





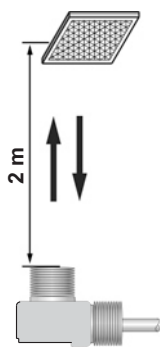



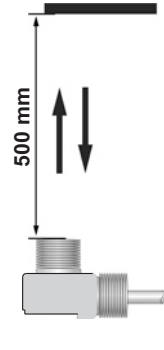





Thru-beam Mode / Retroreflective Mode

SensingMode	Appearance	Supply Voltage	OutputMode	Part Number
Thru-beam Mode Sensing Distance: 20m Infrared: 950nm	2m Cable 	10-30V DC	Emitter	T18-T020MD-EY9C2L2
			NPN	T18-T020MN-CY9C4U2
			PNP	T18-T020MP-CY9C4U2
			NPN/PNP	
	Quick Disconnect 	10-30V DC (Euro Style)	Emitter	T18-T020MD-EY9Q4LE
			NPN	T18-T020MN-CY9Q4UE
			PNP	T18-T020MP-CY9Q4UE
			NPN/PNP	
	6" Pig tail 	10-30V DC (Euro Style)	Emitter	T18-T020MD-EY9P4LE
			NPN	T18-T020MN-CY9P4UE
			PNP	T18-T020MP-CY9P4UE
			NPN/PNP	
Retroreflective Mode Sensing Distance: 2 m (Note) Infrared: 950nm	2m Cable 	10-30V DC	NPN	T18-L2000N-CY9C4U2
			PNP	T18-L2000P-CY9C4U2
			NPN/PNP	
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	Quick Disconnect 	10-30V DC (Euro Style)	NPN	T18-L2000N-CY9Q4UE
			PNP	T18-L2000P-CY9Q4UE
			NPN/PNP	
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	6" Pig tail 	10-30V DC (Euro Style)	NPN	T18-L2000N-CY9P4UE
			PNP	T18-L2000P-CY9P4UE
			NPN/PNP	
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Note: Used with RE-6152 (supplied with sensor) reflector.

Polarized Retroreflective Mode/ Diffuse Mode

SensingMode	Appearance	Supply Voltage	OutputMode	Part Number	
 <p>Retroreflective Mode (with polarizing filter) Sensing Distance: 2 m (Note) Red Light 680 nm</p>	2m Cable 	10-30V DC	NPN	T18-L2000N-CY6C4U2-PF	
			PNP	T18-L2000P-CY6C4U2-PF	
			NPN/PNP		
			—	—	
		Quick Disconnect 	10-30V DC (Euro Style)	NPN	T18-L2000N-CY6Q4UE-PF
		PNP		T18-L2000P-CY6Q4UE-PF	
		NPN/PNP			
		—		—	
		6" Pig tail 	10-30V DC (Euro Style)	NPN	
		PNP			
		NPN/PNP			
		—		—	
 <p>Diffuse Mode Sensing Distance: 500mm Infrared: 880 nm</p>	2m Cable 	10-30V DC	NPN	T18-D0500N-CY9C4U2	
			PNP	T18-D0500P-CY9C4U2	
			NPN/PNP		
			—	—	
		Quick Disconnect 	10-30V DC (Euro Style)	NPN	T18-D0500N-CY9Q4UE
		PNP		T18-D0500P-CY9Q4UE	
		NPN/PNP			
		—		—	
		6" Pig tail 	10-30V DC (Euro Style)	NPN	T18-D0500N-CY9P4UE
		PNP		T18-D0500P-CY9P4UE	
		NPN/PNP			
		—		—	

