





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
	Quick Disconnect 	10-30V DC (Euro Style)	Emitter (2-wire)	T30-T060MD-EY9Q4LE
			NPN	T30-T060MN-CY9Q4UE
			PNP	T30-T060MP-CY9Q4UE
			NPN/PNP	T30-T060MD-CY9Q5UE
	6" Pigtail 	10-30V DC (Euro Style)	Emitter (2-wire)	T30-T060MD-EY9P4LE
			NPN	T30-T060MN-CY9P4UE
			PNP	T30-T060MP-CY9P4UE
			NPN/PNP	T30-T060MD-CY9P5UE
Thru-beam Mode Sensing Distance : 60m	Micro Style 	12-240V DC/ 24-240VAC (Micro Style)	Solid State Isolated Relay (4-wire)	
			Light-ON (2-wire)	
			Dark-ON (2-wire)	
			Emitter (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.

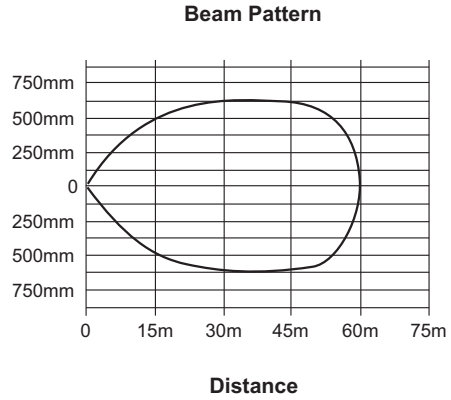
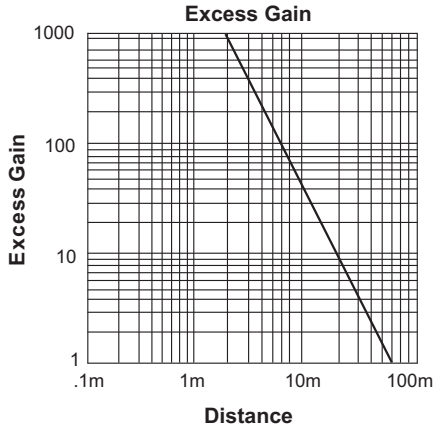
Specifications(AC/DC)

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.				

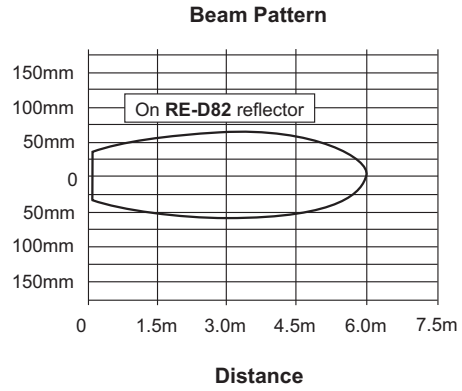
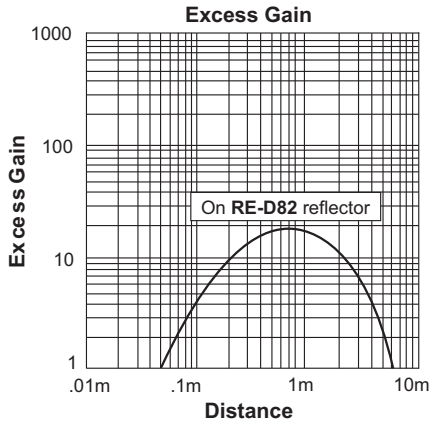
Note: Used with RE-D82 (supplied with sensor) reflector.

