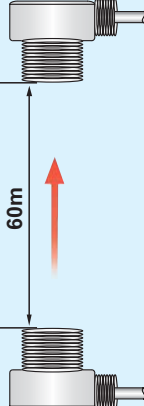



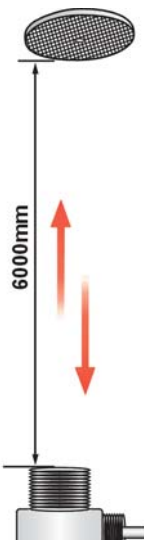





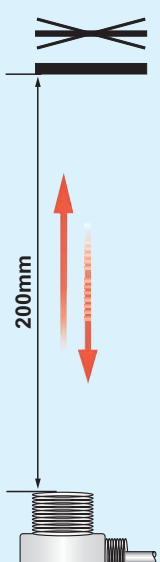



## Through-beam mode

Sensing mode	Appearance	Supply voltage	OUTPUT MODE	Part Number
 <p>Through-beam mode Sensing distance 60m Infrared 950nm</p>	<b>Cable</b>  	10-30V DC	Emitter	T30-T060MD-EY9C2L2
			NPN	T30-T060MN-CY9C4U2
			PNP	T30-T060MP-CY9C4U2
		20-250V AC	Emitter (2-wire)	T30-T060MA-EY9C2L2
			Light-ON (3-wire)	T30-T060MA-LY9C3U2
			Dark-ON (3-wire)	T30-T060MA-DY9C3U2
		20-250V AC/DC	Emitter (2-wire)	T30-T060MC-EY9C2L2
			Light-ON (2-wire)	T30-T060MC-LY9C2U2
			Dark-ON (2-wire)	T30-T060MC-DY9C2U2
	<b>Quick Disconnect</b>  	10-30V DC (Euro)	Emitter	T30-T060MD-EY9Q4LE
			NPN	T30-T060MN-CY9Q4UE
			PNP	T30-T060MP-CY9Q4UE
		20-250V AC (Micro)	Emitter (2-wire)	T30-T060MA-EY9Q4LM
			Light-ON (3-wire)	T30-T060MA-LY9Q4UM
			Dark-ON (3-wire)	T30-T060MA-DY9Q4UM
		20-250V AC/DC (Micro)	Emitter (2-wire)	T30-T060MC-EY9Q4LM
			Light-ON (2-wire)	T30-T060MC-LY9Q4UM
			Dark-ON (2-wire)	T30-T060MC-DY9Q4UM
	<b>6" Pigtail</b>  	10-30V DC (Euro)	Emitter	T30-T060MD-EY9P4LE
			NPN	T30-T060MN-CY9P4UE
			PNP	T30-T060MP-CY9P4UE
		20-250V AC (Micro)	Emitter (2-wire)	T30-T060MA-EY9P4LM
			Light-ON (3-wire)	T30-T060MA-LY9P4UM
			Dark-ON (3-wire)	T30-T060MA-DY9P4UM
20-250V AC/DC (Micro)		Emitter (2-wire)	T30-T060MC-EY9P4LM	
		Light-ON (2-wire)	T30-T060MC-LY9P4UM	
		Dark-ON (2-wire)	T30-T060MC-DY9P4UM	

