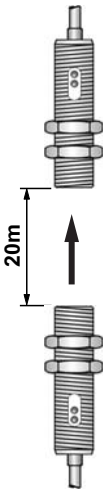



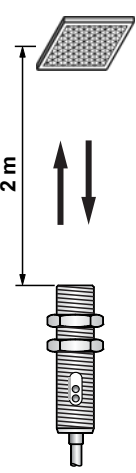





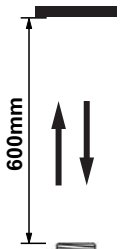



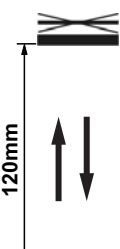



## Thru-beam Mode/ Polarized Retroreflective Mode (Stainless Steel Housing)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
<b>Thru-beam Mode</b> Sensing Distance: 20m LED red 660nm 	<b>2m Cable</b> 	10-36V DC	Emitter	GM18S-T020MD-EX6G3L2
			NPN Light-ON	GM18S-T020MN-LX6G3U2
			NPN Dark-ON	GM18S-T020MN-DX6G3U2
			NPN L.O./D.O.	GM18S-T020MN-CX6G4U2
			PNP Light-ON	GM18S-T020MP-LX6G3U2
			PNP Dark-ON	GM18S-T020MP-DX6G3U2
	PNP L.O./D.O.	GM18S-T020MP-CX6G4U2		
	<b>Quick Disconnect (Euro-Style)</b> 	10-36V DC	Emitter	GM18S-T020MD-EX6Q4LE
			NPN Light-ON	GM18S-T020MN-LX6Q4UE
			NPN Dark-ON	GM18S-T020MN-DX6Q4UE
			NPN L.O./D.O.	GM18S-T020MN-CX6Q4UE
			PNP Light-ON	GM18S-T020MP-LX6Q4UE
			PNP Dark-ON	GM18S-T020MP-DX6Q4UE
	PNP L.O./D.O.	GM18S-T020MP-CX6Q4UE		
	<b>6" Pigtail (Euro-Style)</b> 	10-36V DC	Emitter	GM18S-T020MD-EX6P4LE
			NPN Light-ON	GM18S-T020MN-LX6P4UE
			NPN Dark-ON	GM18S-T020MN-DX6P4UE
			NPN L.O./D.O.	GM18S-T020MN-CX6P4UE
PNP Light-ON			GM18S-T020MP-LX6P4UE	
PNP Dark-ON			GM18S-T020MP-DX6P4UE	
PNP L.O./D.O.	GM18S-T020MP-CX6P4UE			
<b>Retro-reflective Mode</b> with polarizing filter Sensing distance: 2 m (Note) LED red 660nm 	<b>2m Cable</b> 	10-36V DC	NPN Light-ON	GM18S-L2000N-LX6G3U2-PF
			NPN Dark-ON	GM18S-L2000N-DX6G3U2-PF
			NPN L.O./D.O.	GM18S-L2000N-CX6G4U2-PF
			PNP Light-ON	GM18S-L2000P-LX6G3U2-PF
			PNP Dark-ON	GM18S-L2000P-DX6G3U2-PF
			PNP L.O./D.O.	GM18S-L2000P-CX6G4U2-PF
	<b>Quick Disconnect (Euro-Style)</b> 	10-36V DC	NPN Light-ON	GM18S-L2000N-LX6Q4UE-PF
			NPN Dark-ON	GM18S-L2000N-DX6Q4UE-PF
			NPN L.O./D.O.	GM18S-L2000N-CX6Q4UE-PF
			PNP Light-ON	GM18S-L2000P-LX6Q4UE-PF
			PNP Dark-ON	GM18S-L2000P-DX6Q4UE-PF
			PNP L.O./D.O.	GM18S-L2000P-CX6Q4UE-PF
	<b>6" Pigtail (Euro-Style)</b> 	10-36V DC	NPN Light-ON	GM18S-L2000N-LX6P4UE-PF
			NPN Dark-ON	GM18S-L2000N-DX6P4UE-PF
			NPN L.O./D.O.	GM18S-L2000N-CX6P4UE-PF
			PNP Light-ON	GM18S-L2000P-LX6P4UE-PF
			PNP Dark-ON	GM18S-L2000P-DX6P4UE-PF
			PNP L.O./D.O.	GM18S-L2000P-CX6P4UE-PF