Sensing Characteristics (Typical)

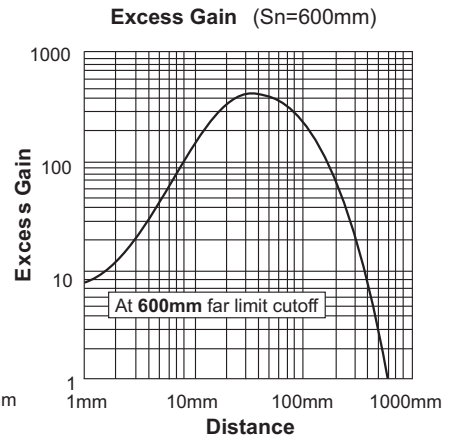
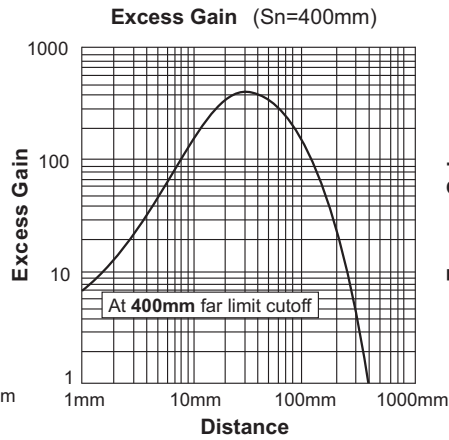
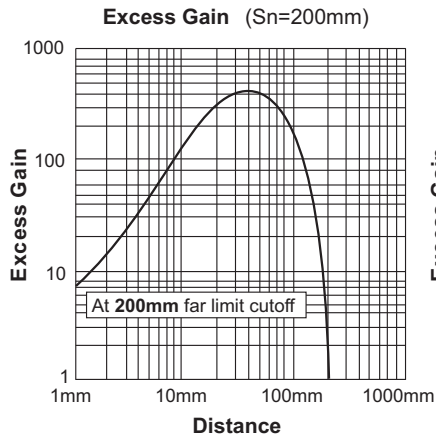
Opposed Mode (Sn=60m)



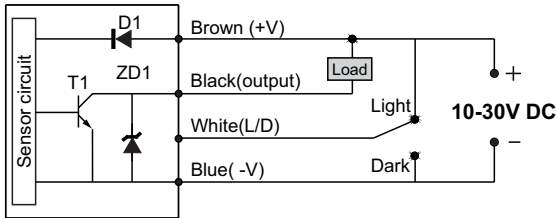
Polarized Retroreflective Mode(Sn=6 m)



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



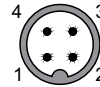
NPN output type



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

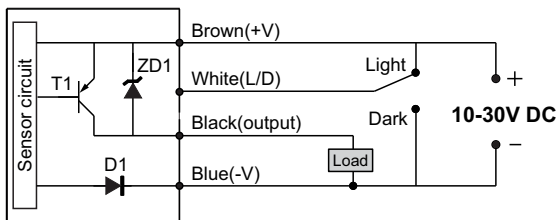
Connector pin position

Euro-style



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

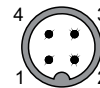
PNP output type



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

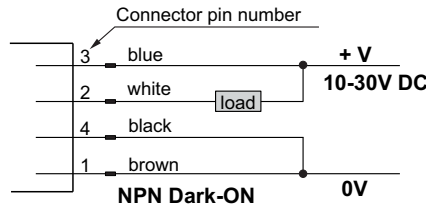
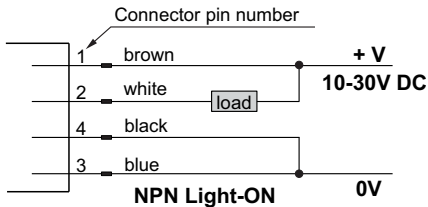
Connector pin position

Euro-style



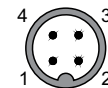
- 1. Brown (+)
- 2. White (Light/Dark control)
- 3. Blue (-)
- 4. Black (Output)

NPN/PNP output type

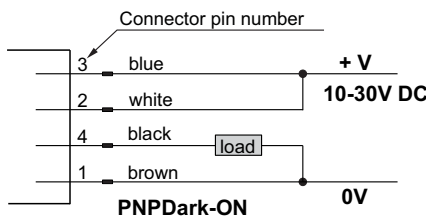
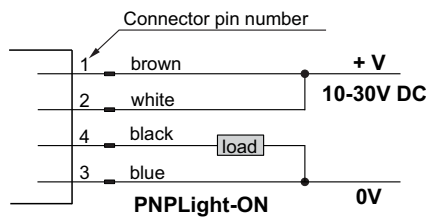


