SICK.COM

DATA SHEET

VT18-2O4470

V18
Photoelectric sensors

Sensor Intelligence

Illustration may differ

PHOTOELECTRIC SENSORS

VT18-2O4470

ORDERING INFORMATION

Type	part no.
VT18-2O4470	6012019

Further device versions and accessories at www.sick.com/V18

DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	18 mm x 18 mm x 92 mm
Housing design (light emission)	Cylindrical
Housing length	92 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
Output current $I_{max.}$	≤ 100 mA
Response time	≤ 6.25 ms [4]
Switching frequency	80 Hz [5]
Connection type	Male connector M12, 4-pin
Circuit protection	A [6] B [7] C [8] D [9]
Protection class	III
Weight	30 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] A = V_s connections reverse-polarity protected.

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

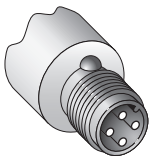
[8] C = interference suppression.

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

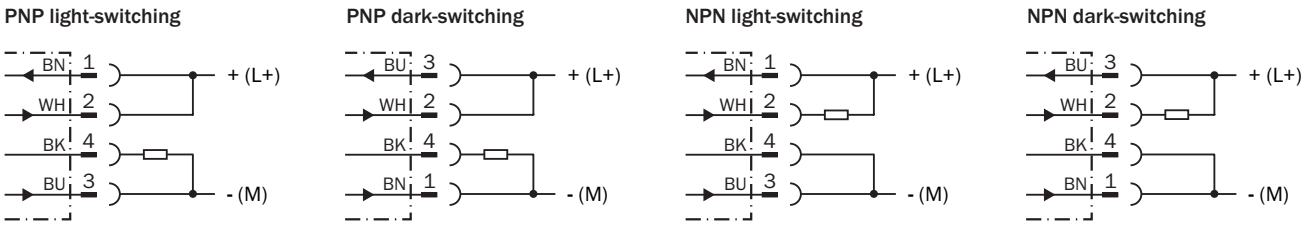
CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓
cRUus certificate	✓

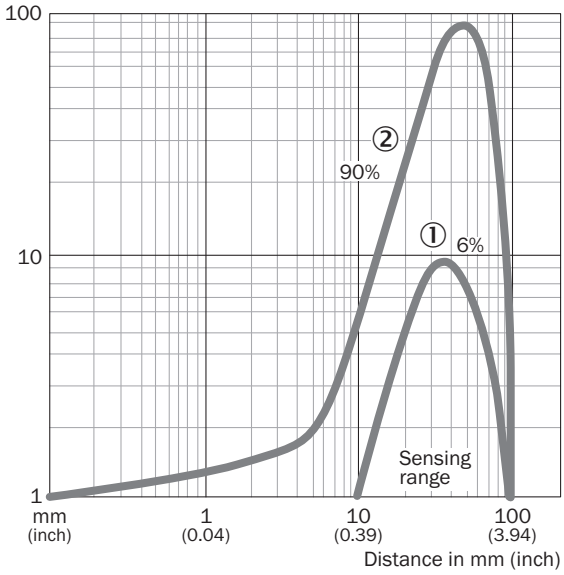
CONNECTION TYPE



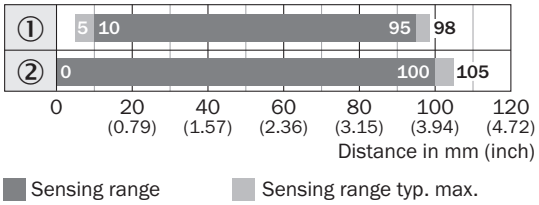
CONNECTION DIAGRAM CD-198



CHARACTERISTIC CURVE



SENSING RANGE DIAGRAM



① Sensing range on black, 6 % remission
② Sensing range on white, 90 % remission

DIMENSIONAL DRAWING

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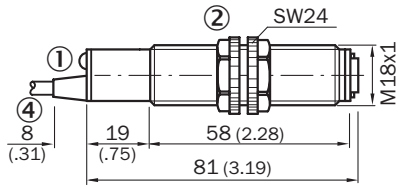

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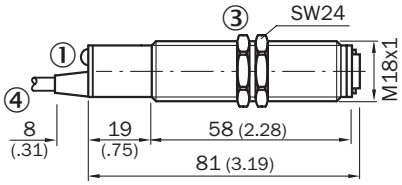

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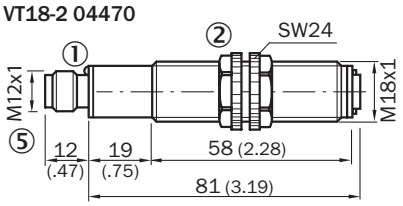
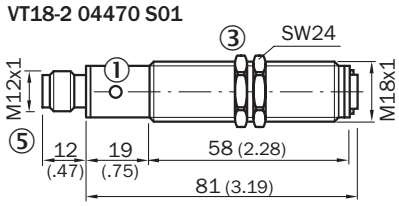


VT18-2 04470 S01



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

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6012019

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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