



Photoelectric sensors  
V180-2, Photoelectric proximity sensor, energetic

VTE180-2F32487



**Model Name** > **VTE180-2F32487**  
**Part No.** > **6044027**



*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, energetic
Housing design (light emission):	Cylindrical, straight
Housing length:	69.8 mm
Thread diameter (housing):	M18 x 1
Optical axis:	Axial
Sensing range max.:	1 mm ... 1,100 mm <sup>1)</sup>
Sensing range:	1 mm ... 800 mm <sup>2)</sup>
Type of light:	Visible red light
Light source:	LED <sup>3)</sup>
Wave length:	645 nm
Angle of dispersion:	Ca. 1.2 °
Adjustment:	Potentiometer, 270°
Light spot size (distance):	Ø 30 mm (800 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

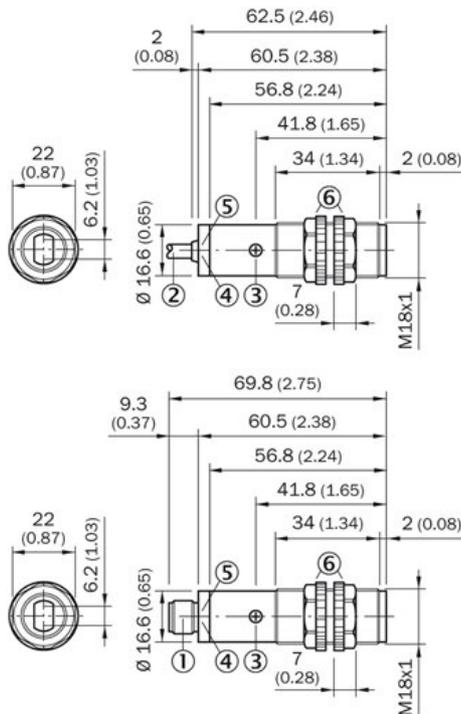
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	± 10 %

Power consumption:	≤ 30 mA <sup>2)</sup>
Output type:	PNP, open collector <sup>3)</sup>
Switching mode:	Light switching <sup>4)</sup>
Signal voltage PNP HIGH/LOW:	Approx. VS - 1.8 V / 0 V
Output current I <sub>max</sub> :	≤ 100 mA <sup>5)</sup>
Response time:	≤ 0.5 ms <sup>5)</sup>
Switching frequency:	± 1,000 Hz <sup>6)</sup>
Connection type:	Connector M12, 3-pin
Circuit protection:::	A, B, D <sup>7) 8) 9)</sup>
Protection class:	III
Weight:	18 g
Housing material:	Plastic, PBT/PC
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	Fastening nuts (2 x)
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C

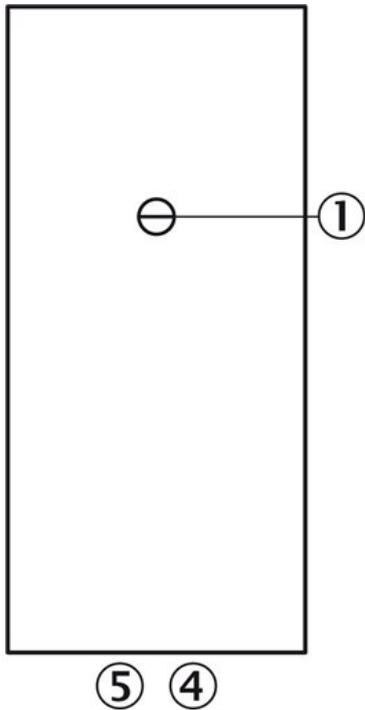
<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A <sup>2)</sup> Without load <sup>3) 4)</sup> Control wire open: dark-switching D.ON <sup>5)</sup> Signal transit time with resistive load <sup>6)</sup> With light/dark ratio 1:1 <sup>7)</sup> A = V<sub>S</sub> connections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

