VT18-204172

V18

CYLINDRICAL PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Ordering information

Type	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.

[3] Background blanking at 115 mm.

[4] Average service life: 100,000 h at T_U = +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 mm²
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.

[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.

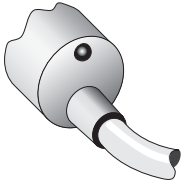[8] B = inputs and output reverse-polarity protected.

[9] C = interference suppression.

[10] D = outputs overcurrent and short-circuit protected.

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

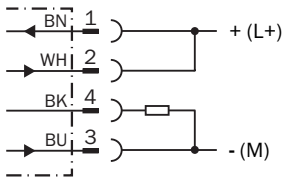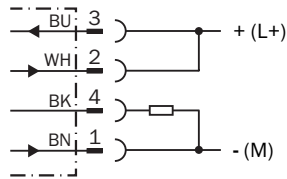|	
ECLASS 8.1	27270903
ECLASS 9.0	27270903
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC001821
ETIM 6.0	EC001821
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

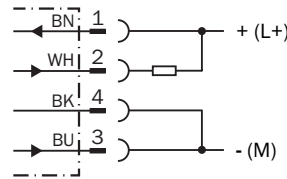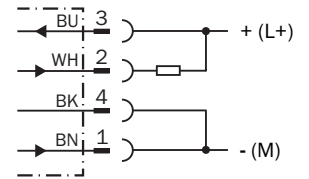## Connection type

Connection diagram
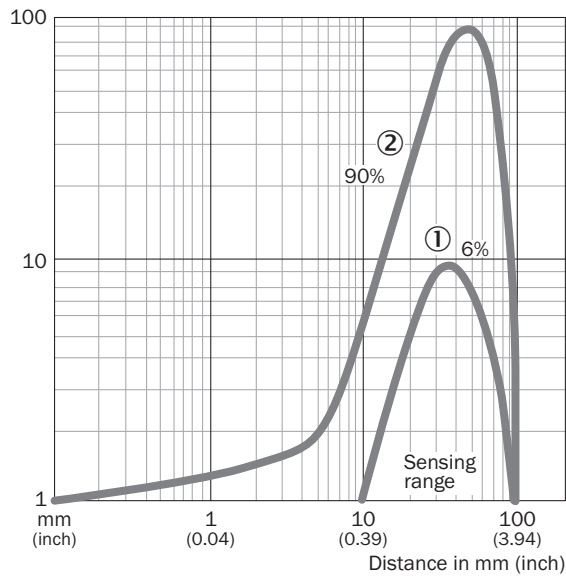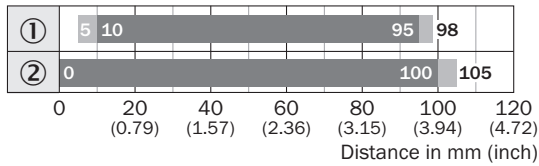
Cd-198

PNP light-switching	PNP dark-switching	NPN light-switching	NPN dark-switching

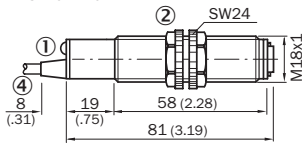## Characteristic curve

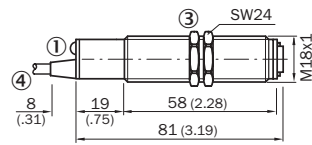## Sensing range diagram

■ Sensing range   ■ Sensing range typ. max.

① Sensing range on black, 6 % remission
② Sensing range on white, 90 % remission
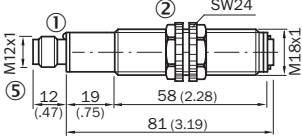
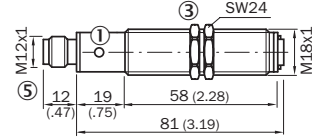## Dimensional drawing (Dimensions in mm (inch))

VT18-2 04470

VT18-2 04470 S01

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

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(included with delivery)
④ Connection cable
⑤ Male connector M12, 4-pin

Recommended accessories

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

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket for M18 sensors, steel, zinc coated, without mounting hardware	BEF-WN-M18	5308446
Others			
	• **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

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."

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