Product data sheet

VTE18L-4N324

V18 Laser

CYLINDRICAL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ

Ordering information

Type	Part no.
VTE18L-4N324	6027420

Other models and accessories ➜ www.sick.com/V18_Laser

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)
Laser power output	0.4 mW
Adjustment	Cable (Sensing range) [3] Single teach-in button (Sensing range) [4]
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 T_U = +25 °C.

[3] Electronically via control input C (0 V).

[4] Manual, via teach-in button.

Mechanics/electronics

Supply voltage	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)

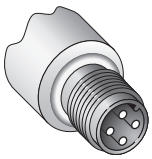
[1] Limit values.
[2] May not exceed or fall below U_V tolerances.
[3] Without load.
[4] Signal transit time with resistive load.
[5] With light/dark ratio 1:1.
[6] A = V_S connections reverse-polarity protected.
[7] B = inputs and output reverse-polarity protected.
[8] C = interference suppression.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

Classifications

eCl@ss 5.0	27270903
eCl@ss 5.1.4	27270903
eCl@ss 6.0	27270903
eCl@ss 6.2	27270903
eCl@ss 7.0	27270903
eCl@ss 8.0	27270903
eCl@ss 8.1	27270903
eCl@ss 9.0	27270903
eCl@ss 10.0	27270904

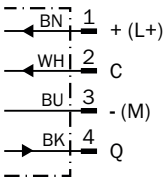
eCl@ss 11.0	27270904
eCl@ss 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection type



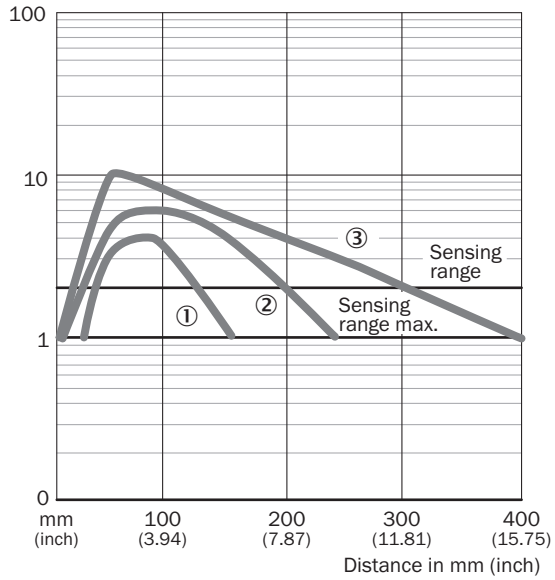
Connection diagram

Cd-099



Characteristic curve

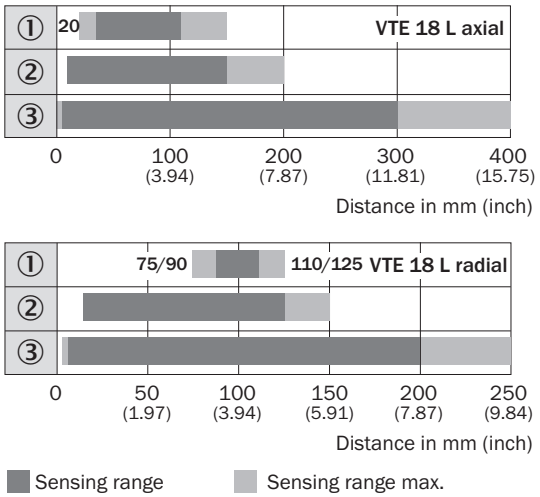
Operating reserve



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



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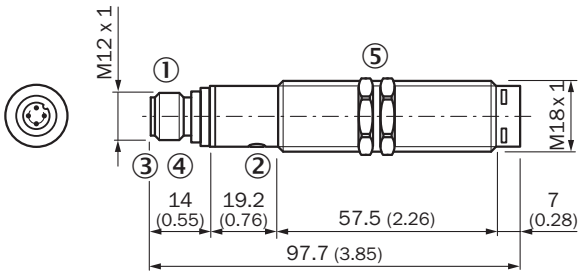
② Sensing range on gray, 18% remission factor
③ Sensing range on white, 90% remission factor

Dimensional drawing (Dimensions in mm (inch))

Axial



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:- lights continuously:Reception signal> reserve factor 2- blinks: Reception signal< reserve factor 2 but > switching threshold 1
⑤ Fastening nuts (2 x); width across 24, metal(included with delivery)

Recommended accessories

Other models and accessories ➜ www.sick.com/V18_Laser

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Cable: unshielded	STE-1204-G	6009932

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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.”

WORLDWIDE PRESENCE:

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