







2016

Photoelectric ^{CE RoHS}







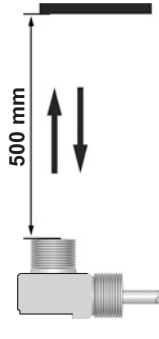



INDUCTIVE
METAL FACE
HIGH/LOW TEMPERATURE
PHOTOELECTRIC
ULTRASONIC
ADAPTIVE
CAPACITIVE
QUICK CONNECT CABLES
CUSTOMIZATION

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	
			---	---
	Quick Disconnect 	10-30V DC (Euro Style)	NPN	T18-L2000N-CY9Q4UE
			PNP	T18-L2000P-CY9Q4UE
			NPN/PNP	
			---	---
	6" Pig tail 	10-30V DC (Euro Style)	NPN	T18-L2000N-CY9P4UE
			PNP	T18-L2000P-CY9P4UE
			NPN/PNP	
			---	---

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.

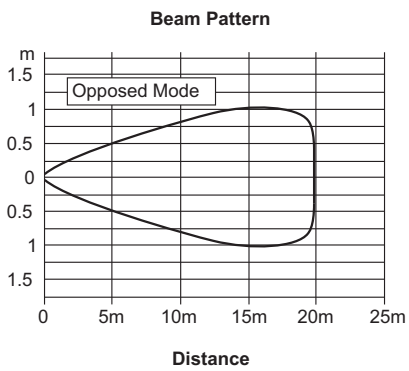
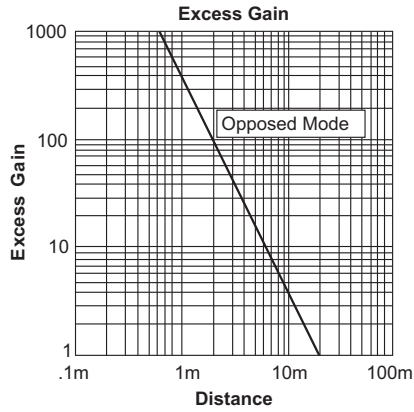
Specifications

Type Item \ Model No.	Thru-beam T18-T020Mx- xX9xxxx	Diffuse reflective (with background suppression)				Retroreflective 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						

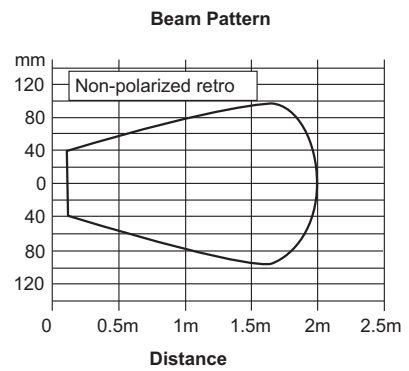
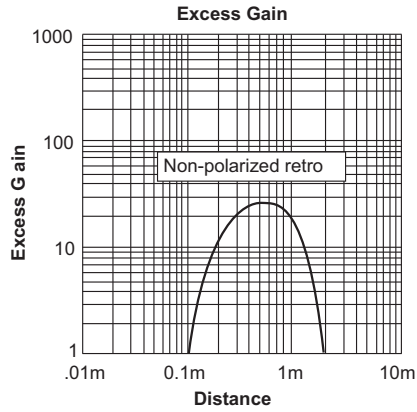
Note: Used with RE-6152 (supplied with sensor) reflector.

Sensing Characteristics (Typical)

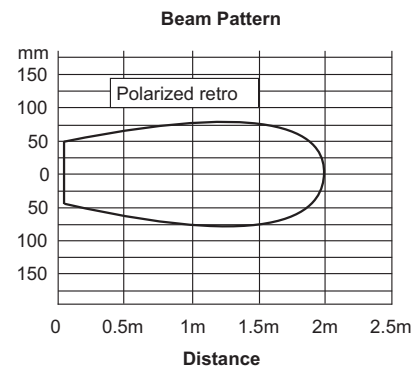
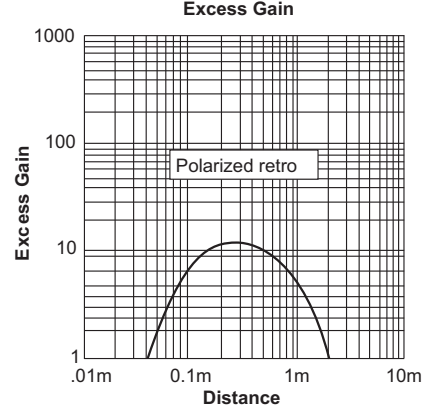
Opposed Mode (Sn=20m)



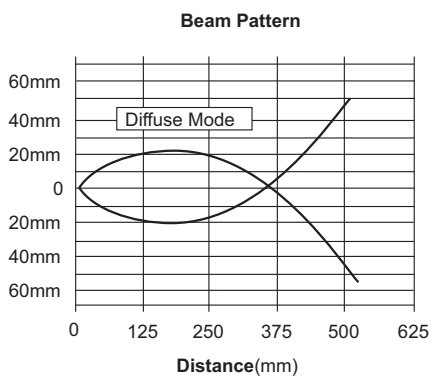
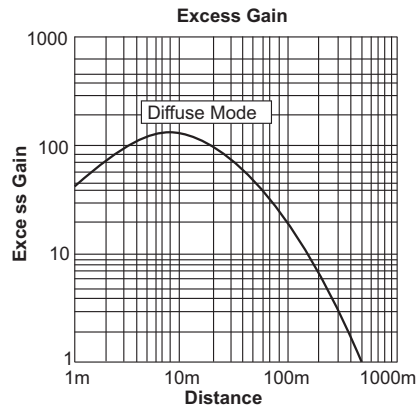
Retroreflective Mode (Sn=2m)



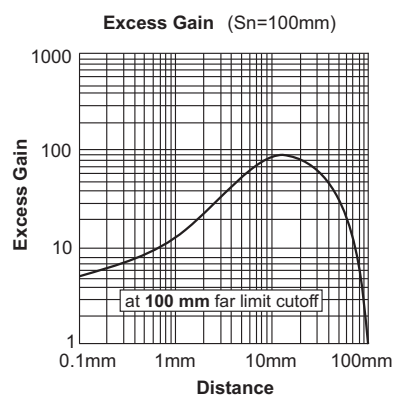
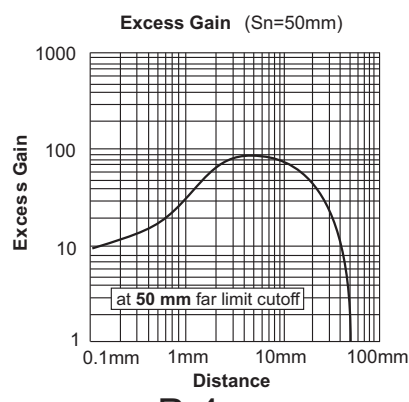
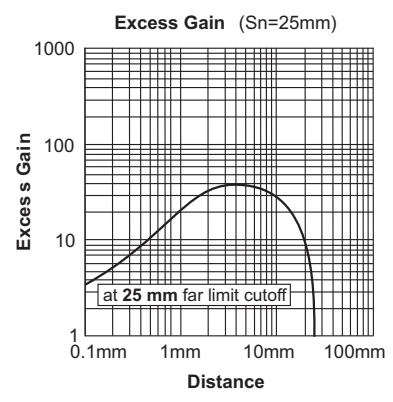
Polarized Retroreflective(Sn=2m)



Diffuse Mode (Sn=500mm)

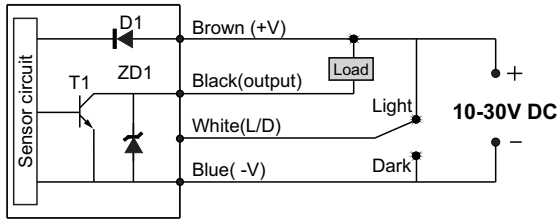


Diffuse Mode with Background Suppression (Sn=25/50/100mm)



Connection Diagrams

NPN output type



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

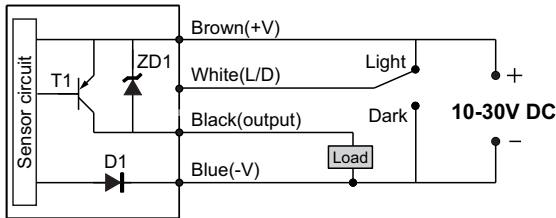
Connector pin position

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

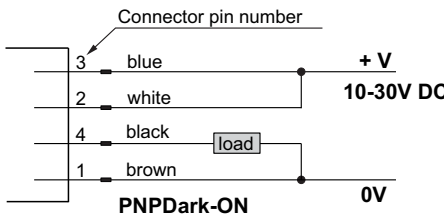
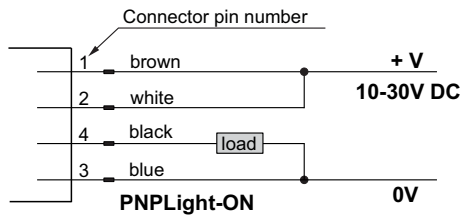
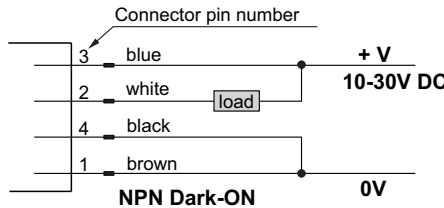
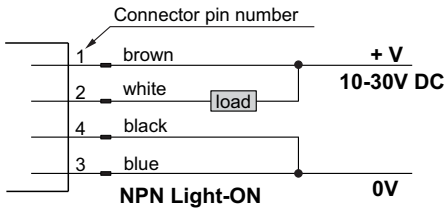
Connector pin position

Euro-style



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

NPN/PNP output type

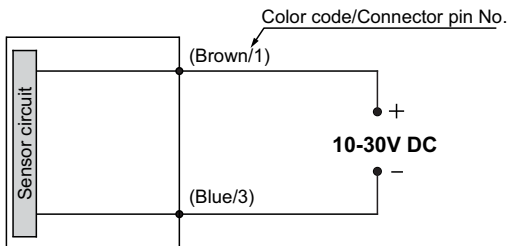


Connector pin position

Euro-style



Emitter of Thru-beam Mode



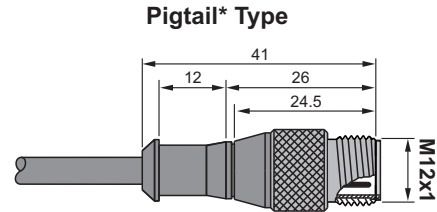
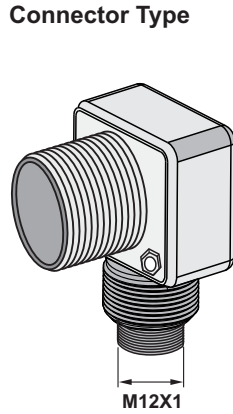
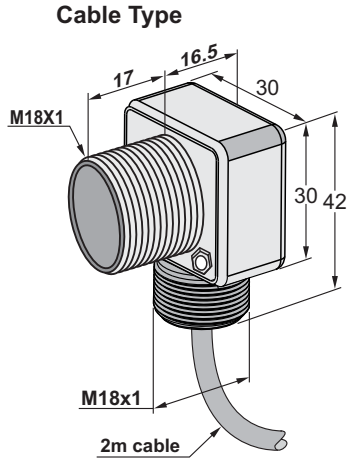
Connector pin position

Euro-style



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

Sensor Type

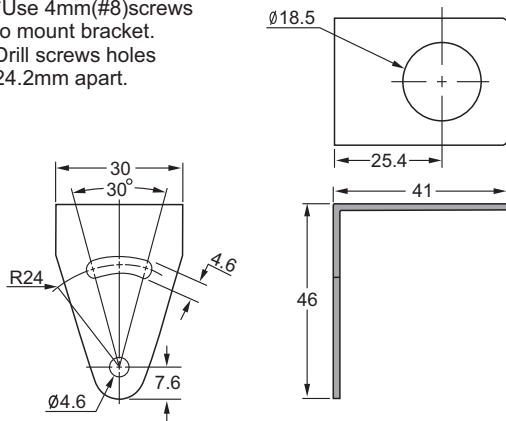


*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

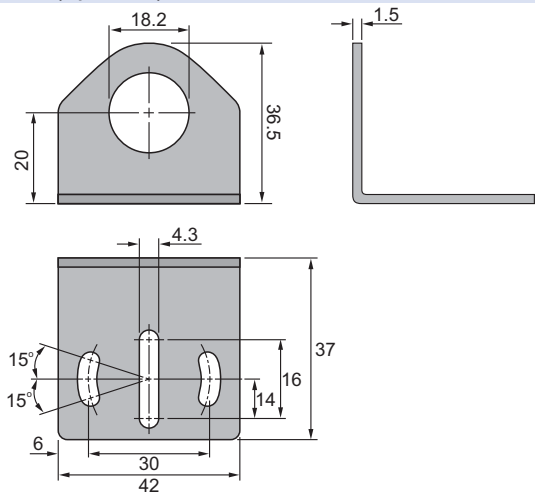
Mounting Brackets *

MB-4630(optional)

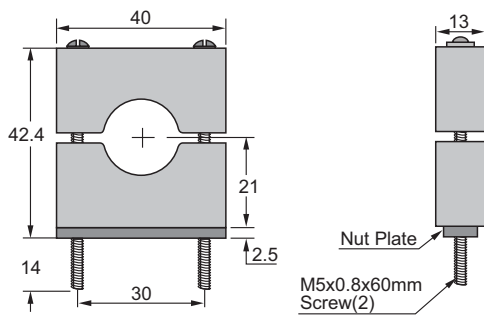
*Use 4mm(#8)screws to mount bracket. Drill screws holes 24.2mm apart.



MB-4237(optional)

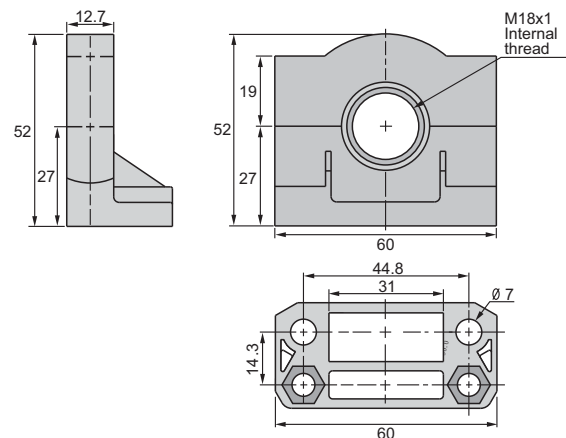


MB-4240(optional)



18mm split clamp bracket





MB-6052(optional)



Mounting Bracket to Provide 360 °Rotation

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

Thru-beam Mode

SensingMode	Appearance	Supply Voltage	OutputMode	Part Number
Infrared 950 nm	2mCable 	10-30V DC	Emitter	T30-T060MD-EY9C2L2
			NPN	T30-T060MN-CY9C4U2
			PNP	T30-T060MP-CY9C4U2
			NPN/PNP	T30-T060MD-CY9C5U2
		12-240V DC/ 24-240VAC	Emitter (2-wire)	
			Solid State Isolated Relay (4-wire)	
			Light-ON (2-wire)	
			Dark-ON (2-wire)	
	Quick Disconnect 	10-30V DC (Euro Style)	Emitter	T30-T060MD-EY9Q4LE
			NPN	T30-T060MN-CY9Q4UE
			PNP	T30-T060MP-CY9Q4UE
			NPN/PNP	T30-T060MD-CY9Q5UE
		12-240V DC/ 24-240VAC (Micro Style)	Emitter (2-wire)	
			Solid State Isolated Relay (4-wire)	
			Light-ON (2-wire)	
			Dark-ON (2-wire)	
Thru-beam Mode Sensing Distance : 60m	6" Pigtail 	10-30V DC (Euro Style)	Emitter	T30-T060MD-EY9P4LE
			NPN	T30-T060MN-CY9P4UE
			PNP	T30-T060MP-CY9P4UE
			NPN/PNP	T30-T060MD-CY9P5UE
		12-240V DC/ 24-240VAC (Micro Style)	Emitter (2-wire)	
			Solid State Isolated Relay (4-wire)	
			Light-ON (2-wire)	
			Dark-ON (2-wire)	
	 60m	10-30V DC (Euro Style)	Emitter	T30-T060MD-EY9Q4LE
			NPN	T30-T060MN-CY9Q4UE
			PNP	T30-T060MP-CY9Q4UE
			NPN/PNP	T30-T060MD-CY9Q5UE
		12-240V DC/ 24-240VAC (Micro Style)	Emitter (2-wire)	
			Solid State Isolated Relay (4-wire)	
			Light-ON (2-wire)	
			Dark-ON (2-wire)	

Specifications (DC)

Item	Type	Thru-beam	Retroreflective (with polarizing filters)	Diffuse reflective (with background suppression)		
	Model No.	T30-T060Mx-xX9xxxx	T30-L6000x-xX6xxxx-PF	T30-D0200x-xX9xxxx-BS	T30-D0400x-xX9xxxx-BS	T30-D0600x-xX9xxxx-BS
Sensing Range		60m	6m(Note)	200mm	400mm	600mm
Sensing Object		Opaque object of 8mm or more	3-way mirror	White paper		
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 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 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)	Infrared 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-D82 (supplied with sensor) reflector.

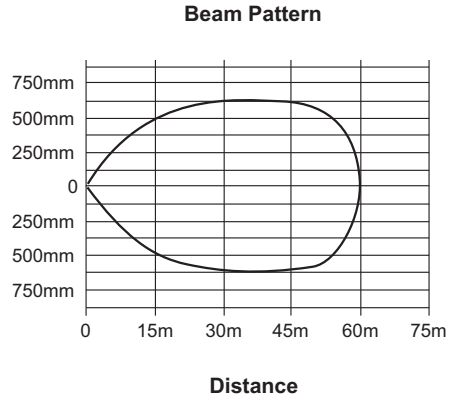
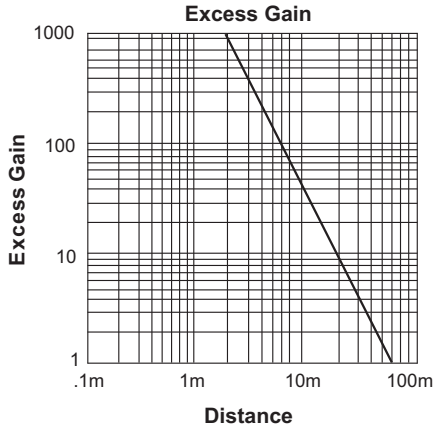
Specifications(AC/DC)

Type		Thru-beam	Retroreflective (with polarizing filters)	Diffuse Mode (with background suppression)		
Item	Model No.	T30-T060MC-xX9xxxx	T30-L6000C-xX6xxxx-PF	T30-D0200C-xX9xxxx-BS	T30-D0400C-xX9xxxx-BS	T30-D0600C-xX9xxxx-BS
Sensing Range		60m	6m(Note)	200mm	400mm	600mm
Sensing Object		Opaque object of 8mm or more	3-way mirror	White paper		
Hysteresis		—		20% or less of operation distance		
Supply Voltage		12-240V DC / 24-240VAC				
Current Consumption		30mA at DC or 5mA at AC or less				
Output		Solid state Isolated Relay, 4-wire hookup; SPST solid-state switch, 2-wire hookup; • Applied voltage: 12 to 240V DC or 24 to 240VAC • Max. Load current: 300 mA; • Voltage drop: 3V or less				
Output Operation		Light or dark switching selectable via control wire (Solid state Isolated Relay) , Selectable either Light-ON Dark-ON by type number(SPST Solid-state)				
Short-circuit Protection		Yes (Except Solid state Isolated Relay output)				
Overload Current Protection		Yes				
Response Time		15ms				
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 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 time each				
Emitting Element		Infrared LED (modulated)	Red LED (modulated)	Infrared LED (modulated)		
Housing Material		Plastic housing: PBT				
Cable		Standard length 2m, other length based on request.				
Connector		Micro-style connector				
Pigtail T ype		See Pigtail Series or our Cables & Connectors catalogue.				

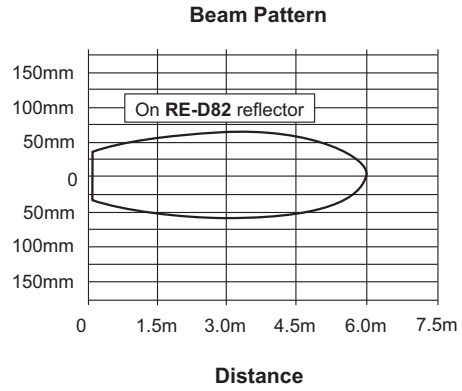
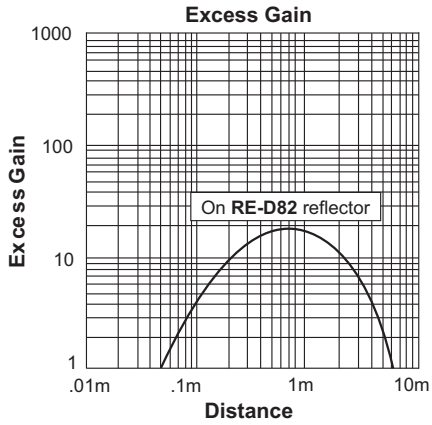
Note: Used with RE-D82 (supplied with sensor) reflector.

Sensing Characteristics (Typical)

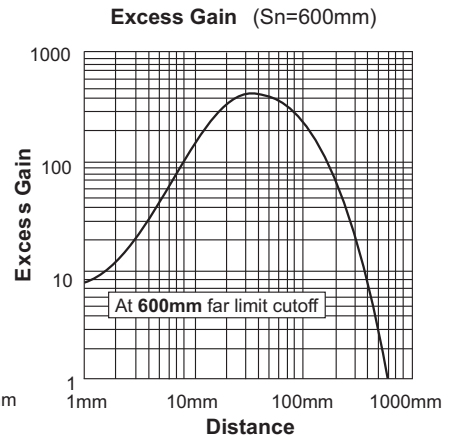
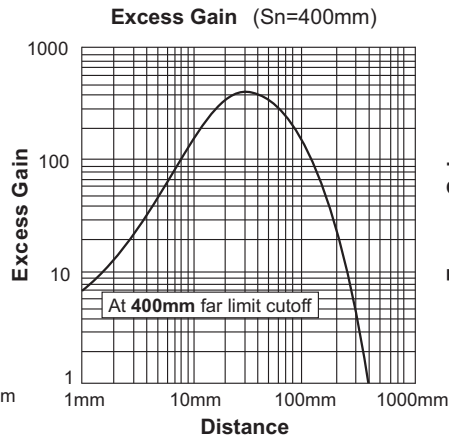
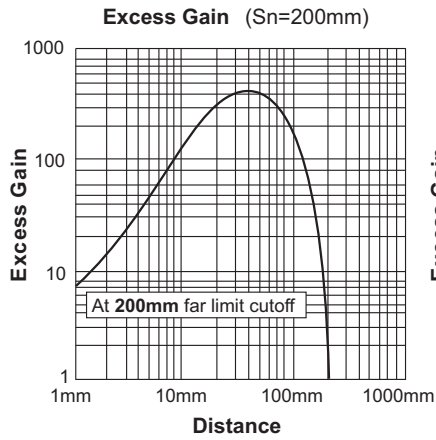
Opposed Mode (Sn=60m)



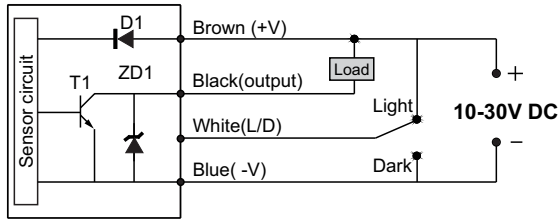
Polarized Retroreflective Mode(Sn=6 m)



Diffuse Mode with Background Suppression (Sn=200/400/600mm)



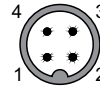
NPN output type



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

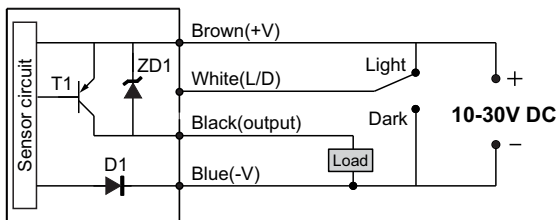
Connector pin position

Euro-style



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

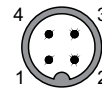
PNP output type



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

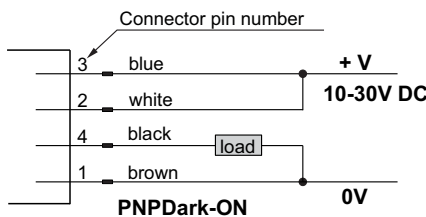
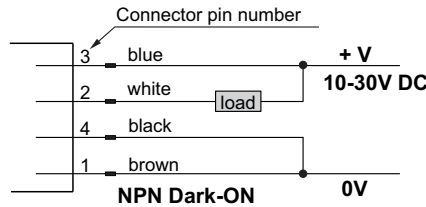
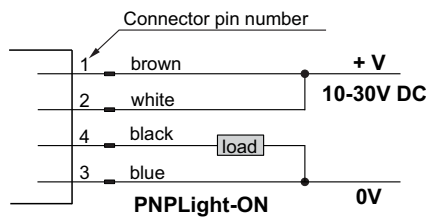
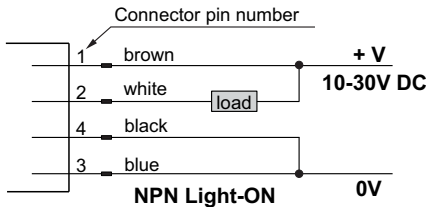
Connector pin position

Euro-style



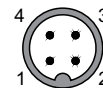
- 1. Brown (+)
- 2. White (Light/Dark control)
- 3. Blue (-)
- 4. Black (Output)

NPN/PNP output type



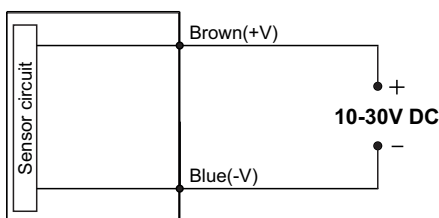
Connector pin position

Euro-style



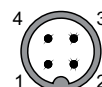
- 1. Brown
- 2. White
- 3. Blue
- 4. Black

