



DATA SHEET

VTE18L-4N344

V18
Photoelectric sensors

SICK

Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

VTE18L-4N344

ORDERING INFORMATION

Type	part no.
VTE18L-4N344	6027424

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



DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric proximity sensor
Functional principle detail	Energetic
Dimensions (W x H x D)	18 mm x 18 mm x 107.7 mm
Housing design (light emission)	Cylindrical
Housing length	107.7 mm
Thread diameter (housing)	M18 x 1
Optical axis	Radial
Sensing range max.	2 mm ... 250 mm ¹⁾
Sensing range	5 mm ... 200 mm
Type of light	Visible red light
Light source	Laser ²⁾
Light spot size (distance)	Ø 5 mm (200 mm)
Wave length	650 nm
Laser class	1 (IEC 60825-1) ³⁾
Laser power output	0.4 mW
Adjustment	Cable, Single teach-in button (Sensing range, Sensing range) ^{4) 5)}

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

²⁾ Average service life: 100,000 h at T_u = +25 °C.

³⁾ Do not intentionally look into the laser beam. Never point the laser beam at people's eyes.

⁴⁾ Electronically via control input C (0 V).

⁵⁾ Manual, via teach-in button.

Special feature	Focused optics
Special applications	Detecting small objects

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MECHANICS/ELECTRONICS

Supply voltage U_s	10 V DC ... 30 V DC ¹⁾
Ripple	$\pm 10\%$ ²⁾
Current consumption	30 mA ³⁾
Switching output	NPN
Switching mode	Light/dark switching
Switching mode selector	Selectable via control input C
Output current $I_{\max}$	$\leq 100\text{ mA}$
Response time	$\leq 0.625\text{ ms}$ ⁴⁾
Switching frequency	800 Hz ⁵⁾
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁶⁾ B ⁷⁾ C ⁸⁾ D ⁹⁾
Protection class	III
Weight	60 g
Housing material	Metal, Nickel-plated brass/PC
Optics material	Plastic, PC with protective glass pane
Enclosure rating	IP67
Special feature	Focused optics
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_s tolerances.

³⁾ Without load.

⁴⁾ Signal transit time with resistive load.

⁵⁾ With light/dark ratio 1:1.

⁶⁾ A = V_s connections reverse-polarity protected.

⁷⁾ B = inputs and output reverse-polarity protected.

⁸⁾ C = interference suppression.

⁹⁾ D = outputs overcurrent and short-circuit protected.

CERTIFICATES

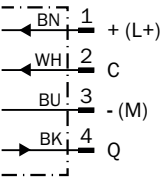
EU declaration of conformity	✓
China RoHS	✓

China Compulsory Product Certification (CCC) exempt	✓
cULus certificate	✓

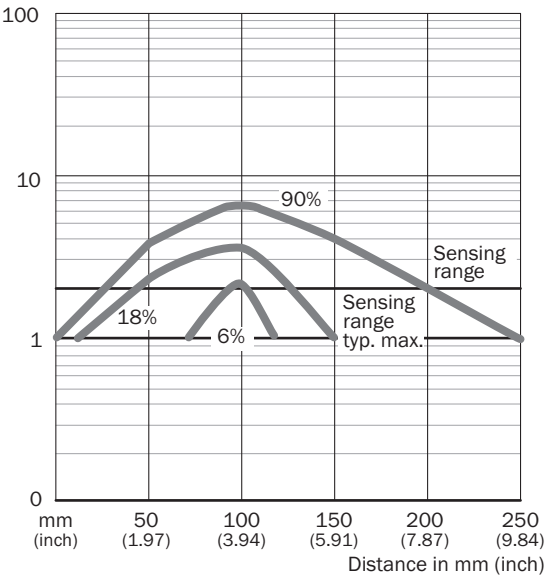
CONNECTION TYPE

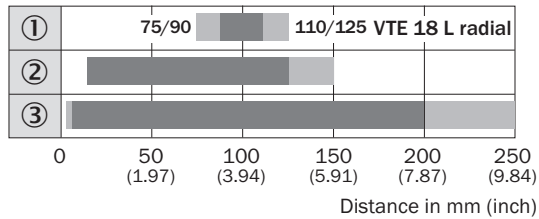
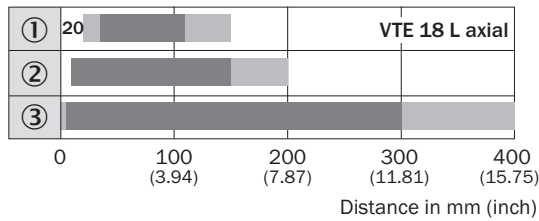


CONNECTION DIAGRAM CD-099



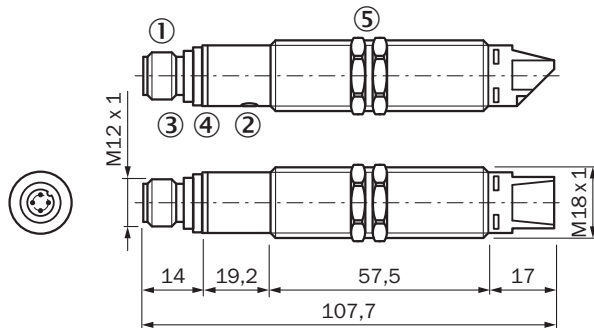
CHARACTERISTIC CURVE VTE18L, RADIAL



SENSING RANGE DIAGRAM VTE18L

■ Sensing range ■ Sensing range max.

- ① Sensing range on black, 6% remission factor
- ② Sensing range on gray, 18% remission factor
- ③ Sensing range on white, 90% remission factor

DIMENSIONAL DRAWING RADIAL

Dimensions in mm (inch)

- ① M12 male device connector, 4-pin
- ② Sensitivity setting: single teach-in button
- ③ green LED indicator: V_s supply voltage feed
- ④ Yellow LED indicator:
- ④ - lights continuously:
- ④ reception signal > reserve factor 2
- ④ - blinks: Reception signal < reserve factor 2 but > switching threshold 1
- ⑤ fastening nuts (2 x); width across 24, metal
- ⑤ (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/6027424



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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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