




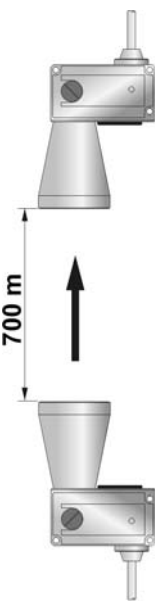






## Thru-beam Mode

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
 <p><b>Thru-beam Mode</b> Sensing Distance: <b>350m</b> Light Source : <b>Infrared 880nm</b></p>	<b>2m Cable</b> 	<b>10 -30V DC</b>	Emitter	RP80-T350MD-EY9C2L2
			NPN	RP80-T350MN-CY9C4U2
			PNP	RP80-T350MP-CY9C4U2
			NPN/PNP	RP80-T350MD-CY9C4U2
	<b>Quick Disconnect (Euro-style)</b> 	<b>10 -30V DC</b>	Emitter	RP80-T350MD-EY9Q4LE
			NPN	RP80-T350MN-CY9Q4UE
			PNP	RP80-T350MP-CY9Q4UE
			NPN/PNP	RP80-T350MD-CY9Q4UE
	<b>Quick Disconnect (Mini-style)</b> 	<b>10 -30V DC</b>	Emitter	RP80-T350MD-EY9Q4LN
			NPN	RP80-T350MN-CY9Q4UN
			PNP	RP80-T350MP-CY9Q4UN
			NPN/PNP	RP80-T350MD-CY9Q4UN
<b>6" Pigtail (Euro-style)</b> 	<b>10 -30V DC</b>	Emitter	RP80-T350MD-EY9P4LE	
		NPN	RP80-T350MN-CY9P4UE	
		PNP	RP80-T350MP-CY9P4UE	
		NPN/PNP	RP80-T350MD-CY9P4UE	
 <p><b>Thru-beam Mode</b> Sensing distance: <b>700m</b> Light Source : <b>Infrared 880nm</b></p>	<b>2m Cable</b> 	<b>10 -30V DC</b>	Emitter	RP80-T700MD-EY9C2L2
			NPN	RP80-T700MN-CY9C4U2
			PNP	RP80-T700MP-CY9C4U2
			NPN/PNP	RP80-T700MD-CY9C4U2
	<b>Quick Disconnect (Euro-style)</b> 	<b>10 -30V DC</b>	Emitter	RP80-T700MD-EY9Q4LE
			NPN	RP80-T700MN-CY9Q4UE
			PNP	RP80-T700MP-CY9Q4UE
			NPN/PNP	RP80-T700MD-CY9Q4UE
	<b>Quick Disconnect (Mini-style)</b> 	<b>10 -30V DC</b>	Emitter	RP80-T700MD-EY9Q4LN
			NPN	RP80-T700MN-CY9Q4UN
			PNP	RP80-T700MP-CY9Q4UN
			NPN/PNP	RP80-T700MD-CY9Q4UN
<b>6" Pigtail (Euro-style)</b> 	<b>10 -30V DC</b>	Emitter	RP80-T700MD-EY9P4LE	
		NPN	RP80-T700MN-CY9P4UE	
		PNP	RP80-T700MP-CY9P4UE	
		NPN/PNP	RP80-T700MD-CY9P4UE	