Emitter of Thru-beam Mode



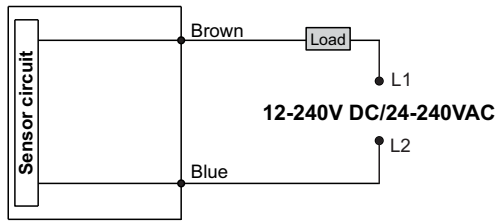
Connector pin position

Euro-style



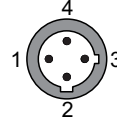
- 1. Brown (+)
- 2. Not used
- 3. Blue (-)
- 4. Not used

SPST Solid State output



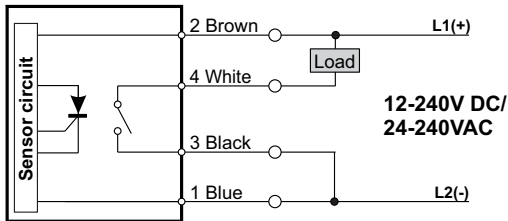
Connector pin position

Micro-style



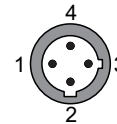
- 1.Red/black(L1)
- 2.Red/white(L2)
- 3.Not used
- 4.Not used

Solid State Isolated Relay



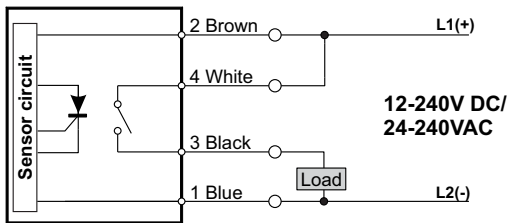
Connector pin position

Micro-style

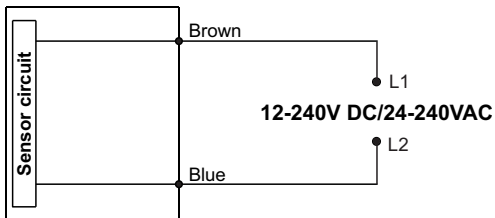


- 1.Red/black(L2)
- 2.Red/white (L1)
- 3.Red (Output)
- 4.Green (Output)

OR

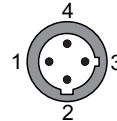


Emitter of Thru-beam Mode



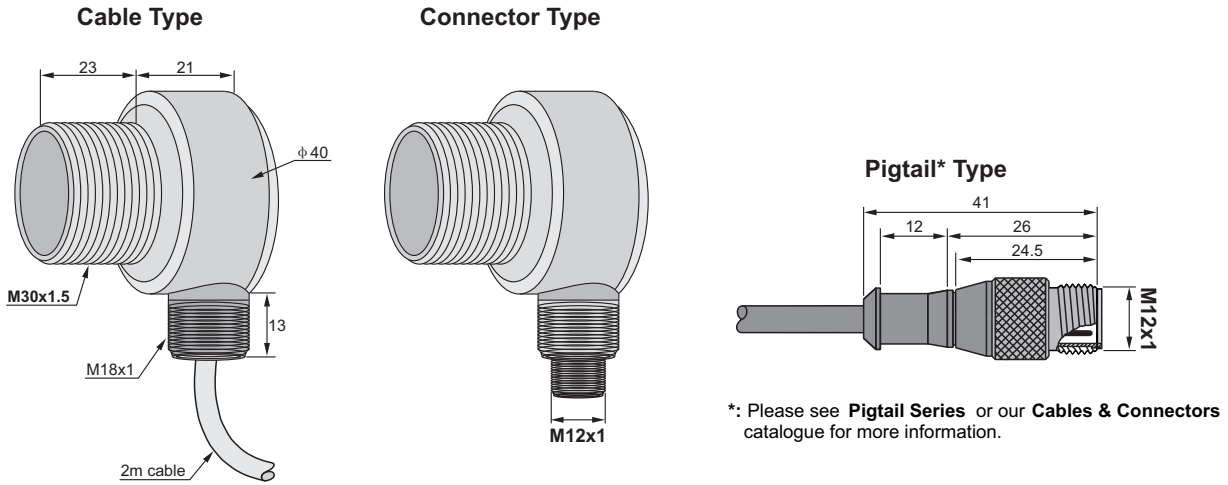
Connector pin position

Micro-style



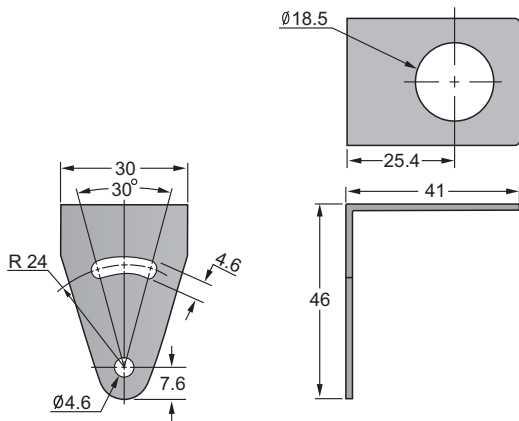
- 1.Red/black(L1)
- 2.Red/white (L2)
- 3.Not used
- 4.Not used

Sensor Type

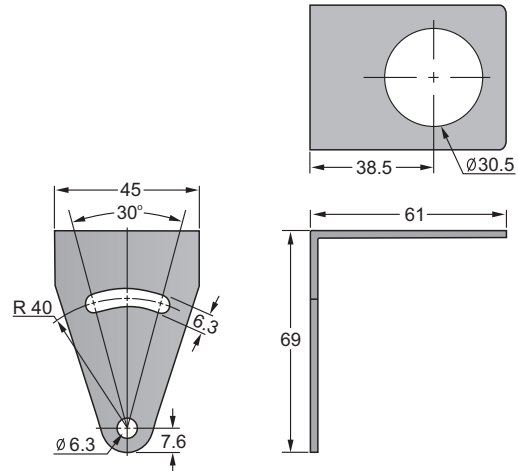


Mounting Brackets *

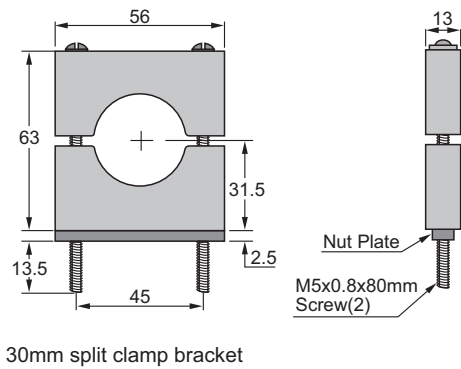
MB-4630(optional)



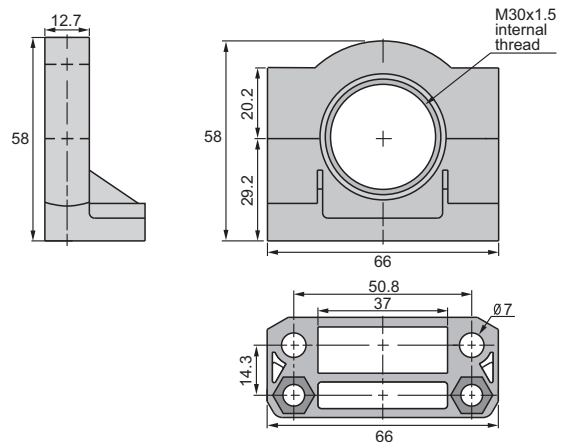
MB-6961(optional)



MB-6356(optional)



MB-6658(optional)

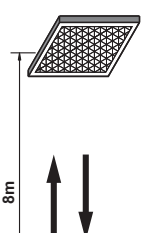






*: Please see **Accessories** (Universal Mounting Brackets Series).

Thru-beam Mode

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Red Light: 660nm Thru-beam Mode Sensing Distance: 22m	2m Cable 	10-30V DC	Emitter	RP64-T022MD-EY6C3L2
			NPN	RP64-T022MN-CY6C4U2
			PNP	RP64-T022MP-CY6C4U2
			NPN/PNP	RP64-T022MD-CY6C5U2
		12-240V DC/ 24-240VAC	Emitter (2-wire)	RP64-T022MA-EY6C2L2
			Relay L.O./D.O.(5-wire)	RP64-T022MR-CY6C5L2
			SPST solid-state Light-ON (2-wire)	
			SPST solid-state Dark-ON (2-wire)	
	Quick Disconnect (Pico-style) 	10-30V DC	Emitter	RP64-T022MD-EY6Q4LP
			NPN	RP64-T022MN-CY6Q4UP
			PNP	RP64-T022MP-CY6Q4UP
			NPN/PNP	RP64-T022MD-CY6Q5UP
		12-240V DC/ 24-240VAC	_____	_____
			_____	_____
			_____	_____
			_____	_____
Quick Disconnect swivel 90 ° 	10-30V DC (Euro style)	Emitter	RP64-T022MD-EY6Q4LE-S	
		NPN	RP64-T022MN-CY6Q4UE-S	
		PNP	RP64-T022MP-CY6Q4UE-S	
		NPN/PNP	RP64-T022MD-CY6Q5UE-S	
	12-240V DC/ 24-240VAC (Micro style)	Emitter (2-wire)	RP64-T022MA-EY6Q3LM-S	
		Relay L.O./D.O.(5-wire)	RP64-T022MR-CY6Q5LM-S	
		SPST solid-state Light-ON (2-wire)		
		SPST solid-state Dark-ON (2-wire)		
	6" Pigtail 	10-30V DC (Euro style)	Emitter	RP64-T022MD-EY6P4LE
			NPN	RP64-T022MN-CY6P4UE
			PNP	RP64-T022MP-CY6P4UE
			NPN/PNP	RP64-T022MD-CY6P5UE
12-240V DC/ 24-240VAC (Micro style)		Emitter (2-wire)	RP64-T022MA-EY6P3LM	
		Relay L.O./D.O.(5-wire)	RP64-T022MR-CY6P5LM	
		SPST solid-state Light-ON (2-wire)		
		SPST solid-state Dark-ON (2-wire)		

Retroreflective Mode with Polarizing Filter

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p style="text-align: center;">Red Light: 660 nm</p>  <p style="text-align: center;">8m</p> <p style="text-align: center;">Retro-reflective Mode with Polarizing Filter Sensing Distance: 8m (Note)</p>	<p>2m Cable</p> 	10-30V DC	NPN	RP64-L8000N-CY6C4U2-PF
			PNP	RP64-L8000P-CY6C4U2-PF
			NPN/PNP	RP64-L8000D-CY6C5U2-PF
		12-240V DC/ 24-240VAC	Relay L.O./D.O.(5-wire)	
			SPST solid-state Light-ON (2-wire)	
			SPST solid-state Dark-ON (2-wire)	
	<p>Quick Disconnect (Pico-style)</p> 	10-30V DC	NPN	RP64-L8000N-CY6Q4UP-PF
			PNP	RP64-L8000P-CY6Q4UP-PF
			NPN/PNP	RP64-L8000D-CY6Q5UP-PF
		12-240V DC/ 24-240VAC	_____	_____
			_____	_____
			_____	_____
<p>Quick Disconnect swivel 90°</p> 	10-30V DC (Euro style)	NPN	RP64-L8000N-CY6Q4UE-PS	
		PNP	RP64-L8000P-CY6Q4UE-PS	
		NPN/PNP	RP64-L8000D-CY6Q5UE-PS	
	12-240V DC/ 24-240VAC (Micro style)	Relay L.O./D.O.(5-wire)		
		SPST solid-state Light-ON (2-wire)		
		SPST solid-state Dark-ON (2-wire)		
<p>6" Pigtail</p> 	10-30V DC (Euro style)	NPN	RP64-L8000N-CY6P4UE-PF	
		PNP	RP64-L8000P-CY6P4UE-PF	
		NPN/PNP	RP64-L8000D-CY6P5UE-PF	
	12-240V DC/ 24-240VAC (Micro style)	Relay L.O./D.O.(5-wire)		
		SPST solid-state Light-ON (2-wire)		
		SPST solid-state Dark-ON (2-wire)		

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

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number	
<p style="text-align: center;">Red Light: 660nm</p> <p style="text-align: center;">300mm</p> <p style="text-align: center;">Diffuse Mode with Background Suppression Sensing Distance:300mm</p>	<p>2m Cable</p>	10-30V DC	NPN	RP64-D0300N-CY6C4U2-BS	
			PNP	RP64-D0300P-CY6C4U2-BS	
			NPN/PNP		
		12-240V DC/ 24-240VAC	Relay L.O./D.O.(5-wire)	RP64-D0300R-CY6C5L2-BS	
			SPST solid-state Light-ON (2-wire)		
			SPST solid-state Dark-ON (2-wire)		
		<p>Quick Disconnect (Pico-style)</p>	10-30V DC	NPN	RP64-D0300N-CY6Q4UP-BS
				PNP	RP64-D0300P-CY6Q4UP-BS
				NPN/PNP	
	12-240V DC/ 24-240VAC		_____	_____	
			_____	_____	
			_____	_____	
	<p>Quick Disconnect swivel 90°</p>	10-30V DC (Euro style)	NPN	RP64-D0300N-CY6Q4UE-SB	
			PNP	RP64-D0300P-CY6Q4UE-SB	
			NPN/PNP		
		12-240V DC/ 24-240VAC (Micro style)	Relay L.O./D.O.(5-wire)		
			SPST solid-state Light-ON (2-wire)		
			SPST solid-state Dark-ON (2-wire)		
		<p>6" Pigtail</p>	10-30V DC (Euro style)	NPN	RP64-D0300N-CY6P4UE-BS
				PNP	RP64-D0300P-CY6P4UE-BS
NPN/PNP					
12-240V DC/ 24-240VAC (Micro style)	Relay L.O./D.O.(5-wire)				
	SPST solid-state Light-ON (2-wire)				
	SPST solid-state Dark-ON (2-wire)				

Diffuse Mode with Background Suppression(Sn=500mm)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p style="text-align: center;">Red Light: 660nm</p> <p style="text-align: center;">500mm</p> <p style="text-align: center;">Diffuse Mode with Background Suppression Sensing Distance: 500mm</p>	2m Cable 	10-30V DC	NPN	RP64-D0500N-CY6C4U2-BS
			PNP	RP64-D0500P-CY6C4U2-BS
			NPN/PNP	RP64-D0500D-CY6C5U2-BS
		12-240V DC/ 24-240VAC	Relay L.O./D.O.(5-wire)	RP64-D0500R-CY6C5L2-BS
			SPST solid-state Light-ON (2-wire)	
			SPST solid-state Dark-ON (2-wire)	
	Quick Disconnect (Pico-style) 	10-30V DC	NPN	RP64-D0500N-CY6Q4UP-BS
			PNP	RP64-D0500P-CY6Q4UP-BS
			NPN/PNP	
		12-240V DC/ 24-240VAC	_____	_____
			_____	_____
			_____	_____
	Quick Disconnect swivel 90° 	10-30V DC (Euro style)	NPN	RP64-D0500N-CY6Q4UE-SB
			PNP	RP64-D0500P-CY6Q4UE-SB
			NPN/PNP	
		12-240V DC/ 24-240VAC (Micro style)	Relay L.O./D.O.(5-wire)	
			SPST solid-state Light-ON (2-wire)	
			SPST solid-state Dark-ON (2-wire)	
	6" Pigtail 	10-30V DC (Euro style)	NPN	RP64-D0500N-CY6P4UE-BS
			PNP	RP64-D0500P-CY6P4UE-BS
NPN/PNP				
12-240V DC/ 24-240VAC (Micro style)		Relay L.O./D.O.(5-wire)		
		SPST solid-state Light-ON (2-wire)		
		SPST solid-state Dark-ON (2-wire)		

Specifications (DC)

Item	Sensing Mode		Thru-beam Mode	
	Diffuse Mode (with background suppression)	Retro-reflective Mode (with polarizing filter)	Emitter	Receiver
Sensing Range,Adjustable	100...300 mm(3.9...11.8 in) 150...500 mm(5.9...19.7 in)	8m(Note)	Max.: 22m(72.2 ft) Typical: 14m(45.9ft)	
Angle of Divergence	approx. 3.0 °	approx.2.5 °	approx.4.0 °	
Light Spot Size	approx. 25mm @ 300mm approx. 35mm @ 500mm	approx. 400mm @ 8m (15.7 in @ 26.2 ft)	approx. 1.5m @ 20m (4.9 ft @ 65.6 ft)	
Light Source	LED Red			
Response Time/Frequency	<15 ms / 33 Hz	<0.7 ms / 700 Hz	<15 ms / 33 Hz	
Supply Voltage	10-30V DC (limit values)			
Current Consumption(no load)	<35 mA			
Ripple (within Vs tolerance)	< 5 V peak-to-peak			
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			
Connection	Cable or M12 4-pin plug			
Connecting Cable	PVC, 2m			
Housing Material	ABS			
Enclosure Rating	IP67 / NEMA6			
Circuit Protection	Outputs short circuit and over current protected, Vs reverse polarity protected			
Test Input	_____	_____	Vs: light source off, 0 V orno connection: light source on.	
Construction	IEC IP66; NEMA1,3,4,12,13			
Ambient Operating Temperature	-25...55C			
Storage Temperature	-40...70C			
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 with StandAbility	IEC 60947-5-2, Part 8.3.3.4 or 500VDC for one min, between all supply terminals connected together and enclosure			
Insulation Resistance	>20M Ω , with 500V 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 time each			
Mounting Bracket	MB-7047 (optional)			
Weight	Approx. 140 g with plug; 162 g with cable			
Cable	2m or 9m 6.2 ϕ 4X0.5 (Emitter :3X0.5) PVC.			
Pigtail Type	See Pigtail Series or our Cables & Connectors catalogue.			

Note: Used with RE-6152 (supplied with sensor) reflector. **P-18**

Specifications(AC/DC)

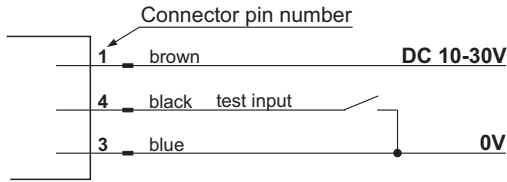
Item	Sensing Mode	Diffuse Mode (with background suppression)	Retro-reflective Mode (with polarizing filter)	Thru-beam Mode	
				Emitter	Receiver
Sensing Range,Adjustable		100...300 mm(3.9...11.8 in) 150...500 mm(5.9...19.7 in)	8 m(Note)	Max.: 22m(72.2 ft) Typical: 14m(45.9ft)	
Angle of Divergence		Approx.3.0 °	approx.2.5 °	approx.4.0 °	
Light Spot Size		approx. 25mm @ 300mm approx. 35mm @ 500mm	approx. 400mm @ 8m (15.7 in @ 26.2 ft)	approx. 1.5m @ 20m (4.9 ft @ 65.6 ft)	
Light Source		LED Red			
Response Time/Frequency		<15 ms / 33 Hz	<0.7 ms / 700 Hz	<15 ms / 33 Hz	
Supply Voltage		12-240V DC, 24-240VAC(10%)			
Power Consumption		<2 VA			
Output Type		Relay SPDT Isolated, SPST solid-state output			
Switching Voltage Max.		250VAC			
Switching Current Max.		3A			
Operation Mode		SPDT Relay Isolated: Selectable either Light-on Dark-on by the control input wire SPST solid-state: Only Light-ON or Dark-ON by type number			
Connection		Cable or M12 5-pin or 3-pin plug			
Connecting Cable		PVC, 2m			
Housing Material		ABS			
Enclosure Rating		IP67 / NEMA6			
Circuit Protection		Output Short Circuit Protection(Only for SPSTSolid State output)			
Test Input		_____			
Ambient Operating Temperature		-25...55C(-13...131F) °			
Storage Temperature		-40...70C(-40...158F) °			
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 with StandAbility		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 time each			
Mounting Bracket		MB-7047 (optional)			
Weight		approx. 159g			
Cable		2m or 9m 6.2 ϕ 4X0.5 (Emitter :3X0.5) PVC.			
Pigtail Type		See Pigtail Series or our Cables & Connectors catalogue.			

Note: Used with RE-6152 (supplied with sensor) reflector. **P-19**

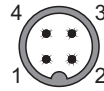
Connection Diagrams

Emitter of Thru-beam Mode (DC)

Connector face view



Euro-style



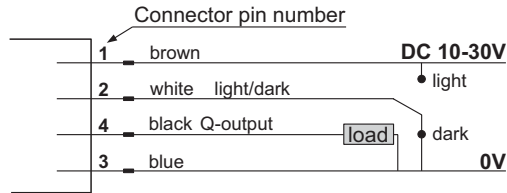
Pico-Style



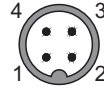
- 1. Brown (+)
- 2. Not used
- 3. Blue (-)
- 4. Black (Test input)

PNP

Connector face view



Euro-style



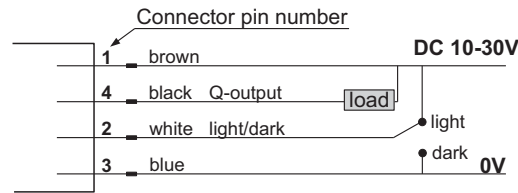
Pico-Style



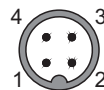
- 1. Brown (+)
- 2. White (Light/Dark control)
- 3. Blue (-)
- 4. Black (Output)

NPN

Connector face view



Euro-style



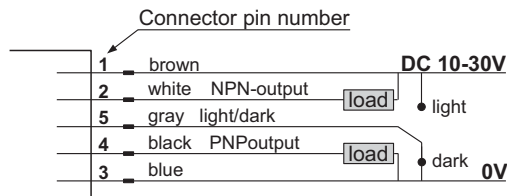
Pico-Style



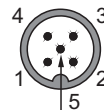
- 1. Brown (+)
- 2. White (Light/Dark control)
- 3. Blue (-)
- 4. Black (Output)

NPN/PNP

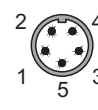
Connector face view



Euro-style



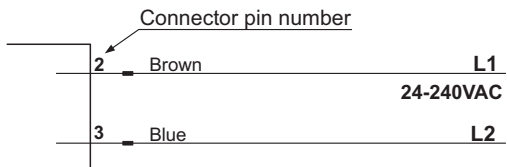
Pico-Style



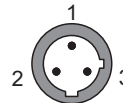
- 1. Brown (+)
- 2. White (NPN output)
- 3. Blue (-)
- 4. Black (PNPoutput)
- 5. Gray (Light/Dark control)

Emitter of Thru-beam Mode(AC)

Connector face view



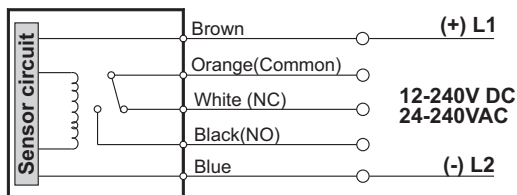
Micro-style



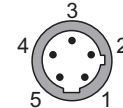
- 1. Green (Not used)
- 2. Red/black (L1)
- 3. Red/white (L2)

SPDT EM Relay version(AC/DC)

Connector face view



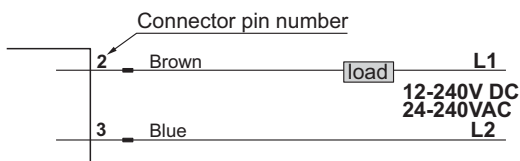
Micro-style



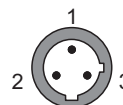
- 1. Red/white(L1)
- 2. Red (L2)
- 3. Green (Common)
- 4. Red/yellow (N.O.)
- 5. Red/black (N.C.)

