













Thru-beam Mode / Retroreflective Mode

W: T18 SERIES

Sensing Mode	Appearance	Supply Voltage	Output Mode	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

Sensing Mode	Appearance	Supply Voltage	Output Mode	Part Number
Retroreflective Mode (with polarizing filter) Sensing Distance: 2 m (Note) Red Light 680nm	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	
Diffuse Mode Sensing Distance: 500mm Infrared: 880nm	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.
 Coming Soon : Part numbers with underline
 In Preparation: Part numbers with a line through the middle

W: T18 SERIES

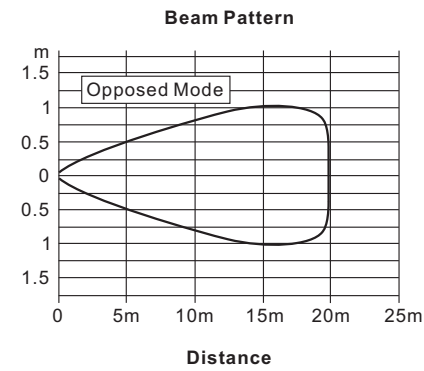
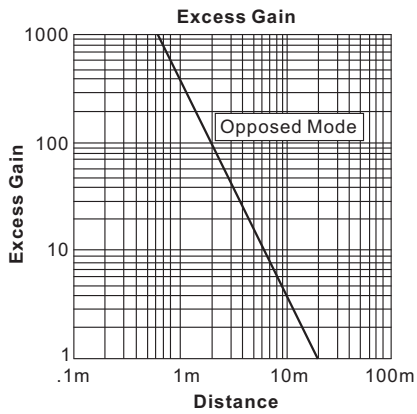
Specifications

Item	Type Model No.	Thru-beam	Diffuse reflective			Retroreflective			
			(with background suppression)			with polarizing filters			
		T18-T020Mx-xX9xxxx	T18-D0500x-xX9xxxx	T18-D0025x-xX9xxxx-BS	T18-D0050x-xX9xxxx-BS	T18-D0100x-xX9xxxx-BS	T18-L2000x-xX9xxxx	T18-L2000x-xX6xxxx-PF	
Sensing Range		20m	500mm	25mm	50mm	100mm	2m (Note)		
Sensing Object		Opaque object of ϕ 8mm or more	White paper			3-way mirror			
Hysteresis		—	20% or less of operation distance			—			
Supply Voltage		10 to 30V DC, Ripple P-P 10% 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 it 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 1500V AC for one min, between all supply terminals connected together and enclosure							
Insulation Resistance		$> 20M\Omega$, with 1500V AC 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 time 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							

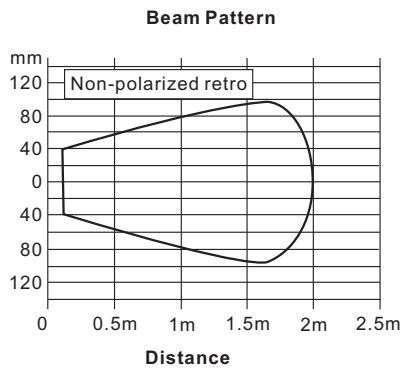
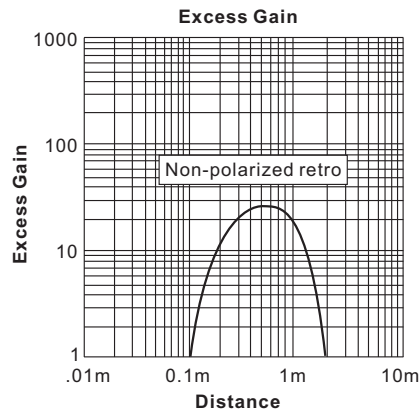
Note: Used with RE-6152 (supplied with sensor) reflector.