Connector pin position

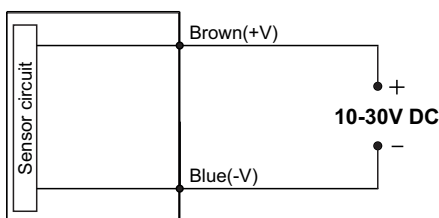
Euro-style



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

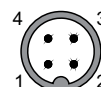


Emitter of Thru-beam Mode



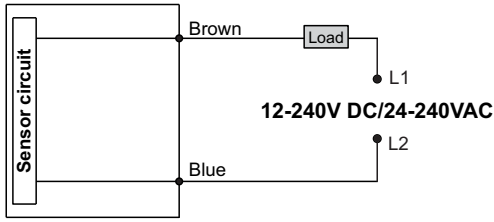
Connector pin position

Euro-style



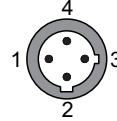
- 1. Brown (+)
- 2. Not used
- 3. Blue (-)
- 4. Not used

SPST Solid State output



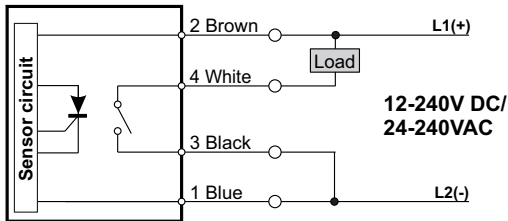
Connector pin position

Micro-style



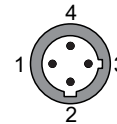
- 1.Red/black(L1)
- 2.Red/white(L2)
- 3.Not used
- 4.Not used

Solid State Isolated Relay



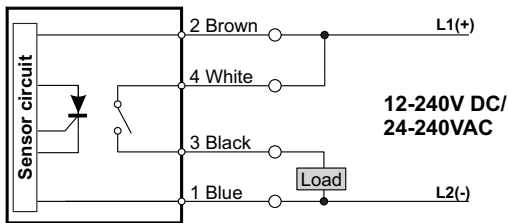
Connector pin position

Micro-style

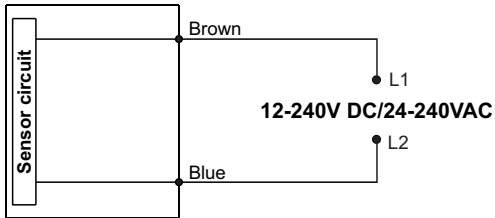


- 1.Red/black(L2)
- 2.Red/white (L1)
- 3.Red (Output)
- 4.Green (Output)