SPST solid-state version(AC/DC)

Connector face view



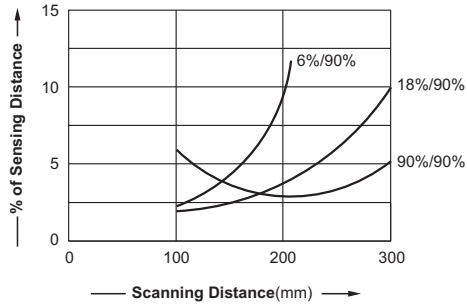
Micro-style



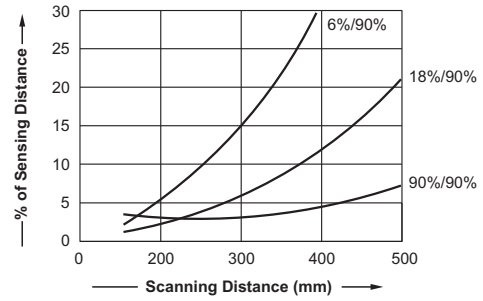
- 1. Green (Not used)
- 2. Red/black (L1)
- 3. Red/white (L2)

Sensing Characteristics (Typical)

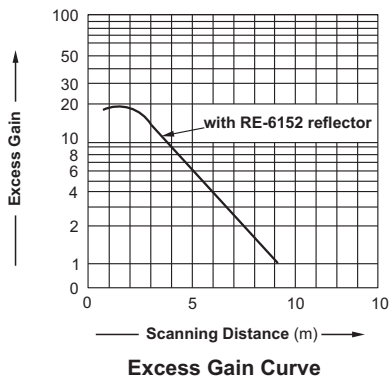
BGS Type Diffuse Sensor(Sn=300mm)



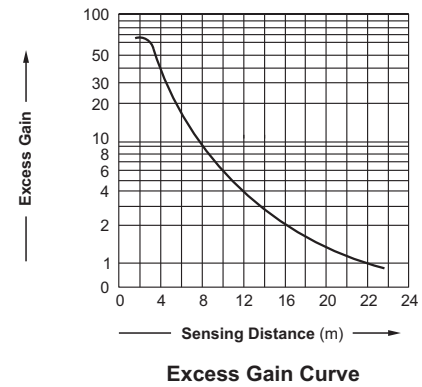
BGS Type Diffuse Sensor(Sn=500 mm)



Retro-reflective Sensor(Sn=8m)



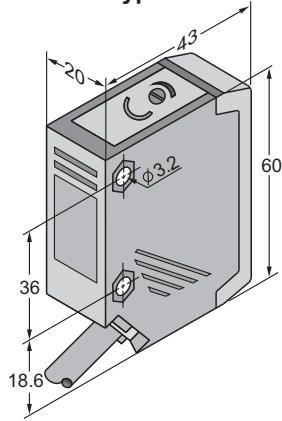
Thru-beam Sensor(22m)



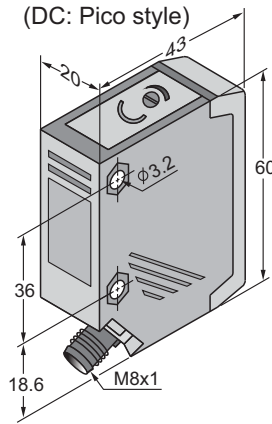
Dimensions (Unit: mm)

Sensor Type

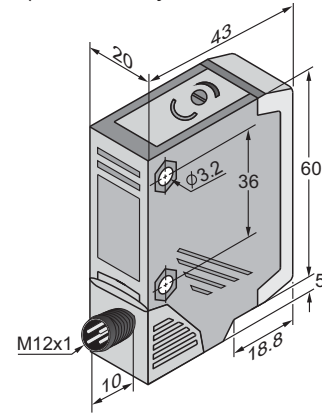
Cable Type



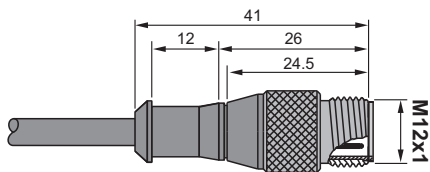
Quick Disconnect (DC: Pico style)



Quick Disconnect swivel 90° (DC: Euro style; AC: Micro style)

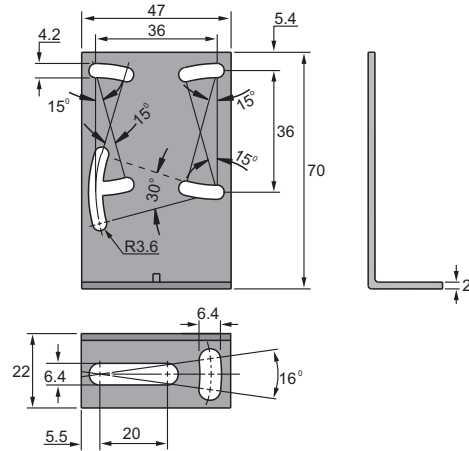


Pigtail* Type

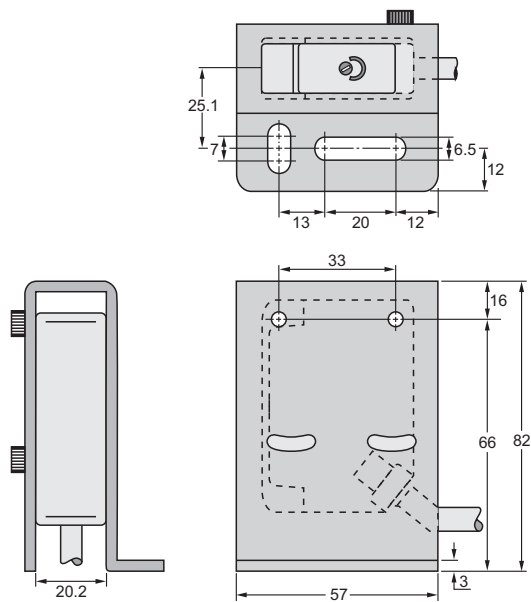


*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

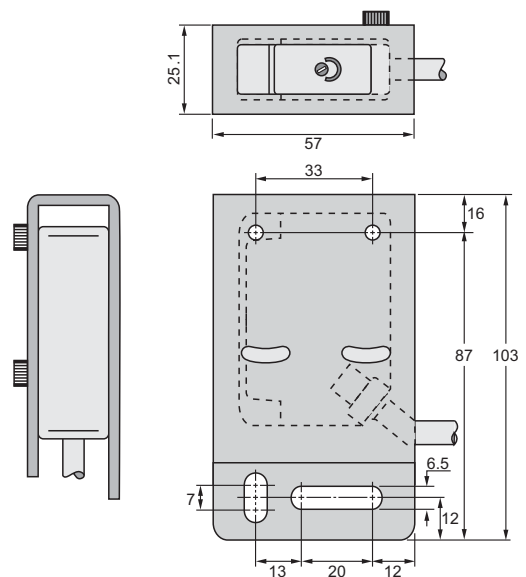
MB-7047 (Mounting bracket-optional)



PB-8257 (Protective bracket-optional)



PB-10357 (Protective bracket-optional)








Standard Thru-beam Mode (DC)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number	
<p style="text-align: center;">Infrared : 880nm</p> <p style="text-align: center;">Standard Thru-beam Mode Sensing Distance : 61m</p>	2m Cable	10-40VDC	Emitter	RP74-T061MD-EY9C3L2	
				NPN/PNP	RP74-T061MD-CY9C4U2
				NPN/PNP with Timing	RP74-T061MD-CY9C4U2-T
				NPN/PNP with Timing (New)	
		Quick Disconnect (Euro Style)		10-40VDC	Emitter
			NPN/PNP		RP74-T061MD-CY9Q4UE
			NPN/PNP with Timing		RP74-T061MD-CY9Q4UE-T
			NPN/PNP with Timing (New)		
			Quick Disconnect (Mini Style)	10-40VDC	Emitter
			NPN/PNP		RP74-T061MD-CY9Q4UN
			NPN/PNP with Timing		RP74-T061MD-CY9Q4UN-T
			NPN/PNP with Timing (New)		
			6" Pigtail (Euro Style)	10-40VDC	Emitter
			NPN/PNP		RP74-T061MD-CY9P4UE
			NPN/PNP with Timing		RP74-T061MD-CY9P4UE-T
			NPN/PNP with Timing (New)		






Standard Thru-beam Mode (AC/DC)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p style="text-align: center;">Infrared : 880nm</p> <p style="text-align: center;">Standard Thru-beam Mode Sensing Distance: 61m</p>	2m Cable 	12-240VDC/ 24-240VAC	Emitter (2-wire)	RP74-T061MA-EY9C2L2
			SPDTRelay (5-wire)	RP74-T061MR-CY9C5L2
			SPDTRelay withTiming (5-wire)	RP74-T061MR-CY9C5L2-T
			SPDTRelay withTiming(New) (5-wire)	
			SolidStatelsolatedN.O. (4-wire)	RP74-T061MS-CY9C4L2
			SolidStatelsolatedN.O. withTiming (4-wire)	RP74-T061MS-CY9C4L2-T
			SolidStatelsolatedN.O. withTiming(New) (4-wire)	
	QuickDisconnect(MicroStyle) 	12-240VDC/ 24-240VAC	Emitter (2-wire)	RP74-T061MA-EY9Q4LM
			SolidStatelsolatedN.O. (4-wire)	RP74-T061MS-CY9Q4LM
			SolidStatelsolatedN.O. withTiming (4-wire)	RP74-T061MS-CY9Q4LM-T
			SolidStatelsolatedN.O. withTiming(New) (4-wire)	
			SPSTSolid-state Light-ON/Dark-ON (2-wire)	
			_____	_____
			_____	_____
	QuickDisconnect (MiniStyle) 	12-240VDC/ 24-240VAC	Emitter (2-wire)	RP74-T061MA-EY9Q4LN
			SPDTRelay (5-wire)	RP74-T061MR-CY9Q5LN
			SPDTRelay withTiming (5-wire)	RP74-T061MR-CY9Q5LN-T
			SPDTRelay withTiming(New) (5-wire)	
			SolidStatelsolatedN.O. (4-wire)	RP74-T061MS-CY9Q4LN
			SolidStatelsolatedN.O. withTiming (4-wire)	RP74-T061MS-CY9Q4LN-T
			SolidStatelsolatedN.O. withTiming(New) (4-wire)	
	6" Pigtail (MicroStyle) 	12-240VDC/ 24-240VAC	Emitter (2-wire)	RP74-T061MA-EY9P4LM
			SPDTRelay (5-wire)	RP74-T061MR-CY9P5LM
			SPDTRelay withTiming (5-wire)	RP74-T061MR-CY9P5LM-T
			SPDTRelay withTiming(New) (5-wire)	
			SolidStatelsolatedN.O. (4-wire)	RP74-T061MS-CY9P4LM
			SolidStatelsolatedN.O. withTiming (4-wire)	RP74-T061MS-CY9P4LM-T
			SolidStatelsolatedN.O. withTiming(New) (4-wire)	
SPSTSolid-state Light-ON/Dark-ON (2-wire)				

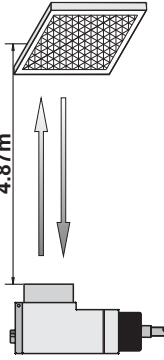




Long Range Thru-beam Mode (DC)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number	
<p style="text-align: center;">Infrared : 880nm</p>  <p style="text-align: center;">152 m</p> <p style="text-align: center;">Long Range Thru-beam Mode Sensing Distance : 152m</p>	2m Cable	10-40V DC	Emitter	RP74-T152MD-EY9C3L2	
				NPN/PNP	RP74-T152MD-CY9C4U2
				NPN/PNPwith Timing	RP74-T152MD-CY9C4U2-T
				NPN/PNPwith Timing (New)	
		Quick Disconnect(Euro Style)		10-40V DC	Emitter
			NPN/PNP		RP74-T152MD-CY9Q4UE
			NPN/PNPwith Timing		RP74-T152MD-CY9Q4UE-T
			NPN/PNPwith Timing (New)		
			Quick Disconnect(Mini Style)	10-40V DC	Emitter
			NPN/PNP		RP74-T152MD-CY9Q4UN
			NPN/PNPwith Timing		RP74-T152MD-CY9Q4UN-T
			NPN/PNPwith Timing (New)		
			6" Pig tail(Euro Style)	10-40V DC	Emitter
			NPN/PNP		RP74-T152MD-CY9P4UE
			NPN/PNPwith Timing		RP74-T152MD-CY9P4UE-T
			NPN/PNPwith Timing (New)		

Long Range Thru-beam Mode (AC/DC)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number	
<p style="text-align: center;">Infrared : 880nm</p>  <p style="text-align: center;">Long Range Thru-beam Mode Sensing Distance: 152m</p>	2m Cable	12-240V DC/ 24-240VAC	Emitter (2-wire)	RP74-T152MA-EY9C2L2	
			12-240V DC/ 24-240VAC	SPDT Relay (5-wire)	RP74-T152MR-CY9C5L2
				SPDTRelay with Timing (5-wire)	RP74-T152MR-CY9C5L2-T
				SPDT Relay with Timing (New) (5-wire)	
				Solid State Isolated N.O. (4-wire)	RP74-T152MS-CY9C4L2
				Solid State Isolated N.O. with Timing (4-wire)	RP74-T152MS-CY9C4L2-T
				Solid State Isolated N.O. with Timing (New) (4-wire)	
		SPST Solid-state Light-ON/Dark-ON (2-wire)			
	Quick Disconnect(Micro Style)		12-240V DC/ 24-240VAC	Emitter (2-wire)	RP74-T152MA-EY9Q4LM
				Solid State Isolated N.O. (4-wire)	RP74-T152MS-CY9Q4LM
				Solid State Isolated N.O. with Timing (4-wire)	RP74-T152MS-CY9Q4LM-T
				Solid State Isolated N.O. with Timing (New) (4-wire)	
				SPST Solid-state Light-ON/Dark-ON (2-wire)	
				_____	_____
	Quick Disconnect(Mini Style)		12-240V DC/ 24-240VAC	Emitter (2-wire)	RP74-T152MA-EY9Q4LN
				SPDT Relay (5-wire)	RP74-T152MR-CY9Q5LN
				SPDTRelay with Timing (5-wire)	RP74-T152MR-CY9Q5LN-T
				SPDT Relay with Timing (New) (5-wire)	
				Solid State Isolated N.O. (4-wire)	RP74-T152MS-CY9Q4LN
				Solid State Isolated N.O. with Timing (4-wire)	RP74-T152MS-CY9Q4LN-T
				Solid State Isolated N.O. with Timing (New) (4-wire)	
				SPST Solid-state Light-ON/Dark-ON (2-wire)	
	6" Pig tail(Micro Style)		12-240V DC/ 24-240VAC (Micro-style)	Emitter (2-wire)	RP74-T152MA-EY9P4LM
				SPDT Relay (5-wire)	RP74-T152MR-CY9P5LM
				SPDTRelay with Timing (5-wire)	RP74-T152MR-CY9P5LM-T
				SPDT Relay with Timing (New) (5-wire)	
				Solid State Isolated N.O. (4-wire)	RP74-T152MS-CY9P4LM
				Solid State Isolated N.O. with Timing (4-wire)	RP74-T152MS-CY9P4LM-T
Solid State Isolated N.O. with Timing (New) (4-wire)					
SPST Solid-state Light-ON/Dark-ON (2-wire)					

Retroreflective Mode

Sensing mode	Connection	Supply Voltage	Output mode	Part number
<p style="text-align: center;">Red light : 660nm</p>  <p style="text-align: center;">4.87m</p> <p style="text-align: center;">Retroreflective mode with polarized</p> <p style="text-align: center;">Sensing distance: 4.87m</p>	Cable 	10-40V DC	NPN/PNP	RP74-L4870D-CY6C4U2-PF
			NPN/PNPwith Timing	RP74-L4870D-CY6C4U2-TP
		12-240VDC/ 24-240VAC	SPDT Relay	RP74-L4870R-CY6C5L2-PF
			SPDT Relay with Timing	RP74-L4870R-CY6C5L2-TP
			Solid State Isolated N.O.	RP74-L4870S-CY6C4U2-PF
	Solid State Isolated N.O. With Timing	RP74-L4870S-CY6C4U2-TP		
	Quick Disconnect 	10-40V DC (Euro)	NPN/PNP	RP74-L4870D-CY6Q4UE-PF
			NPN/PNPwith Timing	RP74-L4870D-CY6Q4UE-TP
		12-240VDC/ 24-240VAC (Micro)	Solid State Isolated N.O.	RP74-L4870S-CY6Q4UM-PF
			Solid State Isolated N.O. with Timing	RP74-L4870S-CY6Q4UM-TP
	Quick Disconnect (Mini) 	10-40V DC	NPN/PNP	RP74-L4870D-CY6Q4UN-PF
			NPN/PNPwith Timing	RP74-L4870D-CY6Q4UN-TP
		12-240VDC/ 24-240VAC	SPDT Relay	RP74-L4870R-CY6Q5LN-PF
			SPDT Relay with Timing	RP74-L4870R-CY6Q5LN-TP
			Solid State Isolated N.O.	RP74-L4870S-CY6Q4UN-PF
Solid State Isolated N.O. with Timing		RP74-L4870S-CY6Q4UN-TP		
Pig tail 		10-40V DC (Euro-style)	NPN/PNP	RP74-L4870D-CY6P4UE-PF
			NPN/PNPwith Timing	RP74-L4870D-CY6P4UE-TP
		12-240VDC/ 24-240VAC (Micro-style)	SPDT Relay	RP74-L4870R-CY6P5LM-PF
	SPDT Relay with Timing		RP74-L4870R-CY6P5LM-TP	
	Solid State Isolated N.O.		RP74-L4870S-CY6P4LM-PF	
Solid State Isolated N.O. with Timing	RP74-L4870S-CY6P4LM-TP			

Retroreflective Mode

Sensing mode	Connection	Supply Voltage	Output mode	Part number
<p style="text-align: center;">Red light : 660nm</p> <p style="text-align: center;">Retroreflective mode Sensing distance: 9.14m</p>	Cable 	10-40V DC	NPN/PNP	RP74-L9140D-CY6C4U2
			NPN/PNPwith Timing	RP74-L9140D-CY6C4U2-T
		12-240VDC/ 24-240VAC	SPDT Relay	RP74-L9140R-CY6C5L2
			SPDT Relay with Timing	RP74-L9140R-CY6C5L2-T
			Solid State Isolated N.O.	RP74-L9140S-CY6C4U2
			Solid State Isolated N.O. with Timing	RP74-L9140S-CY6C4U2-T
	Quick Disconnect 	10-40V DC (Euro)	NPN/PNP	RP74-L9140D-CY6Q4UE
			NPN/PNPwith Timing	RP74-L9140D-CY6Q4UE-T
		12-240VDC/ 24-240VAC (Micro)	Solid State Isolated N.O.	RP74-L9140S-CY6Q4UM
			Solid State Isolated N.O. with Timing	RP74-L9140S-CY6Q4UM-T
Quick Disconnect (Mini) 	10-40V DC	NPN/PNP	RP74-L9140D-CY6Q4UN	
		NPN/PNPwith Timing	RP74-L9140D-CY6Q4UN-T	
	12-240VDC/ 24-240VAC	SPDT Relay	RP74-L9140R-CY6Q5LN	
		SPDT Relay with Timing	RP74-L9140R-CY6Q5LN-T	
		Solid State Isolated N.O.	RP74-L9140S-CY6Q4UN	
		Solid State Isolated N.O. with Timing	RP74-L9140S-CY6Q4UN-T	
	Pig tail 	10-40V DC (Euro-style)	NPN/PNP	RP74-L9140D-CY6P4UE
			NPN/PNPwith Timing	RP74-L9140D-CY6P4UE-T
12-240VDC/ 24-240VAC (Micro-style)		SPDT Relay	RP74-L9140R-CY6P5LM	
		SPDT Relay with Timing	RP74-L9140R-CY6P5LM-T	
		Solid State Isolated N.O.	RP74-L9140S-CY6P4LM	
		Solid State Isolated N.O. with Timing	RP74-L9140S-CY6P4LM-T	

Standard Diffuse Mode

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p style="text-align: center;">Infrared: 880nm</p> <p style="text-align: center;">Standard Diffuse Mode Sensing Distance: 1.52m</p>	2m Cable 	10-40V DC	NPN/PNP	RP74-D1520D-CY9C4U2
			NPN/PNPwith Timing	RP74-D1520D-CY9C4U2-T
			NPN/PNPwith Timing(New)	
		12-240V DC/ 24-240VAC	SPDT Relay (5-wire)	RP74-D1520R-CY9C5L2
			SPDTRelay withTiming (5-wire)	RP74-D1520R-CY9C5L2-T
			SPDT Relay with Timing (New) (5-wire)	
			Solid State Isolated N.O.(4-wire)	RP74-D1520S-CY9C4L2
			Solid State Isolated N.O. (4-wire) with Timing	RP74-D1520S-CY9C4L2-T
			Solid State Isolated N.O. (4-wire) with Timing (New)	
			SPST Solid-state Light-ON/Dark-ON (2-wire)	
	Quick Disconnect 	10-40V DC (Euro-style)	NPN/PNP	RP74-D1520D-CY9Q4UE
			NPN/PNPwith Timing	RP74-D1520D-CY9Q4UE-T
			NPN/PNPwith Timing(New)	
		12-240V DC/ 24-240VAC (Micro-style)	Solid State Isolated N.O.(4-wire)	RP74-D1520S-CY9Q4LM
			Solid State Isolated N.O. (4-wire) with Timing	RP74-D1520S-CY9Q4LM-T
			Solid State Isolated N.O. (4-wire) with Timing (New)	
			SPST Solid-state Light-ON/Dark-ON (2-wire)	
			_____	_____
			_____	_____
			_____	_____
	Quick Disconnect 	10-40V DC (Mini-style)	NPN/PNP	RP74-D1520D-CY9Q4UN
			NPN/PNPwith Timing	RP74-D1520D-CY9Q4UN-T
			NPN/PNPwith Timing(New)	
		12-240V DC/ 24-240VAC (Mini-style)	SPDT Relay (5-wire)	RP74-D1520R-CY9Q5LN
			SPDTRelay withTiming (5-wire)	RP74-D1520R-CY9Q5LN-T
			SPDT Relay with Timing (New) (5-wire)	
			Solid State Isolated N.O.(4-wire)	RP74-D1520S-CY9Q4LN
			Solid State Isolated N.O. (4-wire) with Timing	RP74-D1520S-CY9Q4LN-T
Solid State Isolated N.O. (4-wire) with Timing (New)				
SPST Solid-state Light-ON/Dark-ON (2-wire)				
6" Pig tail 	10-40V DC (Euro-style)	NPN/PNP	RP74-D1520D-CY9P4UE	
		NPN/PNPwith Timing	RP74-D1520D-CY9P4UE-T	
		NPN/PNPwith Timing(New)		
	12-240V DC/ 24-240VAC (Micro-style)	SPDT Relay (5-wire)	RP74-D1520R-CY9P5LM	
		SPDTRelay withTiming (5-wire)	RP74-D1520R-CY9P5LM-T	
		SPDT Relay with Timing (New) (5-wire)		
		Solid State Isolated N.O.(4-wire)	RP74-D1520S-CY9P4LM	
		Solid State Isolated N.O. (4-wire) with Timing	RP74-D1520S-CY9P4LM-T	
		Solid State Isolated N.O. (4-wire) with Timing (New)		
		SPST Solid-state Light-ON/Dark-ON (2-wire)		

Long Range Diffuse Mode

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p style="text-align: center;">Infrared: 880nm</p> <p style="text-align: center;">Long Range Diffuse Mode Sensing Distance: 3.04m</p>	2m Cable 	10-40V DC	NPN/PNP	RP74-D3040D-CY9C4U2
			NPN/PNPwith Timing	RP74-D3040D-CY9C4U2-T
			NPN/PNPwith Timing(New)	
		12-240V DC/ 24-240VAC	SPDT Relay (5-wire)	RP74-D3040R-CY9C5L2
			SPDTRelay withTiming (5-wire)	RP74-D3040R-CY9C5L2-T
			SPDT Relay with Timing (New) (5-wire)	
			Solid State Isolated N.O.(4-wire)	RP74-D3040S-CY9C4L2
			Solid State Isolated N.O. (4-wire) with Timing	RP74-D3040S-CY9C4L2-T
			Solid State Isolated N.O. (4-wire) with Timing (New)	
			SPST Solid-state Light-ON/Dark-ON (2-wire)	
	Quick Disconnect 	10-40V DC (Euro-style)	NPN/PNP	RP74-D3040D-CY9Q4UE
			NPN/PNPwith Timing	RP74-D3040D-CY9Q4UE-T
			NPN/PNPwith Timing(New)	
		12-240V DC/ 24-240VAC (Micro-style)	Solid State Isolated N.O.(4-wire)	RP74-D3040S-CY9Q4LM
			Solid State Isolated N.O. (4-wire) with Timing	RP74-D3040S-CY9Q4LM-T
			Solid State Isolated N.O. (4-wire) with Timing (New)	
			SPST Solid-state Light-ON/Dark-ON (2-wire)	
			_____	_____
			_____	_____
			_____	_____
	Quick Disconnect 	10-40V DC (Mini-style)	NPN/PNP	RP74-D3040D-CY9Q4UN
			NPN/PNPwith Timing	RP74-D3040D-CY9Q4UN-T
			NPN/PNPwith Timing(New)	
		12-240V DC/ 24-240VAC (Mini-style)	SPDT Relay (5-wire)	RP74-D3040R-CY9Q5LN
			SPDTRelay withTiming (5-wire)	RP74-D3040R-CY9Q5LN-T
			SPDT Relay with Timing (New) (5-wire)	
			Solid State Isolated N.O.(4-wire)	RP74-D3040S-CY9Q4LN
			Solid State Isolated N.O. (4-wire) with Timing	RP74-D3040S-CY9Q4LN-T
Solid State Isolated N.O. (4-wire) with Timing (New)				
SPST Solid-state Light-ON/Dark-ON (2-wire)				
6" Pig tail 	10-40V DC (Euro-style)	NPN/PNP	RP74-D3040D-CY9P4UE	
		NPN/PNPwith Timing	RP74-D3040D-CY9P4UE-T	
		NPN/PNPwith Timing(New)		
	12-240V DC/ 24-240VAC (Micro-style)	SPDT Relay (5-wire)	RP74-D3040R-CY9P5LM	
		SPDTRelay withTiming (5-wire)	RP74-D3040R-CY9P5LM-T	
		SPDT Relay with Timing (New) (5-wire)		
		Solid State Isolated N.O.(4-wire)	RP74-D3040S-CY9P4LM	
		Solid State Isolated N.O. (4-wire) with Timing	RP74-D3040S-CY9P4LM-T	
		Solid State Isolated N.O. (4-wire) with Timing (New)		
		SPST Solid-state Light-ON/Dark-ON (2-wire)		

Clear Object Detector

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p style="text-align: center;">Red light : 660nm</p> <p style="text-align: center;">Clear Object Detector Sensing Distance: 1.2m (Note)</p>	<p>2m Cable</p>	10-40V DC	NPN/PNP	RP74-S1200D-CY6C4U2
			NPN/PNPwith Timing	RP74-S1200D-CY6C4U2-T
			NPN/PNPwith Timing(New)	
		12-240V DC/ 24-240VAC	SPDT Relay (5-wire)	RP74-S1200R-CY6C5L2
			SPDTRelay withTiming (5-wire)	RP74-S1200R-CY6C5L2-T
			SPDT Relay with Timing (New) (5-wire)	RP74-S1200R-CY6C5L2-T/N
			Solid State Isolated N.O.(4-wire)	RP74-S1200S-CY6C4L2
			Solid State Isolated N.O. (4-wire) with Timing	RP74-S1200S-CY6C4L2-T
	Solid State Isolated N.O. (4-wire) with Timing (New)			
	SPST Solid-state Light-ON/Dark-ON (2-wire)			
	<p>Quick Disconnect</p>	10-40V DC (Euro-style)	NPN/PNP	RP74-S1200D-CY6Q4UE
			NPN/PNPwith Timing	RP74-S1200D-CY6Q4UE-T
			NPN/PNPwith Timing(New)	
		12-240V DC/ 24-240VAC (Micro-style)	Solid State Isolated N.O.(4-wire)	RP74-S1200S-CY6Q4LM
			Solid State Isolated N.O. (4-wire) with Timing	RP74-S1200S-CY6Q4LM-T
			Solid State Isolated N.O. (4-wire) with Timing (New)	
			SPST Solid-state Light-ON/Dark-ON (2-wire)	
			_____	_____
	<p>Quick Disconnect</p>	10-40V DC (Mini-style)	NPN/PNP	RP74-S1200D-CY6Q4UN
			NPN/PNPwith Timing	RP74-S1200D-CY6Q4UN-T
			NPN/PNPwith Timing(New)	
		12-240V DC/ 24-240VAC (Mini-style)	SPDT Relay (5-wire)	RP74-S1200R-CY6Q5LN
			SPDTRelay withTiming (5-wire)	RP74-S1200R-CY6Q5LN-T
			SPDT Relay with Timing (New) (5-wire)	RP74-S1200R-CY6Q5LN-T/N
			Solid State Isolated N.O.(4-wire)	RP74-S1200S-CY6Q4LN
			Solid State Isolated N.O. (4-wire) with Timing	RP74-S1200S-CY6Q4LN-T
	Solid State Isolated N.O. (4-wire) with Timing (New)			
	SPST Solid-state Light-ON/Dark-ON (2-wire)			
<p>6" Pig tail</p>	10-40V DC (Euro-style)	NPN/PNP	RP74-S1200D-CY6P4UE	
		NPN/PNPwith Timing	RP74-S1200D-CY6P4UE-T	
		NPN/PNPwith Timing(New)		
	12-240V DC/ 24-240VAC (Micro-style)	SPDT Relay (5-wire)	RP74-S1200R-CY6P5LM	
		SPDTRelay withTiming (5-wire)	RP74-S1200R-CY6P5LM-T	
		SPDT Relay with Timing (New) (5-wire)	RP74-S1200R-CY6P5LM-T/N	
		Solid State Isolated N.O.(4-wire)	RP74-S1200S-CY6P4LM	
		Solid State Isolated N.O. (4-wire) with Timing	RP74-S1200S-CY6P4LM-T	
		Solid State Isolated N.O. (4-wire) with Timing (New)		
		SPST Solid-state Light-ON/Dark-ON (2-wire)		

Note: Used with RE-D82 (supplied with sensor) reflector.

