

# VS8 Series



## Miniature Sensors

- Installs in the smallest of spaces
- Red laser models provide bright, precise laser light spot for optimum small part detection
- High switching frequency for detection in even the fastest processes
- User-friendly operation using electronic push button or remote input provides reliable and precise detection
- Red laser, Red LED, and Blue LED versions to solve challenging applications
- ECOLAB and IP67



# Introducing the VS8 Series

Full line of precise small object detection sensors



## Opposed

- Red laser provides bright, precise beam spot for small part detection
- Teach input adjusts the switching threshold to optimize for small part detection
- High switching frequency for reliable detection in high speed applications
- Electronic push button or remote input allows easy programming
- Beam inhibit can be used to test if the pair is functioning correctly



## Retroreflective

- Red laser models provides bright, precise beam spot for small part detection
- Red LED models provide a cost effective part detection solution
- Works with a variety of reflectors
- Electronic push button or remote input allows easy programming



## Adjustable and Fixed Background Suppression

- Red laser models provide bright, precise beam spot for small part detection
- Blue LED models provide detection of dark light-absorbing objects and shiny or glossy objects
- Red LED models provide a cost effective part detection solution
- Reliable detection even with highly reflective objects in the background
- Adjustable range models cover a wide variety of applications with a single model
- Fixed range models ensure easy and consistent operation

## Miniature Size



Actual size shown

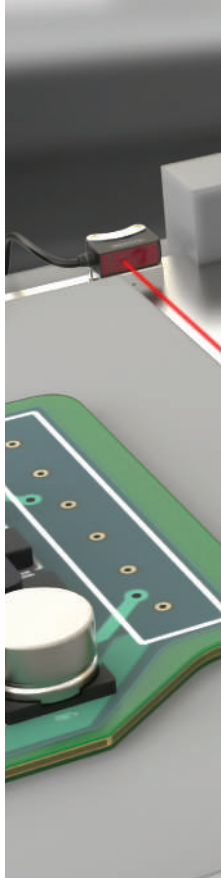
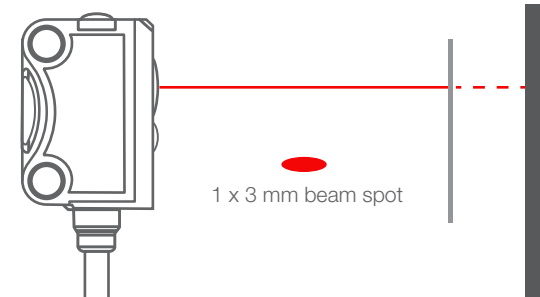
## Industry Standard Mounting

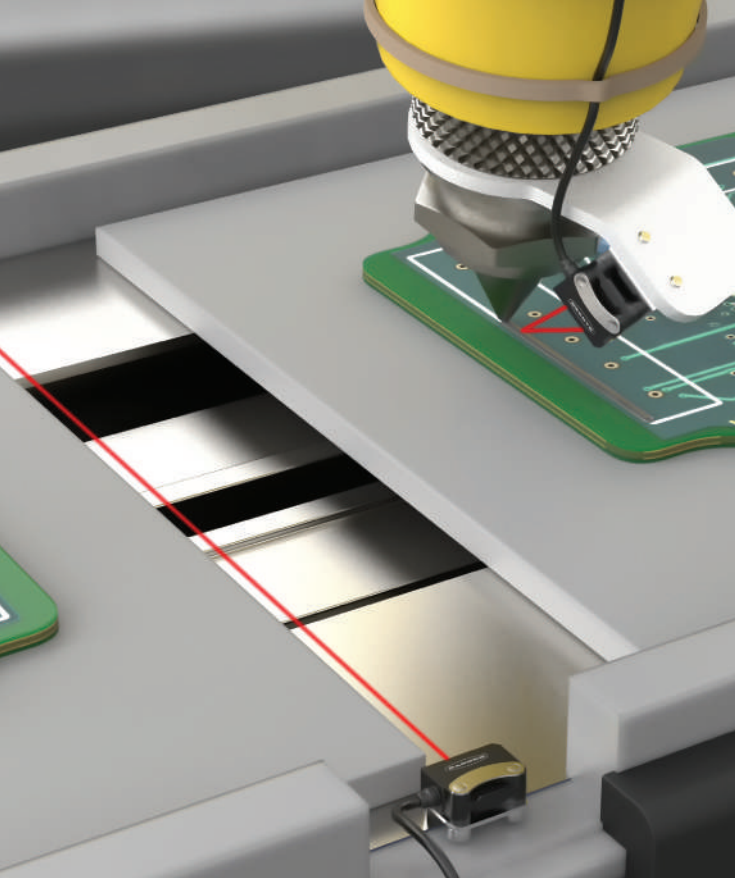
- 15 mm spacing on mounting holes
- Dovetail mounting option allows  $\pm 10^\circ$  tip/pivot adjustments of the sensor even when installed in tight spaces