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

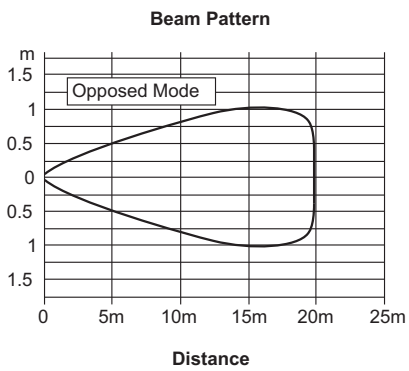
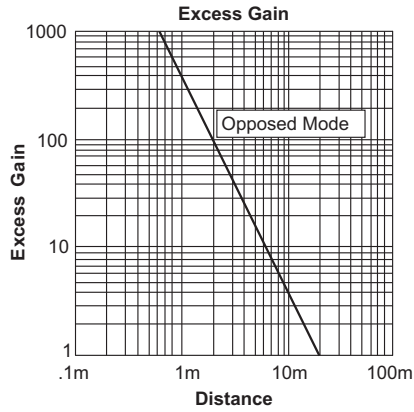
Specifications

Item	Type Model No.	Thru-beam T18-T020Mx- xX9xxxx	Diffuse reflective			Retroreflective	
			(with background suppression)			with polarizing filters	
		T18-D0500x- xX9xxxx	T18-D0025x- xX9xxxx-B5	T18-D0050x- xX9xxxx-B5	T18-D0100x- xX9xxxx-B5	T18-L2000x- xX9xxxx	T18-L2000x- xX6xxxx-PF
Sensing Range		20m	500mm	25mm	50mm	100mm	2m(Note)
Sensing Object		Opaque object of 8mm or more	White paper			3-way mirror	
Hysteresis		—	20% or less of operation distance			—	
Supply Voltage	10 to 30V DC, Ripple P-P10% or less						
Current Consumption	30mA or less						
Output	<NPN> output type NPN open-collector transistor <ul style="list-style-type: none"> • Applied voltage: 30V DC or less • Maximum sink current: 150mA • Voltage drop: 2.5V or less 			<PNP> output type PNP open-collector transistor <ul style="list-style-type: none"> • Applied voltage: 30V DC or less • Maximum sourcing current: 150mA • Voltage drop: 2.5V or less 			
Output Operation	Selectable either Light-ON Dark-ON by the control input wire						
Short-circuit Protection	Yes						
Reverse Polarity Protection	Yes						
Overload Current Protection	Yes						
Response Time	1.5ms						
Operation Indicator	Red LED (light up when the output is activated), Thru-beam sensor is provided on the receiver						
Pollution Degree	3 (Industrial environment)						
Protection	IP67 (IEC)						
Ambient Temperature	-40°C to +70°C						
Maximum relative humidity	90% at 50 °C (non-condensing)						
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 Withstand Ability	IEC 60947-5-2, Part 8.3.3.4 or 1500VAC for one min, between all supply terminals connected together and enclosure						
Insulation Resistance	> 20M Ω, with 1500VAC 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)
Housing Material	Plastic housing: PBT						
Cable	Standard length 2m, other length based on request.						
Connector	Euro-style connector (M12x1 thread)						
Pigtail Type	See Pigtail Series or our Cables & Connectors catalogue						

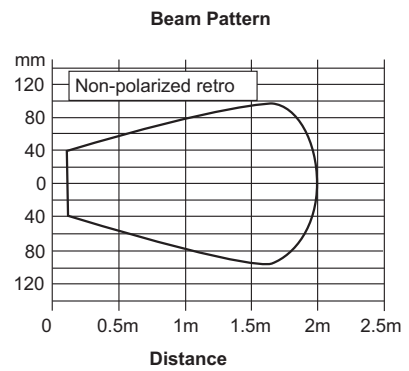
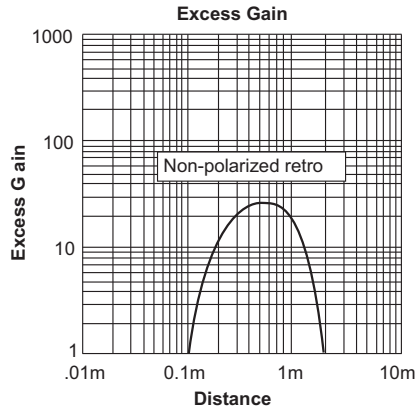
Note: Used with RE-6152 (supplied with sensor) reflector.