Aw: RP80 SERIES

## Specifications

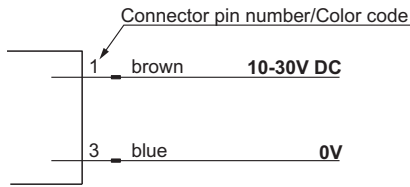
Item \ Sensing Mode	Diffuse Mode	Retro-reflective Mode	Thru-beam Mode	
Sensing range	3m	6m (Note)	700m (Long range), 350m (Standard)	
Power Source	10 to 30 V DC , Ripple P-P: 10% or less			
Current Consumption	55 mA or less		70 mA or less	
Response Time	5 ms or less			
Modulation Method	Pulse Modulation System			
Sensing output	<b>NPN</b> open-collector transistor Maximum sink Current : 200mA Applied voltage : 30V DC or less (between sensing output and 0V) Residual voltage : 1.5V or less (at 100mA sink current )	<b>PNP</b> open-collector transistor Maximum sink Current : 200mA Applied voltage : 30V DC or less (between sensing output and +V) Residual voltage : 1.5V or less (at 100mA sink current )		
Output Operation Mode	Light-ON/Dark-ON selectable			
Operation Indicator	A red LED glows when light received			
Light Emitting Element	Infrared LED x3			
Light Receiving Element	Silicon Photo Diode			
Extraneous Light Immunity	Sunlight : 11000 lx (illuminance on light receiving plane) Incandescent Lamp : 3500 lx (illuminance on light receiving plane)			
Sensing Object	Ø 50mm or more opaque, translucent or specular object			
EMC	IEC 60947-5-2, Parts 7.2.6.1. 2.3 or RFI>3V/m(in 301000MHZ), EFT>1KV, ESD>4KV(contact)			
Vibration With Stand	IEC 60947-5-2, Part 8.3.3.4 or 1500VAC for one min, between all supply terminals connected together and enclosure			
Mechanical Shock Withstand	IEC 60947-5-2, Part 7.4.1 or 30g, 11ms in x , y and z directions for six time each			
Ambient Temperature	Operation : -10 ... +60°C			
Ambient Humidity	35 to 85% RH			
Enclosure Protection	IP 66 (IEC-144) , Water-proof type			
Enclosure Material	Zinc Alloy Die-Casting , Lens Holder : Aluminum , Lens : Glass , coated in brown colour			
Cable	Type : 0.3 mm <sup>2</sup> , 4 core cable (2 cores for emitter) Standard length : 2 m Extension : Extensible up to 100 m by using 0.3 mm <sup>2</sup> or bigger cable			
	Colour of Lead wires		<b>Receiver</b>	<b>Emitter</b>
		Brown	+ V	+V
		Black	Output (Light-ON)	—————
		White	Output (Dark-ON)	—————
Blue	0V	0V		
Weight	Approx. 580 g		Approx. 1260 g (Emitter & receiver)	
Accessories	1 pc , of Adjustment Screwdriver , instruction Manual			

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

## Connection Diagrams

### Emitter of Thru-beam Mode

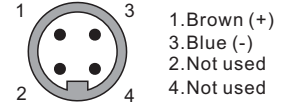
### Connector pin position



#### Euro-style

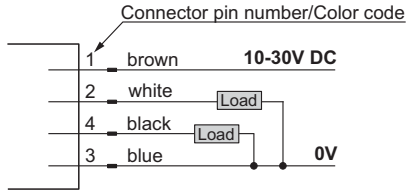


#### Mini-style



### PNP Output type

### Connector pin position



#### Euro-style

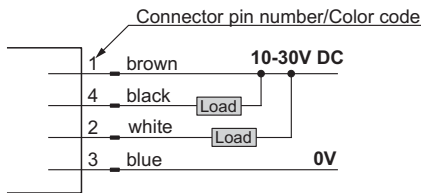


#### Mini-style



### NPN Output type

### Connector pin position



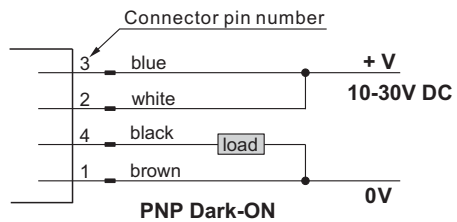
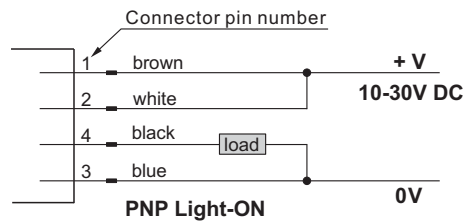
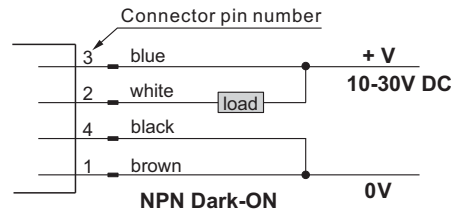
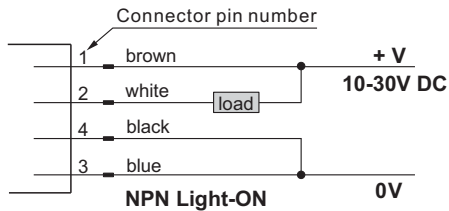
#### Euro-style