Sensing Characteristics (Typical)

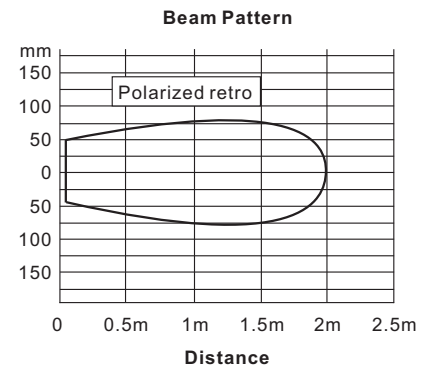
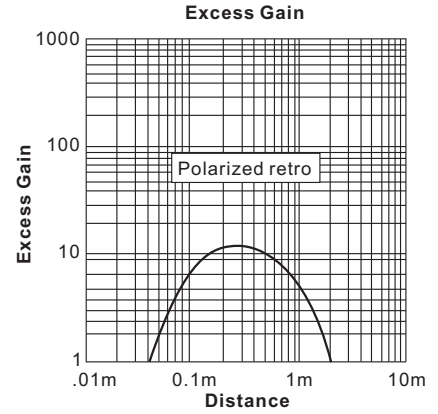
Opposed Mode (Sn=20m)



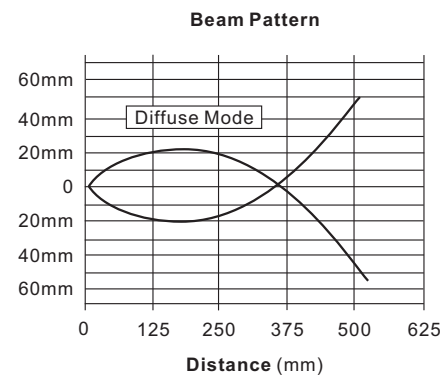
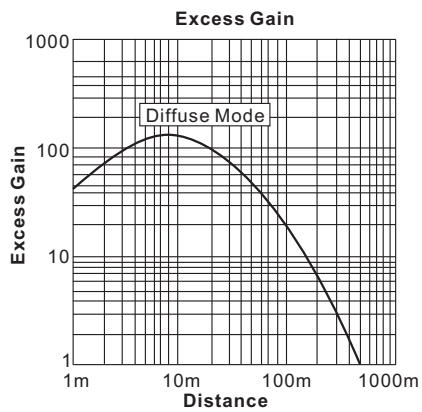
Retroreflective Mode (Sn=2m)



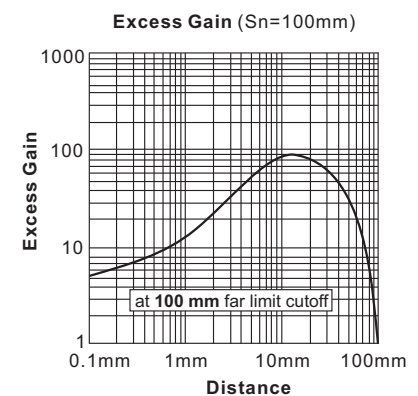
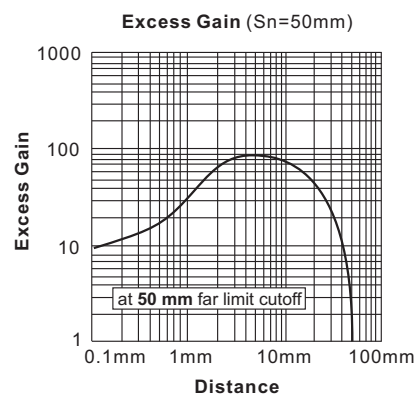
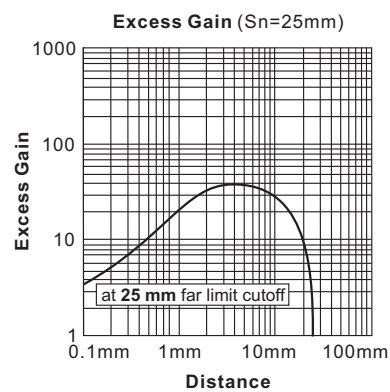
Polarized Retroreflective (Sn=2m)



Diffuse Mode (Sn=500mm)

