





















## Thru-beam Mode (Red Light)

B: M8 SERIES

Sensing Mode	Housing material	Connection	Output Mode	Part Number
<p>Light Source: Red Light 660nm</p>  <p>2 m</p> <p>Thru-beam mode Sensing distance: 2 m</p>	Stainless Steel	 2m Cable <span style="float: right;">CE</span>	Emitter	<u>M8S-T2000D-EX6C2L2</u>
			NPN Light-ON	<u>M8S-T2000N-LX6C3U2</u>
			NPN Dark-ON	<u>M8S-T2000N-DX6C3U2</u>
			PNP Light-ON	<u>M8S-T2000P-LX6C3U2</u>
			PNP Dark-ON	<u>M8S-T2000P-DX6C3U2</u>
		 Quick Disconnect (M8) <span style="float: right;">CE</span>	Emitter	<u>M8S-T2000D-EX6Q4LP</u>
			NPN Light-ON	<u>M8S-T2000N-LX6Q4UP</u>
			NPN Dark-ON	<u>M8S-T2000N-DX6Q4UP</u>
			PNP Light-ON	<u>M8S-T2000P-LX6Q4UP</u>
	 4 Pins 6" Pig tail (M8) <span style="float: right;">CE</span>	Emitter	<u>M8S-T2000D-EX6P4LP</u>	
		NPN Light-ON	<u>M8S-T2000N-LX6P4UP</u>	
		NPN Dark-ON	<u>M8S-T2000N-DX6P4UP</u>	
		PNP Light-ON	<u>M8S-T2000P-LX6P4UP</u>	
		PNP Dark-ON	<u>M8S-T2000P-DX6P4UP</u>	
	Brass	 2m Cable <span style="float: right;">CE</span>	Emitter	<u>M8B-T2000D-EX6C2L2</u>
			NPN Light-ON	<u>M8B-T2000N-LX6C3U2</u>
			NPN Dark-ON	<u>M8B-T2000N-DX6C3U2</u>
			PNP Light-ON	<u>M8B-T2000P-LX6C3U2</u>
PNP Dark-ON			<u>M8B-T2000P-DX6C3U2</u>	
 Quick Disconnect (M8) <span style="float: right;">CE</span>		Emitter	<u>M8B-T2000D-EX6Q4LP</u>	
		NPN Light-ON	<u>M8B-T2000N-LX6Q4UP</u>	
		NPN Dark-ON	<u>M8B-T2000N-DX6Q4UP</u>	
		PNP Light-ON	<u>M8B-T2000P-LX6Q4UP</u>	
 4 Pins 6" Pig tail (M8) <span style="float: right;">CE</span>		Emitter	<u>M8B-T2000D-EX6P4LP</u>	
		NPN Light-ON	<u>M8B-T2000N-LX6P4UP</u>	
		NPN Dark-ON	<u>M8B-T2000N-DX6P4UP</u>	
		PNP Light-ON	<u>M8B-T2000P-LX6P4UP</u>	
		PNP Dark-ON	<u>M8B-T2000P-DX6P4UP</u>	

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






## Thru-beam Mode (Infrared Light)

Sensing Mode	Housing material	Connection	Output Mode	Part Number
<p>Light Source: Infrared 880nm</p>  <p>2 m</p> <p>Thru-beam Mode Sensing distance: 2 m</p>	Stainless Steel	 2m Cable 	Emitter	-M8S-T2000D-EX9C2L2
			NPN Light-ON	-M8S-T2000N-LX9C3U2
			NPN Dark-ON	-M8S-T2000N-DX9C3U2
			PNP Light-ON	-M8S-T2000P-LX9C3U2
			PNP Dark-ON	-M8S-T2000P-DX9C3U2
			 Quick Disconnect (M8) 	Emitter
		NPN Light-ON		-M8S-T2000N-LX9Q4UP
		NPN Dark-ON		-M8S-T2000N-DX9Q4UP
		PNP Light-ON		-M8S-T2000P-LX9Q4UP
		PNP Dark-ON		-M8S-T2000P-DX9Q4UP
		 4 Pins 6" Pig tail (M8) 		Emitter
			NPN Light-ON	-M8S-T2000N-LX9P4UP
	NPN Dark-ON		-M8S-T2000N-DX9P4UP	
	PNP Light-ON		-M8S-T2000P-LX9P4UP	
	PNP Dark-ON		-M8S-T2000P-DX9P4UP	
	Brass		 2m Cable 	Emitter
		NPN Light-ON		-M8B-T2000N-LX9C3U2
		NPN Dark-ON		-M8B-T2000N-DX9C3U2
PNP Light-ON		-M8B-T2000P-LX9C3U2		
PNP Dark-ON		-M8B-T2000P-DX9C3U2		
 Quick Disconnect (M8) 		Emitter		-M8B-T2000D-EX9Q4LP
		NPN Light-ON	-M8B-T2000N-LX9Q4UP	
		NPN Dark-ON	-M8B-T2000N-DX9Q4UP	
		PNP Light-ON	-M8B-T2000P-LX9Q4UP	
		PNP Dark-ON	-M8B-T2000P-DX9Q4UP	
		 4 Pins 6" Pig tail (M8) 	Emitter	-M8B-T2000D-EX9P4LP
NPN Light-ON			-M8B-T2000N-LX9P4UP	
NPN Dark-ON	-M8B-T2000N-DX9P4UP			
PNP Light-ON	-M8B-T2000P-LX9P4UP			
PNP Dark-ON	-M8B-T2000P-DX9P4UP			

