Product data sheet



VS/VE18-4P3140V

V18V

CYLINDRICAL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	Part no.
VS/VE18-4P3140V	6035499

Other models and accessories ➜ www.sick.com/V18V

Detailed technical data

Features

Sensor/ detection 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 °C.

Mechanics/electronics

Supply voltage	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	Stainless steel, 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] May not exceed or fall below U_V tolerances.
[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 °C at max 15 minutes.

Safety-related parameters

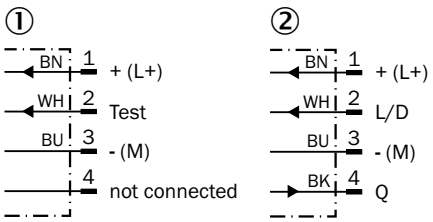
$MTTF_D$	415 years
DC_{avg}	0 %

Classifications

ECl@ss 5.0	27270901
ECl@ss 5.1.4	27270901
ECl@ss 6.0	27270901
ECl@ss 6.2	27270901
ECl@ss 7.0	27270901
ECl@ss 8.0	27270901
ECl@ss 8.1	27270901
ECl@ss 9.0	27270901
ECl@ss 10.0	27270901
ECl@ss 11.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
UNSPSC 16.0901	39121528

Connection diagram

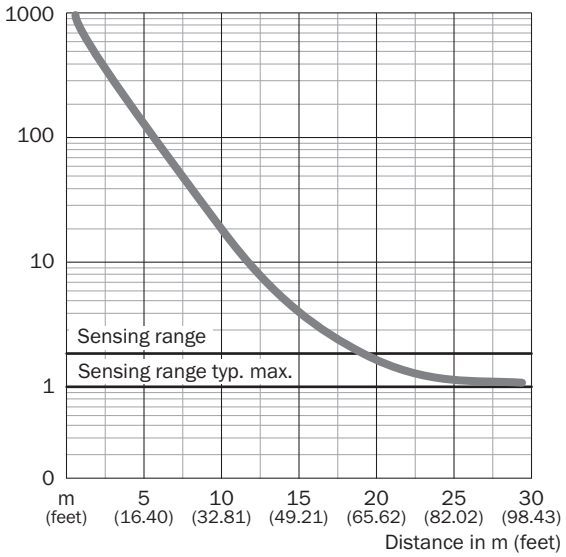
Cd-219



① Sender
② Receiver

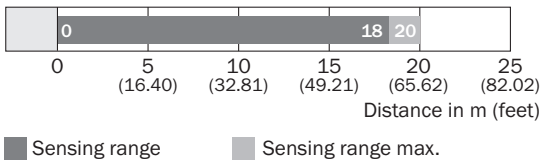
Characteristic curve

VS/VE18V



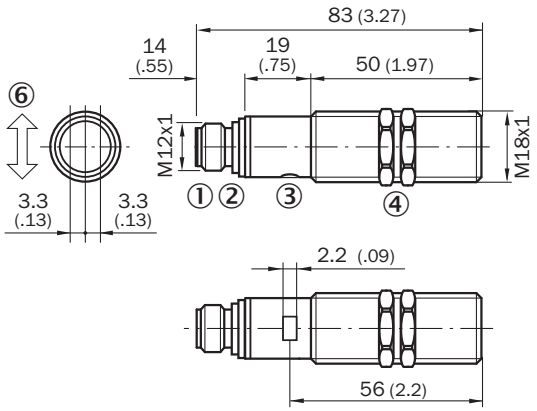
Sensing range diagram

VS/VE18V



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

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m 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)	DOL-1204-G05MNI	6052615

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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.”

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