#### Mini-style

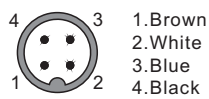


### NPN/PNP output type

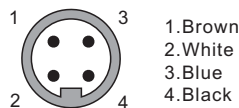


### Connector pin position

#### Euro-style

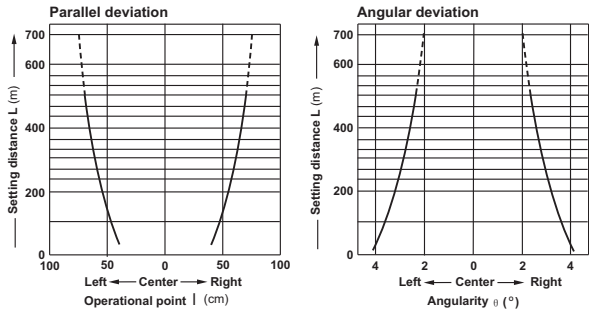


#### Mini-style

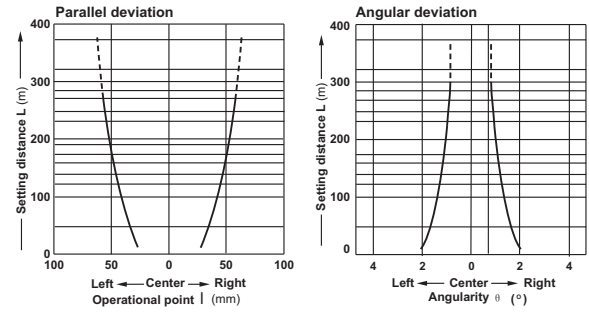


## Sensing Characteristics(Typical)

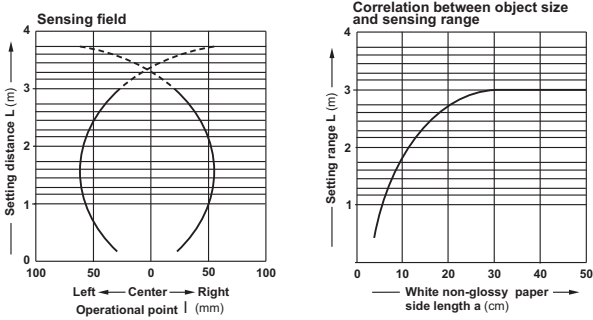
### Thru-beam Mode (Sn=700m)



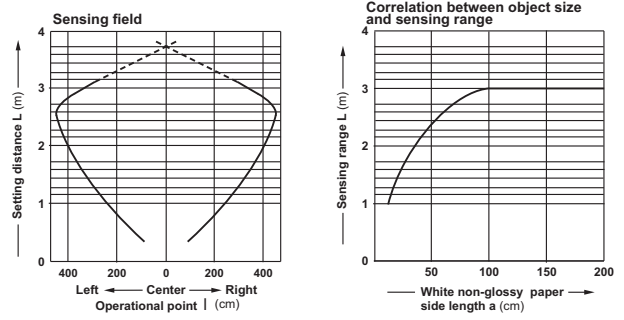
### Thru-beam Mode (Sn=350m)



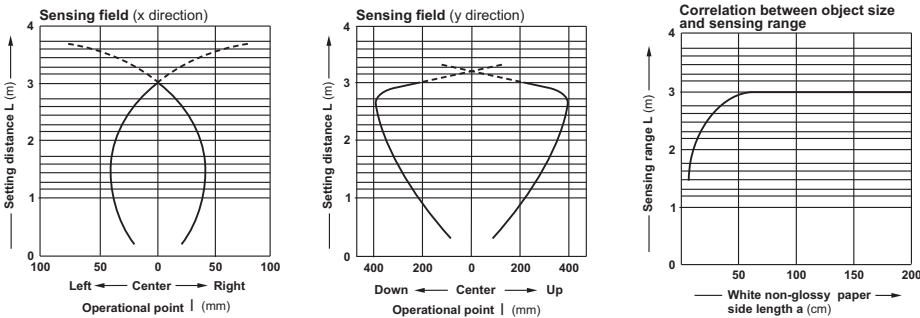
### Diffuse Mode (Standard type)



