

Thru-beam Mode (Stainless Steel Housing)

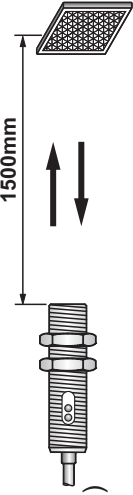
Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
LED Red 660nm  Thru-beam mode Sensing distance: 10m	2m Cable 	10-36V DC	Emitter	<u>CM12S-T010MD-EX6C3L2</u>
			NPN Light-ON	<u>CM12S-T010MN-LX6C3U2</u>
			NPN Dark-ON	<u>CM12S-T010MN-DX6C3U2</u>
			PNP Light-ON	<u>CM12S-T010MP-LX6C3U2</u>
			PNP Dark-ON	<u>CM12S-T010MP-DX6C3U2</u>
	Quick Disconnect (Pico-Style) 	10-36V DC	Emitter	<u>CM12S-T010MD-EX6Q4LP</u>
			NPN Light-ON	<u>CM12S-T010MN-LX6Q4UP</u>
			NPN Dark-ON	<u>CM12S-T010MN-DX6Q4UP</u>
			PNP Light-ON	<u>CM12S-T010MP-LX6Q4UP</u>
			PNP Dark-ON	<u>CM12S-T010MP-DX6Q4UP</u>
	Quick Disconnect (Euro-Style) 	10-36V DC	Emitter	<u>CM12S-T010MD-EX6Q4LE</u>
			NPN Light-ON	<u>CM12S-T010MN-LX6Q4UE</u>
			NPN Dark-ON	<u>CM12S-T010MN-DX6Q4UE</u>
			PNP Light-ON	<u>CM12S-T010MP-LX6Q4UE</u>
			PNP Dark-ON	<u>CM12S-T010MP-DX6Q4UE</u>
	6" Pigtail (Euro-Style) 	10-36V DC	Emitter	<u>CM12S-T010MD-EX6P4LE</u>
			NPN Light-ON	<u>CM12S-T010MN-LX6P4UE</u>
			NPN Dark-ON	<u>CM12S-T010MN-DX6P4UE</u>
			PNP Light-ON	<u>CM12S-T010MP-LX6P4UE</u>
			PNP Dark-ON	<u>CM12S-T010MP-DX6P4UE</u>

Note:

Coming Soon : Part numbers with underline

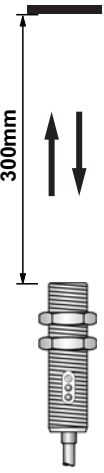
In Preparation: Part numbers with a line through the middle

Retroreflective Mode with Polarizing Filter (Stainless steel housing)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Retro-reflective Mode with polarizing filter Sensing Distance: 1500mm (Note)  1500mm	2m Cable 	10-36V DC	NPN Light-ON	<u>CM12S-L1500N-LX6C3U2-PF</u>
			NPN Dark-ON	<u>CM12S-L1500N-DX6C3U2-PF</u>
			PNP Light-ON	<u>CM12S-L1500P-LX6C3U2-PF</u>
			PNP Dark-ON	<u>CM12S-L1500P-DX6C3U2-PF</u>
	Quick Disconnect (Pico-Style) 	10-36V DC	NPN Light-ON	<u>CM12S-L1500N-LX6Q4UP-PF</u>
			NPN Dark-ON	<u>CM12S-L1500N-DX6Q4UP-PF</u>
			PNP Light-ON	<u>CM12S-L1500P-LX6Q4UP-PF</u>
			PNP Dark-ON	<u>CM12S-L1500P-DX6Q4UP-PF</u>
	Quick Disconnect (Euro-Style) 	10-36V DC	NPN Light-ON	<u>CM12S-L1500N-LX6Q4UE-PF</u>
			NPN Dark-ON	<u>CM12S-L1500N-DX6Q4UE-PF</u>
			PNP Light-ON	<u>CM12S-L1500P-LX6Q4UE-PF</u>
			PNP Dark-ON	<u>CM12S-L1500P-DX6Q4UE-PF</u>
	6" Pigtail (Euro-Style) 	10-36V DC	NPN Light-ON	<u>CM12S-L1500N-LX6P4UE-PF</u>
			NPN Dark-ON	<u>CM12S-L1500N-DX6P4UE-PF</u>
			PNP Light-ON	<u>CM12S-L1500P-LX6P4UE-PF</u>
			PNP Dark-ON	<u>CM12S-L1500P-DX6P4UE-PF</u>

Note: Used with RE-6152 (supplied with sensor) reflector.
Coming Soon : Part numbers with underline
In Preparation: Part numbers with a line through the middle