**Note:**

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

## Diffuse Mode/ Background Suppression Diffuse Mode (Stainless steel housing)

Sensing Mode	Connection	Supply Voltage	Output Mode	Part Number
 <p>600mm</p> <p>Diffuse mode Sensing distance: 600mm LED red 660nm</p>	<b>2m Cable</b> 	10-36V DC	NPN Light-ON	<u>GM18S-D0600N-LX6C3U2</u>
			NPN Dark-ON	<u>GM18S-D0600N-DX6C3U2</u>
			NPN L.O./D.O.	<u>GM18S-D0600N-CX6C4U2</u>
			PNP Light-ON	<u>GM18S-D0600P-LX6C3U2</u>
			PNP Dark-ON	<u>GM18S-D0600P-DX6C3U2</u>
			PNP L.O./D.O.	<u>GM18S-D0600P-CX6C4U2</u>
	<b>Quick Disconnect (Euro-Style)</b> 	10-36V DC	NPN Light-ON	<u>GM18S-D0600N-LX6Q4UE</u>
			NPN Dark-ON	<u>GM18S-D0600N-DX6Q4UE</u>
			NPN L.O./D.O.	<u>GM18S-D0600N-CX6Q4UE</u>
			PNP Light-ON	<u>GM18S-D0600P-LX6Q4UE</u>
			PNP Dark-ON	<u>GM18S-D0600P-DX6Q4UE</u>
			PNP L.O./D.O.	<u>GM18S-D0600P-CX6Q4UE</u>
	<b>6" Pigtail (Euro-Style)</b> 	10-36V DC	NPN Light-ON	<u>GM18S-D0600N-LX6P4UE</u>
			NPN Dark-ON	<u>GM18S-D0600N-DX6P4UE</u>
			NPN L.O./D.O.	<u>GM18S-D0600N-CX6P4UE</u>
			PNP Light-ON	<u>GM18S-D0600P-LX6P4UE</u>
			PNP Dark-ON	<u>GM18S-D0600P-DX6P4UE</u>
			PNP L.O./D.O.	<u>GM18S-D0600P-CX6P4UE</u>
 <p>120mm</p> <p>Diffuse Mode with Background Suppression Sensing distance: 10...120mm LED red 660nm</p>	<b>2m Cable</b> 	10-36V DC	NPN Light-ON	<u>GM18S-D0420N-LX6C3U2-BS</u>
			NPN Dark-ON	<u>GM18S-D0420N-DX6C3U2-BS</u>
			NPN L.O./D.O.	<u>GM18S-D0420N-CX6C4U2-BS</u>
			PNP Light-ON	<u>GM18S-D0420P-LX6C3U2-BS</u>
			PNP Dark-ON	<u>GM18S-D0420P-DX6C3U2-BS</u>
			PNP L.O./D.O.	<u>GM18S-D0420P-CX6C4U2-BS</u>
	<b>Quick Disconnect (Euro-Style)</b> 	10-36V DC	NPN Light-ON	<u>GM18S-D0420N-LX6Q4UE-BS</u>
			NPN Dark-ON	<u>GM18S-D0420N-DX6Q4UE-BS</u>
			NPN L.O./D.O.	<u>GM18S-D0420N-CX6Q4UE-BS</u>
			PNP Light-ON	<u>GM18S-D0420P-LX6Q4UE-BS</u>
			PNP Dark-ON	<u>GM18S-D0420P-DX6Q4UE-BS</u>
			PNP L.O./D.O.	<u>GM18S-D0420P-CX6Q4UE-BS</u>
	<b>6" Pigtail (Euro-Style)</b> 	10-36V DC	NPN Light-ON	<u>GM18S-D0420N-LX6P4UE-BS</u>
			NPN Dark-ON	<u>GM18S-D0420N-DX6P4UE-BS</u>
			NPN L.O./D.O.	<u>GM18S-D0420N-CX6P4UE-BS</u>
			PNP Light-ON	<u>GM18S-D0420P-LX6P4UE-BS</u>
			PNP Dark-ON	<u>GM18S-D0420P-DX6P4UE-BS</u>
			PNP L.O./D.O.	<u>GM18S-D0420P-CX6P4UE-BS</u>