Specifications (DC)

Item	Sensing Mode				
	Retroreflective	Diffuse	Clear Object Detector	Thru-beam	Fiber Optic
Sensing Range (Adjustable)	15 m (standard) 10 m (polarized) (Note)	1.52m (standard) 3.04m (long range)	1.2m(Note)	61m or 152m	Depends on Fiber optic cable
Field of View	1.5°	3.5° (standard) 6.5° (long range)	1.5°	1.5°	—
Light Source	Visible red 660nm	Infrared 880nm	Red 660nm	Infrared 880nm	Visible red 660nm or Infrared 880nm
Indicator LEDs	Green: Power Yellow: Output Red: Margin				
Response Time	2 ms(Thru-beam's receiver is with 5ms)				
Supply Voltage	10-40V DC (Ripple<=10%)				
Output Type	NPN/PNP				
Max. Load Current	250 mA				
No Load Current	<30 mA				
Max. Leakage Current	<10 uA				
Voltage Drop	<2.5 V				
Operation Mode	Light-ON/Dark-ON selectable via switch				
Housing Material	Glass fiber reinforced plastic				
Lens Material	Acrylic				
Cover Gasket Material	Neoprene				
Enclosure Rating	IP67				
Circuit Protection	Outputs short circuit and over current protected, Vs reverse polarity protected				
Time Options	No delay, On delay, Off delay, One-shot(with timer mode only)				
Time Settings	Adjustable, 0.1...1.5 s or 0...15s(with timer mode only)				
Ambient Operating Temperature	-25...55C				
Storage Temperature	-40...70C				
Relative Humidity	5% to 95%				
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, Part 8.3.3.4 or 500VDC for one min, between all supply terminals connected together and enclosure				
Insulation Resistance	>20M Ω , with 500V 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 time each				
Mounting Bracket	RP74-A1 or RP74-A2 or RP74-A3 (please seeAccessories)				
Cable	2m 6.1 φ 4X0.5 5X0.5 (Emitter :3X0.5) PVC.				
Pigtail Type	See Pigtail Series or our Cables & Connectors catalogue.				

Note: Used with RE-D82 (supplied with sensor) reflector.

Specifications(AC/DC)

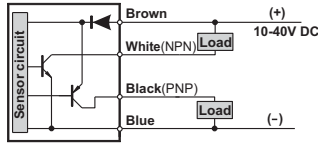
Item	Sensing Mode				
	Retroreflective	Diffuse	Clear Object Detector	Thru-beam	Fiber Optic
Sensing Range (Adjustable)	15 m (standard) 10 m (polarized) (Note)	1.52m (standard) 3.04m (long range)	1.2m(Note)	61m or 152m	Depends on Fiber optic cable
Field of View	1.5°	3.5° (standard) 6.5° (long range)	1.5°	1.5°	—
Light Source	Visible red 660nm	Infrared 880nm	Visible red 660nm	Infrared 880nm	Visible red 660nm or Infrared 880nm
Indicator LEDs	Green: Power Yellow: Output Red: Margin				
Output Type	SPDT EM Relay , Solid State Isolated N.O. , SPST solid-state				
Supply Voltage	12-240V DC/24-240VAC				
Response Time	SPDT EM Relay output: 15ms Solid State Isolated N.O. output: 2ms SPST SCR solid-state relay output: 8ms(thru-beam's receiver units : SPST EM Relay output: 23ms; Solid state Isolated N.O. output: 15ms; SPST SCR solid-state relay output: 2ms ON and 1ms OFF), response time is independent of signal strength				
Max. Load Current	SPDT EM Relay: 10Aat 120VAC, 5Aat 240VAC, 10Aat 28VAC Solid State Isolate N.O. : 300mAat 240VAC/DC SPST SCR solid-state relay: 300mAto 50C ambient, 100mAto 70C°ambient				
No Load Current	<30 mA				
Max. Leakage Current	SPDT EM Relay: 0 ; Solid State Isolate N.O. : 1mAat 240VAC SPST SCR solid-state relay: less than 1.7 mArms				
Operation Mode	SPST EM Relay and Solid State Isolated N.O: Light or dark switching selectable via switch SPST solid-state output: Light/Dark operate select switch				
Housing Material	Glass fiber reinforced plastic				
Lens Material	Acrylic				
Cover Gasket Material	Neoprene				
Enclosure Rating	IP67				
Circuit Protection	Output short circuit protected(Only for SPSTSolid State output type sensor)				
Time Options	No delay, On delay, Offdelay, One-shot(with timer mode only)				
Time Settings	Adjustable, 0.1...1.5s or 0...15s(with timer mode only)				
Ambient Operating Temperature	-25...55C				
Storage Temperature	-40...70C				
Relative Humidity	5% to 95%				
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, 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 time each				
Mounting Bracket	RP74-A1 or RP74-A2 or RP74-A3 (please seeAccessories)				
Cable	2m 6.1φ 4X0.5 5X0.5 (Emitter :3X0.5) PVC.				
Pigtail T ype	See Pigtail Series or our Cables & Connectors catalogue.!				

Note: Used with RE-D82 (supplied with sensor) reflector.

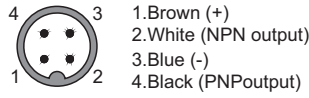
Connection Diagrams

NPN/PNP

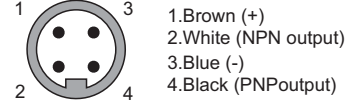
Connector pin position



Euro-style

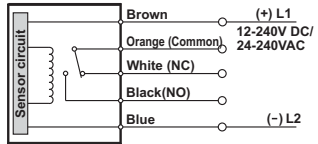


Mini-style



SPDT Relay Version

Connector pin position



Micro-style

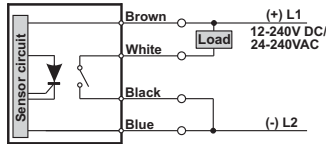


Mini-style

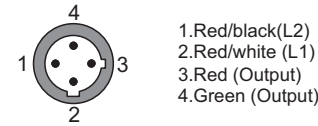


Solid State Isolated Relay

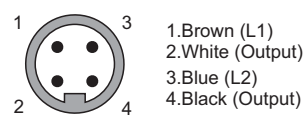
Connector pin position



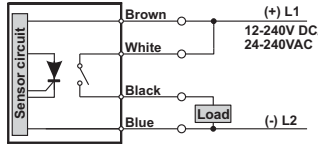
Micro-style



Mini-style

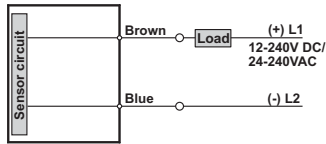


OR

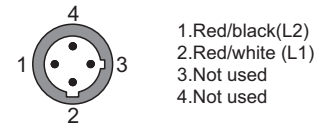


SPST solid-state (AC/DC)

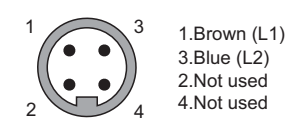
Connector pin position



Micro-style

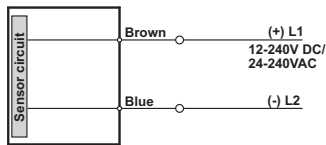


Mini-style

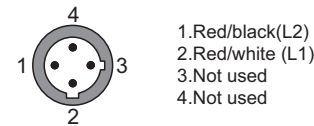


Emitter of Thru-beam Mode (AC/DC)

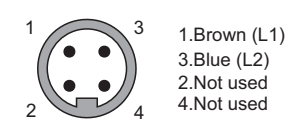
Connector pin position



Micro-style

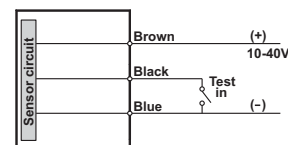


Mini-style



Emitter of Thru-beam Mode (DC)

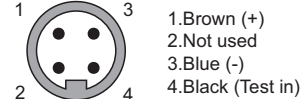
Connector pin position



Euro-style

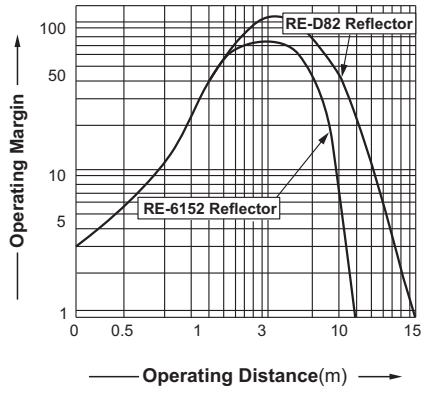


Mini-style

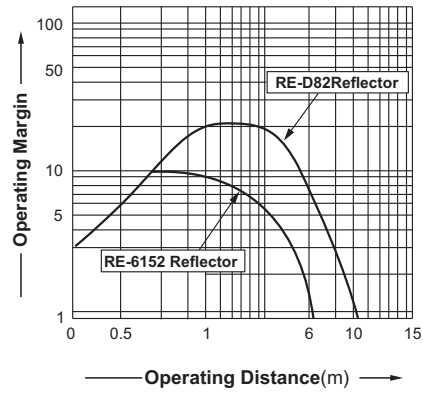


Sensing Characteristics (Typical)

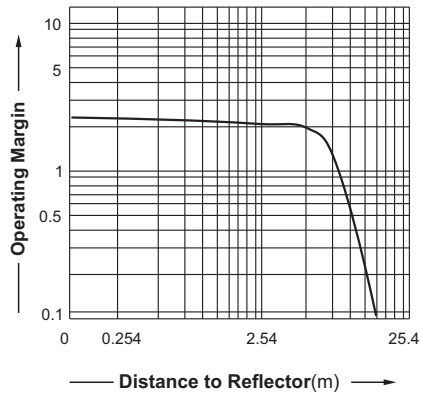
Retroreflective Mode Sensor(Sn=15m)



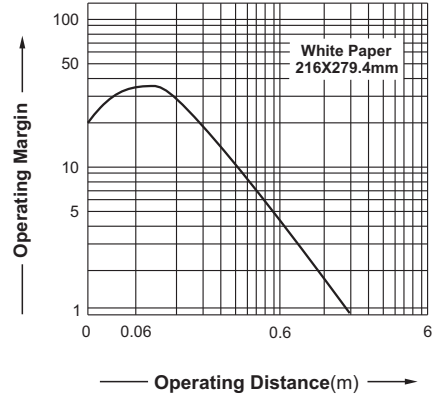
Polarized Retroreflective Mode(Sn=10m)



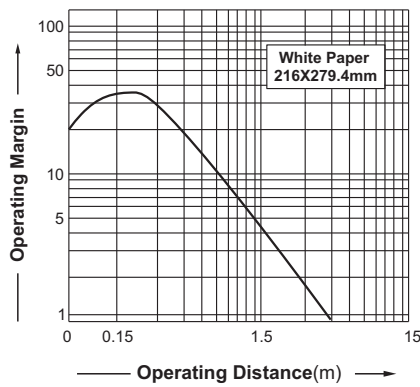
Clear Object Detector Mode(Sn=1.2 m)



Standard Diffuse Mode(Sn=1.52 m)

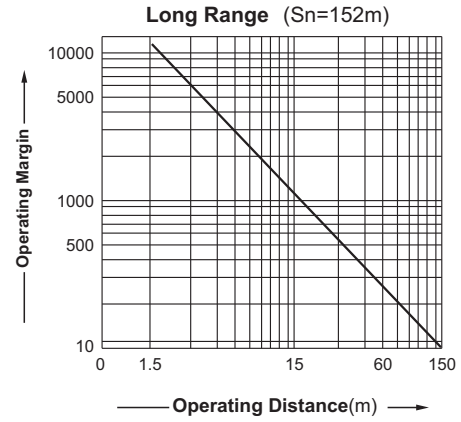
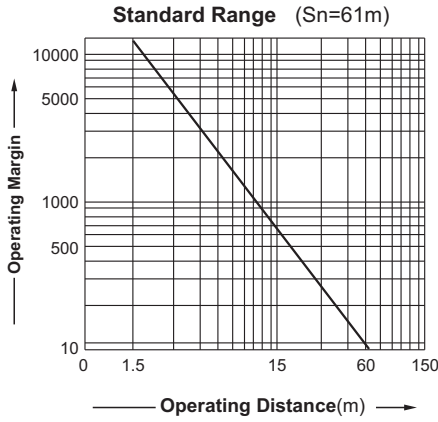


Long Range Diffuse Mode(Sn=3.04 m)

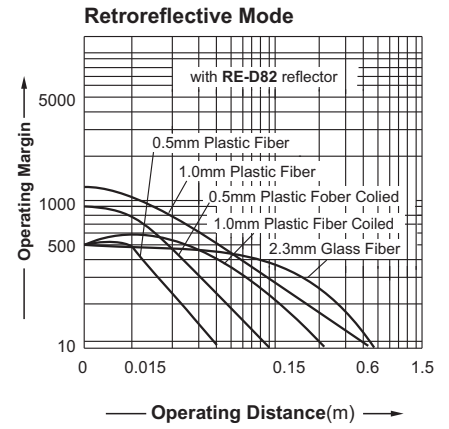
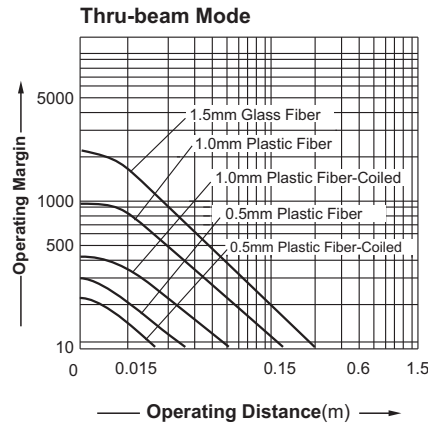
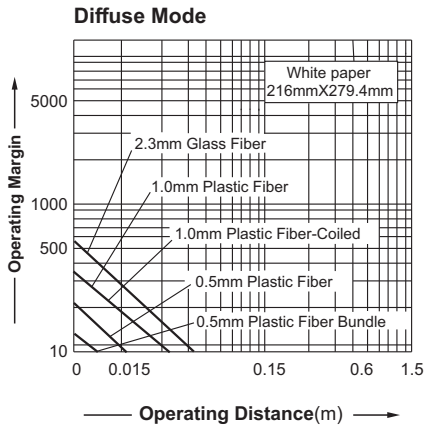


Sensing Characteristics (Typical)

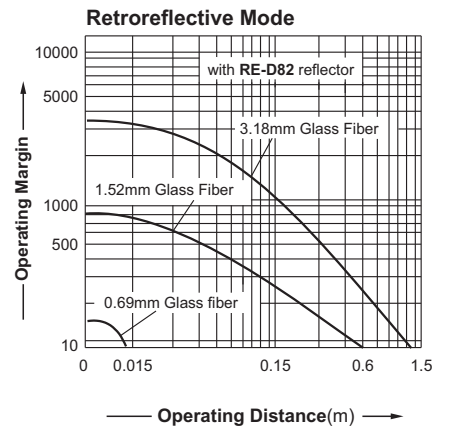
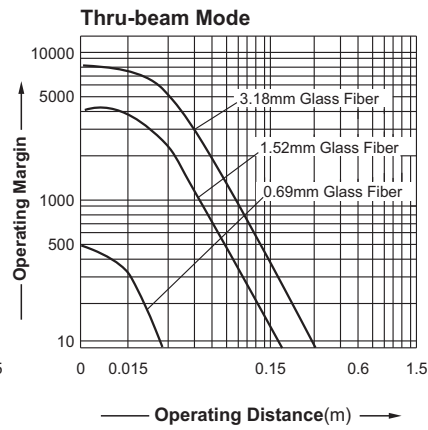
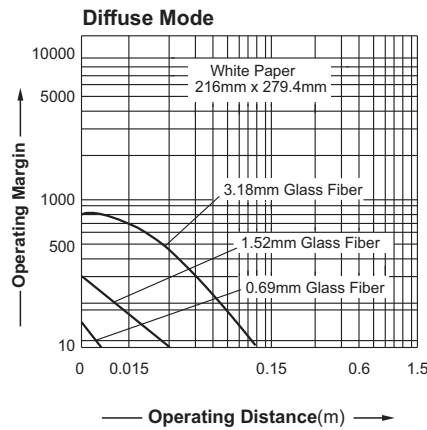
Thru Beam Mode Sensor



Visible Red Fiber Optic Sensor

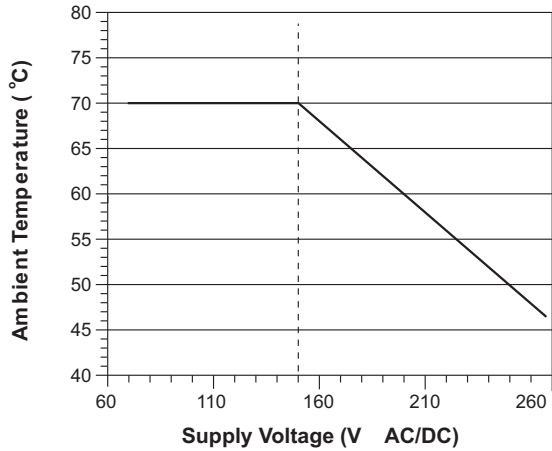


Infrared Fiber Optic Sensor



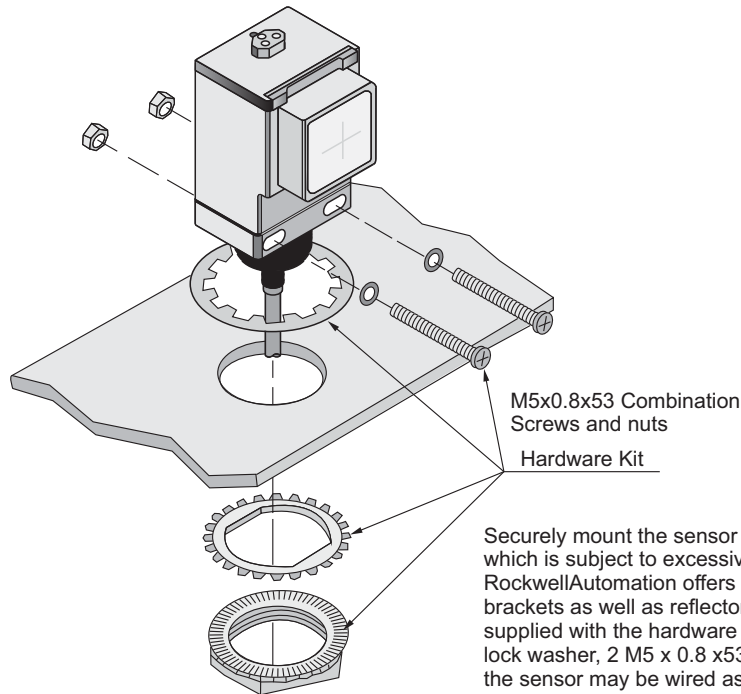
Precautions for Proper Use

Ambient Temperature Ratings



All models of the **RP74** Series with the exception of those with the solid-state output and the EM-relay output have a maximum operating temperature of +70C (+158F). The maximum operating temperature of the solid-state output and the EM-relay output models can be determined from the graph shown above. That temperature is based on the supply voltage fed to the sensor. For example, if the operating voltage is 100VAC the maximum operating temperature would be +70C (+158F). An operating voltage of 220VAC would limit the ambient operating temperature to +55C (+131F). Operating of the sensor at ambient temperatures which exceed these limit could result in sensor failure.

Mounting



Securely mount the sensor on a firm, stable surface or support. Mounting which is subject to excessive vibration or shifting may intermittent operation. Rockwell Automation offers a wide variety of fixed and adjustable mounting brackets as well as reflectors and quick disconnect cables. The sensor is supplied with the hardware kit which contains a plastic mounting nut, lock washer, 2 M5 x 0.8 x 53 screws and nuts. Once securely mounted, the sensor may be wired as indicated in the wiring diagrams.

Installing Fiber Optic Cables

1. Ensure that the fiber optic cable locking clip on the sensor is in the **UNLOCK** position.
2. Insert the fiber optic cable.
3. Insert the clip until the locking lever to the **LOCK** position



1. Set clip to **UNLOCK** position.



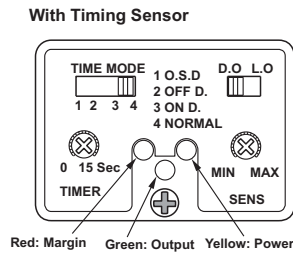
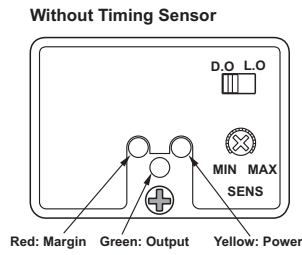
2. Insert fibers.



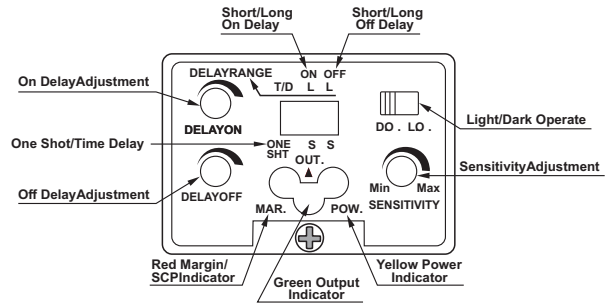
3. Insert the clip to **LOCK** position.

Panel Chart & New Timing Chart

Sensor's Top View Detail

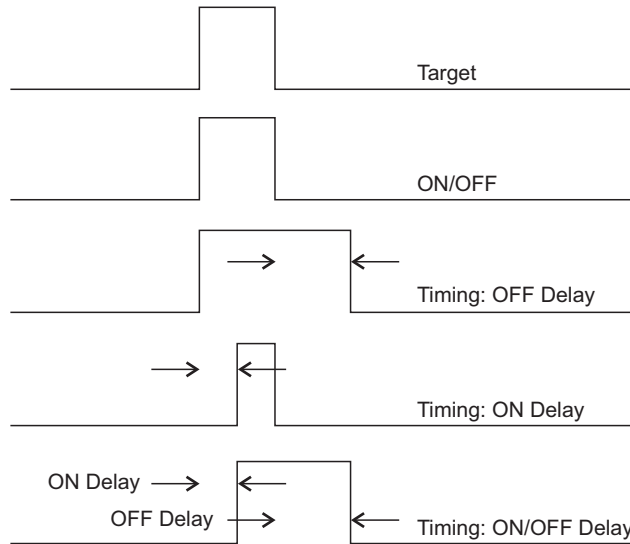


New Timing Delay Sensor (Note)

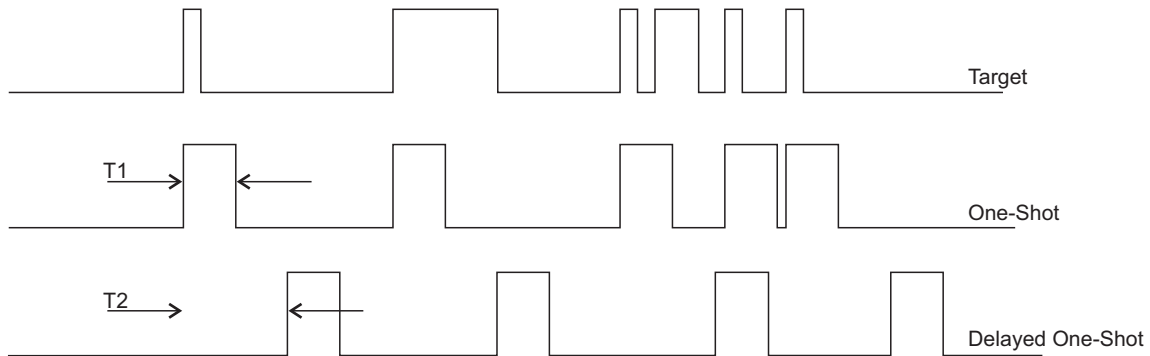


Note: These timers are nonretriggerable. The timing can be set for short (0-1.5 sec) or long (0-15sec) duration using the DIP switches and adjusted via the two 15-turn rotary knobs. Use the illustration below to aid in configuring these timers.

Typical ON/OFF Timing Diffuse (Light Operate) Nonretriggerable (only for new timing delay sensor)



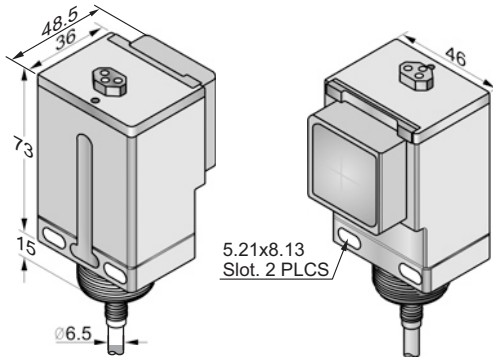
Typical ON/OFF Timing Diffuse (Light Operate) Nonretriggerable (only for new timing delay sensor)



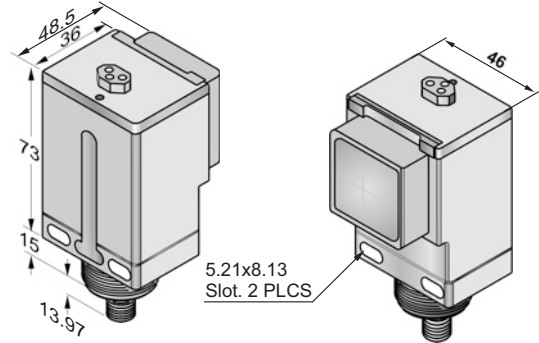
T1 is adjusted via the **OFF** delay potentiometer with either a long(0-15sec) or short (0-1.5sec) dip switch setting.
T2 is adjusted via the **ON** delay potentiometer with either a long(0-15sec) or short (0-1.5sec) dip switch setting.

