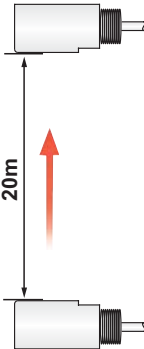
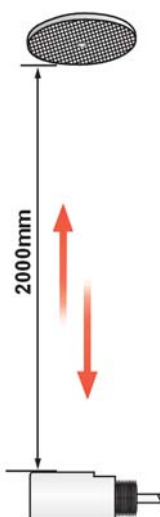





Selection Guide

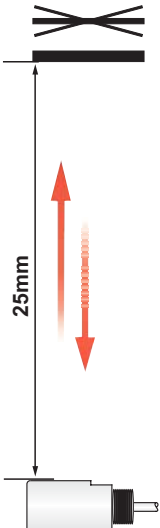
Sensing mode	Connection	Supply Voltage	Output mode	Part number
 <p>Through-beam mode Sensing distance 20m Infrared 950nm</p>	Cable	10-30V DC	Emitter	Q25-T020MD-EY9C2L2
			NPN	Q25-T020MN-CY9C4U2
			PNP	Q25-T020MP-CY9C4U2
		20-250V AC	Emitter (2-wire)	Q25-T020MA-EY9C2L2
			Light-ON (3-wire)	Q25-T020MA-LY9C3U2
			Dark-ON (3-wire)	Q25-T020MA-DY9C3U2
		20-250V AC/DC	Emitter (2-wire)	Q25-T020MC-EY9C2L2
			SPDT Relay (5-wire)	Q25-T020MR-CY9C5U2
			SPDT Relay with Timing (5-wire)	Q25-T020MR-CY9C5U2-T
			Light-ON (2-wire)	Q25-T020MC-LY9C2U2
			Dark-ON (2-wire)	Q25-T020MC-DY9C2U2
		Quick Disconnect	10-30V DC (Euro)	Emitter
	NPN			Q25-T020MN-CY9Q4UE
	PNP			Q25-T020MP-CY9Q4UE
	20-250V AC (Micro)		Emitter (2-wire)	Q25-T020MA-EY9Q4LM
			Light-ON (3-wire)	Q25-T020MA-LY9Q4UM
			Dark-ON (3-wire)	Q25-T020MA-DY9Q4UM
	20-250V AC/DC (Micro)		Emitter (2-wire)	Q25-T020MC-EY9Q4LM
			SPDT Relay (5-wire)	Q25-T020MR-CY9Q5UM
			SPDT Relay with Timing (5-wire)	Q25-T020MR-CY9Q5UM-T
			Light-ON (2-wire)	Q25-T020MC-LY9Q4UM
			Dark-ON (2-wire)	Q25-T020MC-DY9Q4UM
	6" Pig tail		10-30V DC (Euro)	Emitter
		NPN		Q25-T020MN-CY9P4UE
		PNP		Q25-T020MP-CY9P4UE
		20-250V AC (Micro)	Emitter (2-wire)	Q25-T020MA-EY9P4LM
			Light-ON (3-wire)	Q25-T020MA-LY9P4UM
Dark-ON (3-wire)			Q25-T020MA-DY9P4UM	
20-250V AC/DC (Micro)		Emitter (2-wire)	Q25-T020MC-EY9P4LM	
		SPDT Relay (5-wire)	Q25-T020MR-CY9P5UM	
		SPDT Relay with Timing (5-wire)	Q25-T020MR-CY9P5UM-T	
		Light-ON (2-wire)	Q25-T020MC-LY9P4UM	
		Dark-ON (2-wire)	Q25-T020MC-DY9P4UM	

