



VSM Series

Self-Contained, High Performance Metal Sensors

The VSM sensors are heavy-duty, compact, metal sensors that are ideal for use in confined areas.

- Sapphire lens
- Tough 300 series stainless steel body withstands a wide variety of chemicals and cutting fluids
- Smooth barrel models are ideal for hygienic applications that require frequent cleaning
- Advanced optical design provides high performance with repeatable sensing



VSMQ

A high-performance, heavy-duty metal photoelectric sensor with a well-focused, narrow beam.




VSM4

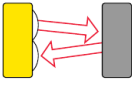
Smooth, stainless steel barrel sensor is ideal for hygienic applications that require routine cleaning.



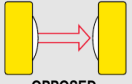
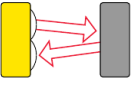
VSM5


Advanced optical design provides high performance.

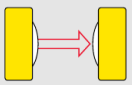
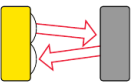
VSMQ (Flat-Pack, Side-Looker), 10-30 V DC
 Infrared LED

Sensing Mode	Range	Connection	Output Type	Models NPN	Models PNP
 DIFFUSE	20-50 mm	2 m	LO	VSMQAN6CV20	VSMQAP6CV20
	50-140 mm			VSMQAN6CV50	VSMQAP6CV50
	90-200 mm			VSMQAN6CV90	VSMQAP6CV90


VSM4 (4 mm Smooth Barrel), 10-30 V DC
 Infrared LED

Sensing Mode	Range	Connection	Output Type	Models NPN	Models PNP
 OPPOSED	250 mm	2 m	—	VSM46E Emitter	
		3-Pin Pico QD		VSM46EQ7 Emitter	
		2 m		VSM4RN6R	VSM4RP6R
 DIFFUSE	10-30 mm	2 m	LO	VSM4AN6CV10	VSM4AP6CV10
		3-Pin Pico QD		VSM4AN6CV10Q7	VSM4AP6CV10Q7
	20-50 mm	2 m		VSM4AN6CV20	VSM4AP6CV20
		3-Pin Pico QD		VSM4AN6CV20Q7	VSM4AP6CV20Q7
	50-140 mm	2 m		VSM4AN6CV50	VSM4AP6CV50
		3-Pin Pico QD		VSM4AN6CV50Q7	VSM4AP6CV50Q7

VSM5 (5 mm Threaded Barrel), 10-30 V DC
 Infrared LED

Sensing Mode	Range	Connection	Output Type	Models NPN	Models PNP
 OPPOSED	250 mm	2 m	—	VSM56E Emitter	
		3-Pin Pico QD		VSM56EQ7 Emitter	
		2 m		VSM5RN6R	VSM5RP6R
 DIFFUSE	10-30 mm	2 m	LO	VSM5AN6CV10	VSM5AP6CV10
		3-Pin Pico QD		VSM5AN6CV10Q7	VSM5AP6CV10Q7
	20-50 mm	2 m		VSM5AN6CV20	VSM5AP6CV20
		3-Pin Pico QD		VSM5AN6CV20Q7	VSM5AP6CV20Q7
	50-140 mm	2 m		VSM5AN6CV50	VSM5AP6CV50
		3-Pin Pico QD		VSM5AN6CV50Q7	VSM5AP6CV50Q7



For more specifications see page 231.


 Connection options: A model with a QD requires a mating cordset (see page 230).

Cordsets

Pico QD (for Q7 models)

See page 884

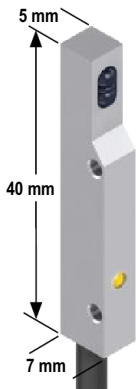
Length	Threaded 3-Pin	
	Straight	Right-Angle
2.00 m	 PKG3M-2	 PKW3M-2
5.00 m	PKG3M-5	PKW3M-5
9.00 m	PKG3M-9	PKW3M-9


 Additional cordset information available.
 See page 902.

