



DATA SHEET

VSE18L-4P324

V18
Photoelectric sensors

SICK

Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

VSE18L-4P324

ORDERING INFORMATION

Type	part no.
VSE18L-4P324	6027931

Further device versions and accessories at www.sick.com/V18



DETAILED TECHNICAL DATA

FEATURES

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	18 mm x 18 mm x 97.7 mm
Housing design (light emission)	Cylindrical
Housing length	97.7 mm
Thread diameter (housing)	M18 x 1
Optical axis	Axial
Sensing range max.	0 m ... 60 m
Sensing range	0 m ... 50 m
Focus	0.06°
Type of light	Visible red light
Light source	Laser ¹⁾
Light spot size (distance)	Ø 40 mm (50 m)
Angle of dispersion	0.06°
Wave length	650 nm
Laser class	1 (IEC 60825-1) ²⁾
Laser power output	0.4 mW
Adjustment	Potentiometer, 270° (Sensitivity)
Special applications	Detecting small objects

¹⁾ Average service life: 100,000 h at T_u = +25 °C.

²⁾ Do not intentionally look into the laser beam. Never point the laser beam at people's eyes.

MECHANICS/ELECTRONICS

Supply voltage U_B	10 V DC ... 30 V DC ¹⁾
Ripple	$\pm 10\%$ ²⁾
Current consumption	25 mA ³⁾
Switching output	PNP
Switching mode	Light/dark switching
Switching mode selector	Selectable via L/D control cable
Output current I_{max}	≤ 100 mA
Response time	≤ 0.5 ms ⁴⁾
Switching frequency	1,000 Hz ⁵⁾
Angle of reception	0.08°
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾ D ⁹⁾
Protection class	III
Weight	120 g
Housing material	Metal, Nickel-plated brass/PC
Optics material	Plastic, PC with protective glass pane
Enclosure rating	IP67
Test input sender off	TE to 0 V
Ambient operating temperature	-15 °C ... +55 °C
Ambient temperature, storage	-25 °C ... +70 °C
UL File No.	NRKH.E181493, CDRH-conform (0312012-00)

¹⁾ Limit values.²⁾ May not fall below or exceed U_V tolerances.³⁾ Without load.⁴⁾ Signal transit time with resistive load.⁵⁾ With light/dark ratio 1:1.⁶⁾ A = V_B connections reverse-polarity protected.⁷⁾ B = inputs and output reverse-polarity protected.⁸⁾ C = interference suppression.⁹⁾ D = outputs overcurrent and short-circuit protected.**SAFETY-RELATED PARAMETERS**

MTTF _D	470 years
DC _{avg}	0 %

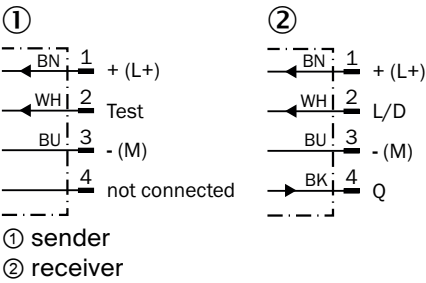
CERTIFICATES

EU declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓

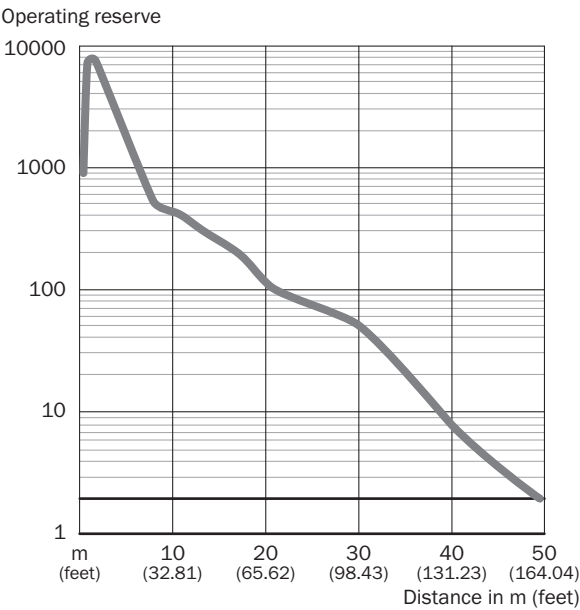
CONNECTION TYPE



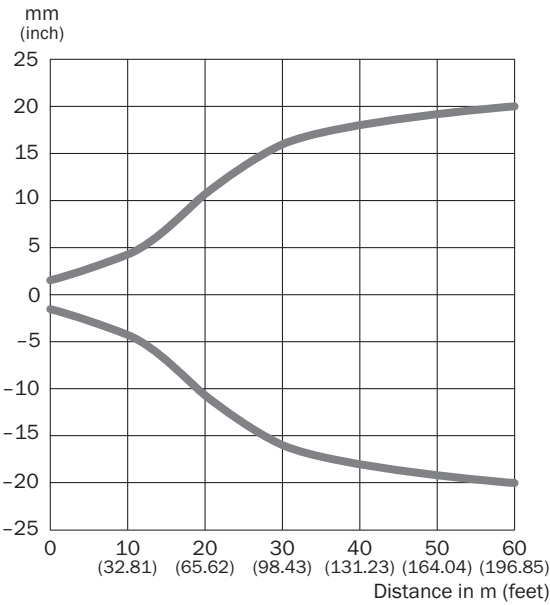
CONNECTION DIAGRAM CD-219



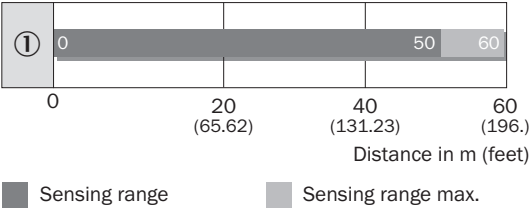
CHARACTERISTIC CURVE



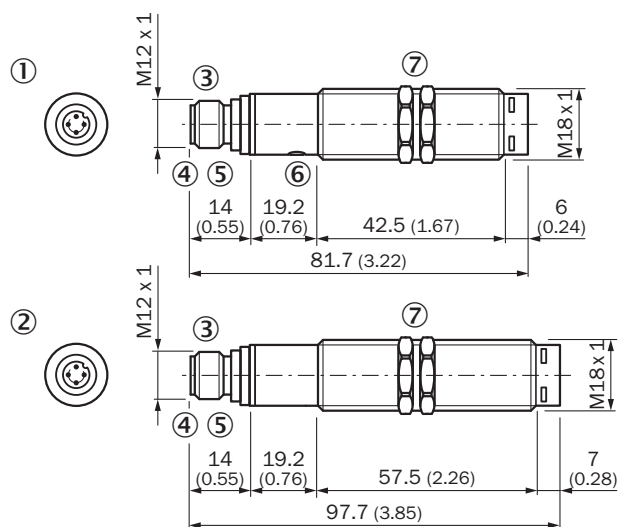
LIGHT SPOT SIZE VSE18L



SENSING RANGE DIAGRAM VSE18L



DIMENSIONAL DRAWING AXIAL



Dimensions in mm (inch)

- ① sender
- ② receiver
- ③ M12 male device connector, 4-pin
- ④ Sensitivity setting: single teach-in button
- ⑤ green LED indicator: V_s supply voltage feed
- ⑥ Yellow LED indicator:
- ⑥ - lights continuously:
- ⑥ reception signal > reserve factor 2
- ⑥ - blinks: Reception signal < reserve factor 2 but > switching threshold 1
- ⑦ fastening nuts (2 x); width across 24, metal
- ⑦ (included with delivery)

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6027931



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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