Selection Guide

U : Q25 SERIES

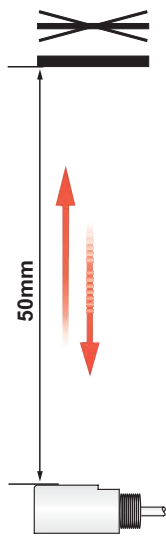
Sensing mode	Connection	Supply Voltage	Output mode	Part number	
<p>Retro-reflective mode with polarizing filter</p> <p>Sensing distance 2000mm</p> <p>LED red 680nm</p> 	<p>Cable</p> 	10-30V DC	NPN	Q25-L2000N-CY6C4U2-PF	
			PNP	Q25-L2000P-CY6C4U2-PF	
		20-250V AC	Light-ON (3-wire)	Q25-L2000A-LY6C3U2-PF	
			Dark-ON (3-wire)	Q25-L2000A-DY6C3U2-PF	
		20-250V AC/DC	SPDT Relay (5-wire)	Q25-L2000R-CY6C5U2-PF	
			SPDT Relay with Timing (5-wire)	Q25-L2000R-CY6C5U2-TP	
			Light-ON (2-wire)	Q25-L2000C-LY6C2U2-PF	
			Dark-ON (2-wire)	Q25-L2000C-DY6C2U2-PF	
		<p>Quick Disconnect</p> 	10-30V DC (Euro)	NPN	Q25-L2000N-CY6Q4UE-PF
				PNP	Q25-L2000P-CY6Q4UE-PF
	20-250V AC (Micro)		Light-ON (3-wire)	Q25-L2000A-LY6Q4UM-PF	
			Dark-ON (3-wire)	Q25-L2000A-DY6Q4UM-PF	
	20-250V AC/DC (Micro)		SPDT Relay (5-wire)	Q25-L2000R-CY6Q5UM-PF	
			SPDT Relay with Timing (5-wire)	Q25-L2000R-CY6Q5UM-TP	
			Light-ON (2-wire)	Q25-L2000C-LY6Q4UM-PF	
			Dark-ON (2-wire)	Q25-L2000C-DY6Q4UM-PF	
	<p>6" Pig tail</p> 		10-30V DC (Euro)	NPN	Q25-L2000N-CY6P4UE-PF
				PNP	Q25-L2000P-CY6P4UE-PF
		20-250V AC (Micro)	Light-ON (3-wire)	Q25-L2000A-LY6P4UM-PF	
			Dark-ON (3-wire)	Q25-L2000A-DY6P4UM-PF	
20-250V AC/DC (Micro)		SPDT Relay (5-wire)	Q25-L2000R-CY6P5UM-PF		
		SPDT Relay with Timing (5-wire)	Q25-L2000R-CY6P5UM-TP		
		Light-ON (2-wire)	Q25-L2000C-LY6P4UM-PF		
		Dark-ON (2-wire)	Q25-L2000C-DY6P4UM-PF		

Selection Guide

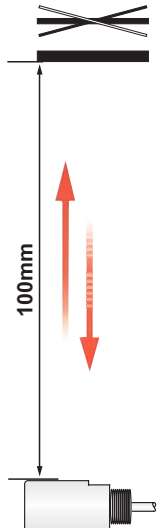
Sensing mode	Connection	Supply Voltage	Output mode	Part number	
 <p>Diffuse mode (Fixed- field) Sensing distance 25mm Infrared 880nm</p>	Cable	10-30V DC	NPN	Q25-D0025N-CY9C4U2-BS	
			PNP	Q25-D0025P-CY9C4U2-BS	
		20-250V AC	Light-ON (3-wire)	Q25-D0025A-LY9C3U2-BS	
			Dark-ON (3-wire)	Q25-D0025A-DY9C3U2-BS	
		20-250V AC/DC	SPDT Relay (5-wire)	Q25-D0025R-CY9C5U2-BS	
			SPDT Relay with Timing (5-wire)	Q25-D0025R-CY9C5U2-BT	
			Light-ON (2-wire)	Q25-D0025C-LY9C2U2-BS	
			Dark-ON (2-wire)	Q25-D0025C-DY9C2U2-BS	
		Quick Disconnect	10-30V DC (Euro)	NPN	Q25-D0025N-CY9Q4UE-BS
				PNP	Q25-D0025P-CY9Q4UE-BS
			20-250V AC (Micro)	Light-ON (3-wire)	Q25-D0025A-LY9Q4UM-BS
				Dark-ON (3-wire)	Q25-D0025A-DY9Q4UM-BS
	20-250V AC/DC (Micro)		SPDT Relay (5-wire)	Q25-D0025R-CY9Q5UM-BS	
			SPDT Relay with Timing (5-wire)	Q25-D0025R-CY9Q5UM-BT	
			Light-ON (2-wire)	Q25-D0025C-LY9Q4UM-BS	
			Dark-ON (2-wire)	Q25-D0025C-DY9Q4UM-BS	
	6" Pig tail		10-30V DC (Euro)	NPN	Q25-D0025N-CY9P4UE-BS
				PNP	Q25-D0025P-CY9P4UE-BS
			20-250V AC (Micro)	Light-ON (3-wire)	Q25-D0025A-LY9P4UM-BS
				Dark-ON (3-wire)	Q25-D0025A-DY9P4UM-BS
		20-250V AC/DC (Micro)	SPDT Relay (5-wire)	Q25-D0025R-CY9P5UM-BS	
			SPDT Relay with Timing (5-wire)	Q25-D0025R-CY9P5UM-BT	
			Light-ON (2-wire)	Q25-D0025R-LY9P4UM-BS	
			Dark-ON (2-wire)	Q25-D0025R-DY9P4UM-BS	

