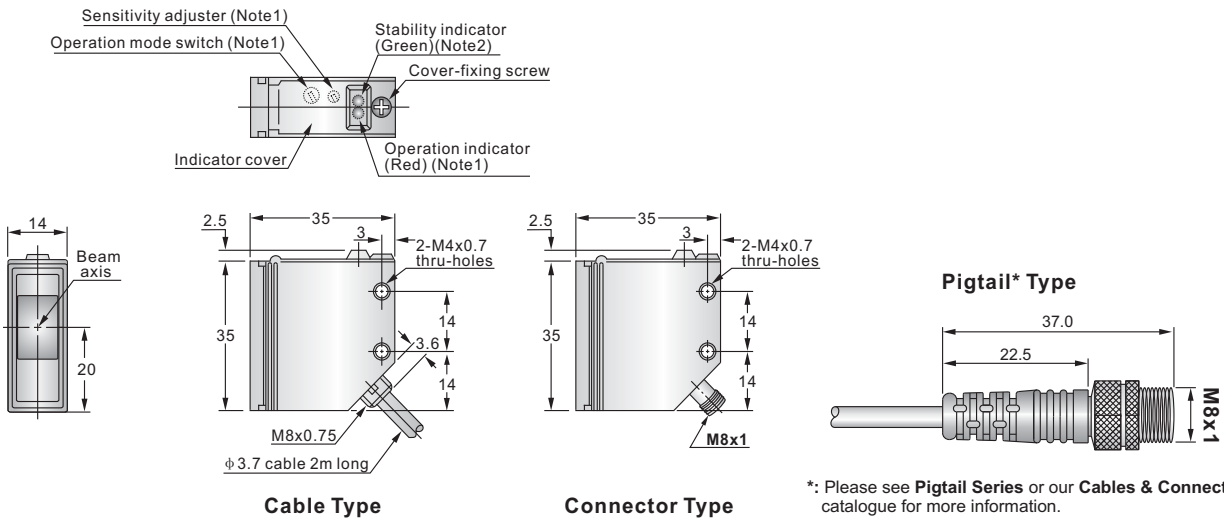


- When connected to another protective tube**



Dimensions (Unit: mm)

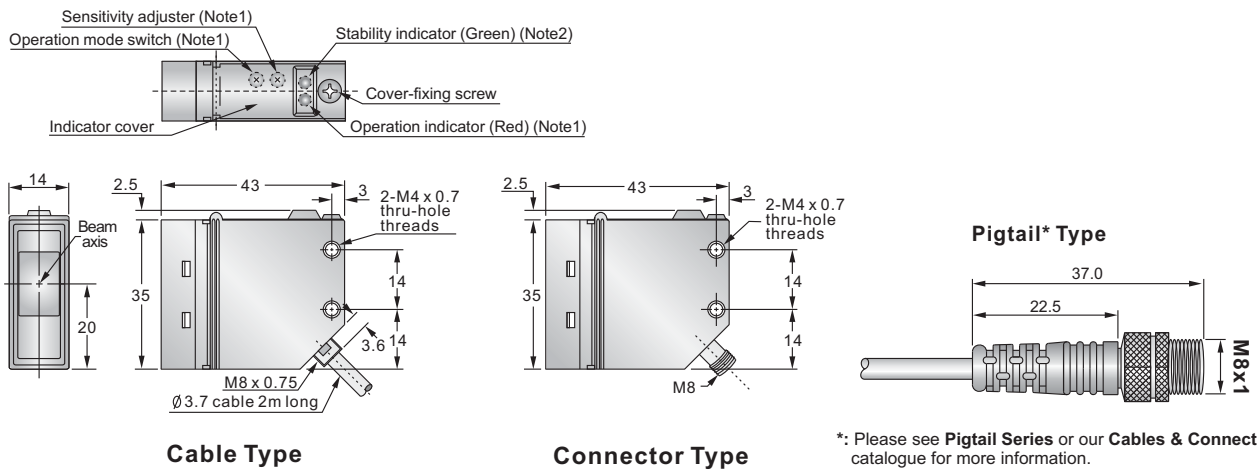
Thru-beam Mode Type Sensor (Except Sn=50m type) / Diffuse Mode Sensor



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

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

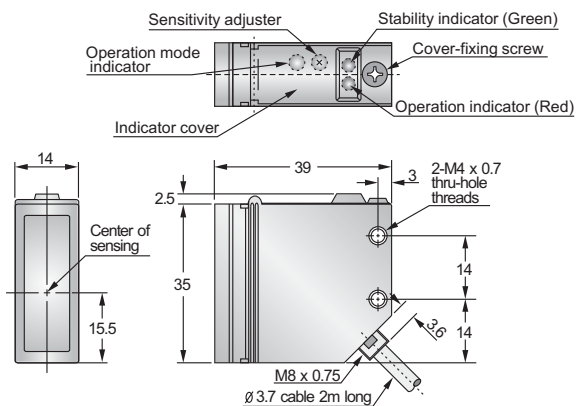
Thru-beam Mode Type Sensor (Only for Sn=50m type)