Sensing Characteristics (Typical)

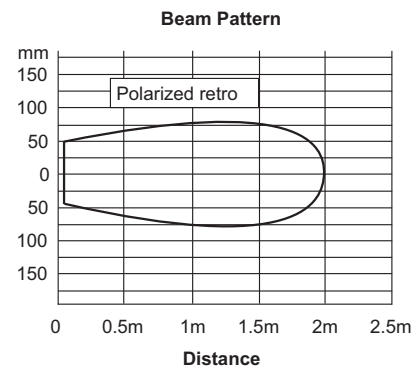
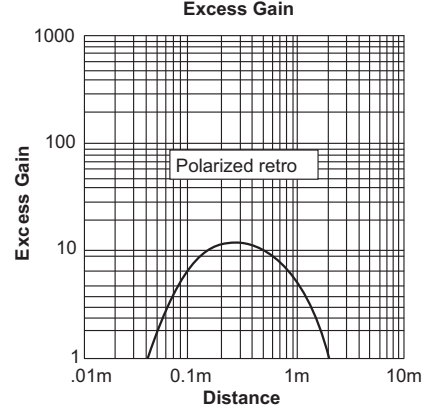
Opposed Mode (Sn=20m)



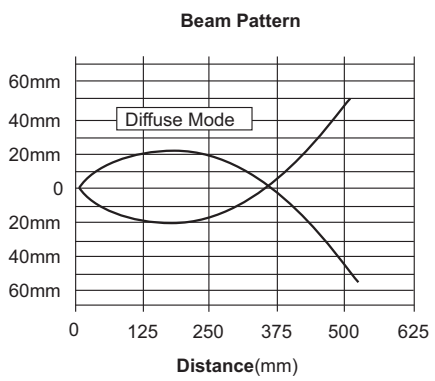
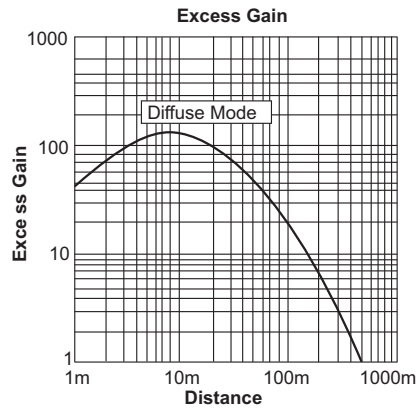
Retroreflective Mode (Sn=2m)



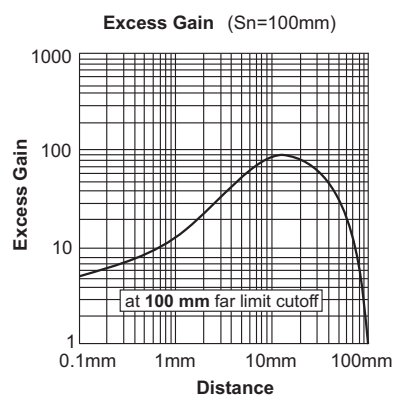
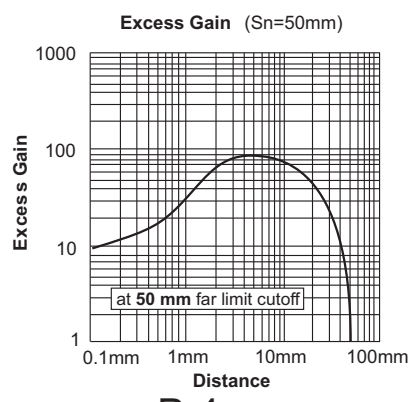
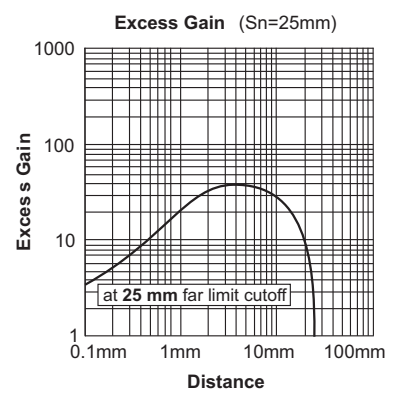
Polarized Retroreflective(Sn=2m)