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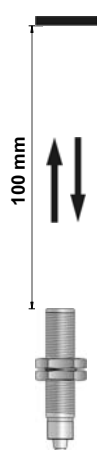






## Diffuse Mode (Red Light)

B: M8 SERIES

Sensing Mode	Housing material	Connection	Output Mode	Part Number
<p>Light Source: Red Light 660nm</p>  <p>100 mm</p> <p>Diffuse Mode Sensing Distance: 100 mm</p>	Stainless Steel	 2m Cable 	NPN Light-ON	<u>M8S-D0100N-LX6C3U2</u>
			NPN Dark-ON	<u>M8S-D0100N-DX6C3U2</u>
			PNP Light-ON	<u>M8S-D0100P-LX6C3U2</u>
			PNP Dark-ON	<u>M8S-D0100P-DX6C3U2</u>
		————	————	
		NPN Dark-ON	<u>M8S-D0100N-DX6Q4UP</u>	
		PNP Light-ON	<u>M8S-D0100P-LX6Q4UP</u>	
		PNP Dark-ON	<u>M8S-D0100P-DX6Q4UP</u>	
		————	————	
		NPN Dark-ON	<u>M8S-D0100N-DX6P4UP</u>	
		PNP Light-ON	<u>M8S-D0100P-LX6P4UP</u>	
		PNP Dark-ON	<u>M8S-D0100P-DX6P4UP</u>	
	————	————		
	Brass	 2m Cable 	NPN Light-ON	<u>M8B-D0100N-LX6C3U2</u>
			NPN Dark-ON	<u>M8B-D0100N-DX6C3U2</u>
			PNP Light-ON	<u>M8B-D0100P-LX6C3U2</u>
			PNP Dark-ON	<u>M8B-D0100P-DX6C3U2</u>
		————	————	
		NPN Dark-ON	<u>M8B-D0100N-DX6Q4UP</u>	
		PNP Light-ON	<u>M8B-D0100P-LX6Q4UP</u>	
		PNP Dark-ON	<u>M8B-D0100P-DX6Q4UP</u>	
		————	————	
		NPN Dark-ON	<u>M8B-D0100N-DX6P4UP</u>	
		PNP Light-ON	<u>M8B-D0100P-LX6P4UP</u>	
PNP Dark-ON		<u>M8B-D0100P-DX6P4UP</u>		
————	————			