Brackets

VSM

SMBVSM4



VSMQ
Diffuse Models





VSM4
Opposed and
Diffuse Models



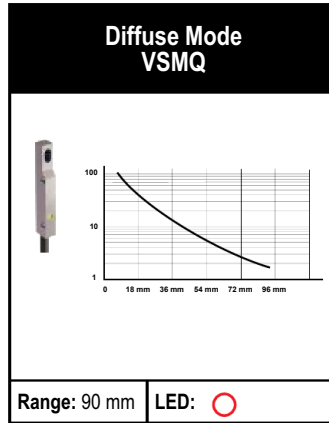
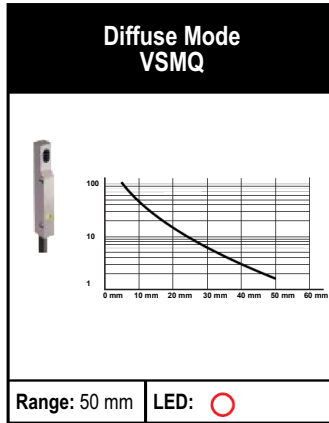
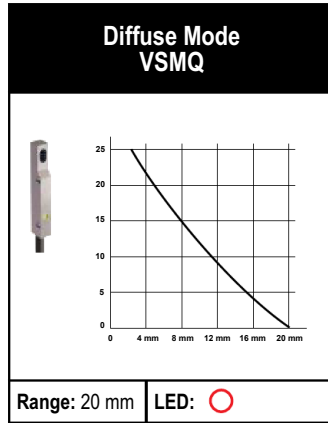
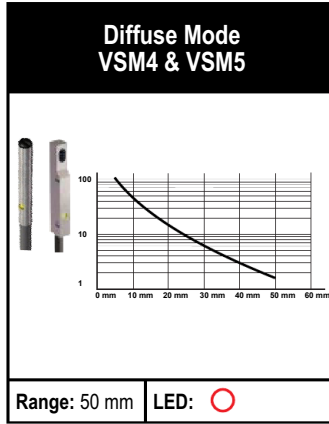
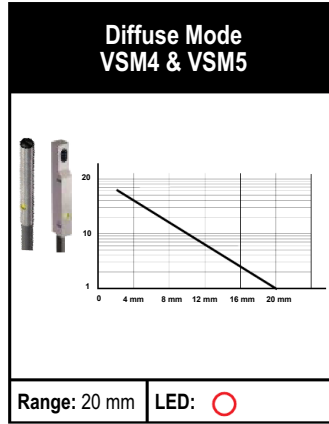
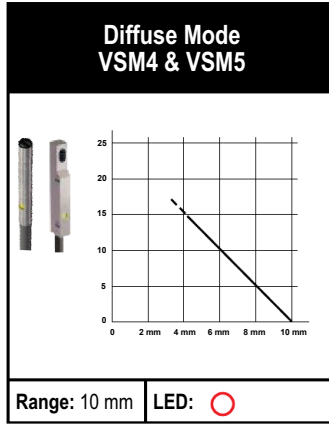
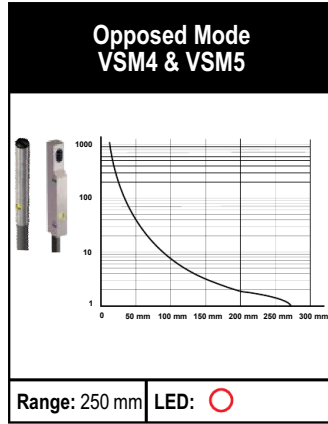
VSM5
Opposed and
Diffuse Models

VSM Specifications

Supply Voltage and Current	10 to 30 V dc (10% max. ripple)
Supply Protection Circuitry	Protected against reverse polarity and transient voltages
Output Configuration	Single-output: 1 NPN or 1 PNP, Light Operate (LO) or Dark Operate (DO), depending on model
Output Rating	100 mA max. OFF-state leakage current: less than 1 μ A ON-state saturation voltage: less than 2 V @ 100 mA
Output Protection Circuitry	Protected against false pulse on power-up and continuous overload or short circuit of outputs Overload trip point \geq 100 mA
Response Time	2.5 milliseconds
Delay at Power-up	20 milliseconds
Repeatability	1 millisecond
Indicators	Yellow LED: light sensed
Construction	300 series stainless steel with PVC cable CV10 & CV20: sapphire lens CV50 & Opposed: Glass lens
Environmental Rating	IP67
Connections	2 m PVC-jacketed cable or 3-pin Pico-style integral QD (Q7), depending on model. QD cordsets ordered separately. See page 230.
Operating Conditions	Operating temperature: 0° to +55° C
Certification	 

Excess Gain Curves (Convergent performance based on 90% reflectance white test card)

○ = Infrared LED



Beam Patterns (Convergent performance based on 90% reflectance white test card)

○ = Infrared LED