Selection Guide

U : Q25 SERIES

Sensing mode	Connection	Supply Voltage	Output mode	Part number	
 <p>Diffuse mode (Fixed-field) Sensing distance 50mm Infrared 880nm</p>	Cable	10-30V DC	NPN	Q25-D0050N-CY9C4U2-BS	
			PNP	Q25-D0050P-CY9C4U2-BS	
		20-250V AC	Light-ON (3-wire)	Q25-D0050A-LY9C3U2-BS	
			Dark-ON (3-wire)	Q25-D0050A-DY9C3U2-BS	
		20-250V AC/DC	SPDT Relay (5-wire)	Q25-D0050R-CY9C5U2-BS	
			SPDT Relay with Timing (5-wire)	Q25-D0050R-CY9C5U2-BT	
			Light-ON (2-wire)	Q25-D0050C-LY9C2U2-BS	
			Dark-ON (2-wire)	Q25-D0050C-DY9C2U2-BS	
		Quick Disconnect	10-30V DC (Euro)	NPN	Q25-D0050N-CY9Q4UE-BS
				PNP	Q25-D0050P-CY9Q4UE-BS
	20-250V AC (Micro)		Light-ON (3-wire)	Q25-D0050A-LY9Q4UM-BS	
			Dark-ON (3-wire)	Q25-D0050A-DY9Q4UM-BS	
	20-250V AC/DC (Micro)		SPDT Relay (5-wire)	Q25-D0050R-CY9Q5UM-BS	
			SPDT Relay with Timing (5-wire)	Q25-D0050R-CY9Q5UM-BT	
			Light-ON (2-wire)	Q25-D0050C-LY9Q4UM-BS	
			Dark-ON (2-wire)	Q25-D0050C-DY9Q4UM-BS	
	6" Pig tail		10-30V DC (Euro)	NPN	Q25-D0050N-CY9P4UE-BS
				PNP	Q25-D0050P-CY9P4UE-BS
		20-250V AC (Micro)	Light-ON (3-wire)	Q25-D0050A-LY9P4UM-BS	
			Dark-ON (3-wire)	Q25-D0050A-DY9P4UM-BS	
20-250V AC/DC (Micro)		SPDT Relay (5-wire)	Q25-D0050R-CY9P5UM-BS		
		SPDT Relay with Timing (5-wire)	Q25-D0050R-CY9P5UM-BT		
		Light-ON (2-wire)	Q25-D0050C-LY9P4UM-BS		
		Dark-ON (2-wire)	Q25-D0050C-DY9P4UM-BS		

