

VTE18L-4N324 V18

PHOTOELECTRIC SENSORS



Ordering information

Туре	part no.
VTE18L-4N324	6027420

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

Illustration may differ



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 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 mm 400 mm ¹⁾
Sensing range	5 mm 300 mm
Type of light	Visible red light
Light source	Laser ²⁾
Light spot size (distance)	Ø 8 mm (300 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)
Special feature	Focused optics
Special applications	Detecting small objects

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

 $^{^{2)}}$ Average service life: 100,000 h at TU = +25 °C.

 $^{^{}m 3)}$ 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.

Mechanics/electronics

Supply voltage U _B	10 V DC 30 V DC ¹⁾
Ripple	± 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.}	≤ 100 mA
Response time	≤ 0.625 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.

Certificates

EU declaration of conformity	✓
China RoHS	✓
cULus certificate	✓

Classifications

ECLASS 5.0	27270903
ECLASS 5.1.4	27270903
ECLASS 6.0	27270903
ECLASS 6.2	27270903
ECLASS 7.0	27270903

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_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.

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ECLASS 8.0	27270903
ECLASS 8.1	27270903
ECLASS 9.0	27270903
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

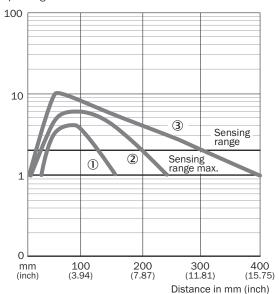
Connection type



Connection diagram Cd-099

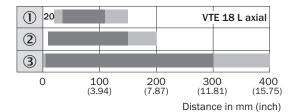
Characteristic curve

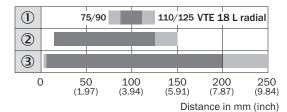
Operating reserve



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

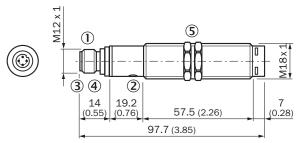
Sensing range diagram VTE18L





- 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 Axial



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)

Recommended accessories

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

	Brief description	Туре	part no.
connectors a	and cables		
	 Connection type head A: Female connector, M12, 4-pin, straight, A-coded Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Application: Zones with chemicals, Uncontaminated zones 	YF2A14-050VB3XLEAX	2096235
	 Connection type head A: Male connector, M12, 4-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: ≤ 0.75 mm² 	STE-1204-G	6009932
Mounting systems			
40	 Description: Mounting bracket for M18 sensors Material: Steel Details: Steel, zinc coated Items supplied: Without mounting hardware Suitable for: GR18, V180-2, V18, W15, Z1, Z2 	BEF-WN-M18	5308446

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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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