OR

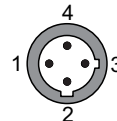


Emitter of Thru-beam Mode



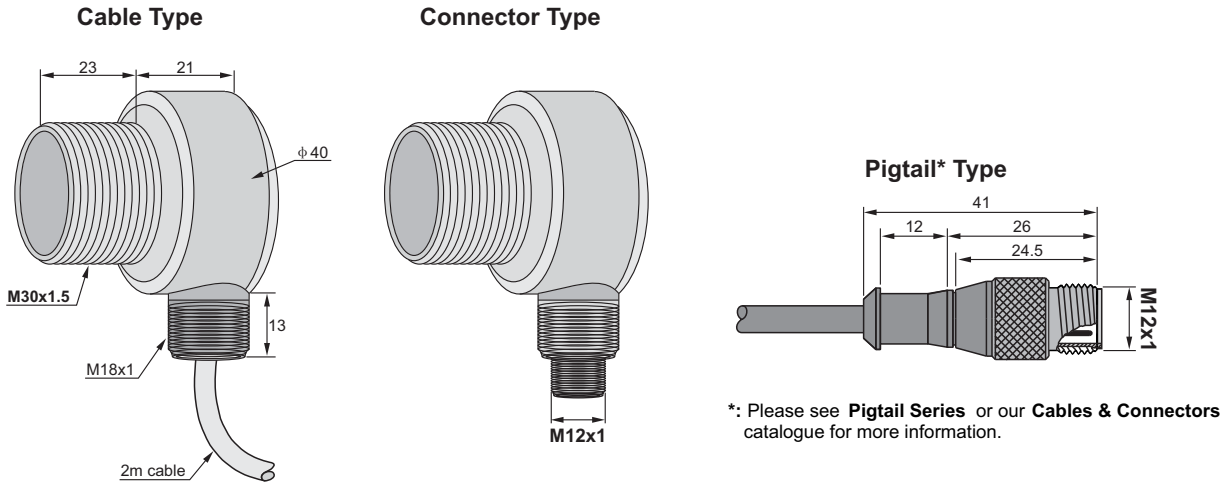
Connector pin position

Micro-style



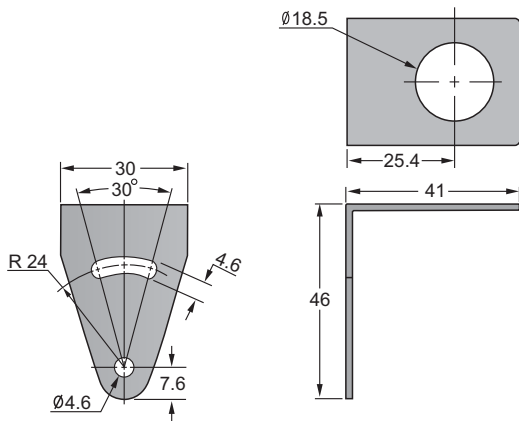
- 1.Red/black(L1)
- 2.Red/white (L2)
- 3.Not used
- 4.Not used

Sensor Type

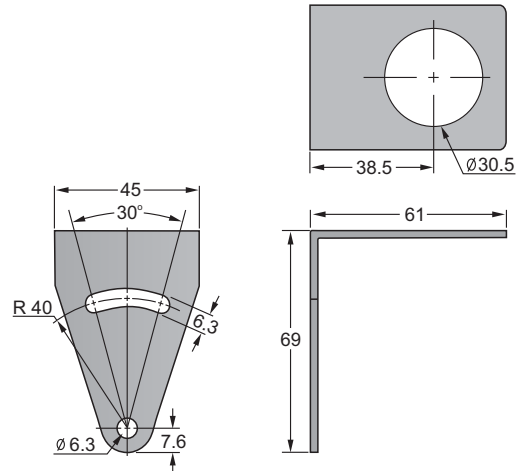


Mounting Brackets *

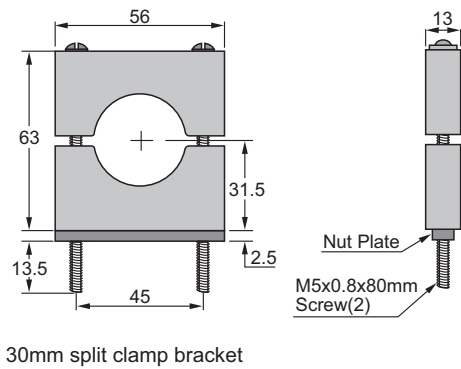
MB-4630(optional)



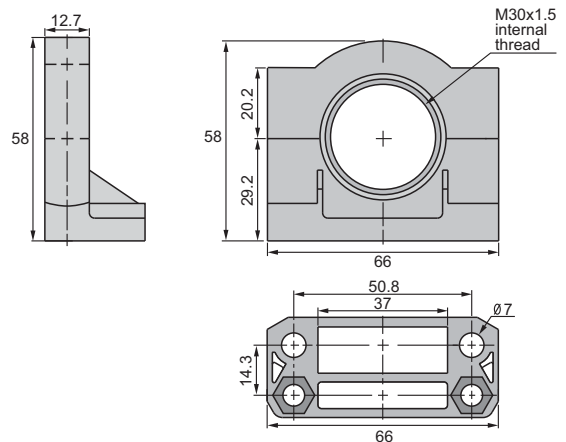
MB-6961(optional)



MB-6356(optional)



MB-6658(optional)



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