



VTE18-4N4240V

V18

PHOTOELECTRIC SENSORS



Ordering information

Туре	part no.
VTE18-4N4240V	6035490

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 83 mm
Housing design (light emission)	Cylindrical
Housing length	83 mm
Thread diameter (housing)	M18 x 1
Optical axis	Axial
Sensing range max.	0 mm 450 mm ¹⁾
Sensing range	5 mm 400 mm
Focus	Approx. 4.5°
Type of light	Infrared light
Light source	LED ²⁾
Light spot size (distance)	Ø 60 mm (400 mm)
Angle of dispersion	Approx. 4.5°
Wave length	880 nm
Adjustment	Single teach-in button (Sensing range) Manual, via Touch-Teach-in
Special applications	Hygienic and washdown zones

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

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

Mechanics/electronics

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Supply voltage \mathbf{U}_{B}	10 V DC 30 V DC ¹⁾
Ripple	± 10 % ²⁾
Current consumption	35 mA ³⁾
Switching output	NPN ⁴⁾
Switching mode	Light/dark switching ⁴⁾
Switching mode selector	Selectable via L/D control cable
Signal voltage NPN HIGH/LOW	Approx. VS / < 2.0 V
Output current I _{max} .	≤ 100 mA
Response time	\leq 1 ms $^{5)}$
Switching frequency	500 Hz ⁶⁾
Connection type	Male connector M12, 4-pin ⁷⁾
Circuit protection	A ⁸⁾ B ⁹⁾ C ¹⁰⁾ D ¹¹⁾
Protection class	III
Weight	120 g
Housing material	Metal, Stainless steel V4A (1.4404, 316L)
Optics material	Plastic, Plan, PPS (Grilamid)
Enclosure rating	IP67 IP68 IP69K ¹²⁾
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.

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
cULus certificate	✓

 $^{^{2)}}$ May not fall below or exceed 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.

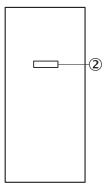
 $^{^{12)}}$ With correct mounted IP69K connector.

 $^{^{13)}}$ +100 $^{\circ}\text{C}$ at max 15 minutes.

Classifications

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

Adjustments



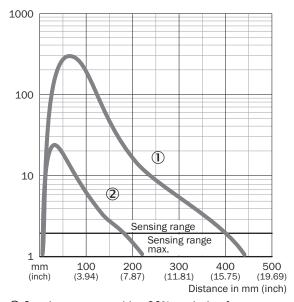
② Sensing range adjustment: Touch-Teach-In

Connection type



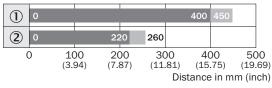
Connection diagram Cd-087

Characteristic curve VTE18V, 450 mm



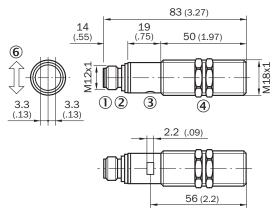
- ① Sensing range on white, 90% remission factor
- ② Sensing range on gray, 18% remission factor

Sensing range diagram VTE18V, 450 mm



- Sensing range
- Sensing range max.
- ① Sensing range on white, 90% remission factor
- ② Sensing range on gray, 18% remission factor

Dimensional drawing VTF18V, VTE18V



Dimensions in mm (inch)

- ① M12 male device connector, 4-pin
- ② Sensing range adjustment: Touch-Teach-In
- 3 Status indicator LED, green: signalizing Touch-Teach-in
- 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, stainless steel

Recommended accessories

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

	Brief description	Туре	part no.
connectors ar	nd cables		
C	Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PVC Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: 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) Application: Hygienic and washdown zones	DOL-1204-G05MNI	6052615
•	Connection type head A: Female connector, M12, 4-pin, straight Connection type head B: Flying leads Signal type: Sensor/actuator cable Cable: 5 m, 4-wire, PP Description: Sensor/actuator cable, unshielded Connection systems: Flying leads Note: This product is generally resistant to chemical cleaning agents (see ECOLAB) and other chemical compounds such as H202 and CH202. Before permanent installation is carried out, the material's resistance to the cleaning agent being used must be checked., Resistant against lactic acid & hydrogen peroxide (H202) Application: Hygienic and washdown zones, Drag chain operation	DOL-1204-G05MRN	6058476

	Brief description	Туре	part no.
Mounting systems			
40	 Description: Mounting bracket for M18 sensors Material: Stainless steel Details: Stainless steel Items supplied: Without mounting hardware 	BEF-WN-M18N	5320947
6	 Description: Plate N11N for universal clamp bracket Material: Stainless steel Details: Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) Items supplied: Universal clamp (5322627), mounting hardware Usable for: DeltaPac, Glare, WTD20E 	BEF-KHS-N11N	2071081

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For us, that is "Sensor Intelligence."

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