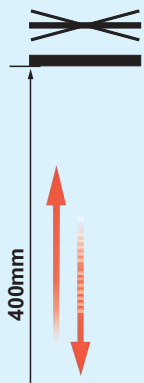



## Retro-reflective mode with polarizing filter

Sensing mode	Appearance	Supply voltage	OUTPUT MODE	Part Number
 <p><b>Retro-reflective mode With polarizing filter</b></p> <p>Sensing distance 6000mm LED red 680nm</p>	<b>Cable</b>  	10-30V DC	NPN	T30-L6000N-CY6C4U2-PF
			PNP	T30-L6000P-CY6C4U2-PF
		20-250V AC	Light-ON (3-wire)	T30-L6000A-LY6C3U2-PF
			Dark-ON (3-wire)	T30-L6000A-DY6C3U2-PF
		20-250V AC/DC	Light-ON (2-wire)	T30-L6000C-LY6C2U2-PF
			Dark-ON (2-wire)	T30-L6000C-DY6C2U2-PF
	<b>Quick Disconnect</b>  	10-30V DC (Euro)	NPN	T30-L6000N-CY6Q4UE-PF
			PNP	T30-L6000P-CY6Q4UE-PF
		20-250V AC (Micro)	Light-ON (3-wire)	T30-L6000A-LY6Q4UM-PF
			Dark-ON (3-wire)	T30-L6000A-DY6Q4UM-PF
		20-250V AC/DC (Micro)	Light-ON (2-wire)	T30-L6000C-LY6Q4UM-PF
			Dark-ON (2-wire)	T30-L6000C-DY6Q4UM-PF
	<b>6" Pigtail</b>  	10-30V DC (Euro)	NPN	T30-L6000N-CY6P4UE-PF
			PNP	T30-L6000P-CY6P4UE-PF
		20-250V AC (Micro)	Light-ON (3-wire)	T30-L6000A-LY6P4UM-PF
Dark-ON (3-wire)			T30-L6000A-DY6P4UM-PF	
20-250V AC/DC (Micro)		Light-ON (2-wire)	T30-L6000C-LY6P4UM-PF	
		Dark-ON (2-wire)	T30-L6000C-DY6P4UM-PF	

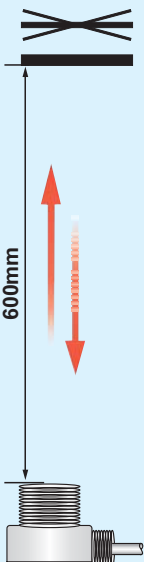



## Diffuse sensor (Fixed-field)

Sensing mode	Appearance	Supply voltage	OUTPUT MODE	Part Number
 <p><b>Diffuse mode (Fixed-field) with background suppression</b> Sensing distance 200mm Infrared 950nm</p>	<b>Cable</b>  	10-30V DC	NPN	T30-D0200N-CY9C4U2-BS
			PNP	T30-D0200P-CY9C4U2-BS
		20-250V AC	Light-ON (3-wire)	T30-D0200A-LY9C3U2-BS
			Dark-ON (3-wire)	T30-D0200A-DY9C3U2-BS
		20-250V AC/DC	Light-ON (2-wire)	T30-D0200C-LY9C2U2-BS
			Dark-ON (2-wire)	T30-D0200C-DY9C2U2-BS
	<b>Quick Disconnect</b>  	10-30V DC (Euro)	NPN	T30-D0200N-CY9Q4UE-BS
			PNP	T30-D0200P-CY9Q4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	T30-D0200A-LY9Q4UM-BS
			Dark-ON (3-wire)	T30-D0200A-DY9Q4UM-BS
		20-250V AC/DC (Micro)	Light-ON (2-wire)	T30-D0200C-LY9Q4UM-BS
			Dark-ON (2-wire)	T30-D0200C-DY9Q4UM-BS
	<b>6" Pigtail</b>  	10-30V DC (Euro)	NPN	T30-D0200N-CY9P4UE-BS
			PNP	T30-D0200P-CY9P4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	T30-D0200A-LY9P4UM-BS
			Dark-ON (3-wire)	T30-D0200A-DY9P4UM-BS
		20-250V AC/DC (Micro)	Light-ON (2-wire)	T30-D0200C-LY9P4UM-BS
			Dark-ON (2-wire)	T30-D0200C-DY9P4UM-BS

