



VS/VE18-4P3140V

PHOTOELECTRIC SENSORS





Ordering information

Туре	part no.
VS/VE18-4P3140V	6035499

Other models and accessories → www.sick.com/V18

Illustration may differ



Detailed technical data

Features

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

 $^{^{1)}}$ Average service life: 100,000 h at T_{U} = +25 $^{\circ}\text{C}.$

Mechanics/electronics

Supply voltage U _B	10 V DC 30 V DC ¹⁾
Ripple	± 10 % ²⁾
Power consumption, sender	35 mA ³⁾
Power consumption, receiver	40 mA ³⁾
Switching output	PNP ⁴⁾
Switching mode	Light/dark switching ⁴⁾
Switching mode selector	Selectable via L/D control cable
Signal voltage PNP HIGH/LOW	Approx. VS - 2.0 V / 0 V
Output current I _{max.}	≤ 100 mA
Response time	≤ 2 ms ⁵⁾
Switching frequency	250 Hz ⁶⁾
Angle of reception	8°
Attenuation along light beam	≥ 20 %
Connection type	Male connector M12, 4-pin ⁷⁾
Circuit protection	A ⁸⁾ B ⁹⁾ C ¹⁰⁾ D ¹¹⁾
Protection class	III
Weight	240 g
Housing material	Metal, Stainless steel V4A (1.4404, 316L)
Optics material	Plastic, Plan, PPS (Grilamid)
Enclosure rating	IP67 IP68 IP69K ¹²⁾
Test input sender off	TE to 0 V
Ambient operating temperature	-25 °C +80 °C ¹³⁾
Ambient temperature, storage	-40 °C +80 °C
UL File No.	FDA, UL No. NRKH.E181493 & cUL No. NRKH7.E181493

¹⁾ Limit values.

 $^{^{2)}\,\}mathrm{May}$ not fall below or exceed U_{V} tolerances.

 $^{^{\}rm 3)}$ Without load, at VS 30 V DC.

 $^{^{4)}}$ Control wire open: dark switching D.ON.

⁵⁾ Signal transit time with resistive load.

⁶⁾ With light/dark ratio 1:1.

 $^{^{7)}}$ With gold plated contact pins, PPS with FDA certificate.

 $^{^{8)}}$ A = V_S connections reverse-polarity protected.

 $^{^{9)}}$ B = interference suppression.

 $^{^{10)}}$ D = outputs overcurrent and short-circuit protected.

 $^{^{11)}}$ D = inputs and output reverse-polarity protected.

 $^{^{12)}}$ With correct mounted IP69K connector.

 $^{^{13)}}$ +100 $^{\circ}\text{C}$ at max 15 minutes.

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Safety-related parameters

MTTF _D	415 years
DC _{avg}	0 %

Certificates

EU declaration of conformity	✓
UK declaration of conformity	1
Moroccan declaration of conformity	1
China RoHS	1
cULus certificate	1

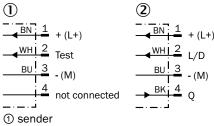
Classifications

ECLASS 5.0	27270901
ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901
ECLASS 7.0	27270901
ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Connection type

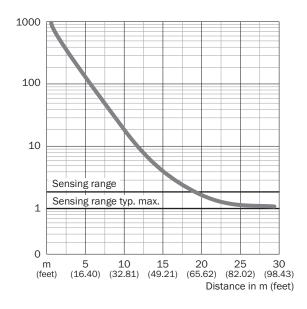


Connection diagram Cd-219

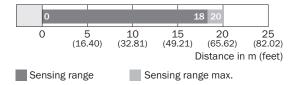


② receiver

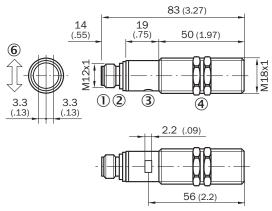
Characteristic curve VS/VE18V



Sensing range diagram VS/VE18V



Dimensional drawing VL18V, VSE18V



Dimensions in mm (inch)

- ① M12 male device connector, 4-pin
- ② Yellow LED indicator:
- ② lights continuously:
- 2 reception signal > reserve factor 2
- 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/V18

	Brief description	Туре	part no.
connectors ar	nd cables		
6	Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB). Please do not use cleaning agents of any other Kind., Not resistant against lactic acid & hydrogen peroxide (H2O2) Application: Hygienic and washdown zones	DOL-1204-G05MNI	6052615
	Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H202 and CH202. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H202) Application: Hygienic and washdown zones, Drag chain operation	DOL-1204-G05MRN	6058476

	Brief description	Туре	part no.	
Mounting syst	Mounting systems			
40	 Description: Mounting bracket for M18 sensors Material: Stainless steel Details: Stainless steel Items supplied: Without mounting hardware 	BEF-WN-M18N	5320947	
6	 Description: Plate N11N for universal clamp bracket Material: Stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: DeltaPac, Glare, WTD20E 	BEF-KHS-N11N	2071081	

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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."

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