## Ultra Small Beam Spot

- Can reliably detected an object with a diameter of 0.5 mm at a distance of 70 mm (laser adjustable-field and fixed background suppression models)





## Opposed Mode

Model	Sensing Mode	Range	Output	Connection
VS8LEJ	Red Laser Emitter with Beam Inhibit	0 m to 3 m (0 in to 9.8 ft)	—	2 m (6.5 ft) unterminated 4-wire PUR cable
VS8LEJQ	Red Laser Emitter with Beam Inhibit	0 m to 3 m (0 in to 9.8 ft)	—	200 mm (7.8 in) PUR cable with a 4-pin M8/Pico-style male quick disconnect (QD)
VS8EAPR	Receiver	0 m to 3 m (0 in to 9.8 ft)	PNP	2 m (6.5 ft) unterminated 4-wire PUR cable
VS8EANR			NPN	
VS8EAPRQ	Receiver	0 m to 3 m (0 in to 9.8 ft)	PNP	200 mm (7.8 in) PUR cable with a 4-pin M8/Pico-style male quick disconnect (QD)
VS8EANRQ			NPN	

## Retroreflective Mode

Model	Sensing Mode	Range	Output	Connection
VS8EAPLP	Red LED Retro Reflective	0.1 m to 1.6 m (3.9 in to 62.9 in) with BRT-2X2	PNP	2 m (6.5 ft) unterminated 4-wire PUR cable
VS8EANLP			NPN	
VS8EAPLPQ	Red LED Retro Reflective	0.1 m to 1.6 m (3.9 in to 62.9 in) with BRT-2X2	PNP	200 mm (7.8 in) PUR cable with a 4-pin M8/Pico-style male quick disconnect (QD)
VS8EANLPQ			NPN	
VS8EAPLLP	Red Laser Retro Reflective	0.1 m to 2 m (3.9 in to 78.7 in) with BRT-51X51BM	PNP	2 m (6.5 ft) unterminated 4-wire PUR cable
VS8EANLLP			NPN	
VS8EAPLLPQ	Red Laser Retro Reflective	0.1 m to 2 m (3.9 in to 78.7 in) with BRT-51X51BM	PNP	200 mm (7.8 in) PUR cable with a 4-pin M8/Pico-style male quick disconnect (QD)
VS8EANLLPQ			NPN	