## Diffuse sensor (Fixed-field)

Sensing mode	Appearance	Supply voltage	OUTPUT MODE	Part Number
<p><b>Diffuse mode (Fixed-field) with background suppression</b> Sensing distance 400mm Infrared 950nm</p> 	<p>Cable</p> 	10-30V DC	NPN	T30-D0400N-CY9C4U2-BS
			PNP	T30-D0400P-CY9C4U2-BS
		20-250V AC	Light-ON (3-wire)	T30-D0400A-LY9C3U2-BS
			Dark-ON (3-wire)	T30-D0400A-DY9C3U2-BS
		20-250V AC/DC	Light-ON (2-wire)	T30-D0400C-LY9C2U2-BS
			Dark-ON (2-wire)	T30-D0400C-DY9C2U2-BS
	<p>Quick Disconnect</p> 	10-30V DC (Euro)	NPN	T30-D0400N-CY9Q4UE-BS
			PNP	T30-D0400P-CY9Q4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	T30-D0400A-LY9Q4UM-BS
			Dark-ON (3-wire)	T30-D0400A-DY9Q4UM-BS
		20-250V AC/DC (Micro)	Light-ON (2-wire)	T30-D0400C-LY9Q4UM-BS
			Dark-ON (2-wire)	T30-D0400C-DY9Q4UM-BS
	<p>6" Pigtail</p> 	10-30V DC (Euro)	NPN	T30-D0400N-CY9P4UE-BS
			PNP	T30-D0400P-CY9P4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	T30-D0400A-LY9P4UM-BS
Dark-ON (3-wire)			T30-D0400A-DY9P4UM-BS	
20-250V AC/DC (Micro)		Light-ON (2-wire)	T30-D0400C-LY9P4UM-BS	
		Dark-ON (2-wire)	T30-D0400C-DY9P4UM-BS	

## Diffuse sensor (Fixed-field)

Sensing mode	Appearance	Supply voltage	OUTPUT MODE	Part Number
 <p><b>Diffuse mode (Fixed-field) with background suppression</b> Sensing distance 600mm Infrared 950nm</p>	<b>Cable</b>  	10-30V DC	NPN	T30-D0600N-CY9C4U2-BS
			PNP	T30-D0600P-CY9C4U2-BS
		20-250V AC	Light-ON (3-wire)	T30-D0600A-LY9C3U2-BS
			Dark-ON (3-wire)	T30-D0600A-DY9C3U2-BS
		20-250V AC/DC	Light-ON (2-wire)	T30-D0600C-LY9C2U2-BS
			Dark-ON (2-wire)	T30-D0600C-DY9C2U2-BS
	<b>Quick Disconnect</b>  	10-30V DC (Euro)	NPN	T30-D0600N-CY9Q4UE-BS
			PNP	T30-D0600P-CY9Q4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	T30-D0600A-LY9Q4UM-BS
			Dark-ON (3-wire)	T30-D0600A-DY9Q4UM-BS
		20-250V AC/DC (Micro)	Light-ON (2-wire)	T30-D0600C-LY9Q4UM-BS
			Dark-ON (2-wire)	T30-D0600C-DY9Q4UM-BS
	<b>6" Pigtail</b>  	10-30V DC (Euro)	NPN	T30-D0600N-CY9P4UE-BS
			PNP	T30-D0600P-CY9P4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	T30-D0600A-LY9P4UM-BS
Dark-ON (3-wire)			T30-D0600A-DY9P4UM-BS	
20-250V AC/DC (Micro)		Light-ON (2-wire)	T30-D0600C-LY9P4UM-BS	
		Dark-ON (2-wire)	T30-D0600C-DY9P4UM-BS	