Diffuse Mode (Stainless Steel Housing)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
Diffuse Mode Sensing Distance: 300mm 	2m Cable 	10-36V DC	NPN Light-ON	<u>GM12S-D0300N-LX6C3U2</u>
			NPN Dark-ON	<u>GM12S-D0300N-DX6C3U2</u>
			PNP Light-ON	<u>GM12S-D0300P-LX6C3U2</u>
			PNP Dark-ON	<u>GM12S-D0300P-DX6C3U2</u>
	Quick Disconnect (Pico-Style) 	10-36V DC	NPN Light-ON	<u>GM12S-D0300N-LX6Q4UP</u>
			NPN Dark-ON	<u>GM12S-D0300N-DX6Q4UP</u>
			PNP Light-ON	<u>GM12S-D0300P-LX6Q4UP</u>
			PNP Dark-ON	<u>GM12S-D0300P-DX6Q4UP</u>
	Quick Disconnect (Euro-Style) 	10-36V DC	NPN Light-ON	<u>GM12S-D0300N-LX6Q4UE</u>
			NPN Dark-ON	<u>GM12S-D0300N-DX6Q4UE</u>
			PNP Light-ON	<u>GM12S-D0300P-LX6Q4UE</u>
			PNP Dark-ON	<u>GM12S-D0300P-DX6Q4UE</u>
	6" Pigtail (Euro-Style) 	10-36V DC	NPN Light-ON	<u>GM12S-D0300N-LX6P4UE</u>
			NPN Dark-ON	<u>GM12S-D0300N-DX6P4UE</u>
			PNP Light-ON	<u>GM12S-D0300P-LX6P4UE</u>
			PNP Dark-ON	<u>GM12S-D0300P-DX6P4UE</u>

Note:

Coming Soon : Part numbers with underline

In Preparation: Part numbers with a line through the middle

Specifications

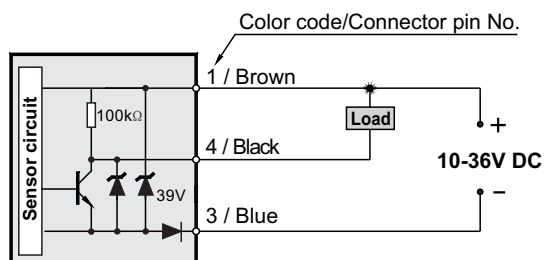
Item	Type Model No.	Thru-beam	Retro-reflective Mode (with polarizing filter)	Diffuse reflective
		CM12S-T010M...	CM12S-L1500...-PF	CM12S-D0300...
Sensing range		10m	1500mm (Note)	300mm
Sensing object		—	3-way mirror	100x100mm white
Hysteresis		10% typ.		
Supply Voltage		10-36V DC		
Max. Ripple content		20%		
Output current		200mA max.		
No-load supply current		15mA typ.		
Output voltage drop		2.0V max. At 200mA		
Max. Switching frequency		1000Hz		
Short-circuit protection		Yes		
Reverse polarity protection		Yes		
Overload current protection		Yes		
Switching time(↑and ↓)		1ms		
Operation indicator		The yellow LED lights up when the output is switched on. The green LED lights up when sufficient light is available for reliable operation (approx.80% of the maximum operating distance).		
Sensitivity setting		The sensitivity can be adjusted by means of the built-in potentiometer(diffuse sensor; optional for other models). Turning clockwise increases the sensitivity.		
Protection		IP67(IEC)		
Ambient temperature		-25 to 55°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)		
Emitting element		LED red 660nm		
Cable		2m long cable		
Pigtail type		See Pigtail Series or our Cables & Connectors catalogue.		
Connecor type		M8 (Pico-style) 4pins or M12 (Euro-style) 4pins		
Housing Material		Stainless steel (Nickel-plated brass on request)		
Weight (cable/connector model)		200/65 g (Emitter and receiver)	100/20 g	100/20 g

