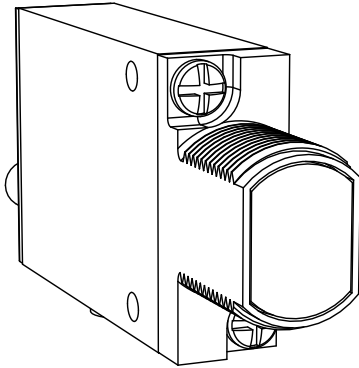


# MINI-BEAM SME312 Expert Series



Microprocessor-based TEACH mode photoelectric sensors<sup>1</sup>



- TEACH-mode sensors in the popular MINI-BEAM package
- Easy push-button programming automatically adjusts sensitivity to optimal setting
- Multiple sensing modes include retroreflective, polarized retro, clear object detection, diffuse, divergent, and convergent, plus glass and plastic fiber optic models
- Fast, 500 microsecond (0.5 millisecond) output response
- Bipolar NPN (sinking)/PNP (sourcing) outputs
- Easy output programming eliminates the need for Light or Dark Operate selection
- Separate TEACH input allows remote programming by an external device, such as a switch or a process controller
- LED status indications for received signal strength (using Banner's AID™ function), power ON, and output state
- Green Stability indicator flashes when received signal level approaches the switching threshold, also indicates Power ON
- Integral 2 meter (6.5 foot) cable or 5-pin Euro-style quick-disconnect (QD) connector, depending on model; 9 meter (30 foot) cable models are also available

<sup>1</sup> U.S. patent(s) issued or pending



**WARNING: Not To Be Used for Personnel Protection**

**Never use this device as a sensing device for personnel protection. Doing so could lead to serious injury or death.** This device does NOT include the self-checking redundant circuitry necessary to allow its use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition.

## Retroreflective Models

Sensing Mode	Model *	Range or Focus	Supply Voltage	Output Type
Retroreflective, 650 nm visible red	SME312LV	5 m (15 ft)**	10 to 30V dc	Bipolar NPN/PNP
Polarized retroreflective, 650 nm visible red	SME312LP	10 mm to 3 m** (0.4 in to 10 ft)		
Polarized retroreflective, 650 nm visible red (clear object)	SME312LPC	1 m (3.3 ft) with supplied reflector**		

\*\* Sensing ranges vary according to the efficiency and reflective area of the retroreflector(s) used. (Retroreflective tape is not recommended for use with Clear Object Detection models.) See *Accessories* and the Banner Engineering catalog for more information.

## Diffuse Models

Sensing Mode	Model *	Range or Focus	Supply Voltage	Output Type
Diffuse, 880 nm infrared	SME312D	380 mm (15 in)	10 to 30V dc	Bipolar NPN/PNP
Diffuse, 650 nm visible red	SME312DV	1100 mm (43 in)		
Divergent Diffuse, 880 nm infrared	SME312W	130 mm (5 in)		



### Convergent Models

Sensing Mode	Model *	Range or Focus	Supply Voltage	Output Type
Convergent, 650 nm visible red	SME312CV	16 mm (0.65 in) Spot Size at Focus: 1.3 mm (0.05 in)	10 to 30V dc	Bipolar NPN/PNP
	SME312CV2	43 mm (1.7 in) Spot Size at Focus: 3.0 mm (0.12 in)		
Convergent, 525 nm visible green	SME312CVG	16 mm (0.65 in) Spot Size at Focus: 1.0 mm (0.04 in)		
Convergent, 475 nm visible blue	SME312CVB	16 mm (0.65 in) Spot Size at Focus: 1.8 mm (0.07 in)		
Convergent, 450-650 nm visible white	SME312CVW			

### Glass Fiber Optic Models

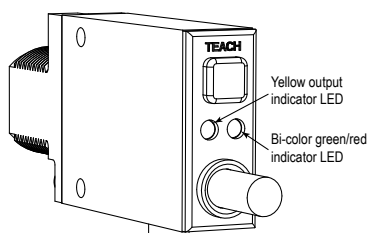
Sensing Mode	Model *	Range or Focus	Supply Voltage	Output Type
Glass Fiber Optic, 880 nm infrared	SME312F	Range varies by sensing mode and fiber optics used	10 to 30V dc	Bipolar NPN/PNP
Glass Fiber Optic, 650 nm visible red	SME312FV			
Glass Fiber Optic, 525 nm visible green	SME312FVG			
Glass Fiber Optic, 475 nm visible blue	SME312FVB			
Glass Fiber Optic, 450-650 nm visible white	SME312FVW			

### Plastic Fiber Optic Models

Sensing Mode	Model *	Range or Focus	Supply Voltage	Output Type
Plastic Fiber Optic, 650 nm visible red	SME312FP	Range varies by sensing mode and fiber optics used	10 to 30V dc	Bipolar NPN/PNP
Plastic Fiber Optic, 525 nm visible green	SME312FPG			
Plastic Fiber Optic, 475 nm visible blue	SME312FPB			
Plastic Fiber Optic, 450-650 nm visible white	SME312FPW			

\* Standard 2 m (6.5 ft) cable models are listed. To order the 9 m (30 ft) cable model, add suffix "W/30" to the model number (e.g., SME312LV W/30.) To order the 5-pin Euro-style QD models, add suffix "QD" (e.g., SME312LVQD). Models with a QD connector require a mating cable.

## Overview



MINI-BEAM® Expert™ is a complete family of sensors, all housed in the popular, robust and compact rectangular housing. Their large push button and easy-to-see indicators provide easy configuration, alignment, and monitoring during use.

**Retroreflective and Polarized Retroreflective Mode** models are excellent for sensing relatively small items where opposed-mode sensing is not possible. They are recommended for relatively clean environments where high excess gain is not required. Polarized models filter out unwanted reflections.

**Polarized Retroreflective Mode – Clear Object Detection** models reliably detect the presence of clear objects.