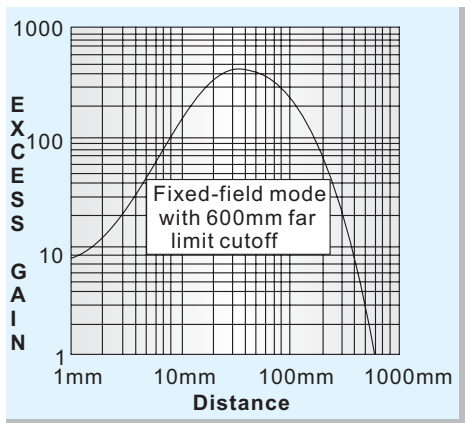
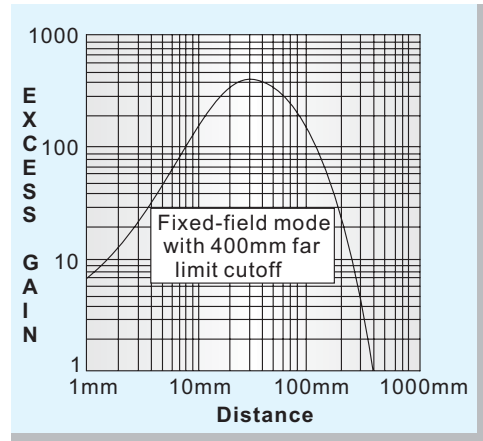
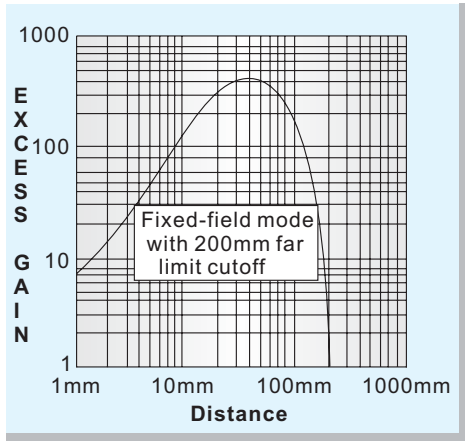
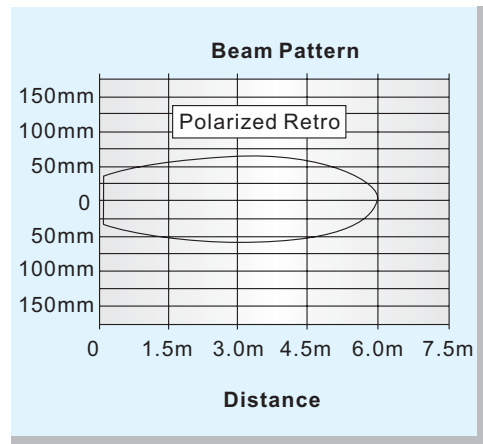
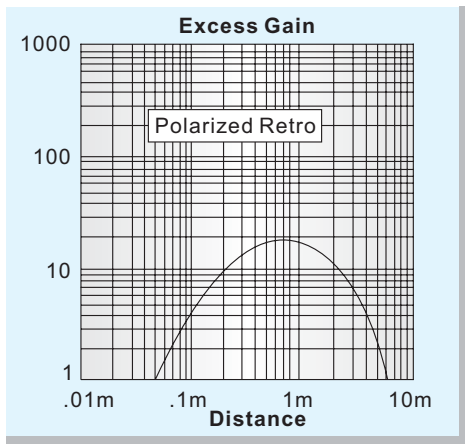
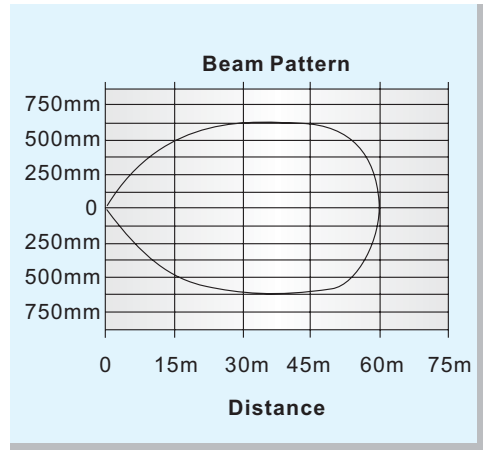
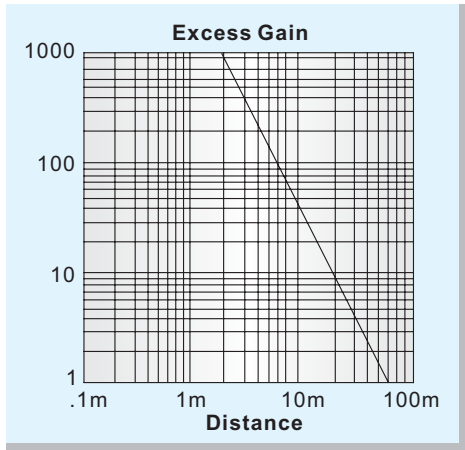
## Specification (DC)

