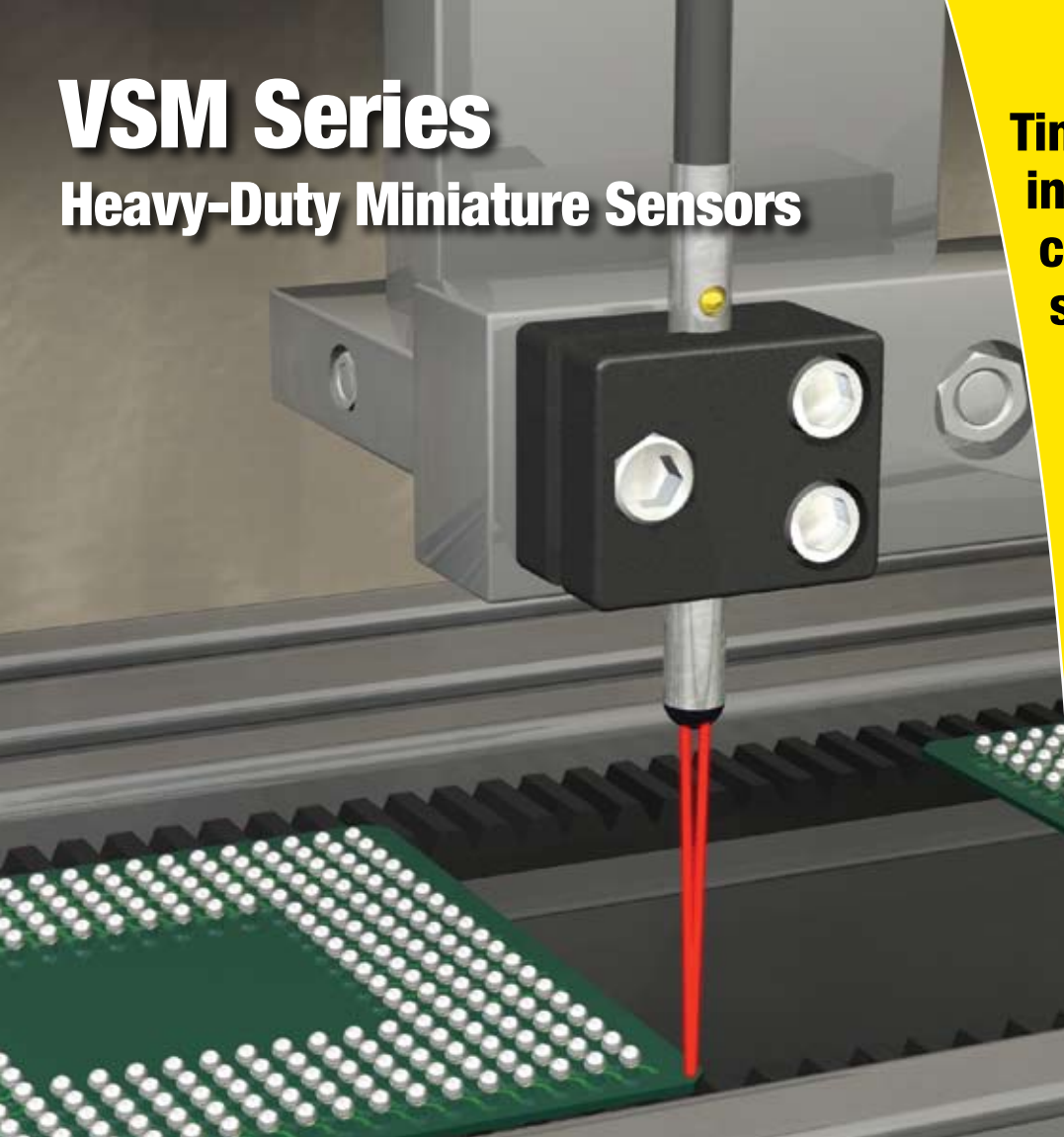


# VSM Series

## Heavy-Duty Miniature Sensors



**Tiny sensors to fit  
in the most  
confined  
spaces**



**Built for outstanding performance  
and durability.**

- ▶ Hygienic applications with frequent cleaning
- ▶ In-die sensing for part presence verification
- ▶ Assembly machines with articulated or reciprocating motion
- ▶ Leading edge detection on small electronic component



## Miniature Metal Sensors Mount Directly On or Inside Manufacturing Equipment.

The VSM robust metal sensors are a complement to Banner's already popular and extensive line of miniature sensors. An extended sensing range and tiny stainless steel housing make them an ideal replacement for range limited proximity sensors, and for areas previously only accessible to remote sensors and fiber optic cable. The tightly collimated beam and self-contained housing of the VSM are suitable for very precise, small object sensing applications in the automotive, food and beverage, semiconductor and electronics, assembly, metal stamping and other industries where significant mounting space restrictions are common.

