



Photoelectric sensors  
V180-2, Photoelectric proximity sensor,  
Background blanking

VTE180-2P42444



**Model Name** > [VTE180-2P42444](#)  
**Part No.** > [6043815](#)



*Illustration may differ*

**At a glance**

- Lowest-cost M18 housing sensor on the market
- Long sensing distances: 100 mm, 400 mm, 800 mm (max. 1,100 mm)
- Bright power and signal LEDs with 360° visibility
- Wide product portfolio solves a broad range of applications
- High switching frequencies up to 1000 Hz
- Available in a metal housing for applications in harsh environments
- Optical axis selectively axial or radial (90°)

**Your benefits**

- Lowest-cost M18 cylindrical sensor on the market reduces installation costs
- Bright red sender LED simplifies alignment and saves installation time
- Bright power and signal LEDs with 360° visibility offer quick and simple troubleshooting, reducing installation and maintenance costs
- The flat and smooth lens reduces the collection of dust and dirt, ensuring safe operation with less maintenance and fewer costs



**Features**

Sensor/detection principle:	Photoelectric proximity sensor, Background blanking
Housing design (light emission):	Cylindrical, angled
Housing length:	83.8 mm
Optical axis:	Radial
Sensing range max.:	1 mm ... 450 mm <sup>1)</sup>
Sensing range:	1 mm ... 400 mm <sup>2)</sup>
Type of light:	Visible red light
Light source:	LED <sup>3)</sup>
Wave length:	645 nm
Angle of dispersion:	Ca. 1.5 °
Adjustment:	Potentiometer, 270°
Light spot size (distance):	Ø 20 mm (400 mm)

<sup>1) 2)</sup> Object with 90 % reflectance (referred to standard white DIN 5033) <sup>3)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

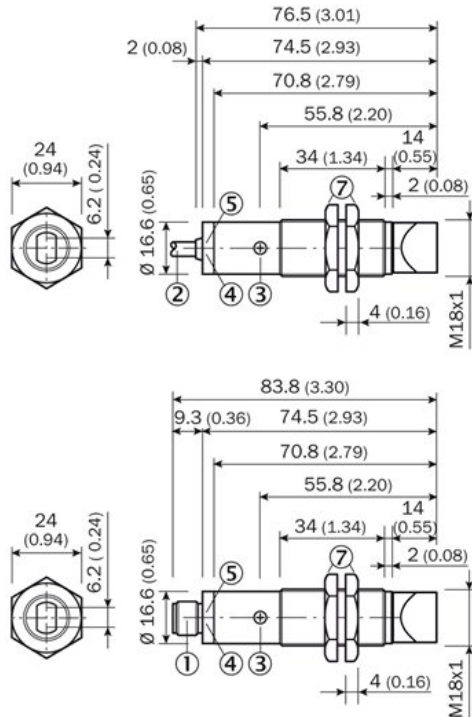
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	± 10 %
Power consumption:	≤ 30 mA <sup>2)</sup>

Output type:	PNP <sup>3)</sup>
Switching mode:	Light/dark-switching <sup>4)</sup>
Signal voltage PNP HIGH/LOW:	Approx. $V_S - 1.8 V / 0 V$
Output current $I_{max.}$ :	$\leq 100 \text{ mA}$
Response time:	$\leq 0.5 \text{ ms}$ <sup>5)</sup>
Switching frequency:	1,000 Hz <sup>6)</sup>
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, D <sup>7) 8) 9)</sup>
Protection class:	III
Weight:	47 g
Housing material:	Nickel-plated brass and PC, Metal
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C

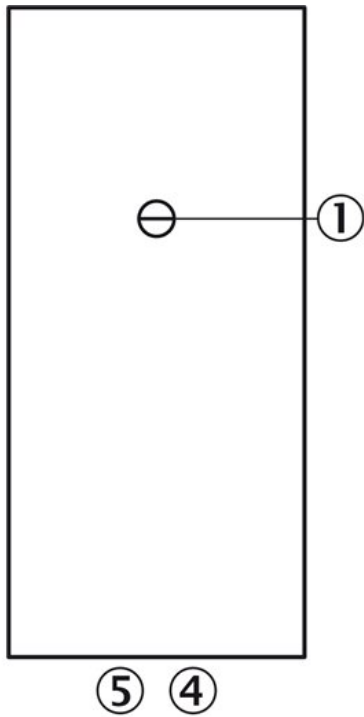
1) Limit values, operation in short-circuit protected network max. 8 A    2) Without load    3) 4) Control wire open: dark-switching D.ON    5) Signal transit time with resistive load    6) With light/dark ratio 1:1    7) A =  $V_S$  connections reverse-polarity protected    8) B = inputs and output reverse-polarity protected    9) D = outputs overcurrent and short-circuit protected