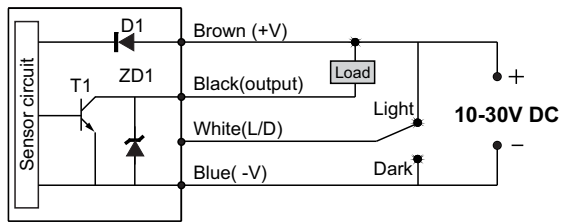


Diffuse Mode with Background Suppression (Sn=25/50/100mm)



Connection Diagrams

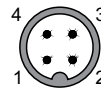
NPN output type



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

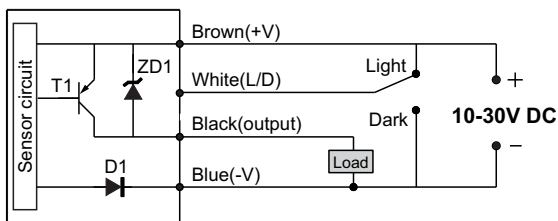
Connector pin position

Euro-style



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

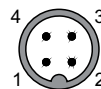
PNP output type



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

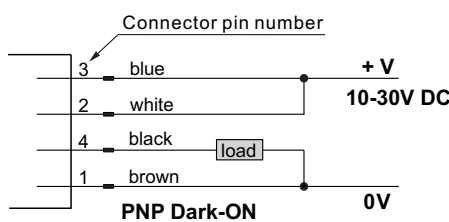
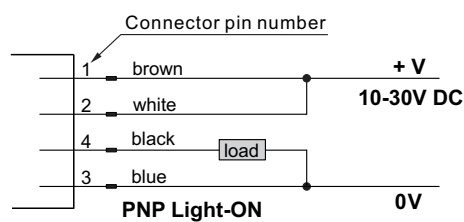
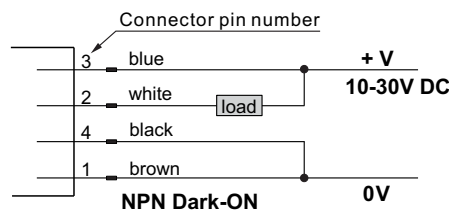
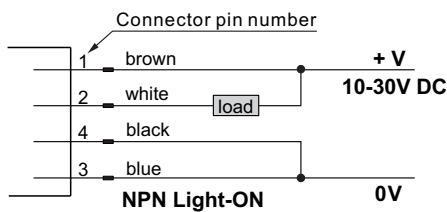
Connector pin position

Euro-style



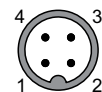
1. Brown (+)
2. White (Light/Dark control)
3. Blue (-)
4. Black (Output)

NPN/PNP output type

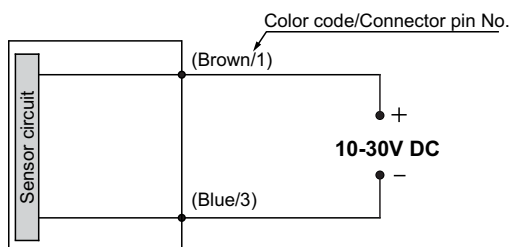


Connector pin position

Euro-style

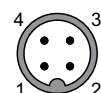


Emitter of Thru-beam Mode



Connector pin position

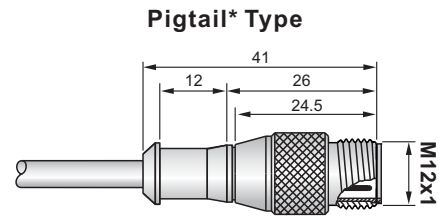
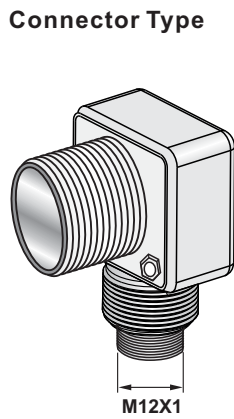
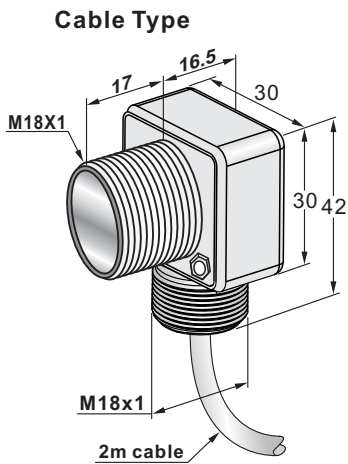
Euro-style