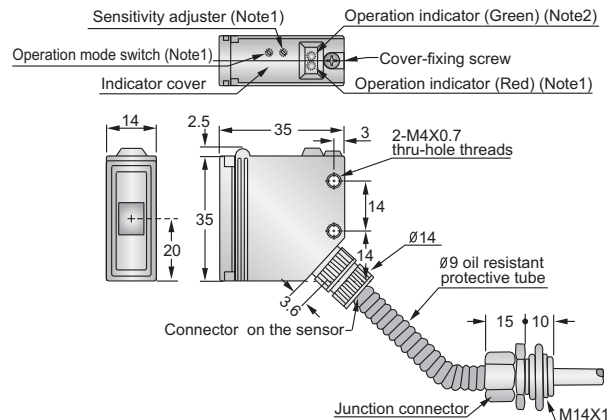
*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

- Notes: 1) Not incorporated on the emitter.
 2) It is the emitting indicator (red) on the emitter.

Retroreflective Type / Clear Object Detector Type Sensor



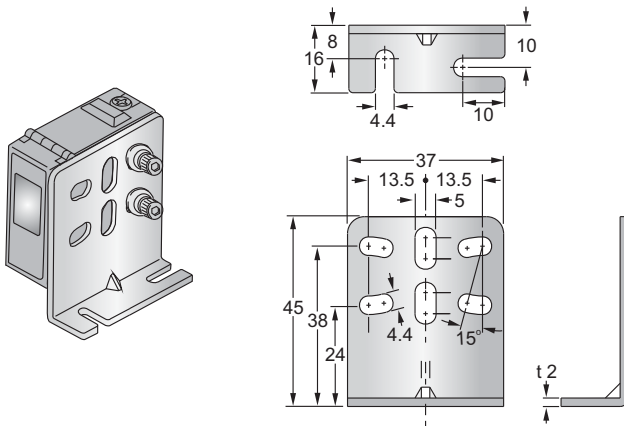
Heavy Duty Type Sensor (RP35B-T5000...type)



- Notes: 1) Not incorporated on the emitter.
 2) It is the emitting indicator (red) on the emitter.

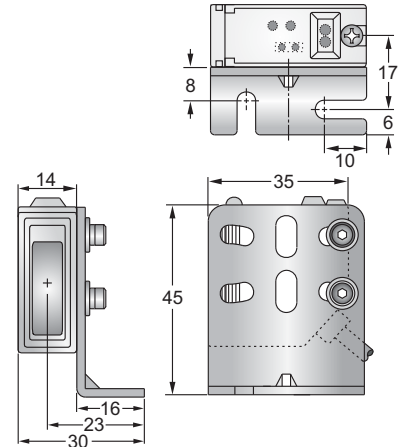
Dimensions (Unit: mm)

MB-4537 (Sensor mounting bracket-optional)

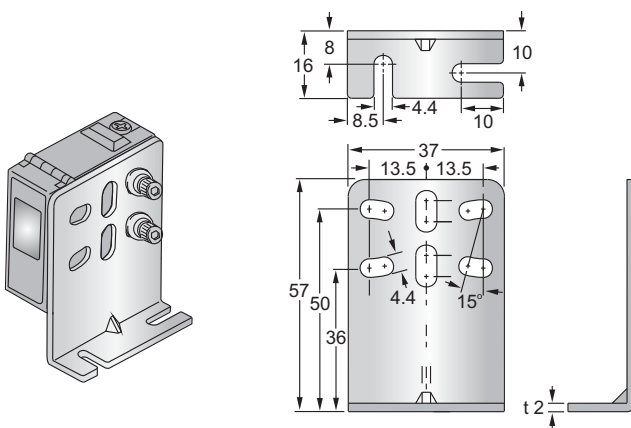


Material: Cold rolled carbon steel (SPCC)
Two M4 (length 16mm) hexagon-socket-head bolts are attached.

Assembly dimensions

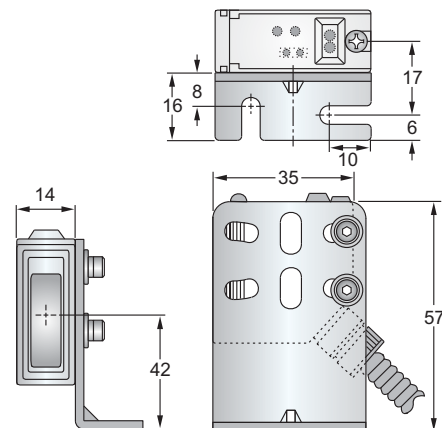


MB-5737 (Sensor mounting bracket-only for heavy duty type sensor-optional)

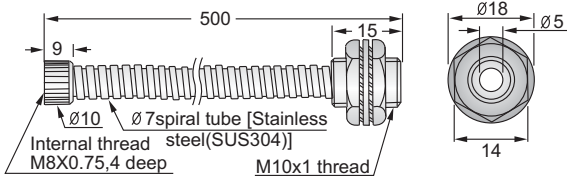


Material: Cold rolled carbon steel (SPCC)
Two M4 (length 16mm) hexagon-socket-head bolts are attached.

Assembly dimensions



PT-RP500 (Protective Tube-optional)



PT-RP1000 (Protective Tube-optional)

