



VT18-204172

V18

PHOTOELECTRIC SENSORS





Ordering information

Туре	part no.
VT18-204172	6012018

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

Illustration may differ



Detailed technical data

Features

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background blanking
Dimensions (W x H x D)	18 mm x 18 mm x 88 mm
Housing design (light emission)	Cylindrical
Housing length	88 mm
Thread diameter (housing)	M18 x 1
Optical axis	Axial
Sensing range max.	2 mm 100 mm ¹⁾
Sensing range	≤ 100 mm ²⁾ 3)
Focus	Approx. 3.5°
Type of light	Infrared light
Light source	LED ⁴⁾
Light spot size (distance)	Ø 12 mm (130 mm)
Angle of dispersion	Approx. 3.5°
Adjustment	None

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

²⁾ Fix.

 $^{^{\}rm 3)}$ Background blanking at 115 mm.

 $^{^{4)}}$ Average service life: 100,000 h at TU = +25 °C.

Mechanics/electronics

Supply voltage U _B	10 V DC 30 V DC ¹⁾
Ripple	± 10 % ²⁾
Current consumption	30 mA ³⁾
Switching output	NPN, PNP
Switching mode	Light/dark switching
Switching mode selector	Wire configurable
Output current I _{max.}	≤ 100 mA
Response time	≤ 6.25 ms ⁴⁾
Switching frequency	80 Hz ⁵⁾
Connection type	Cable, 3-wire, 2 m ⁶⁾
Cable material	Plastic, PVC
Conductor cross section	0.34 mm ²
Cable diameter	Ø 4.7 mm
Circuit protection	A ⁷⁾ B ⁸⁾ C ⁹⁾ D ¹⁰⁾
Protection class	III
Weight	95 g
Housing material	Plastic, PBT/PC
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	-25 °C +70 °C
Ambient temperature, storage	-25 °C +75 °C
UL File No.	NMFT2.E175606

¹⁾ Limit values.

Certificates

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

 $^{^{2)}}$ 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⁾ Do not bend below 0 °C.

 $^{^{7)}}$ A = V_S connections reverse-polarity protected.

 $^{^{8)}}$ B = inputs and output reverse-polarity protected.

⁹⁾ C = interference suppression.

¹⁰⁾ D = outputs overcurrent and short-circuit protected.

PHOTOELECTRIC SENSORS

Classifications

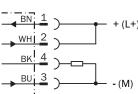
ECLASS 5.0	27270903
ECLASS 5.1.4	27270903
ECLASS 6.0	27270903
ECLASS 6.2	27270903
ECLASS 7.0	27270903
ECLASS 8.0	27270903
ECLASS 8.1	27270903
ECLASS 9.0	27270903
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

Connection type

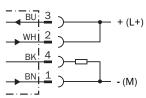


Connection diagram Cd-198

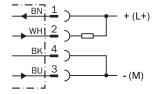




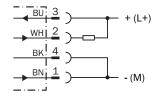
PNP dark-switching



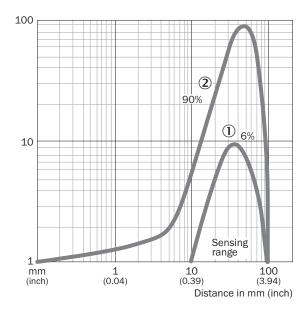
NPN light-switching



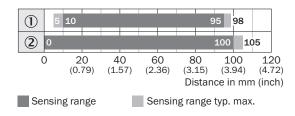
NPN dark-switching



Characteristic curve



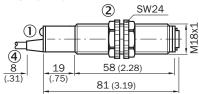
Sensing range diagram



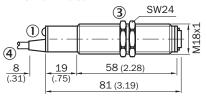
- $\ensuremath{\textcircled{1}}$ Sensing range on black, 6 % remission
- $\ensuremath{\mathfrak{D}}$ Sensing range on white, 90 % remission

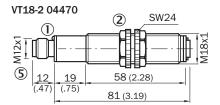
Dimensional drawing

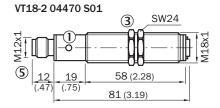
VT18-2 04470



VT18-2 04470 S01









- (1) Red LED signal strength indicator
- ② Locking nut made of plastic (SW 24) – included
- (3) Locking nut made of metal (SW 24) – included
- (4) Connecting cable
- (5) Equipment plug M 12, 4 pin

Dimensions in mm (inch)

- 1 red LED: light reception
- ② fastening nuts (2 x), width across 24 mm, plastic, (included)
- 3 fastening nuts (2 x); width across 24, metal
- ③ (included with delivery)
- ④ Connection cable
- ⑤ male connector M12, 4-pin

Recommended accessories

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

	Brief description	Туре	part no.
Mounting syst	ems		
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
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

	Brief description	Туре	part no.
connectors ar	nd cables		
	 Connection type head A: Male connector, M8, 3-pin, straight, A-coded Description: Unshielded Connection systems: Screw-type terminals Permitted cross-section: 0.14 mm² 0.5 mm² 	STE-0803-G	6037322

SICK AT A GLANCE

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