



# VS/VE18-4N3140V

V18V

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

Type	Part no.
VS/VE18-4N3140V	6035500

Other models and accessories → [www.sick.com/V18V](http://www.sick.com/V18V)

Illustration may differ



### Detailed technical data

#### Features

<b>Sensor/ detection principle</b>	Through-beam photoelectric sensor
<b>Housing design (light emission)</b>	Cylindrical
<b>Housing length</b>	83 mm
<b>Thread diameter (housing)</b>	M18 x 1
<b>Optical axis</b>	Axial
<b>Sensing range max.</b>	0 m ... 20 m
<b>Sensing range</b>	0 m ... 18 m
<b>Type of light</b>	Infrared light
<b>Light source</b>	LED <sup>1)</sup>
<b>Light spot size (distance)</b>	Ø 600 mm (15 m)
<b>Angle of dispersion</b>	2.5°
<b>Wave length</b>	880 nm
<b>Adjustment</b>	None
<b>Special applications</b>	Hygienic and washdown zones

<sup>1)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

## Mechanics/electronics

<b>Supply voltage</b>	10 V DC ... 30 V DC <sup>1)</sup>
<b>Ripple</b>	≤ 10 % <sup>2)</sup>
<b>Power consumption, sender</b>	35 mA <sup>3)</sup>
<b>Power consumption, receiver</b>	40 mA <sup>3)</sup>
<b>Switching output</b>	NPN
<b>Switching mode</b>	Light/dark switching
<b>Switching mode selector</b>	Selectable via L/D control cable
<b>Signal voltage NPN HIGH/LOW</b>	Approx. VS / < 2.0 V
<b>Output current I<sub>max.</sub></b>	≤ 100 mA
<b>Response time</b>	≤ 2 ms <sup>4)</sup>
<b>Switching frequency</b>	250 Hz <sup>5)</sup>
<b>Angle of reception</b>	8°
<b>Attenuation along light beam</b>	≥ 20 %
<b>Connection type</b>	Male connector M12, 4-pin <sup>6)</sup>
<b>Circuit protection</b>	A <sup>7)</sup> B <sup>8)</sup> C <sup>9)</sup> D <sup>10)</sup>
<b>Protection class</b>	III
<b>Weight</b>	240 g
<b>Housing material</b>	Stainless steel, Stainless steel V4A (1.4404, 316L)
<b>Optics material</b>	Plastic, Plan, PPS (Grilamid)
<b>Enclosure rating</b>	IP67, IP68, IP69K <sup>11)</sup>
<b>Test input sender off</b>	TE to 0 V
<b>Ambient operating temperature</b>	-25 °C ... +80 °C <sup>12)</sup>
<b>Ambient storage temperature</b>	-40 °C ... +80 °C
<b>UL File No.</b>	FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493

<sup>1)</sup> Limit values.

<sup>2)</sup> May not exceed or fall below U<sub>v</sub> tolerances.

<sup>3)</sup> Without load, at VS 30 V DC.

<sup>4)</sup> Signal transit time with resistive load.

<sup>5)</sup> With light/dark ratio 1:1.

<sup>6)</sup> With gold plated contact pins, PPS with FDA certificate.

<sup>7)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>8)</sup> B = interference suppression.

<sup>9)</sup> D = outputs overcurrent and short-circuit protected.

<sup>10)</sup> D = inputs and output reverse-polarity protected.

<sup>11)</sup> With correct mounted IP69K connector.

<sup>12)</sup> +100 °C at max 15 minutes.

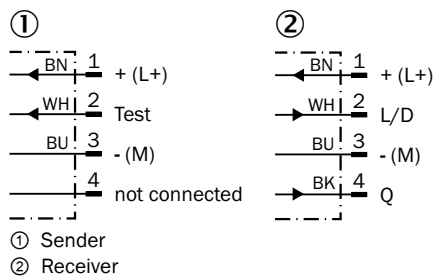
## Classifications

<b>ECl@ss 5.0</b>	27270901
<b>ECl@ss 5.1.4</b>	27270901
<b>ECl@ss 6.0</b>	27270901