### Diffuse Mode (Bell-mounted Angle type)

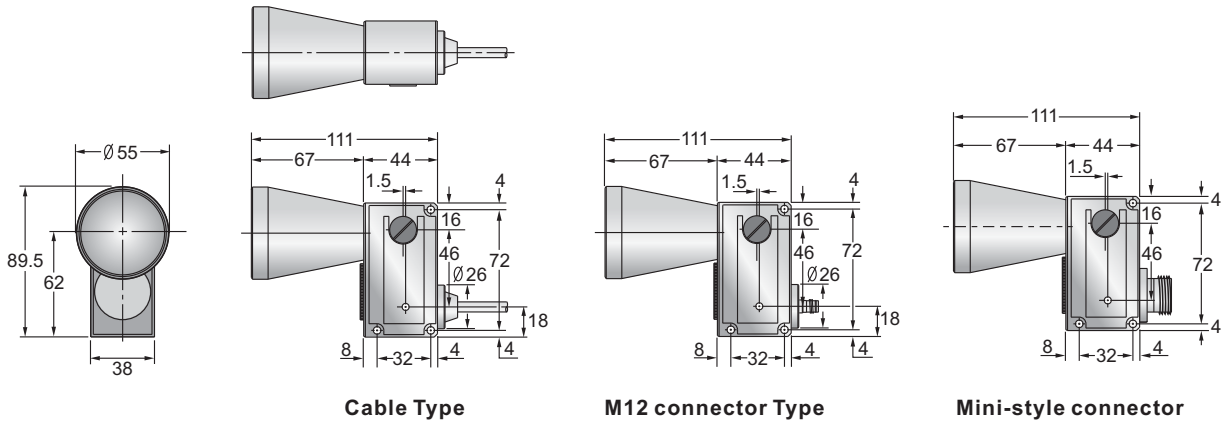


### Diffuse Mode (Fan-shaped Angle type)

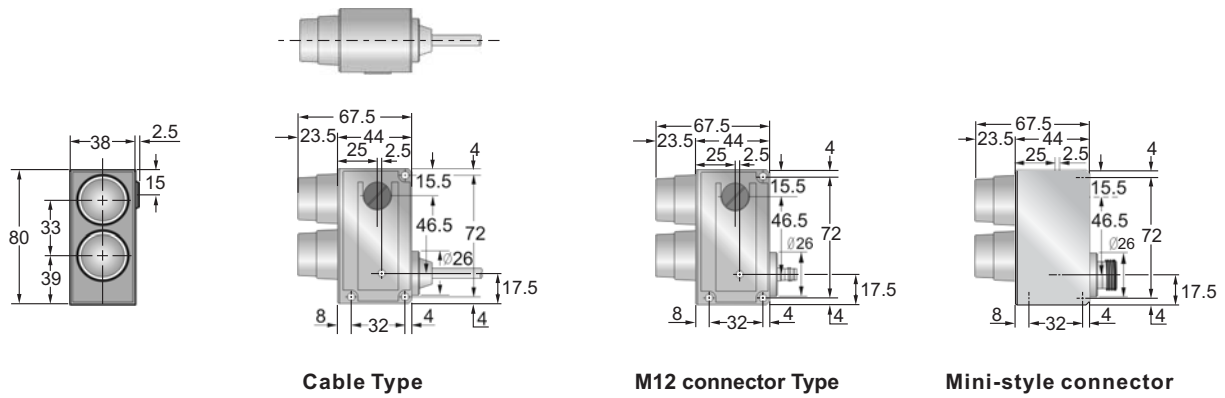


## Dimensions (Unit: mm)

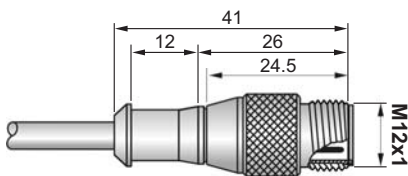
### Thru-beam Mode Sensor



### Diffuse & Retroreflective Mode Sensor

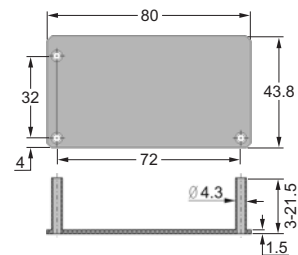


### Pigtail\* Type

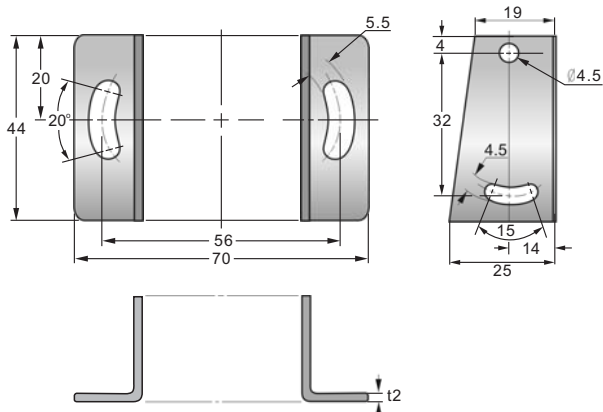


\*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

### Insulating Block (supplied with sensor)



### RP80-A1 (Mounting bracket-optional)



### Mounting Dimensions

(Drawing with thru-beam mode sensor)