**Note:**

Coming Soon : Part numbers with underline  
 In Preparation: Part numbers with a line through the middle

## Specifications

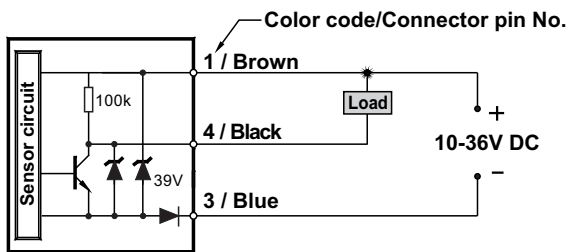
Item	Type Model No.	Thru-beam Mode	Diffuse Mode		Retro-reflective Mode (with polarizing filter)
			Standard Type	With background suppression	
		CM18S-T020M...	CM18S-D0600...	CM18S-L0120...-BS	CM18S-L2000...-PF
Sensing range		20m	600mm	10-120mm	2m (Note)
Sensing object		—	200x200mm white	100x100mm white	3-way mirror
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 (Diffuse mode with background suppression sensor is 500 Hz)			
Short-circuit protection		Yes			
Reverse polarity protection		Yes			
Overload current protection		Yes			
Switching time(↑and↓)		0.5ms (Diffuse mode with background suppression sensor is 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	LED red 660nm	LED red 660nm	LED red polarized 660nm
Housing Material		Stainless Steel (Nickel-plated brass on request)			
Cable		Standard 2m long (other length on request)			
Connection type		M12 (Euro-style) 4pin			
Pigtail type		See Pigtail Series or our Cables & Connectors catalogue.			
Weight (cable/connector model)		230/80g (receiver and emitter)	121/53g	121/53g	121/53g

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

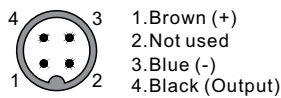
## Connection Diagrams

### NPN output type

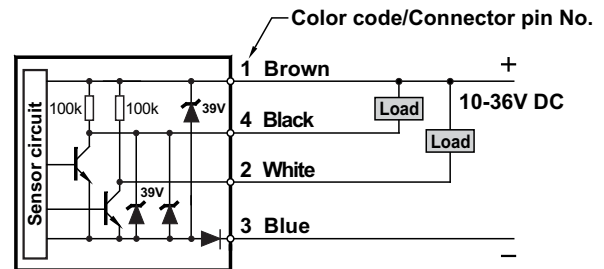
#### NPN Light-ON or Dark-ON output I/O circuit diagram



Connector pin position (Euro-style)



#### NPN changeover outputs I/O circuit diagram

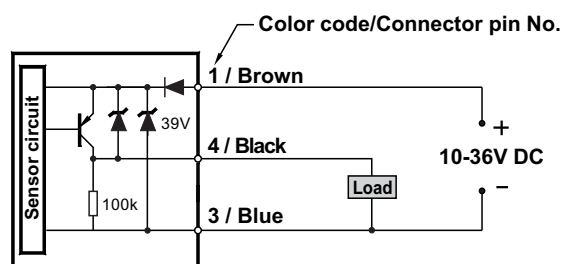


Connector pin position (Euro-style)



### PNP output type

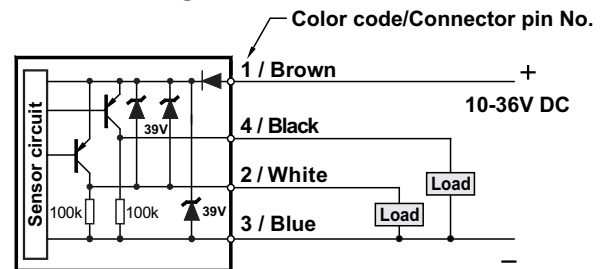
#### PNP Light-ON or Dark-ON output I/O circuit diagram



Connector pin position (Euro-style)