Dimensions (Unit: mm)

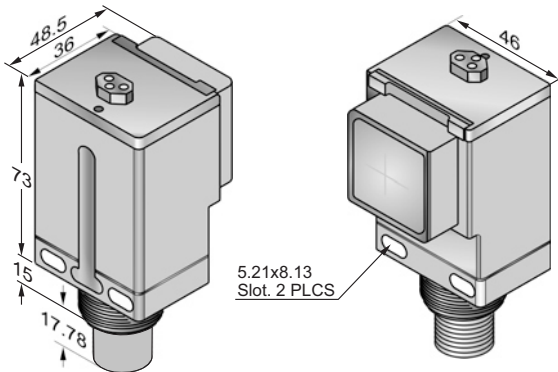
Cable Type



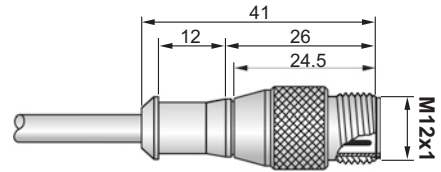
Euro or Micro Style Connector Type



Mini-style Connector Type



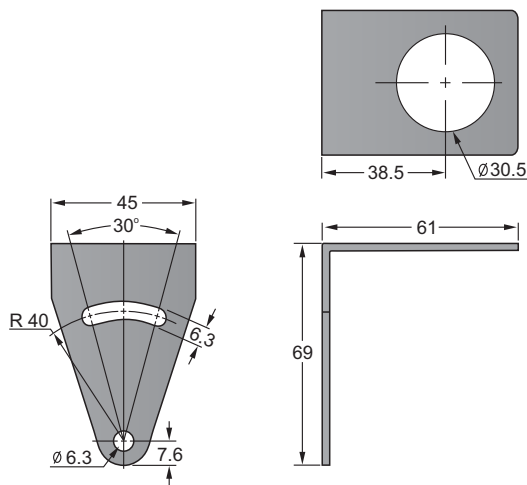
Pig tail* Type



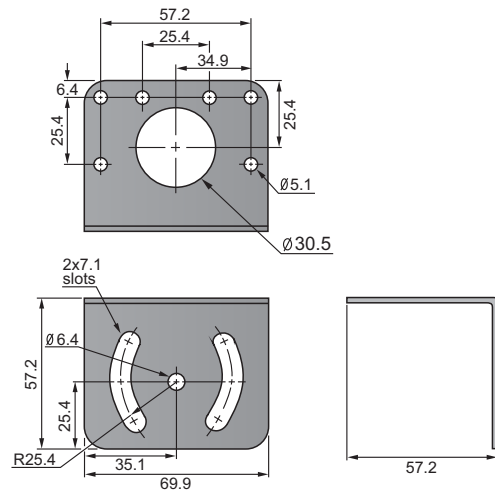
*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

Mounting Bracket

MB-6961(optional)



MB-7057(optional)



Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number	
<p style="text-align: center;">Infrared: 880nm</p> <p style="text-align: center;">Thru-beam Mode Sensing Distance: 28m</p>	Terminal	10-30V DC	Emitter	RP76-T028MD-EY9T4L	
				NPN	RP76-T028MN-CY9T4U
				PNP	RP76-T028MP-CY9T4U
				NPN/PNP	RP76-T028MD-CY9T4U
				NPN, Timing delay	RP76-T028MN-CY9T4U-T
				PNP, Timing delay	RP76-T028MP-CY9T4U-T
				NPN/PNP, Timing delay	RP76-T028MD-CY9T4U-T
		Quick Disconnect (0 to 90° settled)		10-30V DC (Euro Style)	Emitter
		NPN	RP76-T028MN-CY9Q4UE		
		PNP	RP76-T028MP-CY9Q4UE		
		NPN/PNP	RP76-T028MD-CY9Q4UE		
		NPN, Timing delay	RP76-T028MN-CY9Q4UE-T		
		PNP, Timing delay	RP76-T028MP-CY9Q4UE-T		
		NPN/PNP, Timing delay	RP76-T028MD-CY9Q4UE-T		
		Quick Disconnect swivel 90°	10-30V DC (Euro Style)	Emitter	RP76-T028MD-EY9Q4LE-S
		NPN		RP76-T028MN-CY9Q4UE-S	
		PNP		RP76-T028MP-CY9Q4UE-S	
		NPN/PNP		RP76-T028MD-CY9Q4UE-S	
		NPN, Timing delay		RP76-T028MN-CY9Q4UE-TS	
		PNP, Timing delay		RP76-T028MP-CY9Q4UE-TS	
		NPN/PNP, Timing delay		RP76-T028MD-CY9Q4UE-TS	
6" Pigtail		10-30V DC (Euro Style)	Emitter	RP76-T028MD-EY9P4LE	
	NPN		RP76-T028MN-CY9P4UE		
	PNP		RP76-T028MP-CY9P4UE		
	NPN/PNP		RP76-T028MD-CY9P4UE		
	NPN, Timing delay		RP76-T028MN-CY9P4UE-T		
	PNP, Timing delay		RP76-T028MP-CY9P4UE-T		
	NPN/PNP, Timing delay		RP76-T028MD-CY9P4UE-T		

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Infrared:880nm Thru-beam Mode Sensing Distance: 28m	Terminal 	12-240V DC/ 24-240VAC	Emitter (2-wire)	RP76-T028MA-EY9T4L
			Relay NO (4-wire)	RP76-T028MR-CY9T4L
			Relay NO, Timing delay (4-wire)	RP76-T028MR-CY9T4L-T
			SPST Solid-state Light-ON/Dark-ON (2-wire)	
	QuickDisconnect(0or90settled) 	12-240V DC/ 24-240VAC (Micro Style)	Emitter (2-wire)	RP76-T028MA-EY9Q4LM
			Relay NO (4-wire)	RP76-T028MR-CY9Q4LM
			Relay NO, Timing delay (4-wire)	RP76-T028MR-CY9Q4LM-T
			SPST Solid-state Light-ON/Dark-ON (2-wire)	
	Quick Disconnect swivel 90 ° 	12-240V DC/ 24-240VAC (Micro Style)	Emitter (2-wire)	RP76-T028MA-EY9Q4LM-S
			Relay NO (4-wire)	RP76-T028MR-CY9Q4LM-S
			Relay NO, Timing delay (4-wire)	RP76-T028MR-CY9Q4LM-TS
			SPST Solid-state Light-ON/Dark-ON (2-wire)	
6" Pigtail 	12-240V DC/ 24-240VAC (Micro Style)	Emitter (2-wire)	RP76-T028MA-EY9P4LM	
		Relay NO (4-wire)	RP76-T028MR-CY9P4LM	
		Relay NO, Timing delay (4-wire)	RP76-T028MR-CY9P4LM-T	
		SPST Solid-state Light-ON/Dark-ON (2-wire)		

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number	
<p style="text-align: center;">Infrared: 880nm</p> <p style="text-align: center;">800mm</p> <p style="text-align: center;">Diffuse Mode Sensing Distance: 800mm</p>	Terminal	10-30V DC	NPN	RP76-D0800N-CY9T4U	
			PNP	RP76-D0800P-CY9T4U	
			NPN/PNP	RP76-D0800D-CY9T4U	
			NPN , Timing delay	RP76-D0800N-CY9T4U-T	
			PNP, Timing delay	RP76-D0800P-CY9T4U-T	
		NPN/PNP, Timing delay	RP76-D0800D-CY9T4U-T		
		12-240V DC/ 24-240VAC	Relay NO (4-wire)	RP76-D0800R-CY9T4L	
			Relay NO, Timing delay (4-wire)	RP76-D0800R-CY9T4L-T	
			SPST Solid-state L.O./D.O. (2-wire)		
			QuickDisconnect(0or90settled)	10-30V DC (Euro Style)	NPN
	PNP				RP76-D0800P-CY9Q4UE
	NPN/PNP	RP76-D0800D-CY9Q4UE			
	NPN , Timing delay	RP76-D0800N-CY9Q4UE-T			
	PNP, Timing delay	RP76-D0800P-CY9Q4UE-T			
	NPN/PNP, Timing delay	RP76-D0800D-CY9Q4UE-T			
	12-240V DC/ 24-240VAC (Micro Style)	Relay NO (4-wire)		RP76-D0800R-CY9Q4LM	
		Relay NO, Timing delay (4-wire)		RP76-D0800R-CY9Q4LM-T	
		SPST Solid-state L.O./D.O. (2-wire)			
		Quick Disconnect swivel 90 °		10-30V DC (Euro Style)	NPN
			PNP		RP76-D0800P-CY9Q4UE-S
NPN/PNP	RP76-D0800D-CY9Q4UE-S				
NPN , Timing delay	RP76-D0800N-CY9Q4UE-TS				
PNP, Timing delay	RP76-D0800P-CY9Q4UE-TS				
NPN/PNP, Timing delay	RP76-D0800D-CY9Q4UE-TS				
12-240V DC/ 24-240VAC (Micro Style)	Relay NO (4-wire)		RP76-D0800R-CY9Q4LM-S		
	Relay NO, Timing delay (4-wire)		RP76-D0800R-CY9Q4LM-TS		
	SPST Solid-state L.O./D.O. (2-wire)				
	6" Pigtail		10-30V DC (Euro Style)	NPN	RP76-D0800N-CY9P4UE
		PNP		RP76-D0800P-CY9P4UE	
NPN/PNP		RP76-D0800D-CY9P4UE			
NPN , Timing delay		RP76-D0800N-CY9P4UE-T			
PNP, Timing delay		RP76-D0800P-CY9P4UE-T			
NPN/PNP, Timing delay		RP76-D0800D-CY9P4UE-T			
12-240V DC/ 24-240VAC (Micro Style)		Relay NO (4-wire)	RP76-D0800R-CY9P4LM		
		Relay NO, Timing delay (4-wire)	RP76-D0800R-CY9P4LM-T		
		SPST Solid-state L.O./D.O. (2-wire)			

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number		
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Diffuse Mode with Background Suppression</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Sensing Distance:300mm</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Infrared:880nm</p>	Terminal 	10-30V DC	NPN	RP76-D0300N-CY9T4U-BS		
			PNP	RP76-D0300P-CY9T4U-BS		
			NPN/PNP	RP76-D0300D-CY9T4U-BS		
			NPN , Timing delay	RP76-D0300N-CY9T4U-BT		
			PNP, Timing delay	RP76-D0300P-CY9T4U-BT		
			NPN/PNP, Timing delay	RP76-D0300D-CY9T4U-BT		
		12-240V DC/ 24-240VAC	Relay NO (4-wire)	RP76-D0300R-CY9T4L-BS		
			Relay NO, Timing delay (4-wire)	RP76-D0300R-CY9T4L-BT		
			SPST Solid-state L.O./D.O. (2-wire)			
			QuickDisconnect(0 or 90° settled) 	10-30V DC (Euro Style)	NPN	RP76-D0300N-CY9Q4UE-BS
					PNP	RP76-D0300P-CY9Q4UE-BS
					NPN/PNP	RP76-D0300D-CY9Q4UE-BS
	NPN , Timing delay	RP76-D0300N-CY9Q4UE-BT				
	PNP, Timing delay	RP76-D0300P-CY9Q4UE-BT				
	NPN/PNP, Timing delay	RP76-D0300D-CY9Q4UE-BT				
	12-240V DC/ 24-240VAC (Micro Style)	Relay NO (4-wire)	RP76-D0300R-CY9Q4LM-BS			
		Relay NO, Timing delay (4-wire)	RP76-D0300R-CY9Q4LM-BT			
		SPST Solid-state L.O./D.O. (2-wire)				
		Quick Disconnect swivel 90° 	10-30V DC (Euro Style)	NPN	RP76-D0300N-CY9Q4UE-SB	
				PNP	RP76-D0300P-CY9Q4UE-SB	
				NPN/PNP	RP76-D0300D-CY9Q4UE-SB	
	NPN , Timing delay			RP76-D0300N-CY9Q4UE-TB		
	PNP, Timing delay			RP76-D0300P-CY9Q4UE-TB		
	NPN/PNP, Timing delay			RP76-D0300D-CY9Q4UE-TB		
12-240V DC/ 24-240VAC (Micro Style)	Relay NO (4-wire)	RP76-D0300R-CY9Q4LM-SB				
	Relay NO, Timing delay (4-wire)	RP76-D0300R-CY9Q4LM-TB				
	SPST Solid-state L.O./D.O. (2-wire)					
	6" Pigtail 	10-30V DC (Euro Style)	NPN	RP76-D0300N-CY9P4UE-BS		
			PNP	RP76-D0300P-CY9P4UE-BS		
			NPN/PNP	RP76-D0300D-CY9P4UE-BS		
NPN , Timing delay			RP76-D0300N-CY9P4UE-BT			
PNP, Timing delay			RP76-D0300P-CY9P4UE-BT			
NPN/PNP, Timing delay			RP76-D0300D-CY9P4UE-BT			
12-240V DC/ 24-240VAC (Micro Style)	Relay NO (4-wire)	RP76-D0300R-CY9P4LM-BS				
	Relay NO, Timing delay (4-wire)	RP76-D0300R-CY9P4LM-BT				
	SPST Solid-state L.O./D.O. (2-wire)					

Retroreflective Mode with Polarizing Filter

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number						
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Retro-reflective Mode with Polarizing Filter Sensing Distance: 10m (Note)</p> <div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">LED red: 660nm</div> <div style="margin-bottom: 10px;"> </div> <div style="margin-bottom: 10px;"> </div> <div> </div> </div>	Terminal	10-30V DC	NPN	RP76-L010MN-CY6T4U-PF						
			10-30V DC	PNP	RP76-L010MP-CY6T4U-PF					
				10-30V DC	NPN/PNP	RP76-L010MD-CY6T4U-PF				
					NPN , Timing delay	RP76-L010MN-CY6T4U-TP				
					PNP, Timing delay	RP76-L010MP-CY6T4U-TP				
					NPN/PNP, Timing delay	RP76-L010MD-CY6T4U-TP				
		12-240V DC/ 24-240VAC		12-240V DC/ 24-240VAC	Relay NO (4-wire)	RP76-L010MR-CY6T4L-PF				
	Relay NO, Timing delay (4-wire)		RP76-L010MR-CY6T4L-TP							
	SPST Solid-state L.O./D.O. (2-wire)									
	QuickDisconnect(0or90settled)		10-30V DC (Euro Style)	NPN	RP76-L010MN-CY6Q4UE-PF					
	10-30V DC (Euro Style)			10-30V DC (Euro Style)	PNP	RP76-L010MP-CY6Q4UE-PF				
					10-30V DC (Euro Style)	10-30V DC (Euro Style)	NPN/PNP	RP76-L010MD-CY6Q4UE-PF		
							10-30V DC (Euro Style)	10-30V DC (Euro Style)	NPN , Timing delay	RP76-L010MN-CY6Q4UE-TP
									PNP, Timing delay	RP76-L010MP-CY6Q4UE-TP
							12-240V DC/ 24-240VAC (Micro Style)	12-240V DC/ 24-240VAC (Micro Style)	NPN/PNP, Timing delay	RP76-L010MD-CY6Q4UE-TP
		12-240V DC/ 24-240VAC (Micro Style)	12-240V DC/ 24-240VAC (Micro Style)		Relay NO (4-wire)	RP76-L010MR-CY6Q4LM-PF				
	Relay NO, Timing delay (4-wire)			RP76-L010MR-CY6Q4LM-TP						
	SPST Solid-state L.O./D.O. (2-wire)									
	Quick Disconnect swivel 90 °		10-30V DC (Euro Style)	NPN	RP76-L010MN-CY6Q4UE-PS					
	10-30V DC (Euro Style)			10-30V DC (Euro Style)	PNP	RP76-L010MP-CY6Q4UE-PS				
					10-30V DC (Euro Style)	10-30V DC (Euro Style)	NPN/PNP	RP76-L010MD-CY6Q4UE-PS		
							10-30V DC (Euro Style)	10-30V DC (Euro Style)	NPN , Timing delay	RP76-L010MN-CY6Q4UE-PT
									PNP, Timing delay	RP76-L010MP-CY6Q4UE-PT
							12-240V DC/ 24-240VAC (Micro Style)	12-240V DC/ 24-240VAC (Micro Style)	NPN/PNP, Timing delay	RP76-L010MD-CY6Q4UE-PT
12-240V DC/ 24-240VAC (Micro Style)		12-240V DC/ 24-240VAC (Micro Style)	Relay NO (4-wire)		RP76-L010MR-CY6Q4LM-PS					
	Relay NO, Timing delay (4-wire)		RP76-L010MR-CY6Q4LM-PT							
	SPST Solid-state L.O./D.O. (2-wire)									
6" Pigtail		10-30V DC (Euro Style)	NPN	RP76-L010MN-CY6P4UE-PF						
10-30V DC (Euro Style)			10-30V DC (Euro Style)	PNP	RP76-L010MP-CY6P4UE-PF					
				10-30V DC (Euro Style)	10-30V DC (Euro Style)	NPN/PNP	RP76-L010MD-CY6P4UE-PF			
						10-30V DC (Euro Style)	10-30V DC (Euro Style)	NPN , Timing delay	RP76-L010MN-CY6P4UE-TP	
								PNP, Timing delay	RP76-L010MP-CY6P4UE-TP	
						12-240V DC/ 24-240VAC (Micro Style)	12-240V DC/ 24-240VAC (Micro Style)	NPN/PNP, Timing delay	RP76-L010MD-CY6P4UE-TP	
	12-240V DC/ 24-240VAC (Micro Style)	12-240V DC/ 24-240VAC (Micro Style)		Relay NO (4-wire)	RP76-L010MR-CY6P4LM-PF					
Relay NO, Timing delay (4-wire)			RP76-L010MR-CY6P4LM-TP							
SPST Solid-state L.O./D.O. (2-wire)										

Specifications (DC)

Item	Sensing Mode				
	Thru-beam	Retroreflective (with polarizing filter)	Standard Diffuse	Diffuse (background suppression)	Glass Fiber Optic
Sensing Range, Adjustable	28m	10m (Note)	800 mm	300 mm	Depends on fiber optic used
Angle of Divergence	approx.1 °	approx.1.7 °	approx.1.1 °	approx.1.7 °	—
Light Spot Size	350mm@20m	150mm@5m	15mm@800mm	17mm@300mm	—
Light Source	Infrared 880nm	Red Light 660nm	Infrared 880nm	Infrared 880nm	Red Light 660nm
Response Time/Frequency	<=1ms/500Hz			<=2ms/250Hz	<=1ms/500Hz
Supply Voltage	10-30V DC (limit values)				
Current Consumption (no load)	<35 mA				
Ripple (within Vs tolerance)	<= 5 V peak-to-peak				
Indicator LED	Yellow: Power, Green: Output, Red: Margin (Emitter of thru-beam mode: Red LED)				
Output Type	PNP, NPN, PNP/NPN				
Output Voltage High	PNP is Vs-(<=2.5V); NPN is approx. Vs				
Output Voltage Low	PNP is approx. 0V; NPN is <=1.5V				
Output Current Max.	100 mA				
Operation Mode	Light or dark switching selectable via switch				
Housing Material	ABS				
Enclosure Rating	IP66 / NEMA4				
Circuit Protection	Outputs short circuit and over current protected, Vs reverse polarity protected				
Test Input	0 V: light source off; VS or no connection: light source on (only for thru-beam mode)				
Time Options	No delay, On delay, Off delay, One-shot (with timer mode only)				
Time Settings	0.1 ... 5s Variable (with timer mode only)				
Ambient Operating Temperature	-25...55°C				
Storage Temperature	-40...70°C				
EMC	IEC 60947-5-2, Parts 7.2.6.1.2.3 or RFI>3V/m (in 80-1000MHz), EFT>1KV, ESD>4KV(contact)				
Voltage With StandAbility	IEC 60947-5-2, Part 8.3.3.4 or 500VDC for one min, between all supply terminals connected together and enclosure				
Insulation Resistance	>20MΩ, with 500V 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 time each				
Weight	Approx. 120 g				
Mounting Bracket	MB-7263 (optional)				
Pigtail Type	See our pigtail series or our Cables & Connectors catalogue				

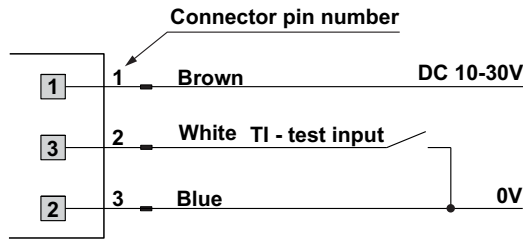
Note: Used with **RE-6152** (supplied with sensor) reflector.

Item \ Sensing Mode	Thru-beam	Retroreflective (with polarizing filter)	Standard Diffuse	Diffuse (background suppression)	Glass Fiber Optic
Sensing Range,Adjustable	28m	10m (Note)	800 mm	300 mm	Depends on fiber optic used
Angle of Divergence	approx.1 °	approx.1.7 °	approx.1.1 °	approx.1.7 °	——
Light Spot Size	350mm@20m	150mm@5m	15mm@800mm	17mm@300mm	——
Light Source	Infrared 880nm	Red Light 660nm	Infrared 880nm	Infrared 880nm	Red Light 660nm
Response Time / Frequency	<20 ms /25 Hz				
Supply Voltage	12-240V DC / 24-240VAC (10%)				
Power Consumption	< 2 VA				
Indicator LED	Yellow: Power, Green: Output, Red: Margin (Emitter of thru-beam mode: Red LED)				
Output Type	Relay NO isolated (provide arc suppression for inductive / capacitive loads), SPSTSolid-state with either normally closed or normally open contact				
Switching Voltage Max.	240 VAC				
Switching Current Max.	3A				
Current Consumption(No load)	< 30 mA				
Operation Mode	Light or dark switching selectable via switch				
Housing Material	ABS				
Enclosure Rating	IP66 / NEMA4				
Circuit Protection	Output short circuit protected (only for 2-wire type), Vs reverse polarity protected				
Time Options	No delay, On delay, Off delay, One-shot (with timer mode only)				
Time Settings	Adjustable, 0.1...5 s (with timer mode only)				
Ambient Operating Temperature	-25...55C				
Storage Temperature	-40...70C				
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, Part 8.3.3.4 or 1500VAC for one min, between all supply terminals connected together and enclosure				
Insulation Resistance	>20M Ω , with 500VAC 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				
Mounting Bracket	MB-7263 (optional)				
Weight	approx. 120 g				
Pig tail Type	See Pigtail Series or our Cables & Connector catalogue				

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

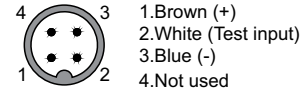
Connection Diagrams

Emitter of Thru-beam Mode (DC)

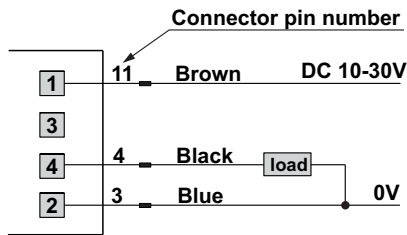


Connector pin position

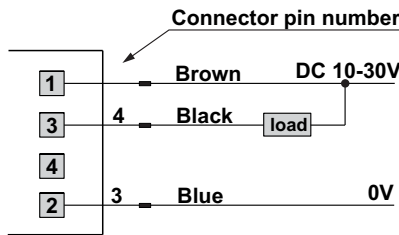
Euro-style



PNP output type



NPN output type

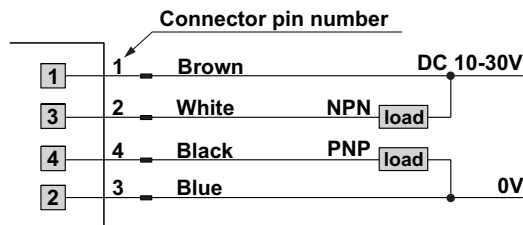


Connector pin position

Euro-style

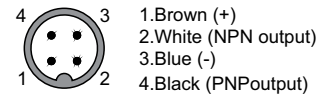


NPN/PNP output type

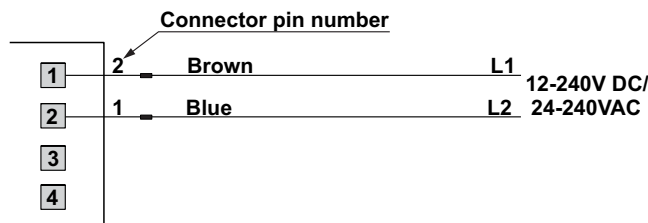


Connector pin position

Euro-style

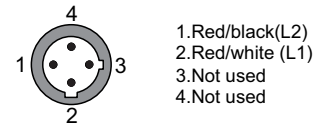


Emitter of Thru-beam Mode (AC/DC)

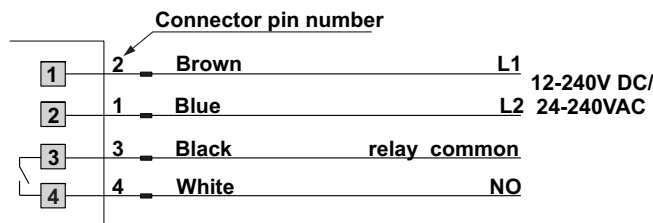


Connector pin position

Micro-style

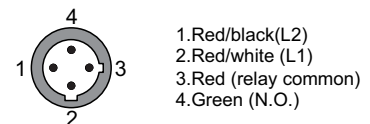


Relay output (AC/DC)