Selection Guide

Sensing mode	Connection	Supply Voltage	Output mode	Part number	
 <p>Diffuse mode (Fixed-field) Sensing distance 100mm Infrared 880nm</p>	Cable	10-30V DC	NPN	Q25-D0100N-CY9C4U2-BS	
			PNP	Q25-D0100P-CY9C4U2-BS	
		20-250V AC	Light-ON (3-wire)	Q25-D0100A-LY9C3U2-BS	
			Dark-ON (3-wire)	Q25-D0100A-DY9C3U2-BS	
		20-250V AC/DC	SPDT Relay (5-wire)	Q25-D0100R-CY9C5U2-BS	
			SPDT Relay with Timing (5-wire)	Q25-D0100R-CY9C5U2-BT	
			Light-ON (2-wire)	Q25-D0100C-LY9C2U2-BS	
			Dark-ON (2-wire)	Q25-D0100C-DY9C2U2-BS	
		Quick Disconnect	10-30V DC (Euro)	NPN	Q25-D0100N-CY9Q4UE-BS
				PNP	Q25-D0100P-CY9Q4UE-BS
			20-250V AC (Micro)	Light-ON (3-wire)	Q25-D0100A-LY9Q4UM-BS
				Dark-ON (3-wire)	Q25-D0100A-DY9Q4UM-BS
	20-250V AC/DC (Micro)		SPDT Relay (5-wire)	Q25-D0100R-CY9Q5UM-BS	
			SPDT Relay with Timing (5-wire)	Q25-D0100R-CY9Q5UM-BT	
			Light-ON (2-wire)	Q25-D0100C-LY9Q4UM-BS	
			Dark-ON (2-wire)	Q25-D0100C-DY9Q4UM-BS	
	6" Pig tail		10-30V DC (Euro)	NPN	Q25-D0100N-CY9P4UE-BS
				PNP	Q25-D0100P-CY9P4UE-BS
			20-250V AC (Micro)	Light-ON (3-wire)	Q25-D0100A-LY9P4UM-BS
				Dark-ON (3-wire)	Q25-D0100A-DY9P4UM-BS
		20-250V AC/DC (Micro)	SPDT Relay (5-wire)	Q25-D0100R-CY9P5UM-BS	
			SPDT Relay with Timing (5-wire)	Q25-D0100R-CY9P5UM-BT	
			Light-ON (2-wire)	Q25-D0100C-LY9P4UM-BS	
			Dark-ON (2-wire)	Q25-D0100C-DY9P4UM-BS	