#### PNP changeover outputs I/O circuit diagram

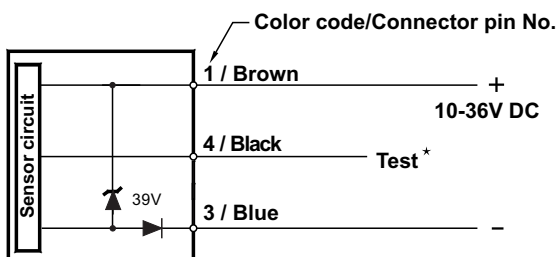


Connector pin position (Euro-style)



### Emitter of Thru-beam Mode

#### I/O circuit diagram



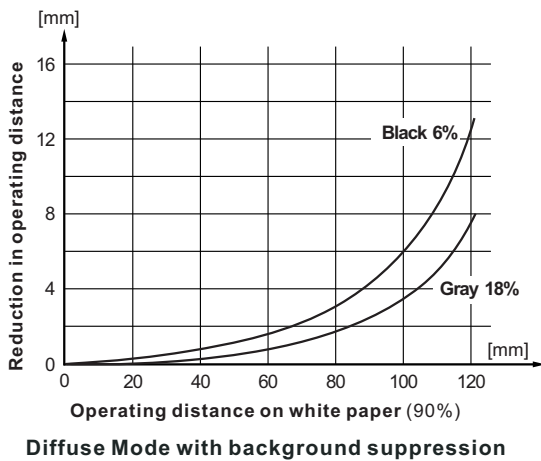
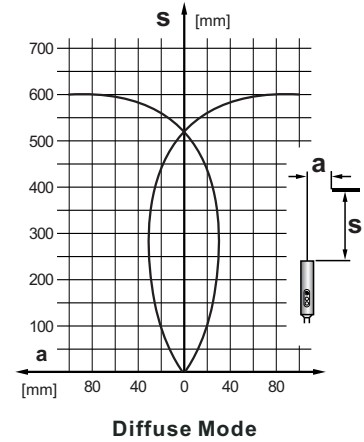
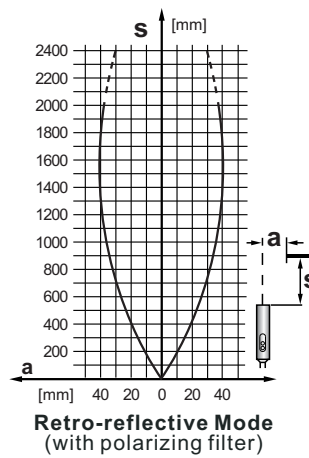
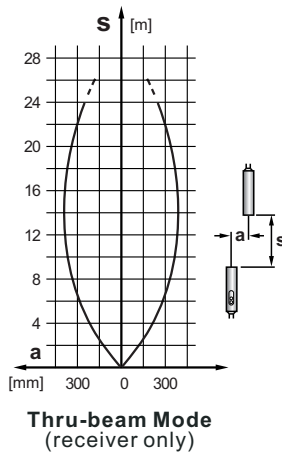
Connector pin position (Euro-style)



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

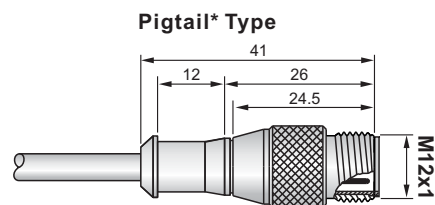
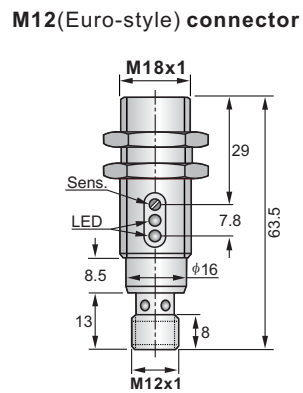
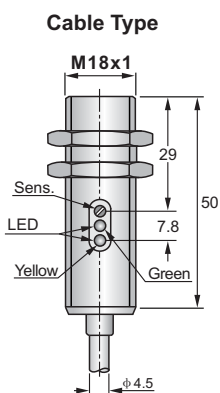
## Response Curve & Dimensions