<b>ECl@ss 6.2</b>	27270901
<b>ECl@ss 7.0</b>	27270901
<b>ECl@ss 8.0</b>	27270901
<b>ECl@ss 8.1</b>	27270901
<b>ECl@ss 9.0</b>	27270901
<b>ETIM 5.0</b>	EC002716
<b>ETIM 6.0</b>	EC002716
<b>UNSPSC 16.0901</b>	39121528

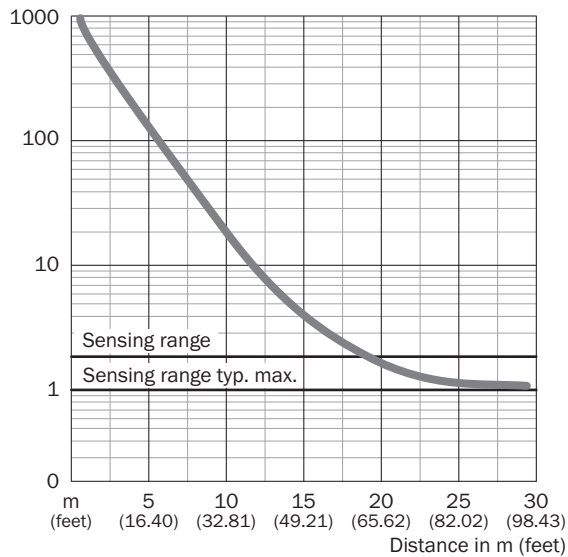
### Connection diagram

cd-219



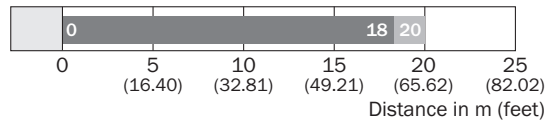
### Characteristic curve

VS/VE18V



## Sensing range diagram

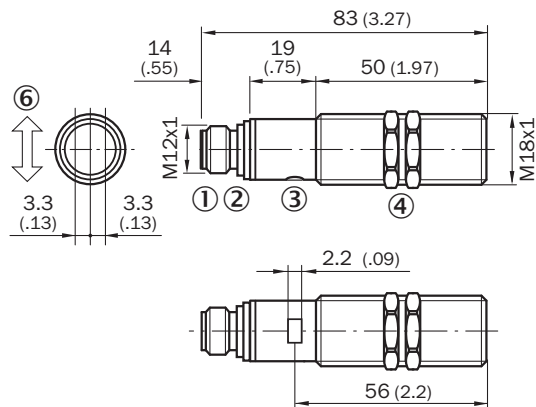
VS/VE18V



■ Sensing range    ■ Sensing range max.

## Dimensional drawing (Dimensions in mm (inch))

VL18V, VSE18V






- ① M12 male device connector, 4-pin
- ② Yellow LED indicator:- lights continuously:Reception signal> reserve factor 2- blinks: Reception signal< reserve factor 2 but > switching threshold 1
- ③ Fastening nuts (2 x); width across 24, stainless steel

## Recommended accessories

Other models and accessories → [www.sick.com/V18V](http://www.sick.com/V18V)

	Brief description	Type	Part no.
<b>Universal bar clamp systems</b>			
	Plate N06N for universal clamp bracket, M18, Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp), Universal clamp (5322627), mounting hardware	BEF-KHS-N06N	2051622
<b>Mounting brackets and plates</b>			
	Mounting plate for M18 sensors, stainless steel, without mounting hardware	BEF-WG-M18N	5320948
	Mounting bracket for M18 sensors, stainless steel, without mounting hardware	BEF-WN-M18N	5320947

	Brief description	Type	Part no.
Terminal and alignment brackets			
	Mounting bracket with ball-and-socket, Plastic, mounting hardware included	BEF-WN-M18-ST02	5312973
	Clamping block for round sensors M18, without fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KH-M18	2051481
	Clamping block for round sensors M18, with fixed stop, plastic (PA12), glass-fiber reinforced, mounting hardware included	BEF-KHF-M18	2051482
	Mounting ring, stainless steel, without mounting hardware	BEF-WN-MH15-2V	4053358

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)