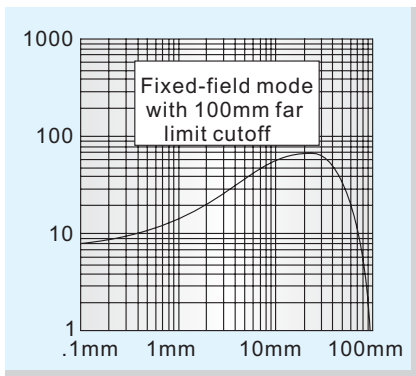
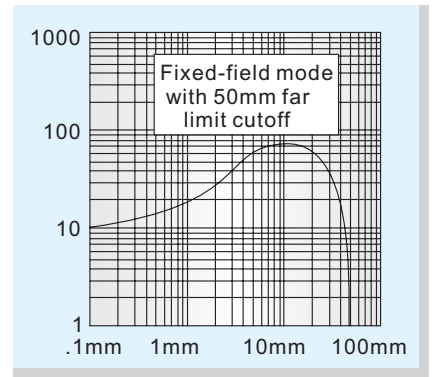
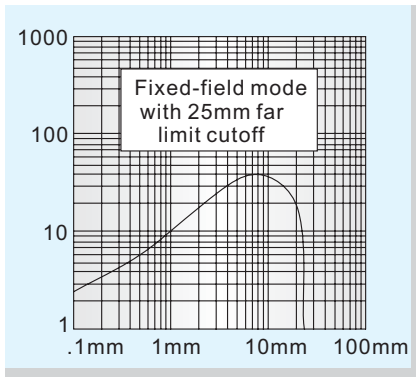
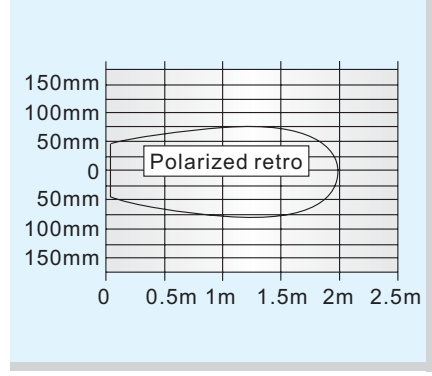
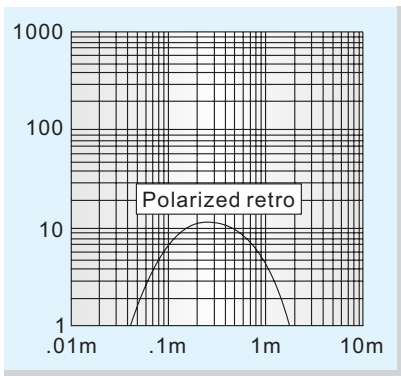
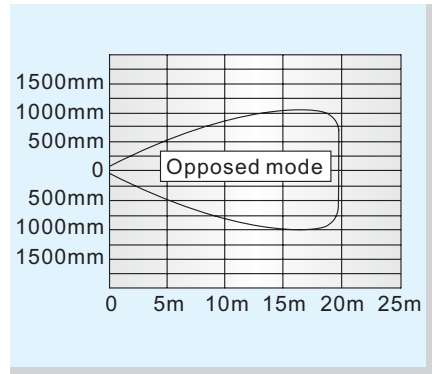
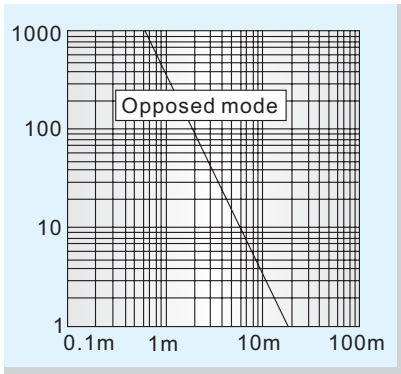
Specification (DC)

Item	Type	Through-beam	Retroreflective With polarizing filters	Diffuse reflective (with background suppression) Fixed-field mode		
	Model No.			Q25-T020Mx- xX9xxxx	Q25-L2000x- xX6xxxx-PF	Q25-D0025x- xX9xxxx-BS
Sensing range		20m	2m	25mm	50mm	100mm
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 <ul style="list-style-type: none"> Applied voltage: 30V DC or less Maximum sink current: 200mA 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 sink current: 200mA 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	-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) Fixed-field mode		
	Model No.			Q25-T020MA- xX9xxxx	Q25-L2000A- xX6xxxx-PF	Q25-D0025A- xX9xxxx-BS
Sensing range		20m	2m	25mm	50mm	100mm
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) ● Applied voltage: 20 to 250V AC ● Max. Load current: 300 mA ● Voltage drop: 10V AC or less				
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		>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		Micro-style connector				
Pigtail Tpye		Cable + Micro-style quick disconnecter				

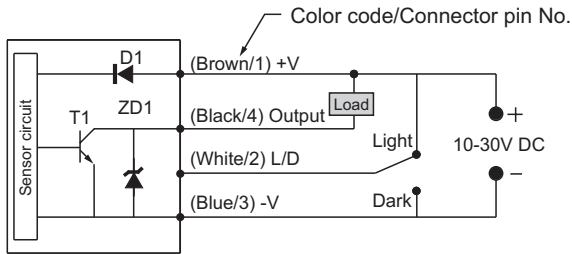
SENSING FIELDS



I/O circuit diagram and Wiring diagram (DC)

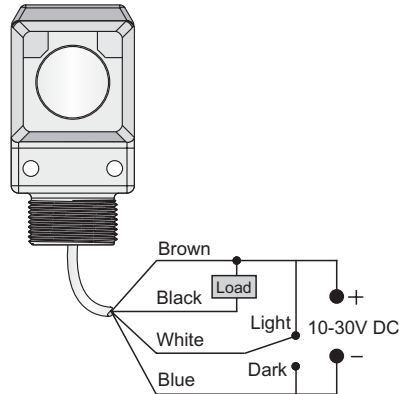
NPN output type

I/O circuit diagram



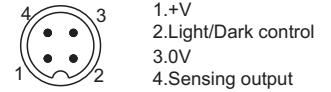
Symbol D1:Reverse polarity protection diode
ZD1:Surge absorption zener diode
T1:NPN output transistor