### Dimensional drawing



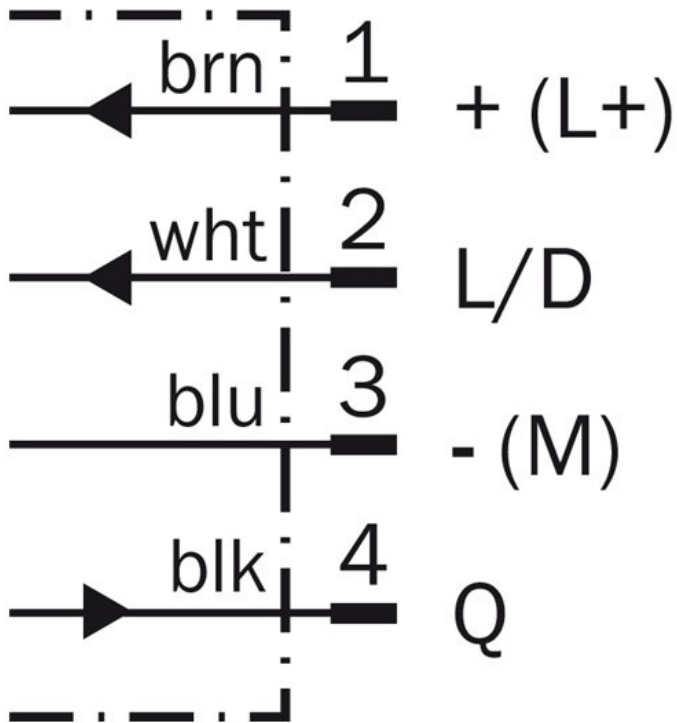
- [1] Connector M12, 3-pin / Connector M12, 3-pin
- [2] Connection cable 2 m
- [3] Sensitivity control; Potentiometer 270°
- [4] LED indicator orange: switching output active
- [5] LED indicator green, stability indicator:  
LED lights continuously = light reception < 0.9 / > 1.1; LED off = light reception > 0.9 / < 1.1
- [7] Metal housing, fastening nuts (2 x); width across 24

Adjustments possible

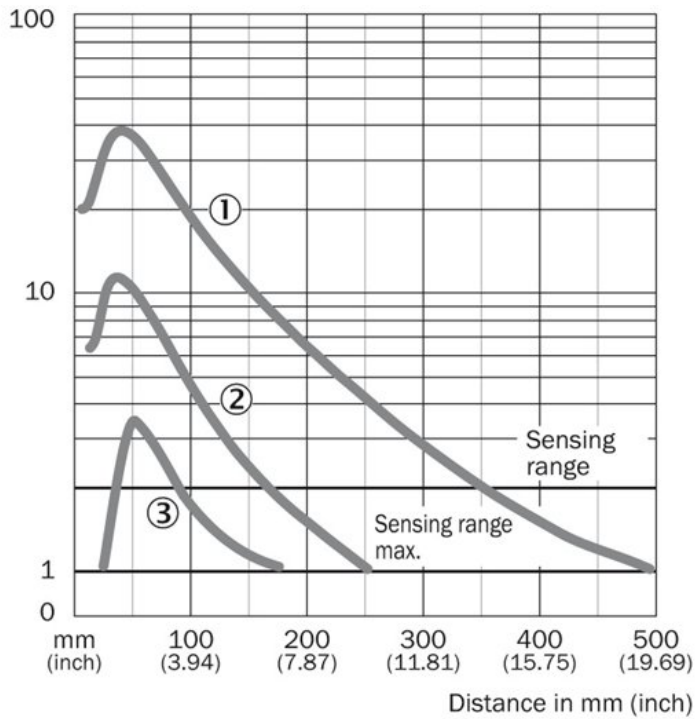


- |3| Sensitivity adjustment 270°
- |4| LED indicator orange: switching output active
- |5| LED indicator green

Connection diagram

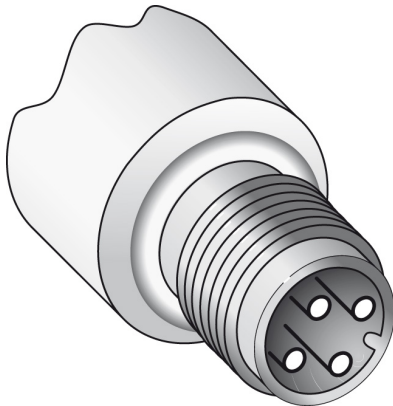


**Characteristic curve**

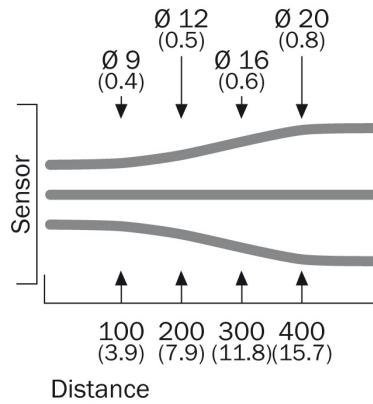


- ① Sensing range on white, 90 % remission
- ② Sensing range on grey, 18 % remission
- ③ Sensing range on black, 6 % remission

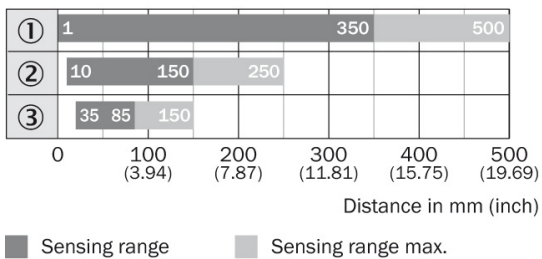
**Connection type**



**Light spot size**



**Sensing range diagram**



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