## Background Suppression

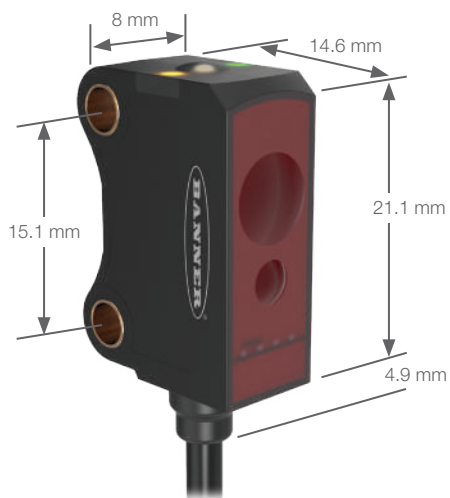
Model	Sensing Mode	Range	Output	Connection
VS8EAPAF70*	Red LED, Adjustable Background Suppression	5 to 70 mm (0.20 to 2.75 in)	PNP	2 m (6.5 ft) unterminated 4-wire PUR cable
VS8EANAF70*			NPN	
VS8EAPLAF70*	Red Laser, Adjustable Background Suppression	6 to 70 mm (0.24 to 2.75 in)	PNP	2 m (6.5 ft) unterminated 4-wire PUR cable
VS8EANLAF70*			NPN	
VS8APFF30B**	Blue LED, Fixed 30 mm Background Suppression	2 to 30 mm (0.08 to 1.18 in)	PNP	2 m (6.5 ft) unterminated 4-wire PUR cable
VS8ANFF30B**			NPN	
VS8APFF15**	Red LED, Fixed 15 mm Background Suppression	2 to 15 mm (0.08 to 0.59 in)	PNP	2 m (6.5 ft) unterminated 4-wire PUR cable
VS8ANFF15**			NPN	
VS8APFF30**	Red LED, Fixed 30 mm Background Suppression	2 mm to 30 mm (0.08 to 1.18 in)	PNP	2 m (6.5 ft) unterminated 4-wire PUR cable
VS8ANFF30**			NPN	
VS8APFF50**	Red LED, Fixed 50 mm Background Suppression	2 mm to 50 mm (0.08 to 1.97 in)	PNP	2 m (6.5 ft) unterminated 4-wire PUR cable
VS8ANFF50**			NPN	

\* To order the 200 mm (7.8 in) PUR cable model with a 4-pin M8/Pico-style quick disconnect, add suffix "Q" to the model number. For example, VS8EAPAF70Q. Only available for AF and LAF models.

To order the 200 mm (7.8 in) PUR cable model with a 4-pin M12/Euro-style quick disconnect, add suffix "Q5" to the model number. For example, VS8EAPAF70Q5. Only available for AF and LAF models.

\*\* To order the 200 mm (7.8 in) PUR cable model with a 3-pin M8/Pico-style quick disconnect, add suffix "Q3" to the model number. For example, VS8APFF15Q3. Only available for FF models.

## VS8 Series



### Supply Voltage

LED models: 10 V dc to 30 V dc (10% max. ripple) at less than 20 mA, exclusive of load  
Laser models: 10 V dc to 30 V dc (10% max. ripple) at less than 12 mA, exclusive of load

### Supply Protection Circuitry

Protected against reverse polarity and short-circuit

### Output Configuration

Retroreflective and Background Suppression Models: Single PNP or NPN on pin 4 (black wire) with remote input on pin 2 (white wire)  
Opposed Mode Receivers only: Single PNP or NPN on pin 4 (black wire) with remote input on pin 2 (white wire)

### Output Response Time

500  $\mu$ s

### Output Rating

50 mA

### Construction

Housing, cable: PUR  
Front screen: PMMA

### Environmental Rating

IEC IP67

### Laser Classification

All Models: Class 1  
Blue LED Models: Risk Group 2

### Operating Conditions

LED models: -20 °C to +60 °C (-4 °F to +140 °F)  
Laser models: -20 °C to +50 °C (-4 °F to +122 °F)  
UL Operating Temperature: -20 °C to +30 °C (-4 °F to +86 °F)

### Certifications



## Accessories



**SMBVS8DT**  
 $\pm 10^\circ$  Pivot



**SMBVS8RA**  
Right-Angle



### LED Reflectors

BRT-2X2  
BRT-10BM  
BRT-40x18A

### Laser Reflectors

BRT-51X51BM  
BRT-TVAG2x2  
BRT-35x35BM



### M12 4-Pin Euro-Style

Straight connector models

**MQDC-406**  
2 m (6.5')  
**MQDC-415**  
5 m (15')  
**MQDC-430**  
9 m (30')  
**MQDC-450**  
15 m (50')



### M8 Pico-Style

Straight connector models shown. For right-angle models change "G" to "W" (example, PKW4M-2)

	3-Pin	4-Pin
<b>PKG3M-2</b>	2 m (6.5')	<b>PKG4M-2</b> 2 m (6.5')
<b>PKG3M-5</b>	5 m (15')	<b>PKG4M-5</b> 5 m (15')
<b>PKG3M-9</b>	9 m (30')	<b>PKG4M-9</b> 9 m (30')