- ▶ Tough, 300 series stainless steel body with sapphire lens withstands a wide variety of chemicals.
- ▶ Miniature sensors are available as small as a 4 mm barrel (about the size of a single optical fiber assembly).
- ▶ Economical, self-contained sensors are available in convergent or opposed sensing modes; no separate amplifier required.
- ▶ Specially designed optics and electronics provide reliable sensing without adjustments.
- ▶ Advanced convergent optical design provides high performance, very repeatable sensing.
- ▶ Well-focused, narrow beam allows the entire sensor to be recessed into fixtures.
- ▶ Smooth, stainless steel barrel is perfect for hygienic applications requiring routine cleaning.

**40-plus years of sensor design experience,  
quality control, sales support and cost-  
effective solutions:**

- ▶ Banner quality products with global availability
- ▶ Rapid customization with most products shipping in 3 days or less
- ▶ Industry's largest force of application engineers to solve your toughest challenges
- ▶ More than 3,000 factory and local field representatives to serve you

[www.bannerengineering.com](http://www.bannerengineering.com)

**1.888.373.6767**

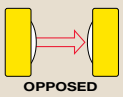
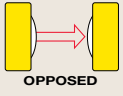
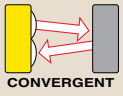
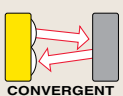
**BANNER®**

more sensors, more solutions

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# VSM, 10 to 30V dc

Sensing Mode/LED	Models* NPN	Models* PNP	Housing Style	Range	Output Type	Connection
 OPPOSED	VSM46E Emitter		4 mm Smooth Barrel	250 mm	—	2 m
	VSM46EQ7 Emitter					3-Pin Pico QD
	VSM4RN6R	VSM4RP6R				2 m
	VSM4RN6RQ7	VSM4RP6RQ7				3-Pin Pico QD
 OPPOSED	VSM56E Emitter		5 mm Threaded Barrel	250 mm	—	2 m
	VSM56EQ7 Emitter					3-Pin Pico QD
	VSM5RN6R	VSM5RP6R				2 m
	VSM5RN6RQ7	VSM5RP6RQ7				3-Pin Pico QD
 CONVERGENT	VSM4AN6CV10	VSM4AP6CV10	4 mm Smooth Barrel	10 mm	LO	2 m
	VSM4AN6CV10Q7	VSM4AP6CV10Q7		3-Pin Pico QD		
	VSM4AN6CV20	VSM4AP6CV20		20 mm		2 m
	VSM4AN6CV20Q7	VSM4AP6CV20Q7		3-Pin Pico QD		
	VSM4AN6CV50	VSM4AP6CV50		50 mm		2 m
	VSM4AN6CV50Q7	VSM4AP6CV50Q7		3-Pin Pico QD		
	VSM5AN6CV10	VSM5AP6CV10		5 mm Threaded Barrel		10 mm
VSM5AN6CV10Q7	VSM5AP6CV10Q7	3-Pin Pico QD				
VSM5AN6CV20	VSM5AP6CV20	20 mm	2 m			
VSM5AN6CV20Q7	VSM5AP6CV20Q7	3-Pin Pico QD				
VSM5AN6CV50	VSM5AP6CV50	50 mm	2 m			
VSM5AN6CV50Q7	VSM5AP6CV50Q7	3-Pin Pico QD				
 CONVERGENT	VSMQAN6CV20	VSMQAP6CV20	Flat-Pack, Side-Looker		20 mm	LO
	VSMQAN6CV50	VSMQAP6CV50		50 mm		
	VSMQAN6CV90	VSMQAP6CV90		90 mm		

\* A model with a QD requires a mating cordset.

## Dimensions



VSMQ Opposed and Convergent Models






VSM5 Opposed and Convergent Models




## Quick-Disconnect (QD) Cordsets

### 3-Pin M8/Pico-Style Threaded QD

	Models		Length
	Straight	3-Pin, Right-Angle	
	PKG3M-2	PKW3M-2	2 m
	PKG3M-5	PKW3M-5	5 m
	PKG3M-9	PKW3M-9	9 m

## Brackets



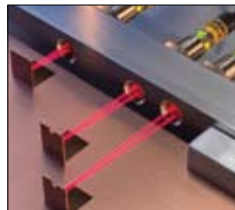
**SMBVSM4**

- Mounting clamp for 4 mm barrel-style sensors
- Black impact-resistant plastic

Miniature Sensors: Visit [www.bannerengineering.com](http://www.bannerengineering.com) for our complete offering.



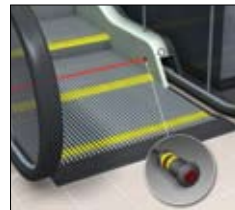
**WORLD-BEAM® Q12**  
PW12-rated, side-mount sensors



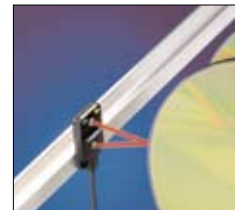
**M12**  
12 mm threaded metal barrel sensor with visible red beam



**T8**  
8 mm right-angle, barrel-mount sensor



**S12 & SB12**  
12 mm plastic, opposed-mode barrel sensors



**VS2**  
Ultra-thin opposed- or convergent-mode sensor for flush mounting



**VS3**  
Right-angle sensor with advanced optics and coaxial retroreflective models

Banner Engineering Corp.

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