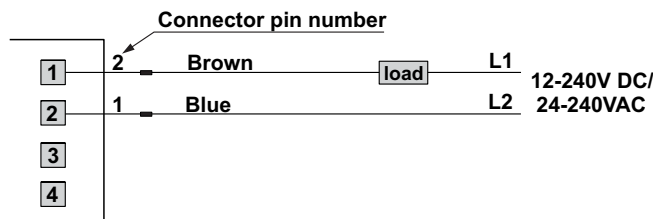


Connector pin position

Micro-style

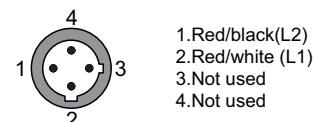


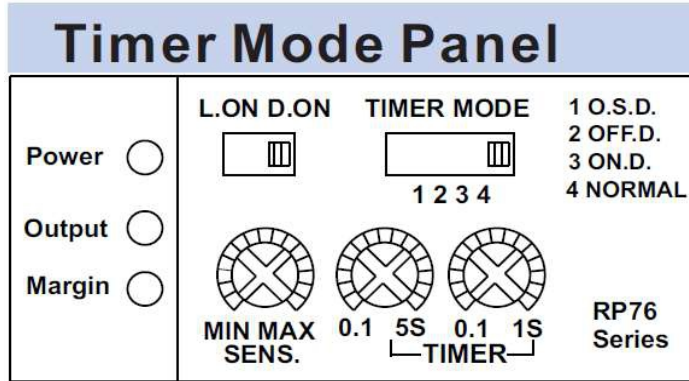
SPST Solid-state output (AC/DC)



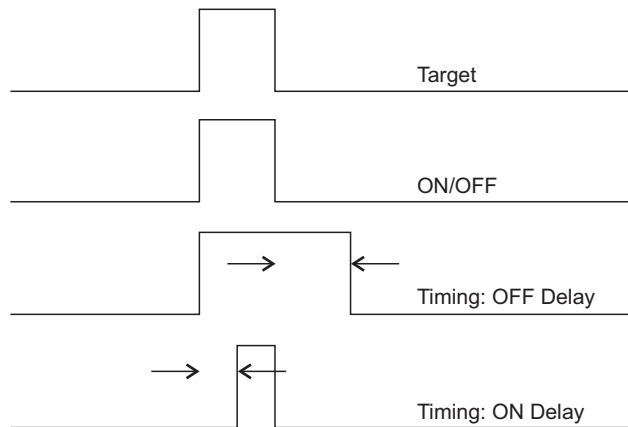
Connector pin position

Micro-style

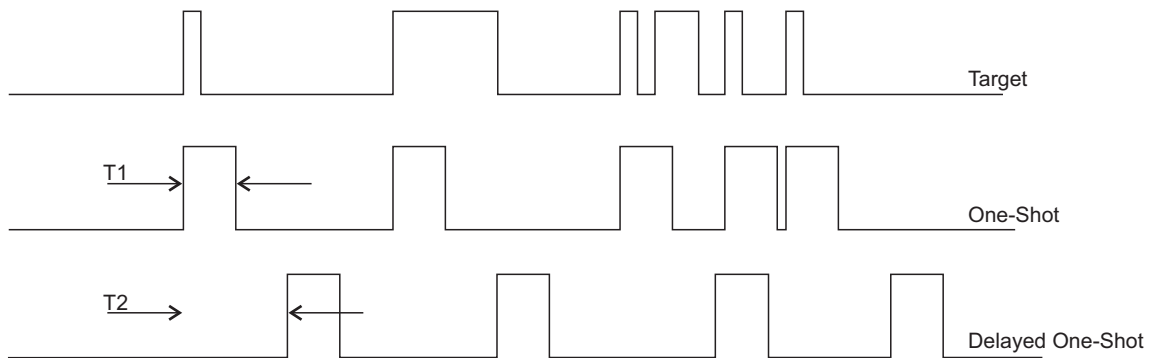




Typical ON/OFF Timing Diffuse (Light Operate) Nonretriggerable (only for new timing delay sensor)



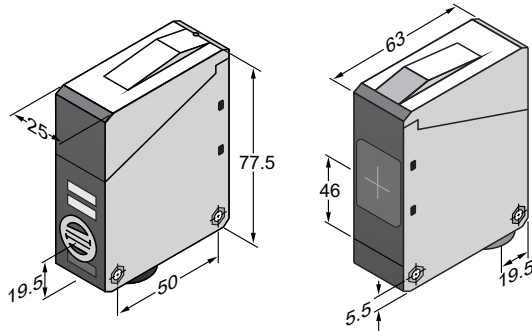
Typical ON/OFF Timing Diffuse (Light Operate) Nonretriggerable (only for new timing delay sensor)



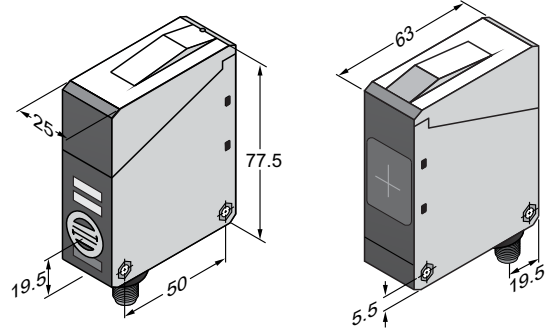
T1 is adjusted via the **OFF** delay potentiometer with either a long(0-15sec) or short (0-1.5sec) dip switch setting.
 T2 is adjusted via the **ON** delay potentiometer with either a long(0-15sec) or short (0-1.5sec) dip switch setting.

Sensor Type

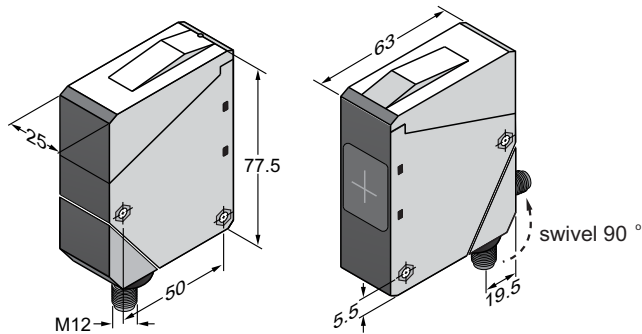
Terminal Type



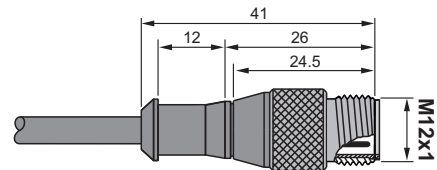
Quick Disconnect(0 or 90 °settled)



Quick Disconnect (Swivel 90 °)

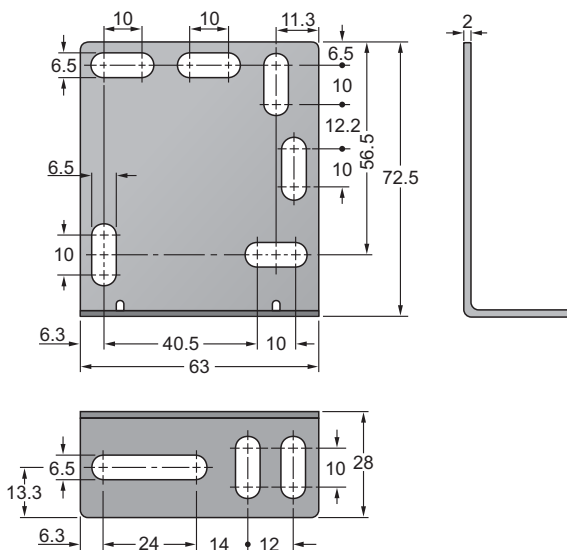


Pigtail* Type

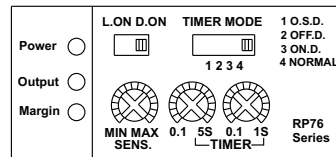


*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

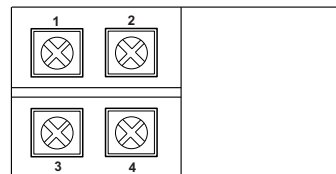
MB-7263 (Mounting bracket-optional)



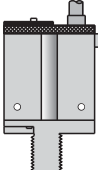
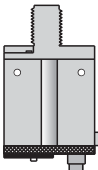






Timer Mode Panel



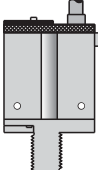
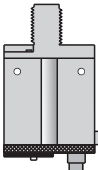




Terminal Type



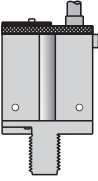
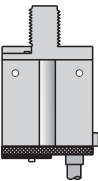






Opposed Mode (Standard Range)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p>Light Source: infrared 880nm</p>  <p>↑</p> 	<p>2m Cable</p> 	<p>10-30V DC</p>	Emitter	MP-T3000D-EX9C3L2
			NPN/PNP (1ms on/off)	MP-T3000D-CX9C4U2
			Emitter	MP-T3000D-EX9C3L2-HS
			NPN/PNP (0.3ms on/off)	MP-T3000D-CX9C4U2-HS
	<p>9m Cable</p> 	<p>10-30V DC</p>	Emitter	MP-T3000D-EX9C3L9
			NPN/PNP (1ms on/off)	MP-T3000D-CX9C4U9
			Emitter	MP-T3000D-EX9C3L9-HS
			NPN/PNP (0.3ms on/off)	MP-T3000D-CX9C4U9-HS
	<p>Pico Style 4 Pins QD</p> 	<p>10-30V DC</p>	Emitter	MP-T3000D-EX9Q4LP
			NPN/PNP (1ms on/off)	MP-T3000D-CX9Q4UP
			Emitter	MP-T3000D-EX9Q4LP-HS
			NPN/PNP (0.3ms on/off)	MP-T3000D-CX9Q4UP-HS
<p>Euro Style 4 Pins QD</p> 	<p>10-30V DC</p>	Emitter	MP-T3000D-EX9Q4LE	
		NPN/PNP (1ms on/off)	MP-T3000D-CX9Q4UE	
		Emitter	MP-T3000D-EX9Q4LE-HS	
		NPN/PNP (0.3ms on/off)	MP-T3000D-CX9Q4UE-HS	
<p>Pico Style 4 Pins 6 'Pigtail</p> 	<p>10-30V DC</p>	Emitter	MP-T3000D-EX9P4LP	
		NPN/PNP (1ms on/off)	MP-T3000D-CX9P4UP	
		Emitter	MP-T3000D-EX9P4LP-HS	
		NPN/PNP (0.3ms on/off)	MP-T3000D-CX9P4UP-HS	
<p>Euro Style 4 Pins 6 'Pigtail</p> 	<p>10-30V DC</p>	Emitter	MP-T3000D-EX9P4LE	
		NPN/PNP (1ms on/off)	MP-T3000D-CX9P4UE	
		Emitter	MP-T3000D-EX9P4LE-HS	
		NPN/PNP (0.3ms on/off)	MP-T3000D-CX9P4UE-HS	

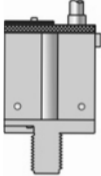
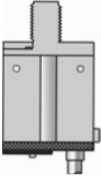




Opposed Mode (Standard Range)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number	
<p style="text-align: center;">Light Source : Infrared 880nm</p>  <p style="text-align: center;">↑</p>  <p style="text-align: center;">Opposed Mode Sensing Distance: 3m</p>	<p>2m Cable</p> 	24~240V AC	Emitter (2-wire)	MP-T3000A-EX9C2L2	
			SPST Solid-state (2ms on/1ms off) (3-wire)	MP-T3000A-CX9C3U2	
		12~240V DC/ 24~240VAC	Emitter (2-wire)	_____	
			SPST Solid-state (2ms on/1ms off) (2-wire)	_____	
		<p>9m Cable</p> 	24~240V AC	Emitter (2-wire)	MP-T3000A-EX9C2L9
				SPST Solid-state (2ms on/1ms off) (3-wire)	MP-T3000A-CX9C3U9
	12~240V DC/ 24~240VAC		Emitter (2-wire)	_____	
			SPST Solid-state (2ms on/1ms off) (2-wire)	_____	
	<p>Micro Style 3 Pins QD</p> 		24~240V AC	Emitter (2-wire)	MP-T3000A-EX9Q3LM
				SPST Solid-state (2ms on/1ms off) (3-wire)	MP-T3000A-CX9Q3UM
		12~240V DC/ 24~240VAC	Emitter (2-wire)	_____	
			SPST Solid-state (2ms on/1ms off) (2-wire)	_____	
<p>Micro Style3 Pins 6 Pigtail</p> 		24~240V AC	Emitter (2-wire)	MP-T3000A-EX9P3LM	
			SPST Solid-state (2ms on/1ms off) (3-wire)	MP-T3000A-CX9P3UM	
	12~240V DC/ 24~240VAC	Emitter (2-wire)	_____		
		SPST Solid-state (2ms on/1ms off) (2-wire)	_____		



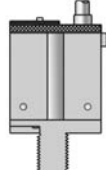
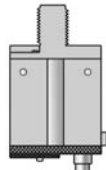




Opposed Mode (Long Range, Sn=30m)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Light Source : Infrared 880nm</p>   <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Opposed Mode Sensing Distance:30m</p>	<p>2m Cable</p> 	<p>10-30V DC</p>	Emitter	MP-T030MD-EX9C3L2
			NPN/PNP (1ms on/off)	MP-T030MD-CX9C4U2
			Emitter	MP-T030MD-EX9C3L2-HS
			NPN/PNP (0.3ms on/off)	MP-T030MD-CX9C4U2-HS
	<p>9m Cable</p> 	<p>10-30V DC</p>	Emitter	MP-T030MD-EX9C3L9
			NPN/PNP (1ms on/off)	MP-T030MD-CX9C4U9
			Emitter	MP-T030MD-EX9C3L9-HS
			NPN/PNP (0.3ms on/off)	MP-T030MD-CX9C4U9-HS
	<p>Pico Style 4 Pins QD</p> 	<p>10-30V DC</p>	Emitter	MP-T030MD-EX9Q4LP
			NPN/PNP (1ms on/off)	MP-T030MD-CX9Q4UP
			Emitter	MP-T030MD-EX9Q4LP-HS
			NPN/PNP (0.3ms on/off)	MP-T030MD-CX9Q4UP-HS
	<p>Euro Style 4 Pins QD</p> 	<p>10-30V DC</p>	Emitter	MP-T030MD-EX9Q4LE
			NPN/PNP (1ms on/off)	MP-T030MD-CX9Q4UE
			Emitter	MP-T030MD-EX9Q4LE-HS
			NPN/PNP (0.3ms on/off)	MP-T030MD-CX9Q4UE-HS
<p>Pico Style 4 Pins 6 'Pigtail</p> 	<p>10-30V DC</p>	Emitter	MP-T030MD-EX9P4LP	
		NPN/PNP (1ms on/off)	MP-T030MD-CX9P4UP	
		Emitter	MP-T030MD-EX9P4LP-HS	
		NPN/PNP (0.3ms on/off)	MP-T030MD-CX9P4UP-HS	
<p>Euro Style 4 Pins 6 'Pigtail</p> 	<p>10-30V DC</p>	Emitter	MP-T030MD-EX9P4LE	
		NPN/PNP (1ms on/off)	MP-T030MD-CX9P4UE	
		Emitter	MP-T030MD-EX9P4LE-HS	
		NPN/PNP (0.3ms on/off)	MP-T030MD-CX9P4UE-HS	

Opposed Mode (Long Range, Sn=30 m)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p style="text-align: center;">Light Source : Infrared 880nm</p>  <p style="text-align: center;">↑</p>  <p style="text-align: center;">Opposed Mode Sensing Distance : 30m</p>	<p>2m Cable</p> 	24~240V AC	Emitter (2-wire)	MP-T030MA-EX9C2L2
			SPST Solid-state (2ms on/1ms off) (3-wire)	MP-T030MA-CX9C3U2
		12~240V DC/ 24~240V AC	Emitter (2-wire)	_____
			SPST Solid-state (2ms on/1ms off) (2-wire)	_____
	<p>9m Cable</p> 	24~240V AC	Emitter (2-wire)	MP-T030MA-EX9C2L9
			SPST Solid-state (2ms on/1ms off) (3-wire)	MP-T030MA-CX9C3U9
		12~240V DC/ 24~240V AC	Emitter (2-wire)	_____
			SPST Solid-state (2ms on/1ms off) (2-wire)	_____
	<p>Micro Style 3 Pins QD</p> 	24~240V AC	Emitter (2-wire)	MP-T030MA-EX9Q3LM
			SPST Solid-state (2ms on/1ms off) (3-wire)	MP-T030MA-CX9Q3UM
		12~240V DC/ 24~240V AC	Emitter (2-wire)	_____
			SPST Solid-state (2ms on/1ms off) (2-wire)	_____
<p>Micro Style 3 Pins 6" Pigtail</p> 	24~240V AC	Emitter (2-wire)	MP-T030MA-EX9P3LM	
		SPST Solid-state (2ms on/1ms off) (3-wire)	MP-T030MA-CX9P3UM	
	12~240V DC/ 24~240V AC	Emitter (2-wire)	_____	
		SPST Solid-state (2ms on/1ms off) (2-wire)	_____	

Opposed Mode(For plastic detection, Sn=300mm)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Light Source : red light 650nm For plastic detection	2m Cable 	10-30V DC	Emitter	MP-T0300D-EX6C3L2-PD
			NPN/PNP (1ms on/off)	MP-T0300D-CX6C4U2-PD
			Emitter	MP-T0300D-EX6C3L2-PH
			NPN/PNP (0.3ms on/off)	MP-T0300D-CX6C4U2-PH
	9m Cable 	10-30V DC	Emitter	MP-T0300D-EX6C3L9-PD
			NPN/PNP (1ms on/off)	MP-T0300D-CX6C4U9-PD
			Emitter	MP-T0300D-EX6C3L9-PH
			NPN/PNP (0.3ms on/off)	MP-T0300D-CX6C4U9-PH
  Opposed Mode Sensing Distance:300mm	Pico Style 4 Pins QD 	10-30V DC	Emitter	MP-T0300D-EX6Q4LP-PD
			NPN/PNP (1ms on/off)	MP-T0300D-CX6Q4UP-PD
			Emitter	MP-T0300D-EX6Q4LP-PH
			NPN/PNP (0.3ms on/off)	MP-T0300D-CX6Q4UP-PH
	Euro Style 4 Pins QD 	10-30V DC	Emitter	MP-T0300D-EX6Q4LE-PD
			NPN/PNP (1ms on/off)	MP-T0300D-CX6Q4UE-PD
			Emitter	MP-T0300D-EX6Q4LE-PH
			NPN/PNP (0.3ms on/off)	MP-T0300D-CX6Q4UE-PH
Pico Style 4 Pins 6 'Pigtail 	10-30V DC	Emitter	MP-T0300D-EX6P4LP-PD	
		NPN/PNP (1ms on/off)	MP-T0300D-CX6P4UP-PD	
		Emitter	MP-T0300D-EX6P4LP-PH	
		NPN/PNP (0.3ms on/off)	MP-T0300D-CX6P4UP-PH	
Euro Style 4 Pins 6 'Pigtail 	10-30V DC	Emitter	MP-T0300D-EX6P4LE-PD	
		NPN/PNP (1ms on/off)	MP-T0300D-CX6P4UE-PD	
		Emitter	MP-T0300D-EX6P4LE-PH	
		NPN/PNP (0.3ms on/off)	MP-T0300D-CX6P4UE-PH	

Retroreflective Mode

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p>Light Source: red light 650nm</p> <p>↑ ↓</p> <p>Retro-reflective Mode Sensing Distance: 5m (Note) NON-Polarized</p>	<p>2m or 9m Cable</p>	10-30V DC	NPN/PNP (1ms on/off)	MP-L5000D-CX6C4U2(2m) MP-L5000D-CX6C4U9(9m)
			NPN/PNP (0.3ms on/off)	MP-L5000D-CX6C4U2-HS(2m) MP-L5000D-CX6C4U9-HS(9m)
		24-240V AC	SPST Solid-state (4ms on/off) (3-wire)	MP-L5000A-CX6C3U2 MP-L5000A-CX6C3U9(9m)
		12-240V DC/ 24-240VAC	SPST Solid-state (4ms on/off) (2-wire)	_____
	<p>M8 Connector (Pico-style)</p>	10-30V DC	NPN/PNP (1ms on/off)	MP-L5000D-CX6Q4UP
			NPN/PNP (0.3ms on/off)	MP-L5000D-CX6Q4UP-HS
		24-240V AC	_____	_____
		12-240V DC/ 24-240VAC	_____	_____
	<p>M12 Connector</p>	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-L5000D-CX6Q4UE
			NPN/PNP (0.3ms on/off)	MP-L5000D-CX6Q4UE-HS
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	MP-L5000A-CX6Q3UM
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	_____
<p>6" M8 Pigtail(Pico-style)</p>	10-30V DC	NPN/PNP (1ms on/off)	MP-L5000D-CX6P4UP	
		NPN/PNP (0.3ms on/off)	MP-L5000D-CX6P4UP-HS	
	24-240V AC	_____	_____	
	12-240V DC/ 24-240VAC	_____	_____	
<p>6" M12 Pigtail</p>	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-L5000D-CX6P4UE	
		NPN/PNP (0.3ms on/off)	MP-L5000D-CX6P4UE-HS	
	24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	MP-L5000A-CX6P3UM	
	12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	_____	







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

Retroreflective Mode with Polarizing Filter

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Light Source: red light 650nm</p> <p style="writing-mode: vertical-rl; transform: rotate(180deg);">Retro-reflective Mode with Polarizing Filter Sensing Distance:2m (Note)</p>	<p>2m or 9m Cable</p>	10-30V DC	NPN/PNP (1ms on/off)	MP-L2000D-CX6C4U2-PF(2m) MP-L2000D-CX6C4U9-PF (9m)
			NPN/PNP (0.3ms on/off)	MP-L2000D-CX6C4U2-FH(2m) MP-L2000D-CX6C4U9-FH (9m)
		24-240V AC	SPST Solid-state (4ms on/off) (3-wire)	MP-L2000A-CX6C3U2-PF(2m) MP-L2000A-CX6C3U9-PF (9m)
		12-240V DC/ 24-240VAC	SPST Solid-state (4ms on/off) (2-wire)	_____
	<p>M8 Connector (Pico-style)</p>	10-30V DC	NPN/PNP (1ms on/off)	MP-L2000D-CX6Q4UP-PF
			NPN/PNP (0.3ms on/off)	MP-L2000D-CX6Q4UP-FH
		24-240V AC	_____	_____
		12-240V DC/ 24-240VAC	_____	_____
	<p>M12 Connector</p>	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-L2000D-CX6Q4UE-PF
			NPN/PNP (0.3ms on/off)	MP-L2000D-CX6Q4UE-FH
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	MP-L2000A-CX6Q3UM-PF
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	_____
<p>6" M8 Pigtail(Pico-style)</p>	10-30V DC	NPN/PNP (1ms on/off)	MP-L2000D-CX6P4UP-PF	
		NPN/PNP (0.3ms on/off)	MP-L2000D-CX6P4UP-FH	
	24-240V AC	_____	_____	
	12-240V DC/ 24-240VAC	_____	_____	
<p>6" M12 Pigtail</p>	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-L2000D-CX6P4UE-PF	
		NPN/PNP (0.3ms on/off)	MP-L2000D-CX6P4UE-FH	
	24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	MP-L2000A-CX6P3UM-PF	
	12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	_____	

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

Diffuse Mode(Sensing Distance=380mm)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Light Source: infrared 880nm 	2m or 9m Cable 	10-30V DC	NPN/PNP (1ms on/off)	MP-D0380D-CX9C4U2 (2m) MP-D0380D-CX9C4U9 (9m)
			NPN/PNP (0.3ms on/off)	MP-D0380D-CX9C4U2-HS (2m) MP-D0380D-CX9C4U9-HS (9m)
		24-240V AC	SPST Solid-state (4ms on/off) (3-wire)	MP-D0380A-CX9C3U2 (2m) MP-D0380A-CX9C3U9 (9m)
		12-240V DC/ 24-240VAC	SPST Solid-state (4ms on/off) (2-wire)	_____
	M8 Connector (Pico-style) 	10-30V DC	NPN/PNP (1ms on/off)	MP-D0380D-CX9Q4UP
			NPN/PNP (0.3ms on/off)	MP-D0380D-CX9Q4UP-HS
		24-240V AC	_____	_____
		12-240V DC/ 24-240VAC	_____	_____
	M12 Connector 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-D0380D-CX9Q4UE
			NPN/PNP (0.3ms on/off)	MP-D0380D-CX9Q4UE-HS
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	MP-D0380A-CX9Q3UM
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	_____
Diffuse Mode Sensing Distance: 380mm 	6" M8 Pigtail(Pico-style)	10-30V DC	NPN/PNP (1ms on/off)	MP-D0380D-CX9P4UP
			NPN/PNP (0.3ms on/off)	MP-D0380D-CX9P4UP-HS
	24-240V AC	_____	_____	
	12-240V DC/ 24-240VAC	_____	_____	
6" M12 Pigtail 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-D0380D-CX9P4UE	
			NPN/PNP (0.3ms on/off)	MP-D0380D-CX9P4UE-HS
	24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	MP-D0380A-CX9P3UM	
	12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	_____	







Diffuse Mode(Sensing Distance=130mm)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Light Source: Infrared 880nm 	2m or 9m Cable 	10-30V DC	NPN/PNP (1ms on/off)	MP-D0130D-CX9C4U2 (2m) MP-D0130D-CX9C4U9 (9m)
			NPN/PNP (0.3ms on/off)	<hr/> <hr/>
		24-240V AC	SPST Solid-state (8ms on/off) (3-wire)	MP-D0130A-CX9C3U2 (2m) MP-D0130A-CX9C3U9 (9m)
		12-240V DC/ 24-240VAC	SPST Solid-state (8ms on/off) (2-wire)	<hr/> <hr/>
	M8 Connector (Pico-style) 	10-30V DC	NPN/PNP (1ms on/off)	MP-D0130D-CX9Q4UP
			NPN/PNP (0.3ms on/off)	<hr/>
		24-240V AC	<hr/>	<hr/>
		12-240V DC/ 24-240VAC	<hr/>	<hr/>
M12 Connector 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-D0130D-CX9Q4UE	
		NPN/PNP (0.3ms on/off)	<hr/>	
	24-240V AC (Micro-style)	SPST Solid-state (8ms on/off) (3-wire)	MP-D0130A-CX9Q3UM	
	12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (8ms on/off) (2-wire)	<hr/>	
Diffuse Mode Sensing Distance: 130mm	6" M8 Pigtail(Pico-style) 	10-30V DC	NPN/PNP (1ms on/off)	MP-D0130D-CX9P4UP
			NPN/PNP (0.3ms on/off)	<hr/>
		24-240V AC	<hr/>	<hr/>
	12-240V DC/ 24-240VAC	<hr/>	<hr/>	
	6" M12 Pigtail 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-D0130D-CX9P4UE
			NPN/PNP (0.3ms on/off)	<hr/>
		24-240V AC (Micro-style)	SPST Solid-state (8ms on/off) (3-wire)	MP-D0130A-CX9P3UM
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (8ms on/off) (2-wire)	<hr/>








