



Photoelectric sensors
V18, Photoelectric proximity sensor, Background
blanking

VT18-204172

Model Name > [VT18-2O4172](#)
Part No. > [6012018](#)



At a glance

- Cylindrical M18 housing
- Three adjustable sensing distances of 100 mm, 200 mm or 400 mm
- Voltage supply of 20 to 253 V AC with TRIAC output

Your benefits

- Simple, standardized design ensures easy mounting, alignment and replacement
- For connection to alternating voltage



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background blanking
Housing design (light emission):	Cylindrical, straight, straight
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)}
Type of light:	Infrared light
Light source:	LED ⁴⁾
Light spot (distance):	12 mm (130 mm)
Angle of dispersion:	3.5 °

¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Fix ³⁾ Background blanking at 115 mm ⁴⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

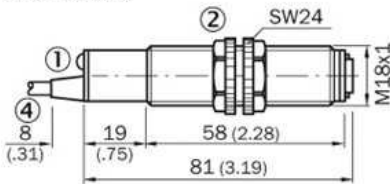
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	≤ 10 % ²⁾
Power consumption:	≤ 30 mA ³⁾
Output type:	NPN, light/dark-switching, programmable by electrical connection PNP
Output current I _{max.} :	100 mA
Response time:	≤ 6.25 ms ⁴⁾
Switching frequency:	80 Hz ⁵⁾
Electrical connection:	Cable, 3-wire, 2 m ⁶⁾
Cable material:	PVC
Conductor cross-section:	0.34 mm ²

Cable diameter:	4.7 mm
Circuit protection:::	A B C D 7) 8) 9) 10)
Protection class:	III
Weight:	95 g
Housing material:	PBT/PC
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient temperature operation:	-25 °C ... 70 °C
Ambient storage temperature:	-25 °C ... 75 °C

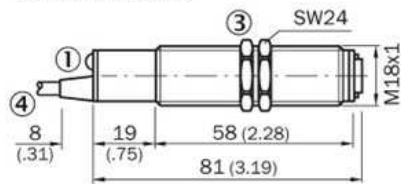
1) Limit values 2) May not exceed or fall short of V_S tolerances 3) Without load 4) Signal transit time with resistive load 5) With light/dark ratio 1:1 6) Do not bend below 0 °C 7) A = V_S connections reverse-polarity protected 8) B = inputs and output reverse-polarity protected 9) C = interference suppression 10) D = outputs overcurrent and short-circuit protected

Dimensional drawing

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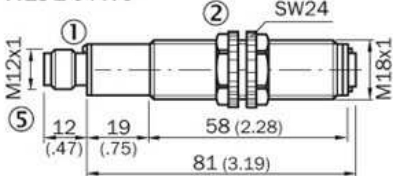


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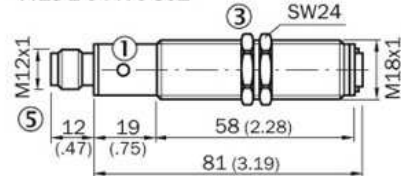


- |1| LED indicator red: Light received
- |2| fastening nuts (2 x), width across 24 mm, plastic, (included)
- |3| fastening nuts (2 x); width across 24, metal (included with delivery)
- |4| Connection cable
- |5| Connector M12, 4-pin

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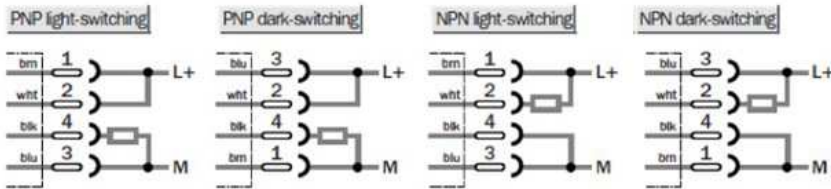
VT18-2 04470 S01



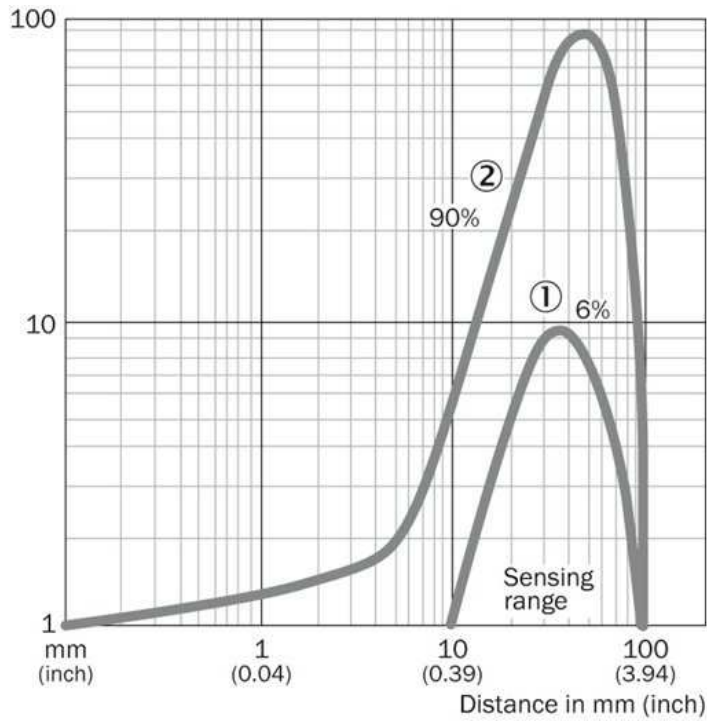
- |1| Red LED signal strength indicator
- |2| Locking nut made of plastic (SW 24) – included
- |3| Locking nut made of metal (SW 24) – included
- |4| Connecting cable
- |5| Equipment plug M 12, 4 pin

All dimension in mm (inch)

Connection diagram



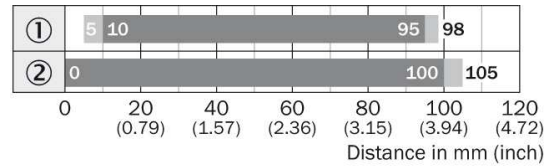
Characteristic curve



Connection type



Sensing range diagram



■ Sensing range ■ Sensing range typ. max.

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

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