Wiring diagram



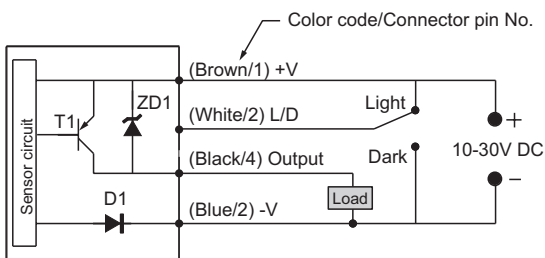
Connector pin position

EURO-style



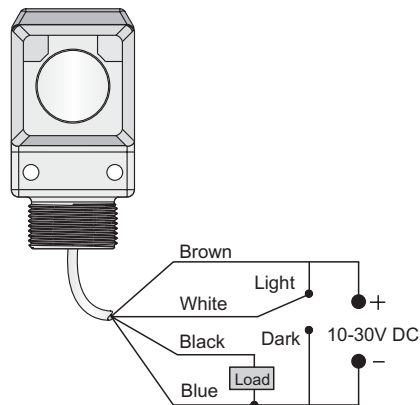
PNP output type

I/O circuit diagram



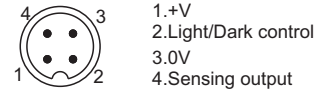
Symbol D1:Reverse polarity protection diode
ZD1:Surge absorption zener diode
T1:PNP output transistor

Wiring diagram



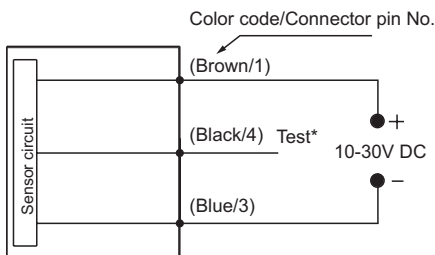
Connector pin position

EURO-style



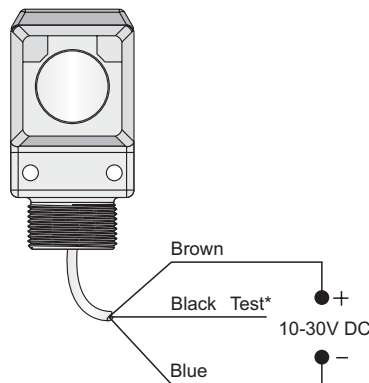
Emitter:

I/O circuit diagram



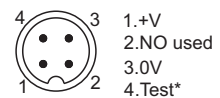
*: Test (black wire) = 0V, Emitter Off.