**Note:**  
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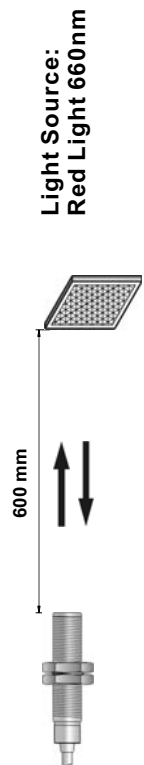




## Diffuse Mode (Infrared Light)

Sensing Mode	Housing material	Connection	Output Mode	Part Number		
<p>Light Source: Infrared 880nm</p>  <p>100 mm</p> <p>Diffuse Mode Sensing Distance: 100 mm</p>	Stainless Steel	 2m Cable	CE	NPN Light-ON	<u>M8S-D0100N-LX9C3U2</u>	
				NPN Dark-ON	<u>M8S-D0100N-DX9C3U2</u>	
				PNP Light-ON	<u>M8S-D0100P-LX9C3U2</u>	
				PNP Dark-ON	<u>M8S-D0100P-DX9C3U2</u>	
			—	—		
		 Quick Disconnect (M8)	CE	NPN Light-ON	<u>M8S-D0100N-LX9Q4UP</u>	
				NPN Dark-ON	<u>M8S-D0100N-DX9Q4UP</u>	
				PNP Light-ON	<u>M8S-D0100P-LX9Q4UP</u>	
				PNP Dark-ON	<u>M8S-D0100P-DX9Q4UP</u>	
			—	—		
		 4 Pins 6" Pig tail (M8)	CE	NPN Light-ON	<u>M8S-D0100N-LX9P4UP</u>	
				NPN Dark-ON	<u>M8S-D0100N-DX9P4UP</u>	
			PNP Light-ON	<u>M8S-D0100P-LX9P4UP</u>		
			PNP Dark-ON	<u>M8S-D0100P-DX9P4UP</u>		
			—	—		
	Brass		 2m Cable	CE	NPN Light-ON	<u>M8B-D0100N-LX9C3U2</u>
					NPN Dark-ON	<u>M8B-D0100N-DX9C3U2</u>
					PNP Light-ON	<u>M8B-D0100P-LX9C3U2</u>
				PNP Dark-ON	<u>M8B-D0100P-DX9C3U2</u>	
			—	—		
		 Quick Disconnect (M8)	CE	NPN Light-ON	<u>M8B-D0100N-LX9Q4UP</u>	
				NPN Dark-ON	<u>M8B-D0100N-DX9Q4UP</u>	
				PNP Light-ON	<u>M8B-D0100P-LX9Q4UP</u>	
				PNP Dark-ON	<u>M8B-D0100P-DX9Q4UP</u>	
		—	—			
 4 Pins 6" Pig tail (M8)		CE	NPN Light-ON	<u>M8B-D0100N-LX9P4UP</u>		
			NPN Dark-ON	<u>M8B-D0100N-DX9P4UP</u>		
		PNP Light-ON	<u>M8B-D0100P-LX9P4UP</u>			
		PNP Dark-ON	<u>M8B-D0100P-DX9P4UP</u>			
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**Note:**  
 Coming Soon : Part numbers with underline  
 In Preparation: Part numbers with a line through the middle

## Retroreflective Mode (Red Light)

B: M8 SERIES

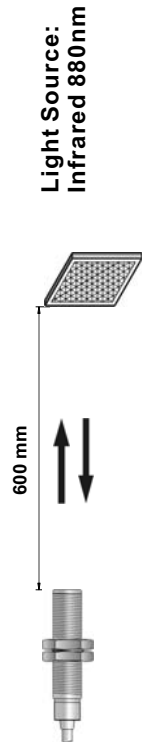












Sensing Mode	Housing material	Connection	Output Mode	Part Number
<p>Light Source: Red Light 660nm</p>  <p>600 mm</p> <p>Retroreflective Mode Sensing Distance: 600 mm (Note)</p>	Stainless Steel	 2m Cable 	NPN Light-ON	-M8S-L0600N-LX6C3U2-
			NPN Dark-ON	-M8S-L0600N-DX6C3U2-
			PNP Light-ON	-M8S-L0600P-LX6C3U2-
			PNP Dark-ON	-M8S-L0600P-DX6C3U2-
		—————	—————	
		NPN Dark-ON	-M8S-L0600N-DX6Q4UP-	
		PNP Light-ON	-M8S-L0600P-LX6Q4UP-	
		PNP Dark-ON	-M8S-L0600P-DX6Q4UP-	
		—————	—————	
		NPN Dark-ON	-M8S-L0600N-DX6P4UP-	
		PNP Light-ON	-M8S-L0600P-LX6P4UP-	
		PNP Dark-ON	-M8S-L0600P-DX6P4UP-	
	—————	—————		
	Brass	 2m Cable 	NPN Light-ON	-M8B-L0600N-LX6C3U2-
			NPN Dark-ON	-M8B-L0600N-DX6C3U2-
			PNP Light-ON	-M8B-L0600P-LX6C3U2-
			PNP Dark-ON	-M8B-L0600P-DX6C3U2-
		—————	—————	
		NPN Dark-ON	-M8B-L0600N-DX6Q4UP-	
		PNP Light-ON	-M8B-L0600P-LX6Q4UP-	
		PNP Dark-ON	-M8B-L0600P-DX6Q4UP-	
		—————	—————	
		NPN Dark-ON	-M8B-L0600N-DX6P4UP-	
		PNP Light-ON	-M8B-L0600P-LX6P4UP-	
PNP Dark-ON		-M8B-L0600P-DX6P4UP-		
—————	—————			

**Note:**

Used with RE-4235 (supplied with sensor) reflector.