Convergent Mode(Sensing Distance=16mm,Infrared Light)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Light Source: infrared 880nm 	2m or 9m Cable 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0016D-CX9C4U2 (2m) MP-C0016D-CX9C4U9 (9m)
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX9C4U2-HS (2m) MP-C0016D-CX9C4U9-HS (9m)
		24-240V AC	SPST Solid-state (4ms on/off) (3-wire)	MP-C0016A-CX9C3U2 (2m) MP-C0016A-CX9C3U9 (9m)
		12-240V DC/ 24-240VAC	SPST Solid-state (4ms on/off) (2-wire)	<hr/> <hr/>
	M8 Connector (Pico-style) 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0016D-CX9Q4UP
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX9Q4UP-HS
		24-240V AC	<hr/>	<hr/>
		12-240V DC/ 24-240VAC	<hr/>	<hr/>
	M12 Connector 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-C0016D-CX9Q4UE
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX9Q4UE-HS
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	MP-C0016A-CX9Q3UM
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	<hr/>
Convergent Mode Sensing Distance: 16mm 	6" M8 Pigtail(Pico-style) 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0016D-CX9P4UP
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX9P4UP-HS
		24-240V AC	<hr/>	<hr/>
		12-240V DC/ 24-240VAC	<hr/>	<hr/>
	6" M12 Pigtail 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-C0016D-CX9P4UE
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX9P4UE-HS
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	MP-C0016A-CX9P3UM
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	<hr/>







Convergent Mode (Sensing Distance=16mm, Red Light)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Light Source: red light 650nm</p> 	<p>2m or 9m Cable</p> 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0016D-CX6C4U2 (2m) MP-C0016D-CX6C4U9 (9m)
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX6C4U2-HS(2m) MP-C0016D-CX6C4U9-HS(9m)
		24-240V AC	SPST Solid-state (4ms on/off) (3-wire)	_____
		12-240V DC/ 24-240VAC	SPST Solid-state (4ms on/off) (2-wire)	_____
	<p>M8 Connector (Pico-style)</p> 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0016D-CX6Q4UP
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX6Q4UP-HS
		24-240V AC	_____	_____
		12-240V DC/ 24-240VAC	_____	_____
	<p>M12 Connector</p> 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-C0016D-CX6Q4UE
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX6Q4UE-HS
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	_____
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	_____
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Convergent Mode Sensing Distance: 16mm Spot size at focus: 1.3mm</p>	<p>6" M8 Pigtail(Pico-style)</p> 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0016D-CX6P4UP
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX6P4UP-HS
		24-240V AC	_____	_____
		12-240V DC/ 24-240VAC	_____	_____
	<p>6" M12 Pigtail</p> 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-C0016D-CX6P4UE
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX6P4UE-HS
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	_____
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	_____








Convergent Mode(Sensing Distance=16mm,Green Light)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Light Source: green light 525nm</p> 	<p>2m or 9m Cable</p> 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0016D-CX5C4U2 (2m) MP-C0016D-CX5C4U9 (9m)
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX5C4U2-HS(2m) MP-C0016D-CX5C4U9-HS(9m)
		24-240V AC	SPST Solid-state (4ms on/off) (3-wire)	_____
		12-240V DC/ 24-240VAC	SPST Solid-state (4ms on/off) (2-wire)	_____
	<p>M8 Connector (Pico-style)</p> 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0016D-CX5Q4UP
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX5Q4UP-HS
		24-240V AC	_____	_____
		12-240V DC/ 24-240VAC	_____	_____
	<p>M12 Connector</p> 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-C0016D-CX5Q4UE
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX5Q4UE-HS
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	_____
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	_____
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Convergent Mode Sensing Distance: 16mm Spot size at focus: 1.0mm</p> 	<p>6" M8 Pigtail(Pico-style)</p> 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0016D-CX5P4UP
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX5P4UP-HS
		24-240V AC	_____	_____
		12-240V DC/ 24-240VAC	_____	_____
	<p>6" M12 Pigtail</p> 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-C0016D-CX5P4UE
			NPN/PNP (0.3ms on/off)	MP-C0016D-CX5P4UE-HS
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	_____
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	_____

Convergent Mode(Sensing Distance=43mm, Infrared Light)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Light Source: infrared 880nm 	2m or 9m Cable 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0043D-CX9C4U2 (2m) MP-C0043D-CX9C4U9 (9m)
			NPN/PNP (0.3ms on/off)	MP-C0043D-CX9C4U2-HS (2m) MP-C0043D-CX9C4U9-HS (9m)
		24-240V AC	SPST Solid-state (4ms on/off) (3-wire)	<hr/>
		12-240V DC/ 24-240VAC	SPST Solid-state (4ms on/off) (2-wire)	<hr/>
	M8 Connector (Pico-style) 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0043D-CX9Q4UP
			NPN/PNP (0.3ms on/off)	MP-C0043D-CX9Q4UP-HS
		24-240V AC	<hr/>	<hr/>
		12-240V DC/ 24-240VAC	<hr/>	<hr/>
	M12 Connector 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-C0043D-CX9Q4UE
			NPN/PNP (0.3ms on/off)	MP-C0043D-CX9Q4UE-HS
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	<hr/>
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	<hr/>
Convergent Mode Sensing Distance: 43mm	6" M8 Pigtail(Pico-style) 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0043D-CX9P4UP
			NPN/PNP (0.3ms on/off)	MP-C0043D-CX9P4UP-HS
		24-240V AC	<hr/>	<hr/>
		12-240V DC/ 24-240VAC	<hr/>	<hr/>
	6" M12 Pigtail 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-C0043D-CX9P4UE
			NPN/PNP (0.3ms on/off)	MP-C0043D-CX9P4UE-HS
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	<hr/>
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	<hr/>

Convergent Mode(Sensing Distance=43mm, Red Light)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Light Source: red light 650nm</p> 	<p>2m or 9m Cable</p> 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0043D-CX6C4U2 (2m) MP-C0043D-CX6C4U9 (9m)
			NPN/PNP (0.3ms on/off)	MP-C0043D-CX6C4U2-HS(2m) MP-C0043D-CX6C4U9-HS(9m)
		24-240V AC	SPST Solid-state (4ms on/off) (3-wire)	_____
		12-240V DC/ 24-240VAC	SPST Solid-state (4ms on/off) (2-wire)	_____
	<p>M8 Connector (Pico-style)</p> 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0043D-CX6Q4UP
			NPN/PNP (0.3ms on/off)	MP-C0043D-CX6Q4UP-HS
		24-240V AC	_____	_____
		12-240V DC/ 24-240VAC	_____	_____
	<p>M12 Connector</p> 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-C0043D-CX6Q4UE
			NPN/PNP (0.3ms on/off)	MP-C0043D-CX6Q4UE-HS
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	_____
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	_____
<p style="writing-mode: vertical-rl; transform: rotate(180deg);">Convergent Mode Sensing Distance: 43mm Spot size at focus: 1.3mm</p> 	<p>6" M8 Pigtail(Pico-style)</p> 	10-30V DC	NPN/PNP (1ms on/off)	MP-C0043D-CX6P4UP
			NPN/PNP (0.3ms on/off)	MP-C0043D-CX6P4UP-HS
		24-240V AC	_____	_____
		12-240V DC/ 24-240VAC	_____	_____
	<p>6" M12 Pigtail</p> 	10-30V DC (Euro-style)	NPN/PNP (1ms on/off)	MP-C0043D-CX6P4UE
			NPN/PNP (0.3ms on/off)	MP-C0043D-CX6P4UE-HS
		24-240V AC (Micro-style)	SPST Solid-state (4ms on/off) (3-wire)	_____
		12-240V DC/ 24-240VAC (Micro-style)	SPST Solid-state (4ms on/off) (2-wire)	_____

Specifications (DC)

Item	Sensing Mode		DC		
	Opposed Mode		Retroreflective Mode	Diffuse/Convergent Mode	
	E	R			
Sensing Range	See each mode				
Hysteresis	—				
Operating Voltage	10~30V				
Ripple	< 10%				
Voltage Drop	—	<2.0V at 150mA			
Max Load Current	—	150mA			
No Load Current	<25mA				
Min. Load Current	—	5mA			
Leakage Current	—	<1mA			
Output Configuration	Bipolar: One current sourcing (PNP) and one current sinking (NPN) open-collector transistor				
Indicators	Red indicator LED on rear or sensor is “on” when the load is energized				
Adjustments	Light-ON/Dark-ON select switch, and 15-turn slotted brass screw GAIN (sensitivity) adjustment potentiometer (clutched at both ends of travel). Both controls are located on rear panel of sensor and protected by a gasketed, clear acrylic cover.				
Transient Protection	Yes				
Reverse Polarity Protection	Yes				
Short Circuit Protection	Yes				
Over Load Current Protection	>180mA				
Output Response Time/ Frequency	1ms/500Hz or 0.3ms/1.6KHz (High-speedType)				
Construction	Reinforced thermoplastic polyester housing, totally encapsulated, o-ring sealing, acrylic lenses, and stainless screws.				
Environmental Rating	IP67				
Operating Conditions	Temperature: -20° to +70 °C, Maximum relative humidity: 90% at 50°C				
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	IEC60947-5-2, Part 8.3.3.4 or 500VDC for onemin, between all supply terminals connected together and enclosure				
Insulation Resistance	>20M Ω, with 500V 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 time each				
Mounting Bracket	MP-A1,A2,A3 (see Accessories)				
Cable	2m or 9m 5.8 ϕ 4X0.5 (Emitter :3X0.5) PVC.				
Pigtail Type	See page Q-01 for cable and connect at pigtail				

Specifications(AC)

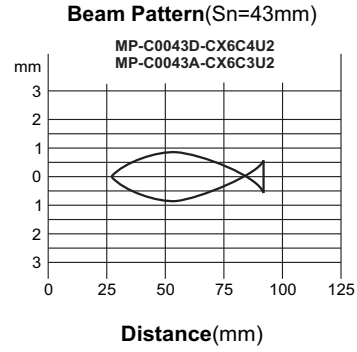
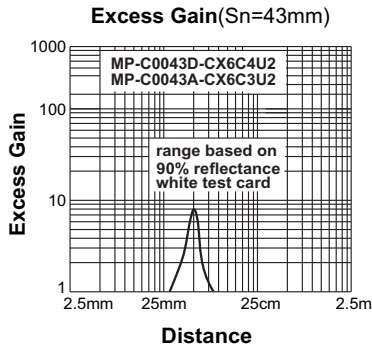
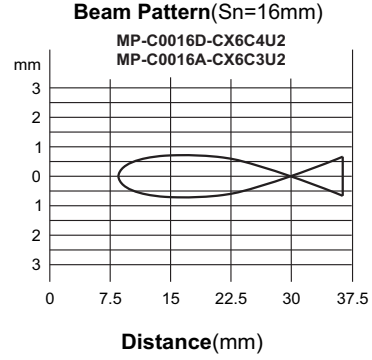
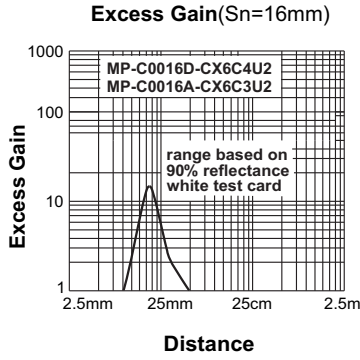
Item	Sensing Mode		AC			
	Opposed Mode		Retroreflective Mode		Diffuse/Convergent Mode	
	E	R				
Sensing Range	See each mode					
Hysteresis	—				<20% SD	
Operating Voltage	24~240VAC(50/60HZ)					
Output Configuration	SPST MOSFET solid-state relay with either normally closed or normally open contact (light/dark operate selectable; 3-wire hookup)					
Voltage Drop	—	<10V at 200mA				
Max Load Current	—	≤ 200mA				
No Load Current	25mA	≤ 1.7mA				
Min. Load Current	—	≤ 5mA				
Leakage Current	—	≤ 1.7mA				
Transient Protection	Yes					
ShortCircuit Protection	—	Yes				
OverLoad Current Protection	—	≥220mA				
Response Time/Frequency	2ms/500Hz	8ms/30Hz	4ms/125Hz		8ms/30Hz	
Construction	Reinforced thermoplastic polyester housing, totally encapsulated, o-ring sealing, acrylic lenses, and stainless screws.					
Adjustments	Light-ON/Dark-ON select switch, and 15-turn slotted brass screw GAIN (sensitivity) adjustment potentiometers (clutched at both ends of travel). Both controls are located on rear panel of sensor and protected, clear acrylic cover.					
Indicators	Red indicator LED on rear or sensor is "on" when the load is energized					
Environmental Rating	IP67					
Operating Temperature	Temperature: -20 ^o to +70 ^o C, Maximum relative humidity: 90% at 50 ^o					
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	IEC60947-5-2,Part8.3.3.4or1500VACforonemin, 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 time each					
Cable	2m or 9m 5.8 ϕ 4X0.5 (Emitter :2x0.5) PVC.					
Pigtail Type	See Pigtail Series or our Cables & Connectors catalogue.					

Specifications(AC/DC)

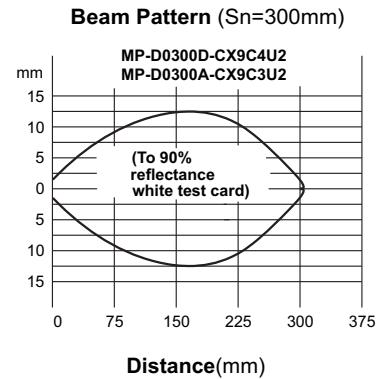
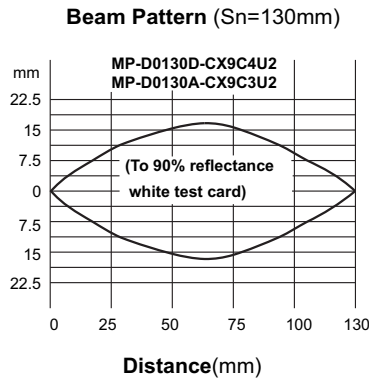
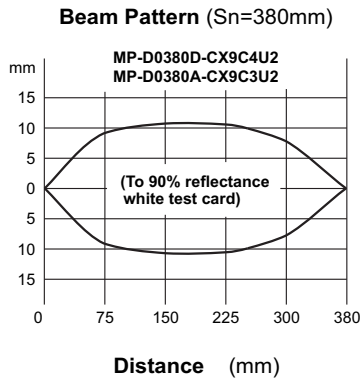
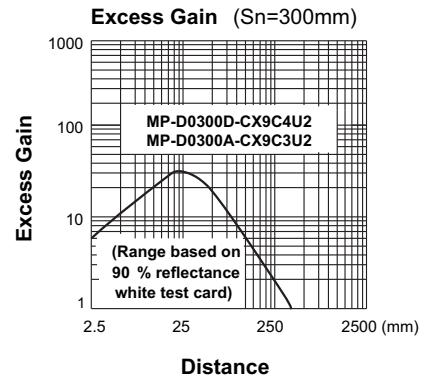
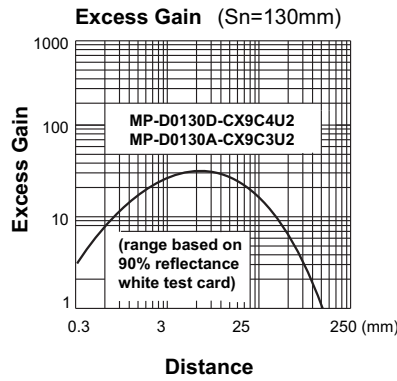
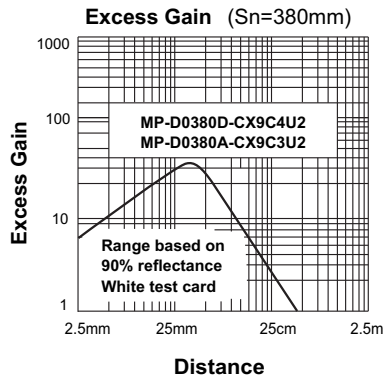
Item	Sensing Mode		AC/DC			
	Opposed Mode		Retroreflective Mode		Diffuse/Convergent Mode	
	E	R				
Sensing Range	See each mode					
Hysteresis	—				<20%SD	
Operating Voltage	12~240V DC/ 24~240VAC					
Output Configuration	SPST SCR solid-state relay with either normally closed or normally open contact (light/dark operate selectable; 2-wire hookup)					
Voltage Drop	—	<10V at 200mA				
Max Load Current	—	≤ 200mA				
No Load Current	25mA	≤ 1.7mA				
Min. Load Current	—	≤ 5mA				
Leakage Current	—	≤ 1.7mA				
Transient protection	yes					
ShortCircuit Protection	—	yes				
OverLoad Current Protection	—	≥220mA				
Response Time/Frequency	2ms/500Hz	8ms/30Hz	4ms/125Hz		8ms/30Hz	
Construction	Reinforced thermoplastic polyester housing, totally encapsulated, o-ring sealing, acrylic lenses, and stainless screws.					
Adjustments	Light/Dark operate selectable, 2-wire hookup, and 15-turn slotted brass screw GAIN (sensitivity) adjustment potentiometers (clutched at both ends of travel). Both controls are located on rear panel of sensor and protected, clear acrylic cover.					
Indicators	Red indicator LED on rear or sensor is “on” when the load is energized					
Environmental Rating	IP67					
Operating Temperature	Temperature: -20℉o +70C°, Maximum relative humidity: 90% at 50C°					
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	IEC60947-5-2,Part8.3.3.4or1500VACforonemin, between all supply terminals connected together and enclosure					
Insulation Resistance	>20MΩ, 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 time each					
Cable	2m or 9m 5.8 ϕ 4X0.5 (Emitter :2x0.5) PVC.					
Pigtail Type	See Pigtail Series or our Cables & Connectors catalogue.					

Sensing Characteristics (Typical)

Convergent Mode

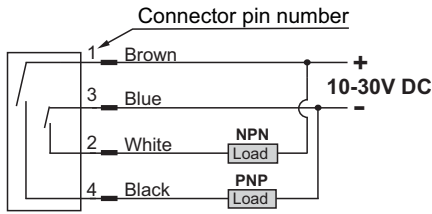


Diffuse Mode



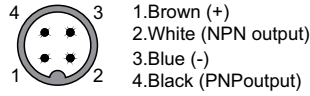
Connection Diagrams

NPN/PNP

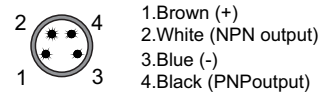


Connector face view

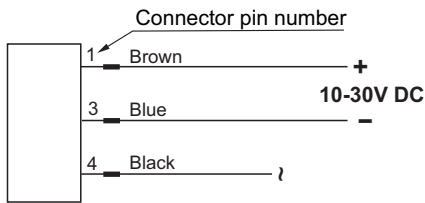
Euro-style



Pico-Style

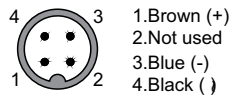


Emitter of Thru-beam Mode (DC)

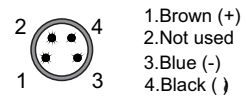


Connector face view

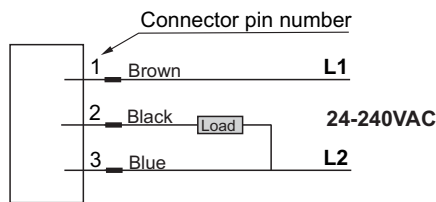
Euro-style



Pico-Style



AC Type Sensor

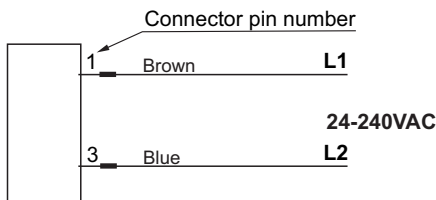


Connector face view

Micro-style

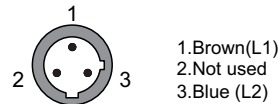


Emitter of Thru-beam Mode (AC)

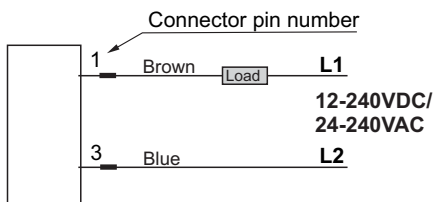


Connector face view

Micro-style

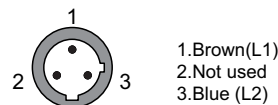


AC/DC Type Sensor

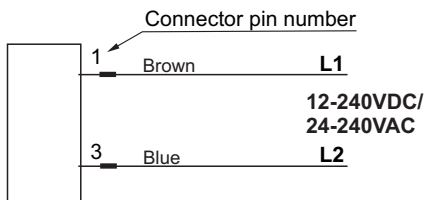


Connector face view

Micro-style

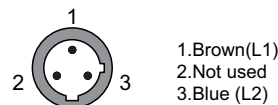


Emitter of Thru-beam Mode(AC/DC)



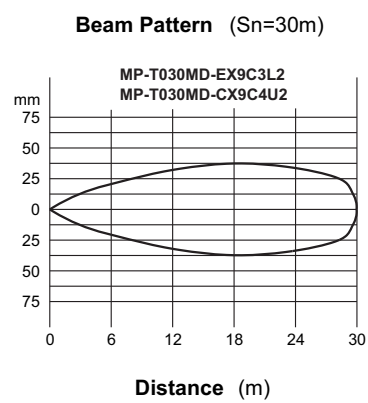
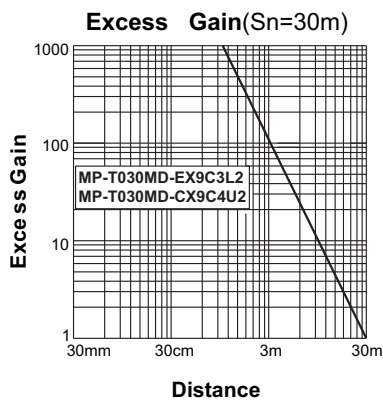
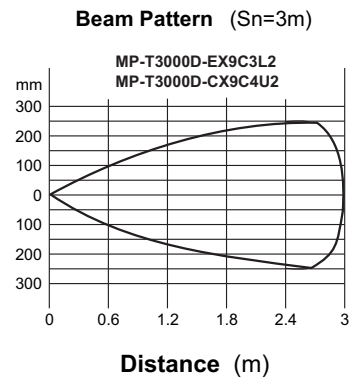
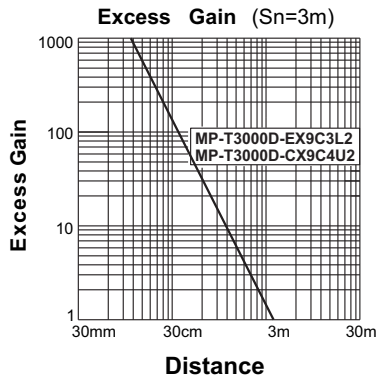
Connector face view

Micro-style

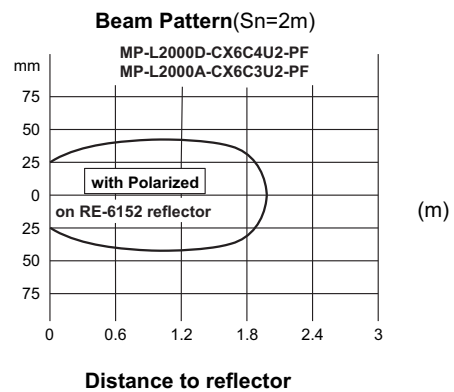
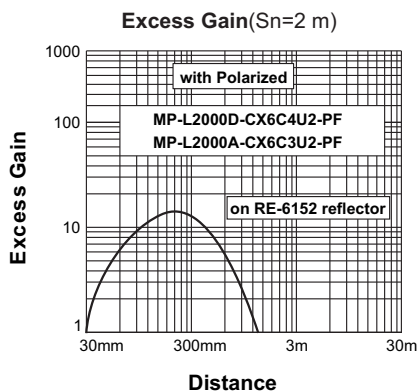
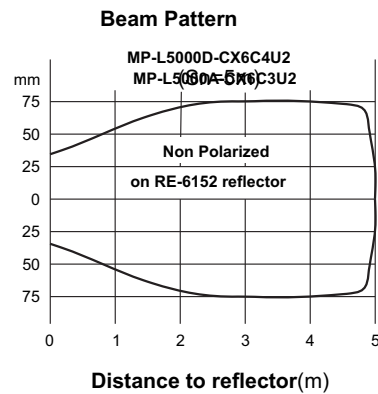
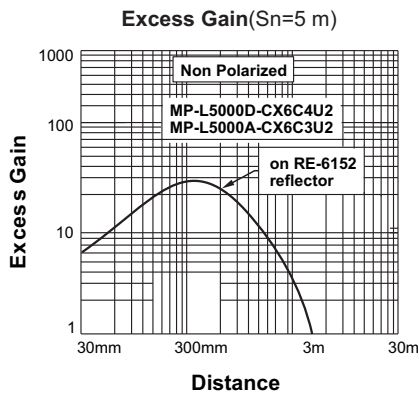


Sensing Characteristics (Typical)

Opposed Mode

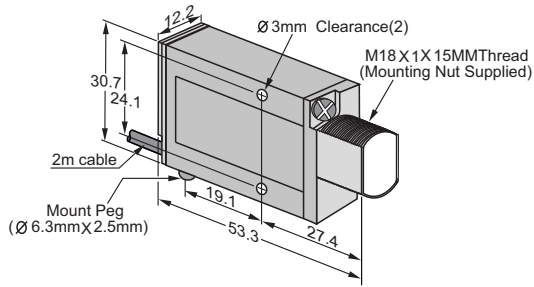


Retro-reflective Mode

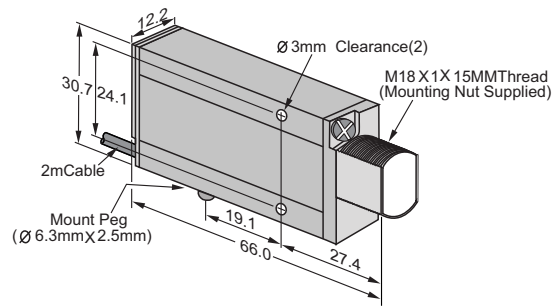


Dimensions (Unit: mm)