Item	Type	Through-beam	Retroreflective With polarizing filters	Diffuse reflective (with background suppression) <b>Fixed-field mode</b>		
	Model No.			T30-T060Mx- xX9xxxx	T30-L6000x- xX6xxxx-PF	T30-D0200x- xX9xxxx-BS
Sensing range		60m	6m	200mm	400mm	600mm
Sensing object		Opaque object of φ8mm or more	3-way mirror	White paper		
Hysteresis		—		20% or less of operation distance		
Supply Voltage	10 to 30V DC, Ripple P-P 10% or less					
Current consumption	30mA or less					
Output	<NPN> output type> NPN open-collector transistor			<PNP> output type> PNP open-collector transistor		
	<ul style="list-style-type: none"> <li>Applied voltage: 30V DC or less</li> <li>Maximum sink current: 200mA</li> <li>Voltage drop: 2.5V or less</li> </ul>			<ul style="list-style-type: none"> <li>Applied voltage: 30V DC or less</li> <li>Maximum sink current: 200mA</li> <li>Voltage drop: 2.5V or less</li> </ul>		
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	-25°C to +55°C					
Ambient humidity	35 to 85% RH,Storage:35 to 85% RH					
EMC	IEC 60947-5-2, Parts 7.2.6.1.2.3 or RFI>3V/m( in 30-1000MHZ), EFT>1KV, ESD>4KV (contact)					
Voltage withstand ability	IEC 60947-5-2, Part 8.3.3.4 or 1500V AC for one min, between all supply terminals connected together and enclosure					
Insulation resistance	>20M Ω , with 1500V AC megger between all supply terminals connected together and enclosure					
Vibration resistance	IEC 60947-5-2, part 7.4.2 or 10-55HZ, 1.0mm amplitude in x,y and z directions for 30 min					
Shock resistance	IEC 60947-5-2, part 7.4.1 or 30g, 11ms in x, y and z directions for six time each					
Emitting element	Infrared LED (modulated)	Red LED (modulated)	Infrared LED (modulated)			
Housing material	Plastic housing: PBT					
cable	Standard length 2m, other length based on request.					
Connector	EURO-style connector(M12x1 thread)					
Pigtail Tpye	Cable + EURO-style quick disconnecter					

## Specification (AC)

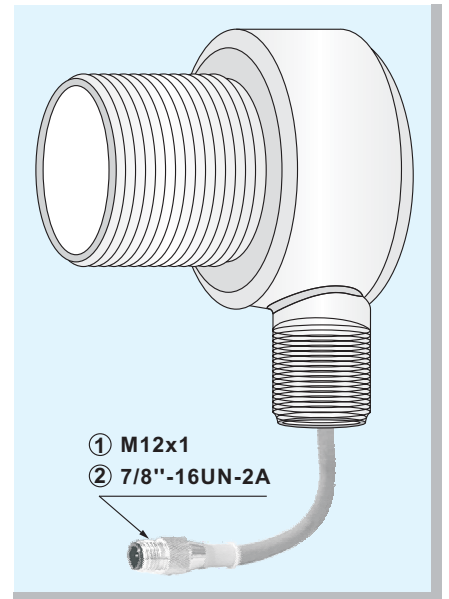
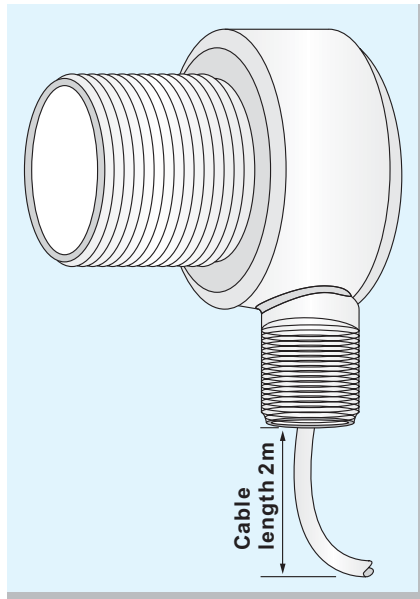
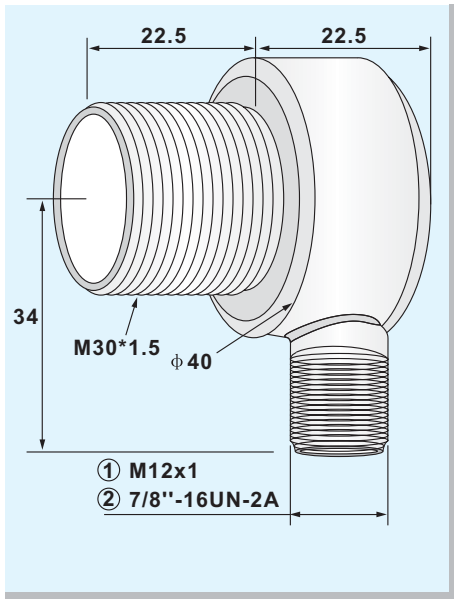
Item	Type	Through-beam	Retroreflective With polarizing filters	Diffuse reflective (with background suppression) <b>Fixed-field mode</b>		
	Model No.			T30-D0200A- xX9xxxx-BS	T30-D0400A- xX9xxxx-BS	T30-D0600A- xX9xxxx-BS
Sensing range		60m	6m	200mm	400mm	600mm
Sensing object		Opaque object of φ8mm or more	3-way mirror	White paper		
Hysteresis		—			20% or less of operation distance	
Supply Voltage	20 to 250V AC					
Current consumption	5mA or less					
Output	AC non-contact (thyristor output) <ul style="list-style-type: none"> <li>● Applied voltage: 20 to 250V AC</li> <li>● Max. Load current: 300 mA</li> <li>● Voltage drop: 10V AC or less</li> </ul>					
Output operation	Selectable either Light-ON Dark-ON by the control input wire					
Short-circuit protection	Yes					
Overload current protection	Yes					
Response time	1.5ms					
Operation indicator	Red LED (light up when the output is activated)					
Pollution degree	3(Industrial environment)					
Protection	IP67(IEC)					
Ambient temperature	-25°C to +55°C					
Ambient humidity	35 to 85% RH,Storage:35 to 85% RH					
EMC	IEC 60947-5-2, Parts 7.2.6.1.2.3 or RFI>3V/m( in 30-1000MHZ), EFT>1KV, ESD>4KV (contact)					
Voltage withstand ability	IEC 60947-5-2, Part 8.3.3.4 or 1500V AC for one min, between all supply terminals connected together and enclosure					
Insulation resistance	>20MΩ, with 1500V AC megger between all supply terminals connected together and enclosure					
Vibration resistance	IEC 60947-5-2, part 7.4.2 or 10-55HZ, 1.0mm amplitude in x,y and z directions for 30 min					
Shock resistance	IEC 60947-5-2, part 7.4.1 or 30g, 11ms in x, y and z directions for six time each					
Emitting element	Infrared LED (modulated)	Red LED (modulated)	Infrared LED (modulated)			
Housing material	Plastic housing: PBT					
cable	Standard length 2m, other length based on request.					
Connector	Micro-style connector					
Pigtail Tpye	Cable + Micro-style quick disconnecter					