Diffuse Mode (Sn=500mm)

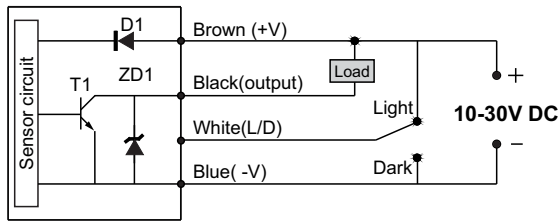


Diffuse Mode with Background Suppression (Sn=25/50/100mm)



Connection Diagrams

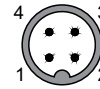
NPN output type



Symbol D1: Reverse polarity protection diode
ZD1: Surge absorption zener diode
T1: NPN output transistor

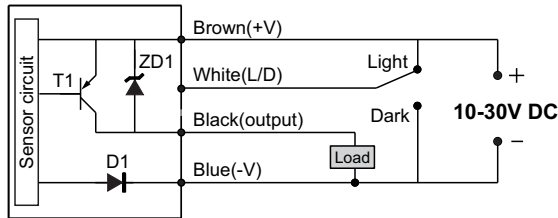
Connector pin position

Euro-style



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

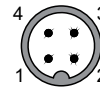
PNP output type



Symbol D1: Reverse polarity protection diode
ZD1: Surge absorption zener diode
T1: PNP output transistor

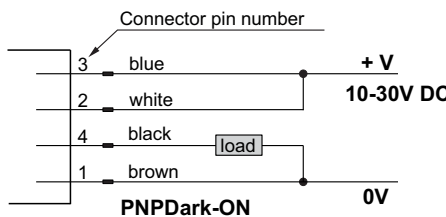
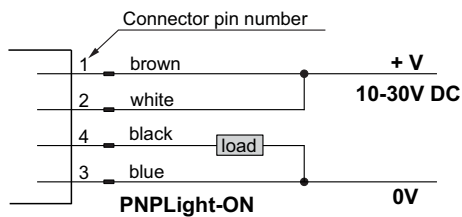
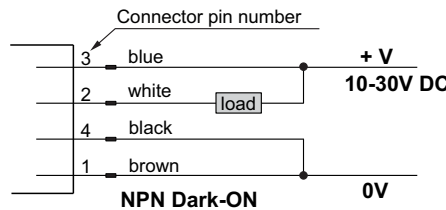
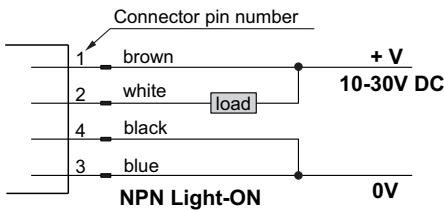
Connector pin position

Euro-style



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

NPN/PNP output type

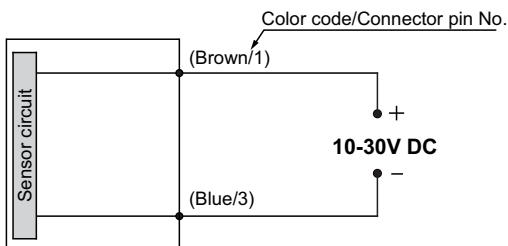


Connector pin position

Euro-style



Emitter of Thru-beam Mode



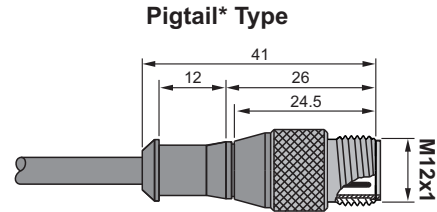
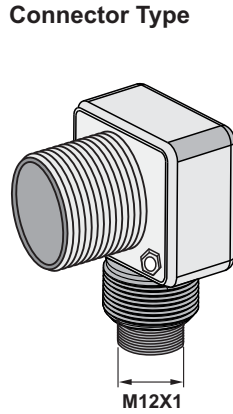
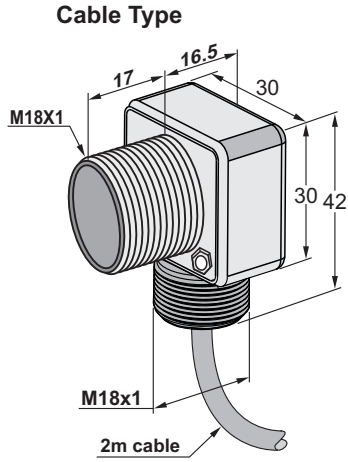
Connector pin position