In Preparation: Part numbers with a line through the middle

## Retroreflective Mode (Infrared Light)

Sensing Mode	Housing material	Connection	Output Mode	Part Number
<p>Light Source: Infrared 880nm</p>  <p>600 mm</p> <p>Retroreflective Mode</p> <p>Sensing Distance: 600 mm (Note)</p>	Stainless Steel	 2m Cable 	NPN Light-ON	-M8S-L0600N-LX9C3U2
			NPN Dark-ON	-M8S-L0600N-DX9C3U2
			PNP Light-ON	-M8S-L0600P-LX9C3U2
			PNP Dark-ON	-M8S-L0600P-DX9C3U2
		—	—	
		 Quick Disconnect (M8) 	NPN Light-ON	-M8S-L0600N-LX9Q4UP
			NPN Dark-ON	-M8S-L0600N-DX9Q4UP
			PNP Light-ON	-M8S-L0600P-LX9Q4UP
			PNP Dark-ON	-M8S-L0600P-DX9Q4UP
		—	—	
		 4 Pins 6" Pig tail (M8) 	NPN Light-ON	-M8S-L0600N-LX9P4UP
			NPN Dark-ON	-M8S-L0600N-DX9P4UP
	PNP Light-ON		-M8S-L0600P-LX9P4UP	
	PNP Dark-ON		-M8S-L0600P-DX9P4UP	
	—	—		
	Brass	 2m Cable 	NPN Light-ON	-M8B-L0600N-LX9C3U2
			NPN Dark-ON	-M8B-L0600N-DX9C3U2
			PNP Light-ON	-M8B-L0600P-LX9C3U2
			PNP Dark-ON	-M8B-L0600P-DX9C3U2
		—	—	
		 Quick Disconnect (M8) 	NPN Light-ON	-M8B-L0600N-LX9Q4UP
			NPN Dark-ON	-M8B-L0600N-DX9Q4UP
			PNP Light-ON	-M8B-L0600P-LX9Q4UP
			PNP Dark-ON	-M8B-L0600P-DX9Q4UP
—		—		
 4 Pins 6" Pig tail (M8) 		NPN Light-ON	-M8B-L0600N-LX9P4UP	
		NPN Dark-ON	-M8B-L0600N-DX9P4UP	
	PNP Light-ON	-M8B-L0600P-LX9P4UP		
	PNP Dark-ON	-M8B-L0600P-DX9P4UP		
—	—			

**Note:**

Used with RE-4235 (supplied with sensor) reflector.

In Preparation: Part numbers with a line through the middle

## Specifications

Item \ Type	Thru-beam Mode	Diffuse Mode	Retroreflective Mode
Sensing range	2 m	100 mm	600 mm (Note)
Sensing object	—————	on white paper (100x100mm)	3-way mirror
Light Source	Red Light 660nm or Infrared Light 880nm		
Supply Voltage	10 to 30V DC Ripple P-P 10% or less		
Current consumption	30mA or less		
Output	<b>&lt;NPN&gt; output type&gt;</b> NPN open-collector transistor <ul style="list-style-type: none"> <li>• Applied voltage: 30V DC or less</li> <li>• Maximum sink current: 150mA</li> <li>• Voltage drop: 2.5V or less</li> </ul>		<b>&lt;PNP&gt; output type&gt;</b> PNP open-collector transistor <ul style="list-style-type: none"> <li>• Applied voltage: 30V DC or less</li> <li>• Maximum source current: 150mA</li> <li>• Voltage drop: 2.5V or less</li> </ul>
Output operation	Light-ON or Dark-ON (by type number)		
Short-circuit protection	Yes		
Reverse polarity protection	Yes		
Overload current protection	Yes		
Response time	0.1ms		
Operation indicator	Receiver: Red LED light up when the output is activated, Emitter: Red LED light up when the power is on.		
Protection	IP67(IEC)		
Ambient temperature	-20 to 70°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 1500VAC 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		
Housing Material	Stainless steel or Nickel-plated Brass		
Connections	<b>Cable type:</b> 2m long with three conductors, <b>Connector type:</b> M8(pico-style) connector, <b>Pigtail type:</b> see <b>Pigtail Series</b> or our <b>Cables &amp; Connectors</b> catalogue.		

**Note:** Used with RE-4235 (supplied with sensor) reflector.

### Sensing Characteristics (Typical)