## Sensing fields



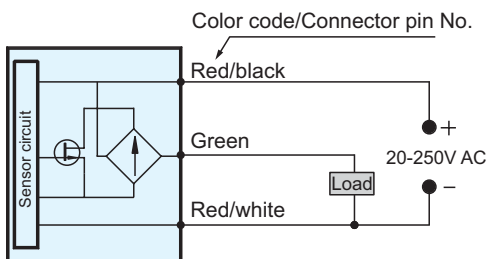


## Dimension

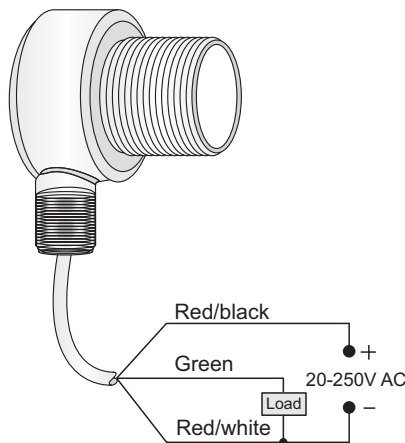


## I/O circuit diagram and Wiring diagram (AC)

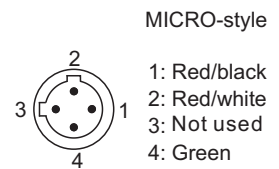
I/O circuit diagram



Wiring diagram

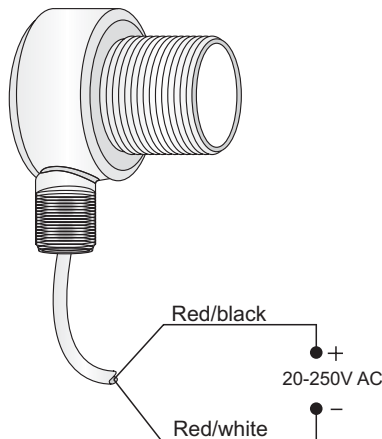
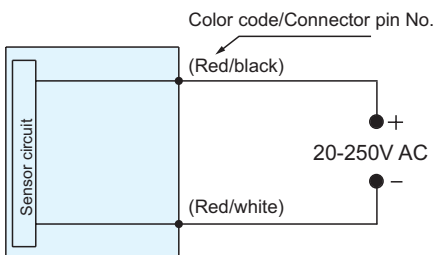