Euro-style



- 1.+V
- 2.not used
- 3.0V
- 4.not used

Sensor Type

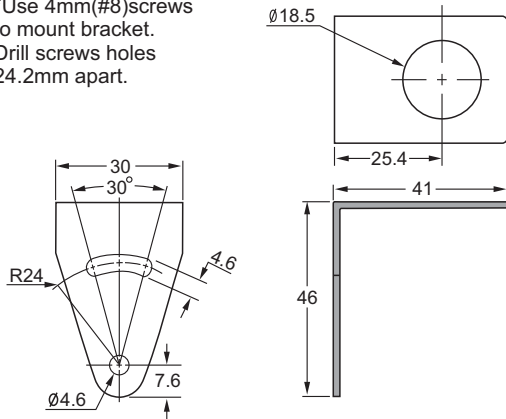


*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

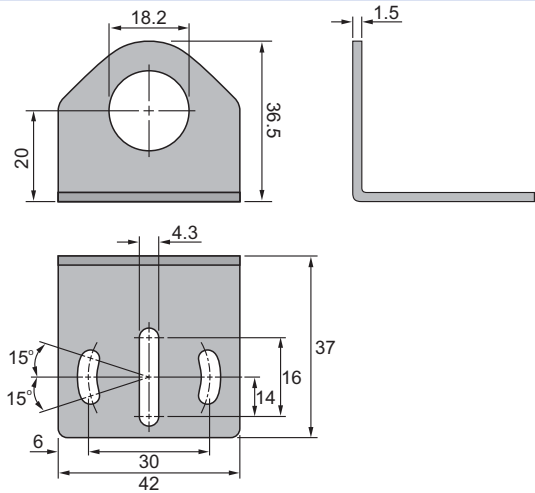
Mounting Brackets *

MB-4630(optional)

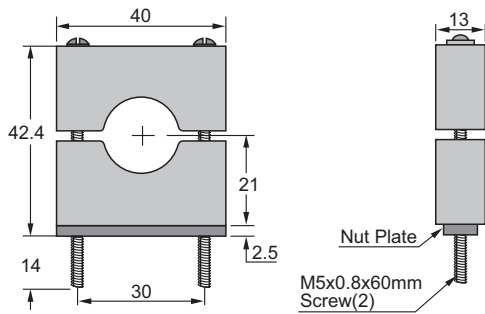
*Use 4mm(#8)screws to mount bracket. Drill screws holes 24.2mm apart.



MB-4237(optional)

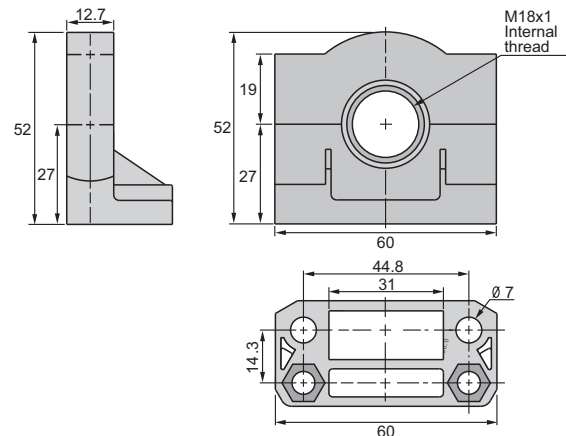


MB-4240(optional)



18mm split clamp bracket

MB-6052(optional)



Mounting Bracket to Provide 360 °Rotation

*: Please see **Accessories** (Universal Mounting Brackets Series).