### Response Curve



F: CM18 SERIES

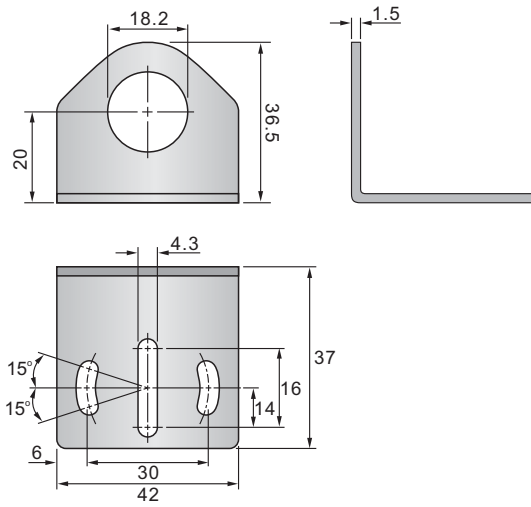
### Dimensions (Unit: mm)



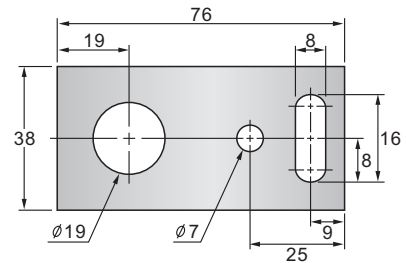
\*: Please see **Pigtail Series** or our **Cables & Connectors** catalogue for more information.

## Mounting Bracket's \* Dimensions (Unit: mm)

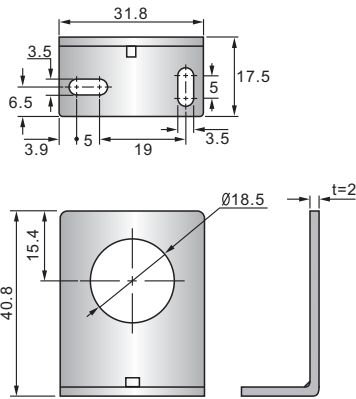
**MB-4237 (optional)**



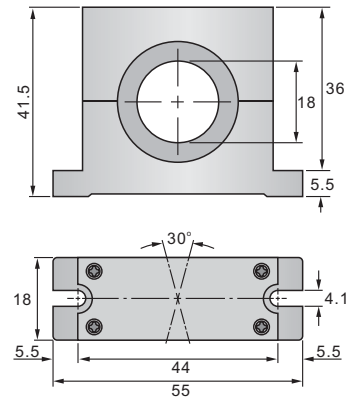
**MB-7638 (optional)**



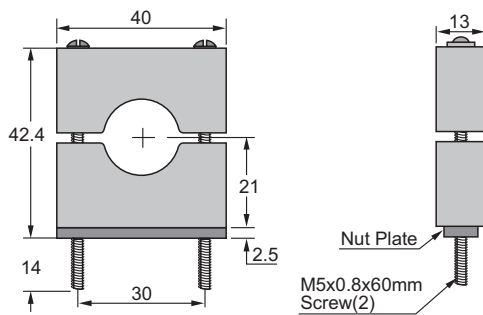
**MB-4032 (optional)**



**MB-5542 (optional)**

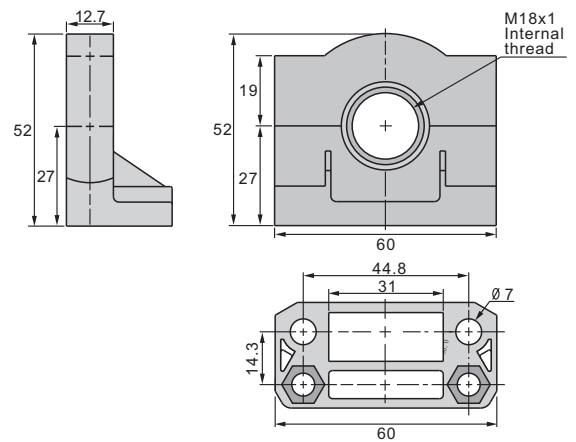


**MB-4240 (optional)**



18mm split clamp bracket

**MB-6052 (optional)**



Mounting Bracket to Provide 360° Rotation

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