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

Dimensions (Unit: mm)

Sensor Type

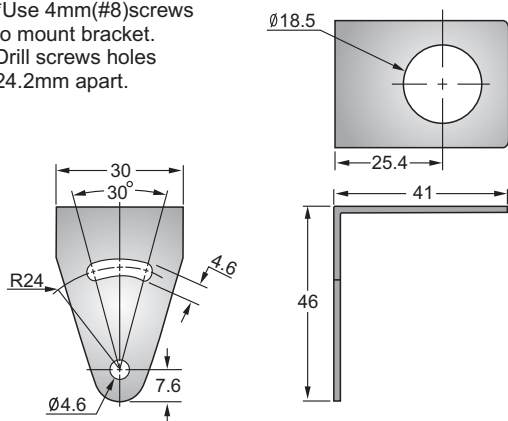


*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

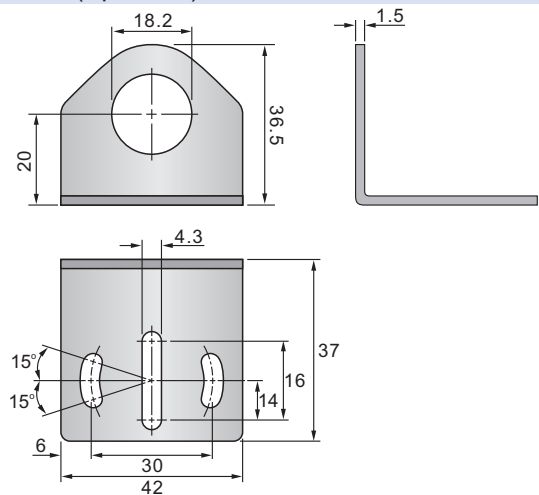
Mounting Brackets *

MB-4630 (optional)

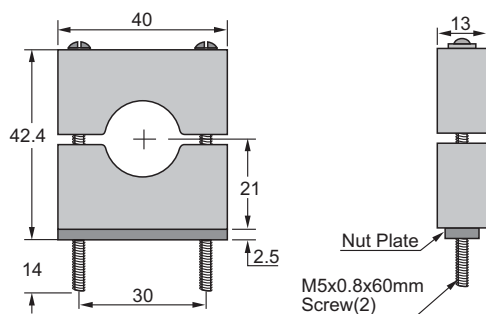
*Use 4mm(#8)screws to mount bracket. Drill screws holes 24.2mm apart.



MB-4237 (optional)

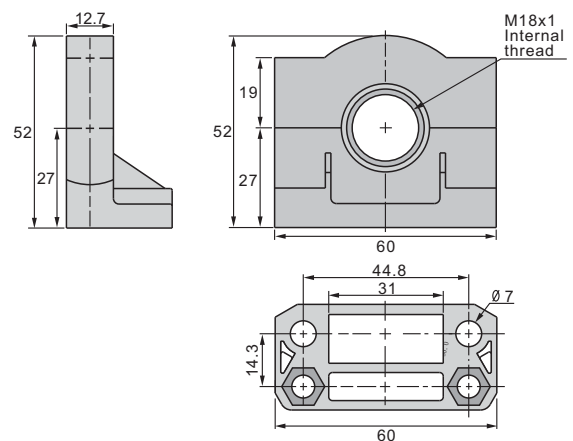


MB-4240 (optional)



18mm split clamp bracket

MB-6052 (optional)



Mounting Bracket to Provide 360° Rotation

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

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