Wiring diagram

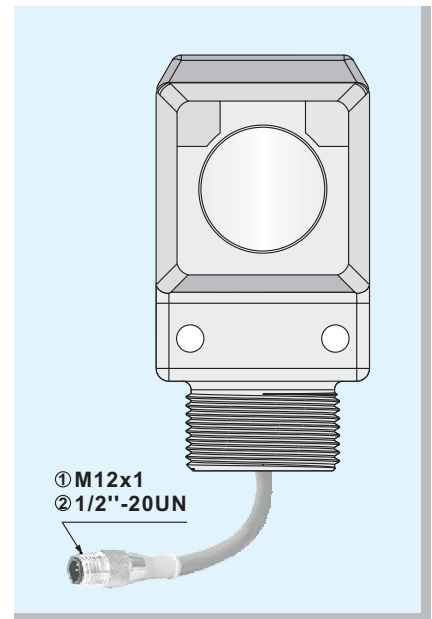
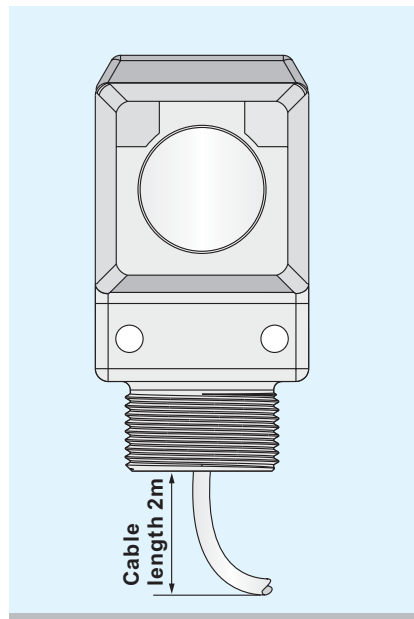
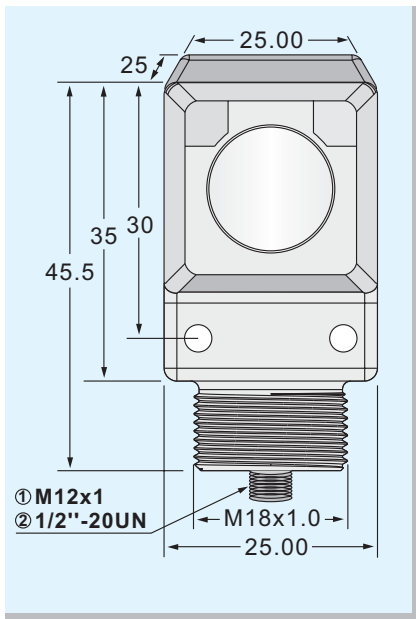


Connector pin position

EURO-style

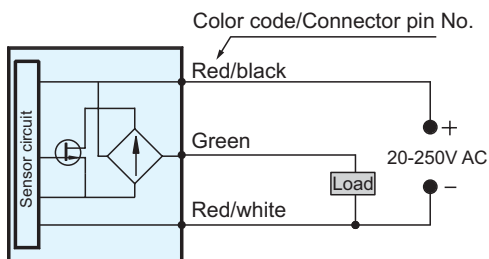


Dimension

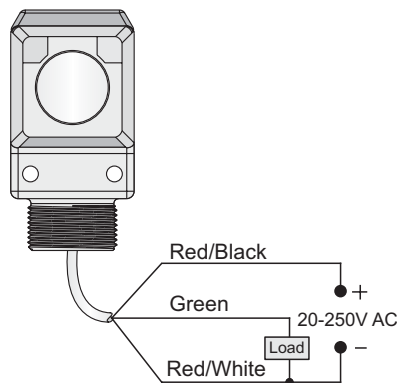


I/O circuit diagram and Wiring diagram (AC)

I/O circuit diagram



Wiring diagram



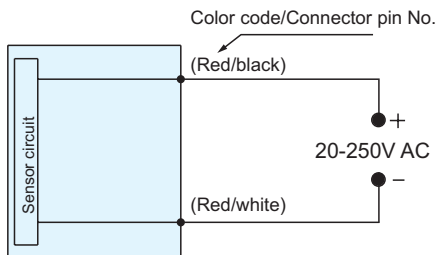
Connector pin position

MICRO-style

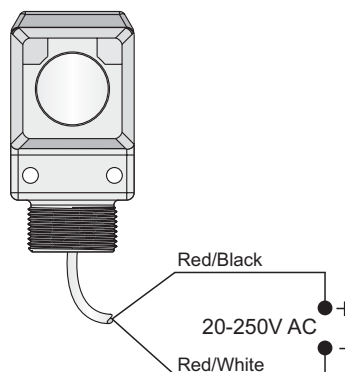


Emitter:

I/O circuit diagram

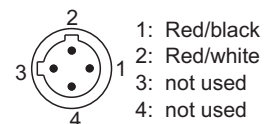


Wiring diagram



Connector pin position

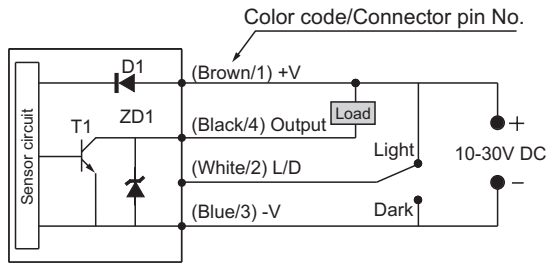
MICRO-style



Circuit and Wiring diagrams(DC)