Connector pin position

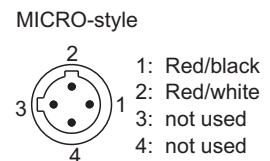


## Emitter:

I/O circuit diagram



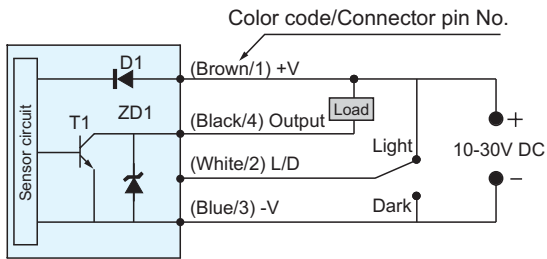
Connector pin position



## I/O circuit diagram and Wiring diagram (DC)

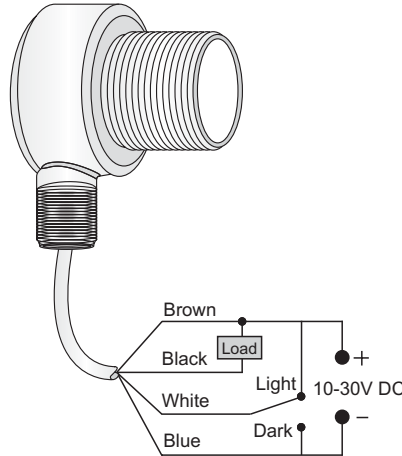
### NPN output type

I/O circuit diagram



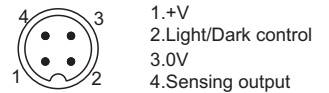
Symbol D1:Reverse polarity protection diode  
ZD1:Surge absorption zener diode  
T1:NPN output transistor

Wiring diagram



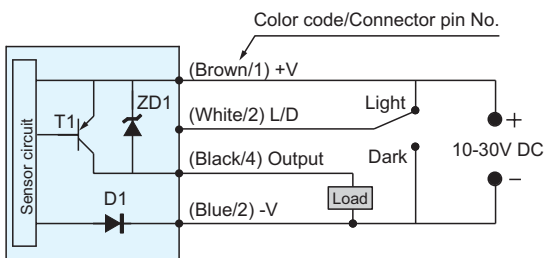
Connector pin position

EURO-style



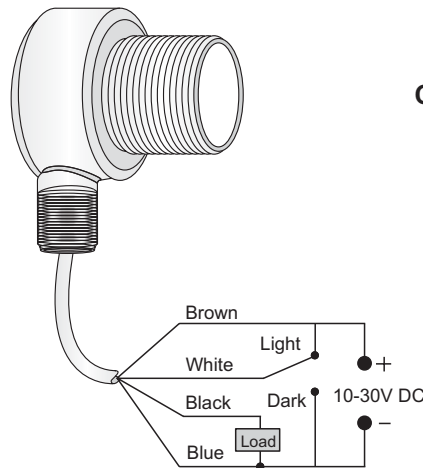
### PNP output type

I/O circuit diagram



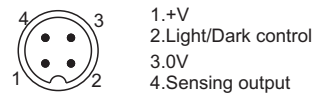
Symbol D1:Reverse polarity protection diode  
ZD1:Surge absorption zener diode  
T1:PNP output transistor

Wiring diagram



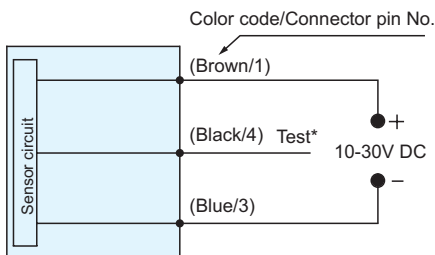
Connector pin position

EURO-style



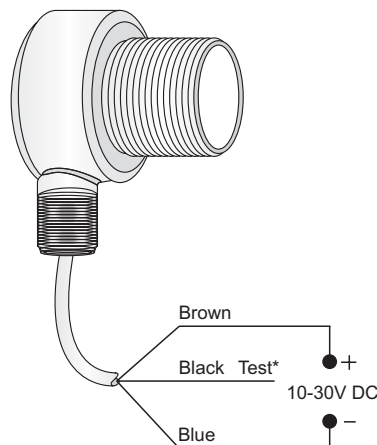
### Emitter:

I/O circuit diagram



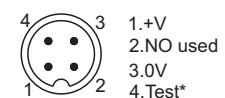
\*: Test (black wire) = 0V, Emitter Off.

Wiring diagram



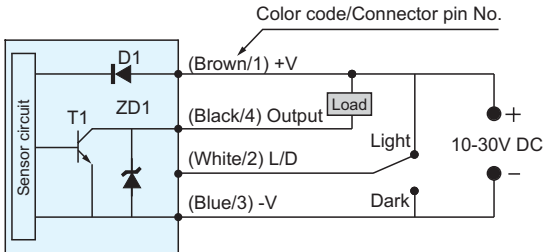
Connector pin position

EURO-style



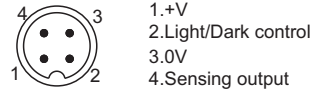
### NPN output type

#### I/O circuit diagram



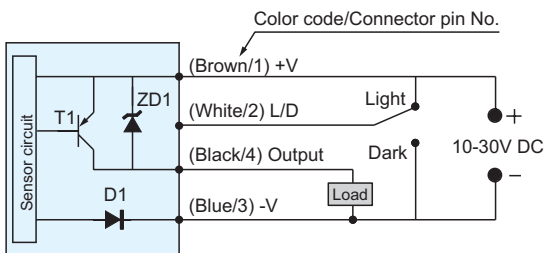
Symbol D1:Reverse polarity protection diode  
 ZD1:Surge absorption zener diode  
 T1:NPN output transistor

#### Connector pin position(Euro-style)



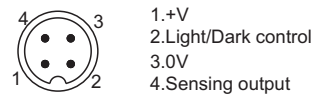
### PNP output type

#### I/O circuit diagram



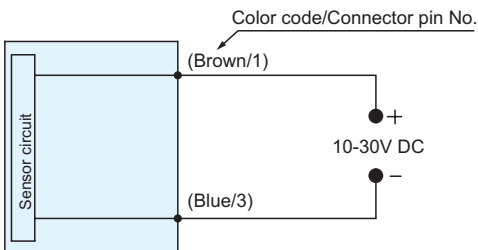
Symbol D1:Reverse polarity protection diode  
 ZD1:Surge absorption zener diode  
 T1:PNP output transistor

#### Connector pin position(Euro-style)

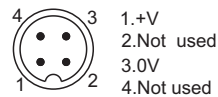


### Emitter

#### I/O circuit diagram



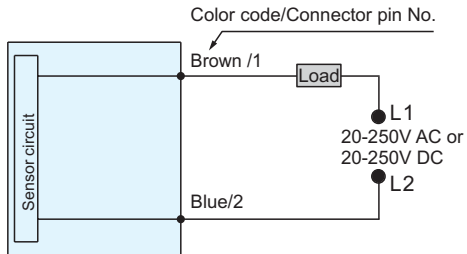
#### Connector pin position(Euro-style)



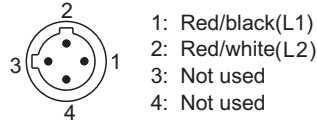
## I/O circuit diagram and Wiring diagram (AC/DC)

### Receiver(AC/DC)

I/O circuit diagram

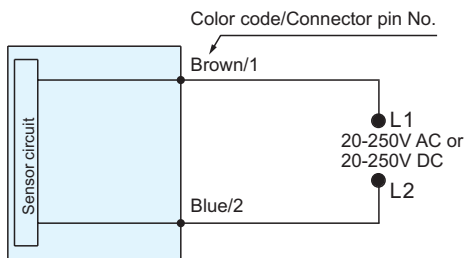


Connector pin position(Micro-style)



### Emitter(AC/DC)

I/O circuit diagram



Connector pin position(Micro-style)

