



VS/VE18-4P3140V

V18V

CYLINDRICAL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
VS/VE18-4P3140V	6035499

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

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_J = +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.

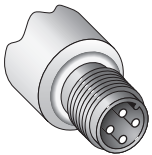
Safety-related parameters

MTTF_D	415 years
DC_{avg}	0 %

Classifications

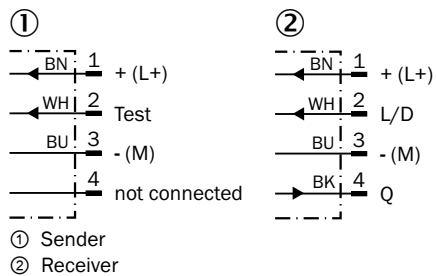
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eCl@ss 11.0	27270901
eCl@ss 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

Connection type



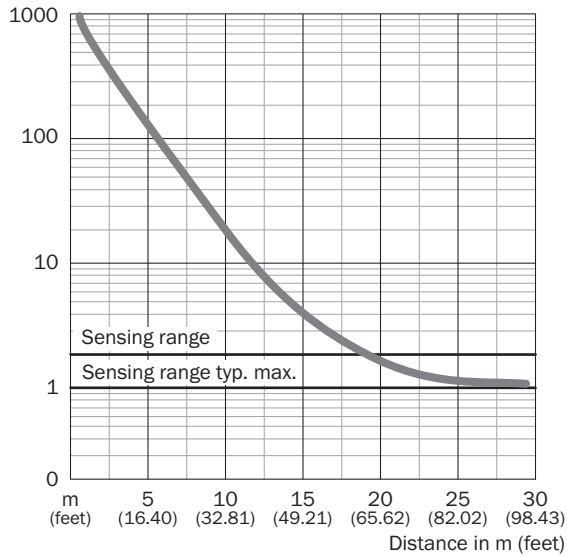
Connection diagram

Cd-219



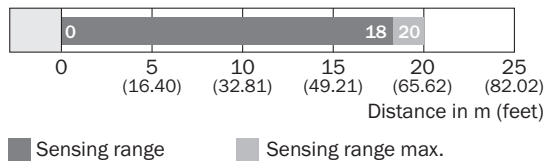
Characteristic curve

VS/VE18V



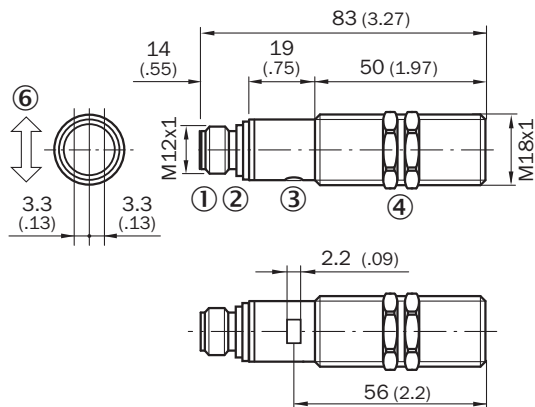
Sensing range diagram

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

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