Standard Type Sensor

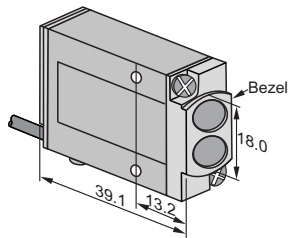


DC Type Sensor



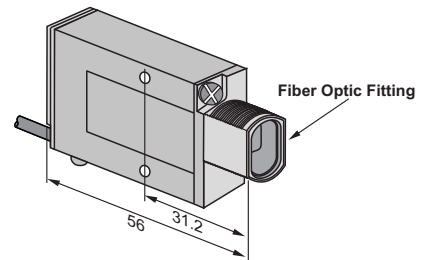
AC & AC/DC Type Sensor

Diffuse Mode Sensor (Sn=130mm, Sn=300mm)

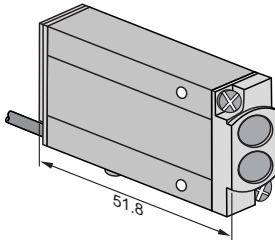


DC Type Sensor

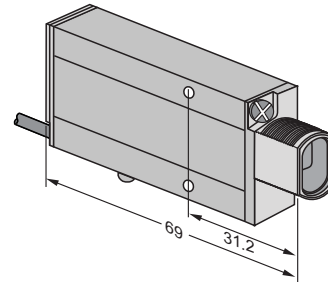
Glass Fiber Optic Mode Sensor



DC Type Sensor

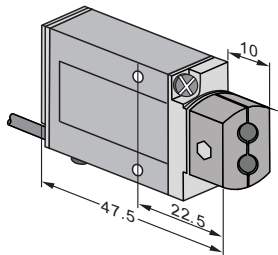


AC & AC/DC Type Sensor



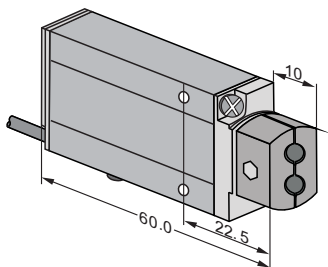
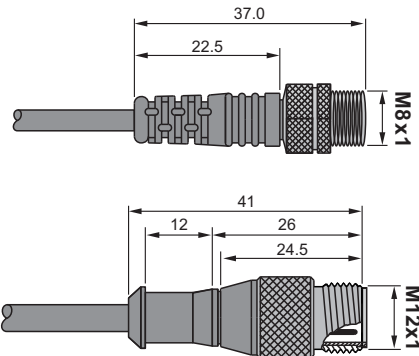
AC & AC/DC Type Sensor

Plastic Fiber Optic Mode Sensor

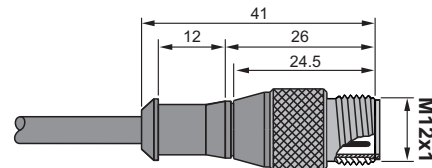


DC Type Sensor

Pigtail* Type



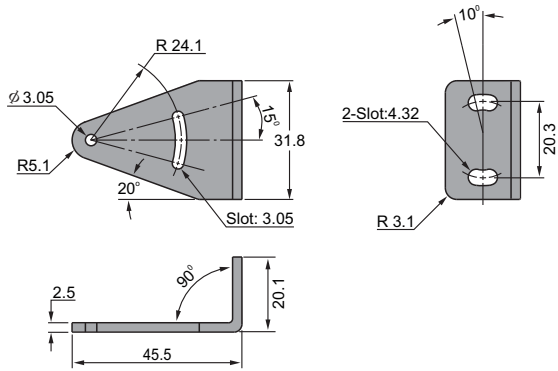
AC & AC/DC Type Sensor



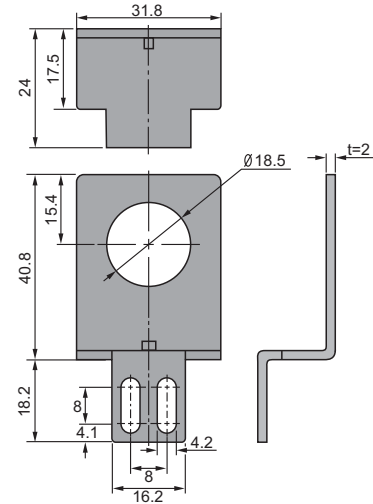
*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

Sensor Mounting Bracket's Dimensions (Unit: mm)

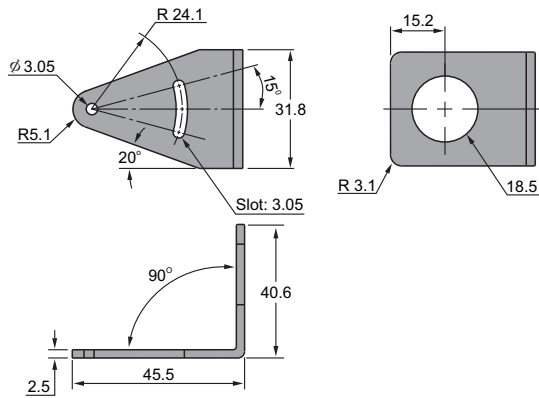
MB-3245 (optional)



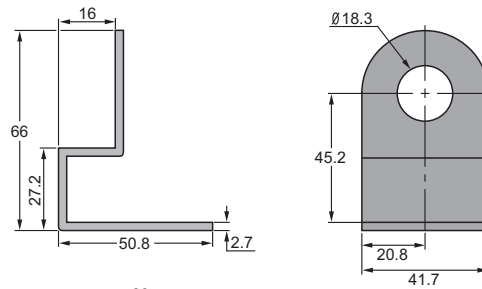
MB-5932 (optional)



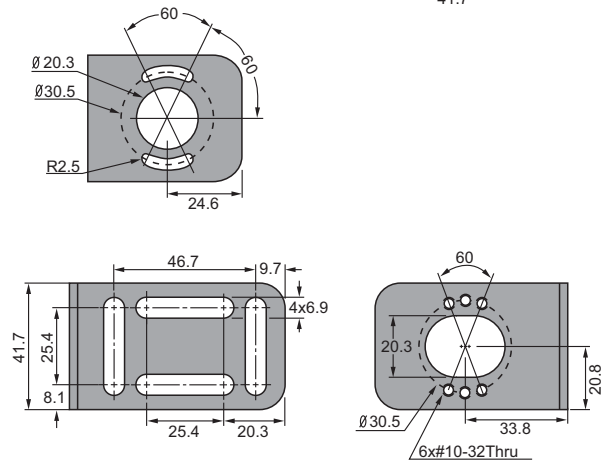
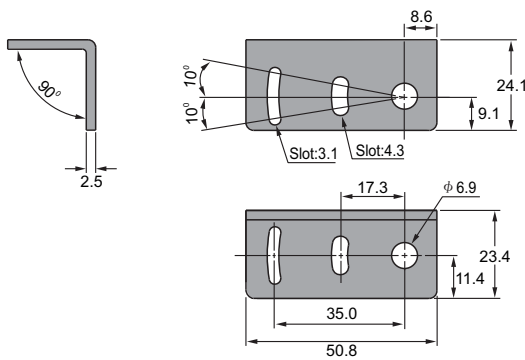
MB-4532 (optional)



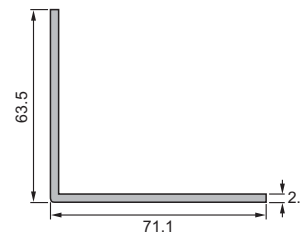
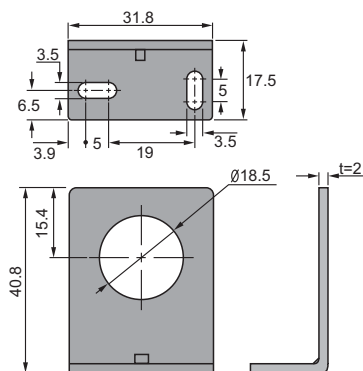
MB-6642/6471 (optional)



MB-5024 (optional)

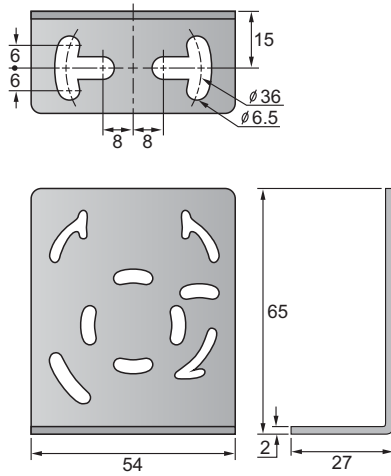


MB-4032 (optional)

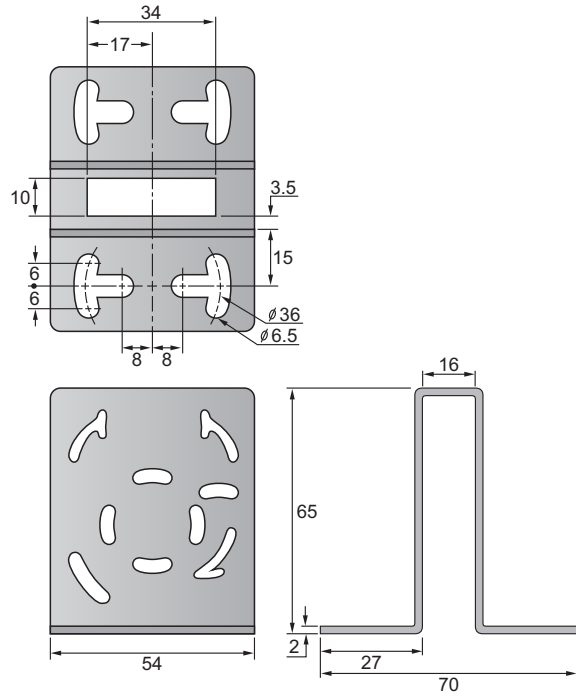


Sensor Mounting Bracket's Dimensions (Unit: mm)

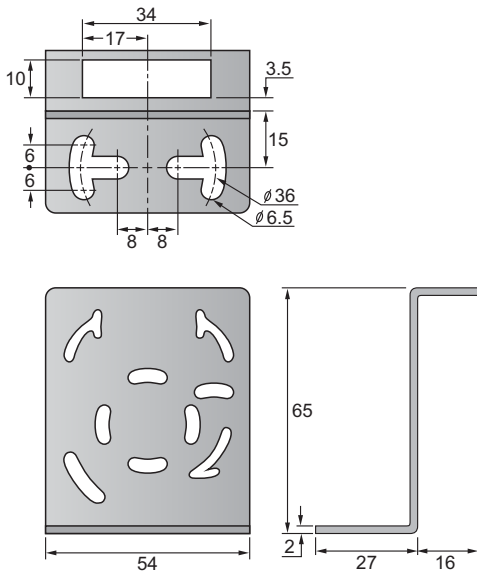
MB-5465A (optional)



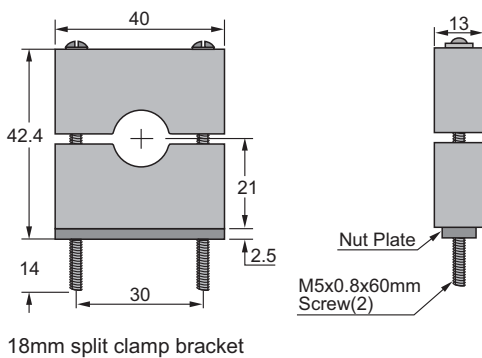
MB-5465C (optional)



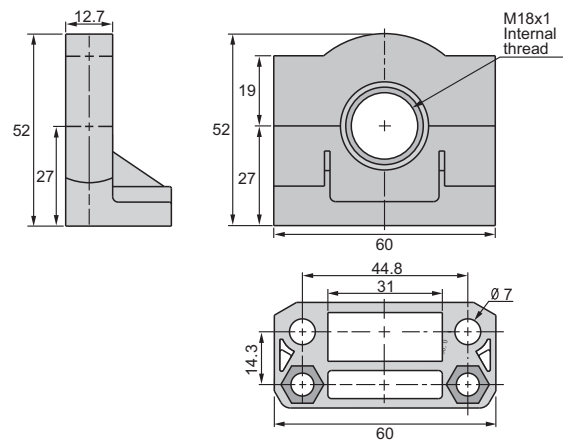
MB-5465B (optional)



MB-4240 (optional)

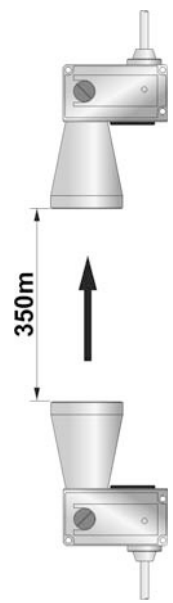




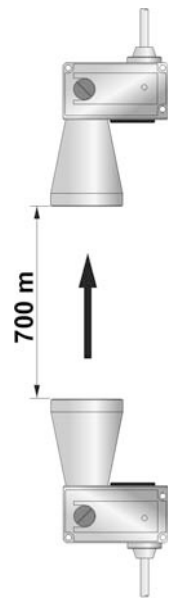






MB-6052 (optional)



Mounting Bracket to Provide 360° Rotation

Thru-beam Mode

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

Specifications

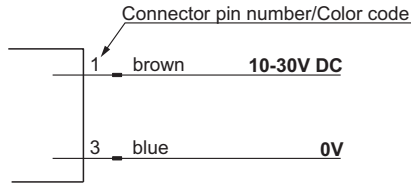
Sensing Mode Item	Diffuse Mode	Retro-reflective Mode	Thru-beam Mode	
Sensing range	3m (Note)	6m	700m (Long range), 350m (Standard)	
Power Source	10 to 30 V DC , Ripple P-P: 10% or less			
Current Consumption	55 mA or less		70 mA or less	
Response Time	5 ms or less			
Modulation Method	Pulse Modulation System			
Sensing output	NPN open-collector transistor Maximum sink Current : 200mA Applied voltage: 30VDC or less (between sensing output and 0V) Residual voltage: 1.5V or less (at 100mA sink current)	PNP open-collector transistor Maximum sink Current : 200mA Applied voltage: 30VDC 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 30-1000MHz), 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 times each			
Ambient Temperature	Operation : -10 ... +60°C			
Ambient Humidity	35 to 85% RH			
Enclosure Protection	IP66 (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 ² , 4 core cable (2 cores for emitter) Standard length : 2 m Extension : Extensible up to 100 m by using 0.3 mm ² or bigger cable			
	Colour of Lead wires		Receiver	Emitter
		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.

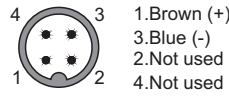
Connection Diagrams

Emitter of Thru-beam Mode

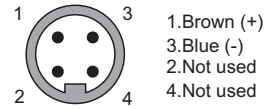
Connector pin position



Euro-style

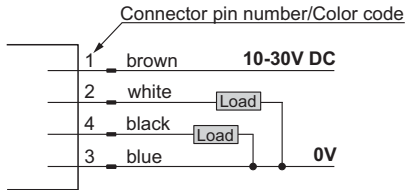


Mini-style



PNP Output type

Connector pin position



Euro-style

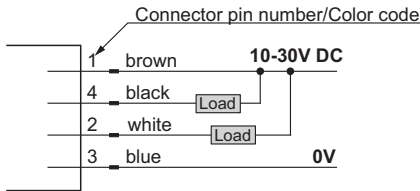


Mini-style



NPN Output type

Connector pin position



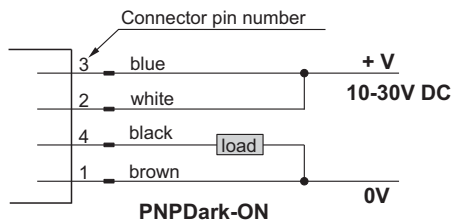
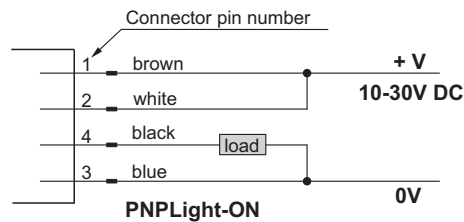
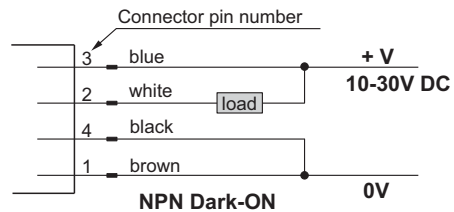
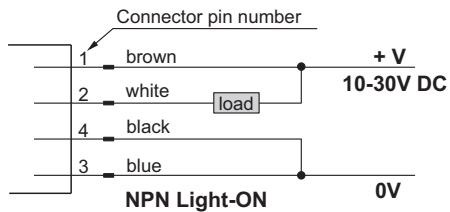
Euro-style



Mini-style

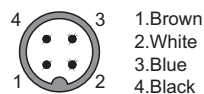


NPN/PNP Output type

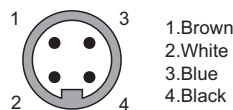


Connector pin position

Euro-style

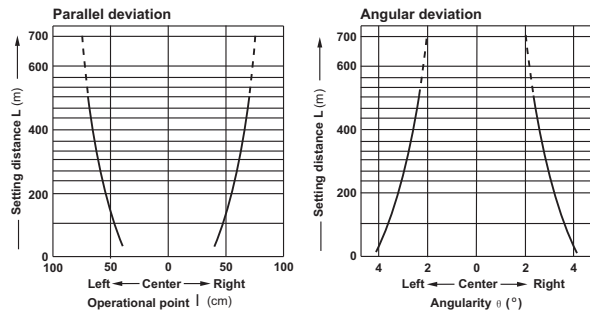


Mini-style

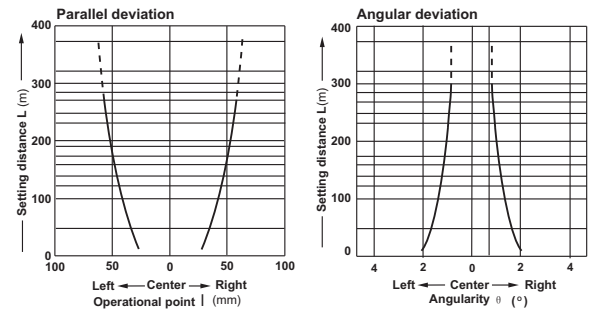


Sensing Characteristics (Typical)

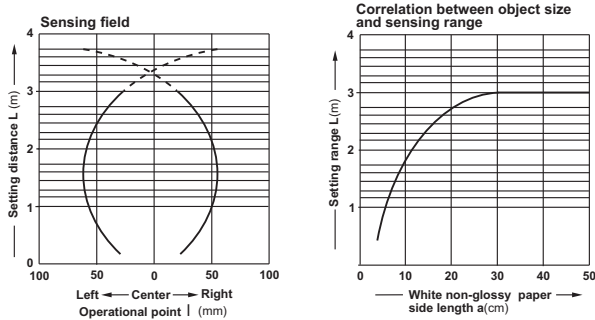
Thru-beam Mode (Sn=700m)



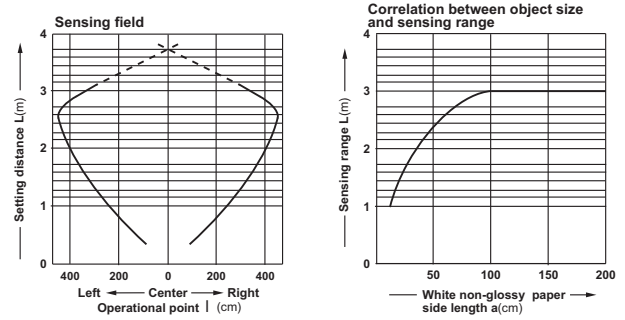
Thru-beam Mode (Sn=350m)



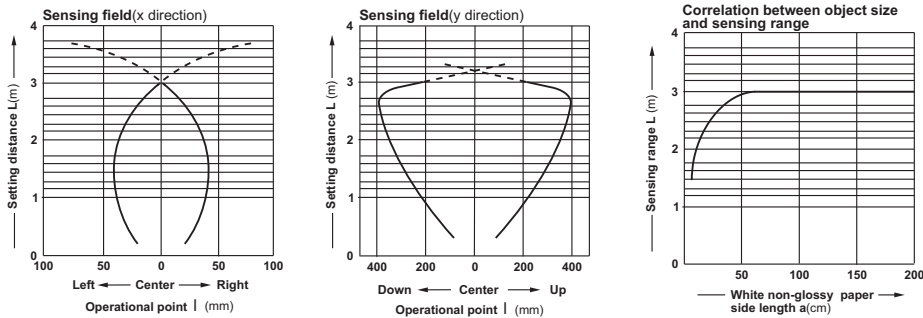
Diffuse Mode(Standard type)



Diffuse Mode(Bell-mountedAngle type)

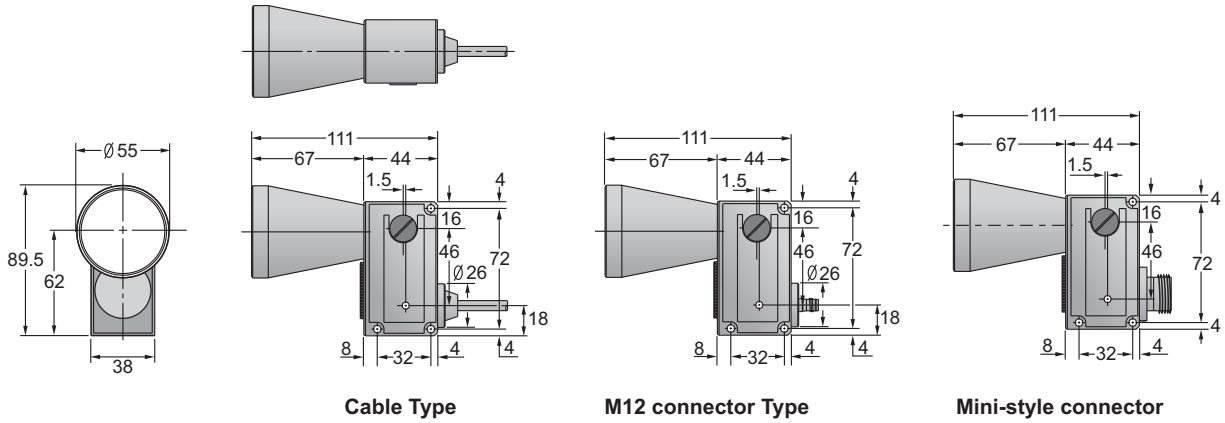


Diffuse Mode(Fan-shapedAngle type)

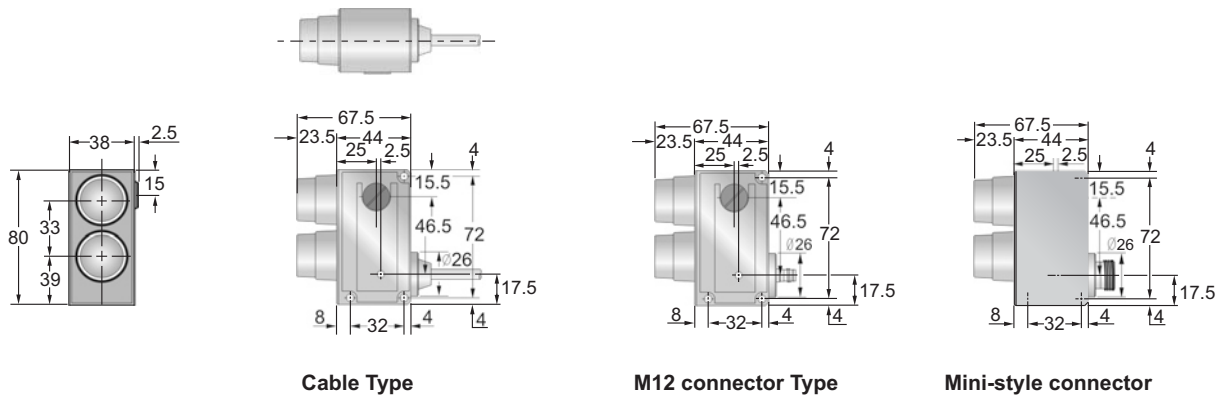


Dimensions (Unit: mm)

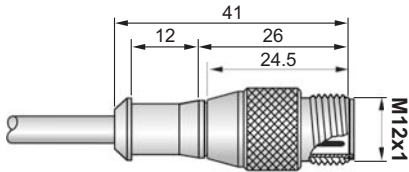
Thru-beam Mode Sensor



Diffuse & Retroreflective Mode Sensor

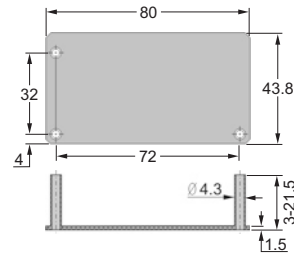


Pigtail* Type

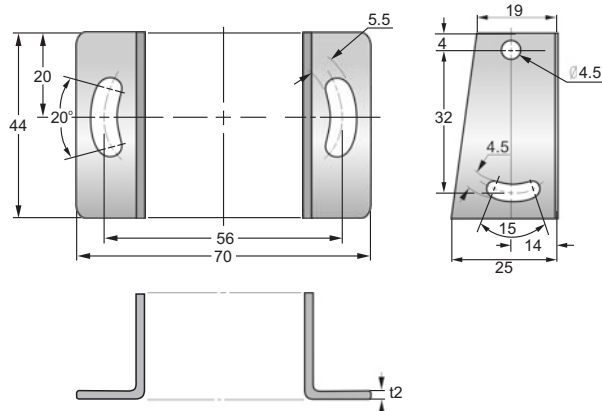


*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

Insulating Block (supplied with sensor)



RP80-A1 (Mounting bracket-optional)



Mounting Dimensions (Drawing with thru-beam mode sensor)

