



S12

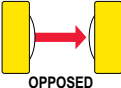
Plastic Barrel-Mount Sensors

The S12 Barrel sensors provide reliable sensing without adjustments.


- Housing rated to IP67 for heavy-duty industrial sensing
- Sensing range up to 15 m
- Visible red LED
- Available in opposed mode
- Cordsets and brackets see page 190

Opposed S12, 10-30 V DC

→ Visible Red LED

Sensing Mode	Range	Connection	Models NPN	Models PNP
 OPPOSED	15 m	2 m	<div>S126E Emitter</div> S12SN6R	S12SP6R

For more specifications see page 191.

 **Connection options:** A model with a QD requires a mating cordset (see page 190).
QD models: For a 4-pin 150 mm Pico-style pigtail QD, add suffix **QP** (example, **S12SN6RQP**).




S12-2

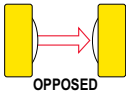
Plastic Barrel-Mount Sensors

The S12-2 Barrel sensors provide reliable sensing without adjustments.


- Housing rated to IP67 for heavy-duty industrial sensing
- Sensing range up to 20 m
- Wide beam pattern makes sensor alignment easy at long ranges
- Available in opposed mode
- Cordsets and brackets see page 190

S12-2, 10-30 V DC

 Infrared LED

Sensing Mode	Range	Input	Connection	Models NPN	Models PNP
 OPPOSED	20 m	—	2 m	S12-2NAEL-2M Emitter	
		Beam Inhibit		S12-2NAEJ-2M Emitter	
		—		S12-2ANRL-2M	S12-2APRL-2M
		—		S12-2RNRL-2M	S12-2RPRL-2M

For more specifications see page 191.



**Connection options:** A model with a QD requires a mating cordset (see page 190).


QD models: For a 4-pin 150 mm Pico-style pigtail QD, add suffix **QP** (example, **S12SN6RQP**).

Cordsets

Pico QD (for S12 models)







See page 904

Length	Snap-on 4-Pin	
	Straight	Right-Angle
2.00 m	 PKG4-2	 PKW4Z-2

 Additional cordset information available.
See page 902.

Pico QD (for S12-2 models)

See page 902

Length	Threaded 3-Pin	
	Straight	Right-Angle
2.00 m	 PKG3M-2	 PKW3M-2
5.00 m	 PKG3M-5	 PKW3M-5
9.00 m	 PKG3M-9	 PKW3M-9

Brackets

S12 & S12-2

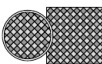

See page 864

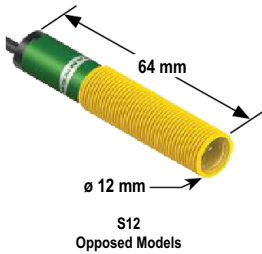
SMB12MM



 Additional brackets and information available.
See page 852.

Other Accessories

Reflectors	Apertures
See page 932	See page 958
	



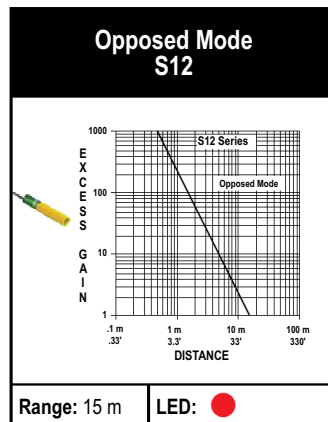
S12 & S12-2 Specifications

Supply Voltage and Current	S12: 10 to 30 V dc (10% max. ripple); 25 mA (emitters) or 20 mA (receivers) exclusive of load S12-2: 10 to 30 V dc; < 25 mA (emitters) or 15 mA (receivers) exclusive of load	
Supply Protection Circuitry	Protected against reverse polarity and transient voltages	
Output Configuration	S12: Complementary solid-state dc switch; choose NPN (current sinking) or PNP (current sourcing) models Light Operate: N.O. output conducts when the sensor sees the emitter's modulated light Dark Operate: N.C. output conducts when the sensor sees dark; The N.C. (normally closed) output may be wired as a normally open marginal signal alarm output, depending upon hookup to the power supply S12-2: One solid state output, NPN (sinking) or PNP (sourcing), depending on model	
Output Ratings	100 mA maximum (each) in standard hookup; when wired for alarm output, the total load may not exceed 100 mA OFF-state leakage current: less than 1 μ A @ 30 V dc ON-state saturation voltage: less than 1 V @ 10 mA; less than 1.5 V @ 150 mA	
Output Protection Circuitry	Protected against false pulse on power-up and continuous overload or short circuit of outputs	
Output Response Time	S12: 3 milliseconds ON, 1.5 milliseconds OFF S12-2: 11 milliseconds ON, 7 milliseconds OFF	
Delay at Power-up	S12: 100 millisecond; outputs are non-conducting during this time S12-2: 1 second; outputs are non-conducting during this time	
Repeatability	S12: 375 microseconds S12-2: 1.5 milliseconds	
Indicators	Green LED (emitter and receiver): power ON Amber LED (receiver only): light sensed	
Construction	Housings are reinforced thermoplastic polyester; lenses are Lexan®; Polyurethane end cap	
Environmental Rating	Leakproof design rated NEMA 6P (IEC IP67)	
Connections	S12: 2 m or 9 m cable, or a 150 mm pigtail with 4-pin Pico-style QD S12-2: 2 m or 9 m cable, or a 150 mm pigtail with 3-pin Pico-style QD QD cordset ordered separately. See page 190.	
Operating Conditions	S12: Temperature: -40° to +70° C Maximum relative humidity: 90% at 50°C (non-condensing) S12-2: Temperature: -25° to +50° C Maximum relative humidity: 90% at 50°C (non-condensing)	
Vibration and Mechanical Shock	Meets Mil. Std. 202F requirements. Method 201A (Vibration: frequency 10 to 60 Hz, max., double amplitude 0.06-inch acceleration 10G). Method 213B conditions H&I (Shock: 75G with unit operating; 100G for non-operation).	
Certifications	CE	

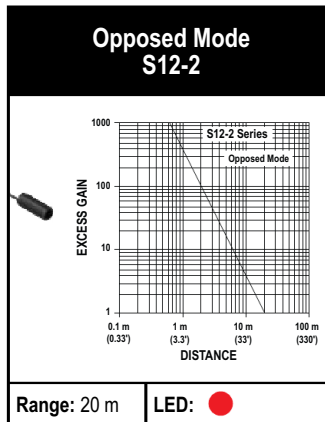
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Excess Gain Curves

● = Visible Red LED

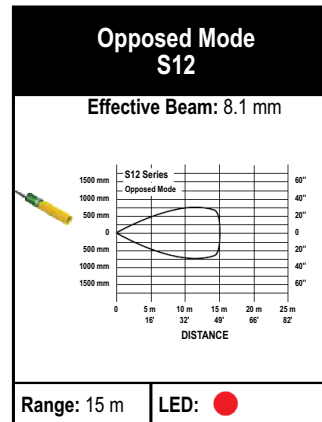


● = Visible Red LED



Beam Patterns

● = Visible Red LED



● = Visible Red LED