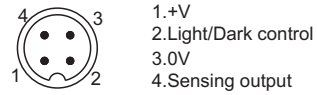
NPN output type

I/O circuit diagram



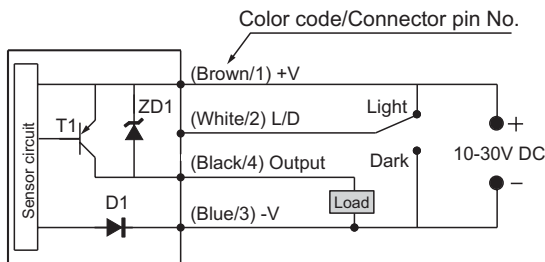
Symbol D1:Reverse polarity protection diode
 ZD1:Surge absorption zener diode
 T1:NPN output transistor

Connector pin position(Euro-style)



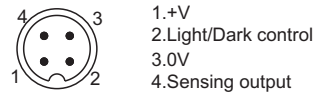
PNP output type

I/O circuit diagram



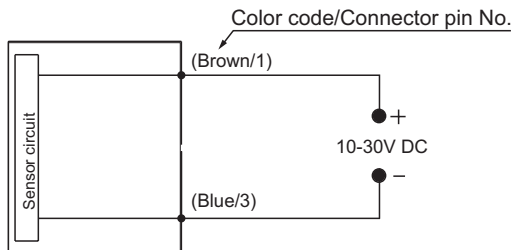
Symbol D1:Reverse polarity protection diode
 ZD1:Surge absorption zener diode
 T1:PNP output transistor

Connector pin position(Euro-style)

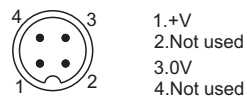


Emitter(DC)

I/O circuit diagram



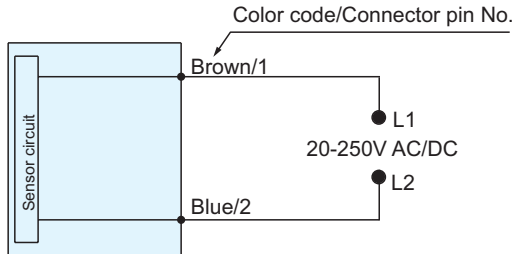
Connector pin position(Euro-style)



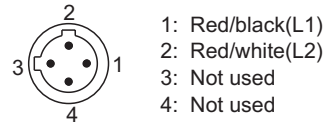
Circuit and Wiring diagrams(AC/DC)

Emitter(AC/DC)

I/O circuit diagram

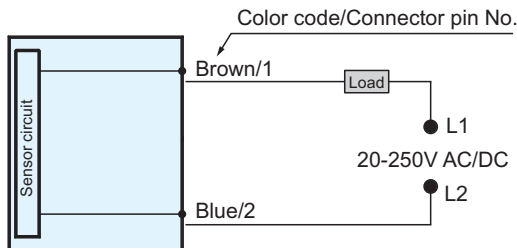


Connector pin position(Micro-style)

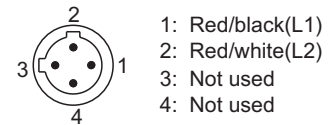


Receiver(AC/DC)

I/O circuit diagram

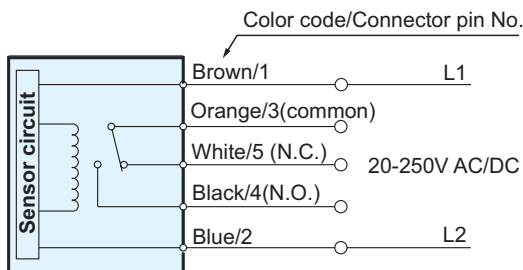


Connector pin position(Micro-style)



SPDT EM Relay Version

I/O circuit diagram



Connector pin position(Micro-style)