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

Connection Diagrams

NPN output type

I/O circuit diagram

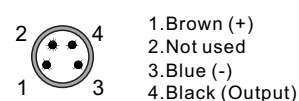


Connector pin position

Euro-style

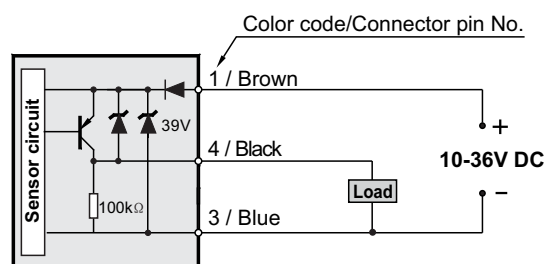


Pico-Style



PNP output type

I/O circuit diagram

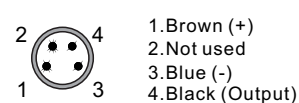


Connector pin position

Euro-style

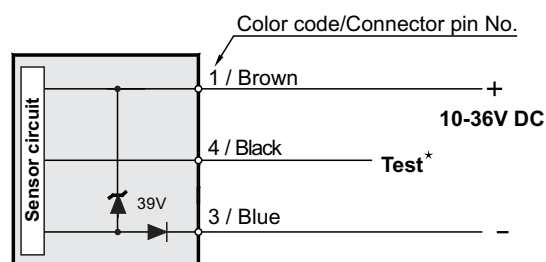


Pico-Style



Emitter of Thru-beam Mode

I/O circuit diagram

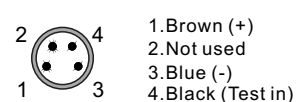


Connector pin position

Euro-style



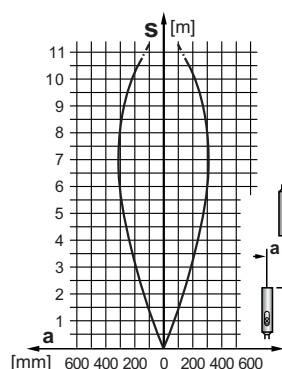
Pico-Style



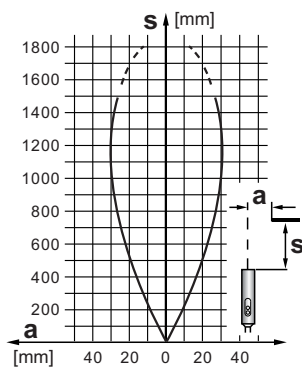
*: Test(black wire)=0V, Emitter off.

Response Curve & Dimensions

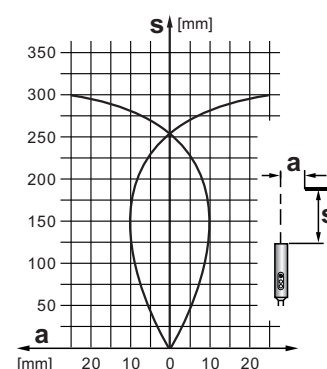
Response Curve



Thru-beam sensor
(Receiver only)



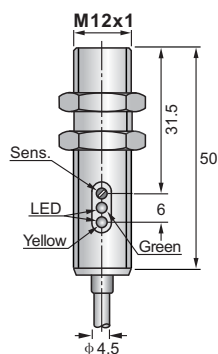
Retro-reflective sensor
(with polarizing filter)



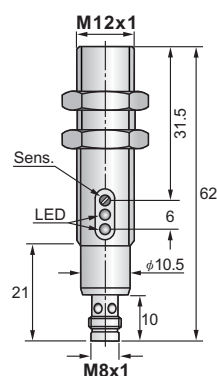
Diffuse sensor

Dimensions (Unit: mm)

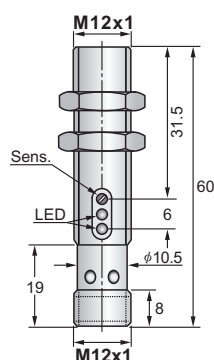
Cable Type



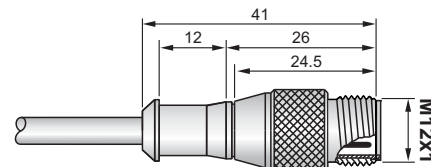
M8 (Pico-style) connector



M12 (Euro-style) connector

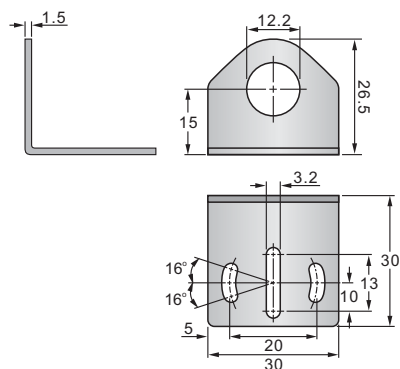


Pigtail* Type

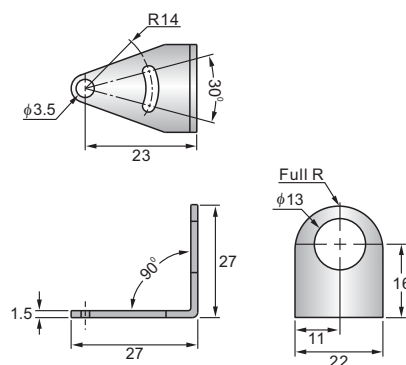


*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

MB-3026 (Mounting Bracket*-optional)



MB-2727 (Mounting Bracket*-optional)



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