## Dimensional drawing



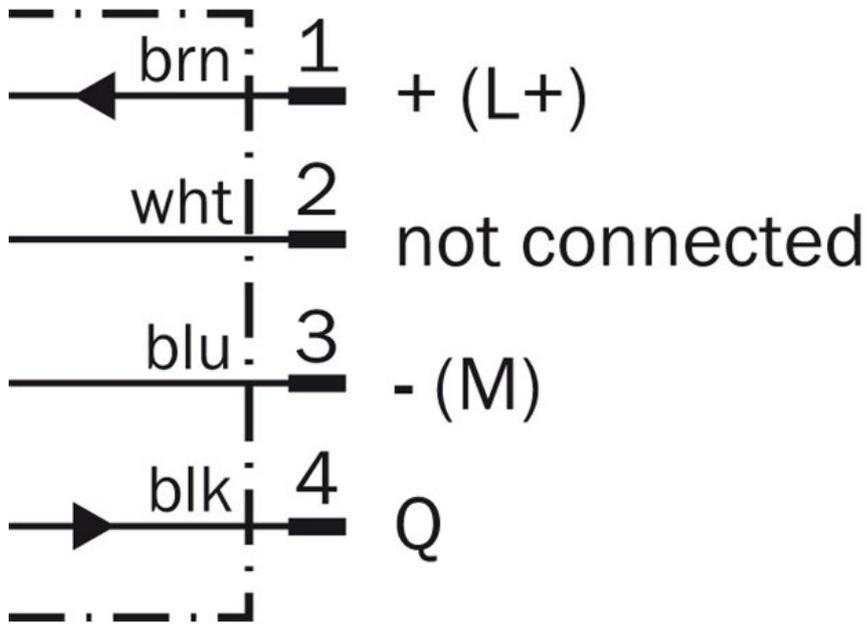
- [1] Connector M12, 4-pin
- [2] Connection cable 2 m
- [3] Sensitivity control (potentiometer, 270°)
- [4] LED indicator orange: switching output active
- [5] LED indicator green: strength indicator
- [6] fastening nuts (2 x); width across 22, PC

Adjustments possible

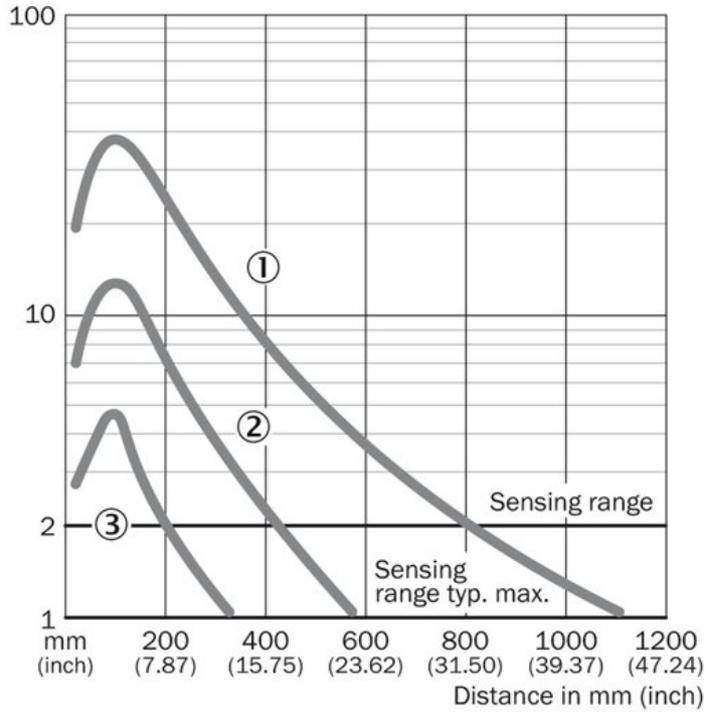


- |3| Sensitivity adjustment 270°
- |4| LED indicator orange: switching output active
- |5| LED indicator green

Connection diagram

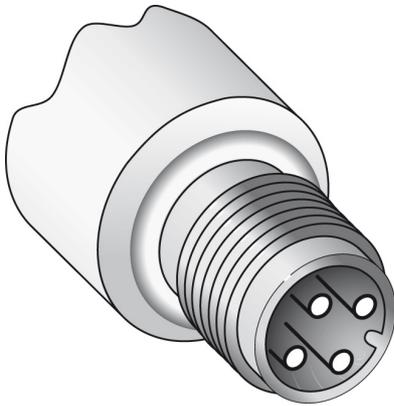


**Characteristic curve**

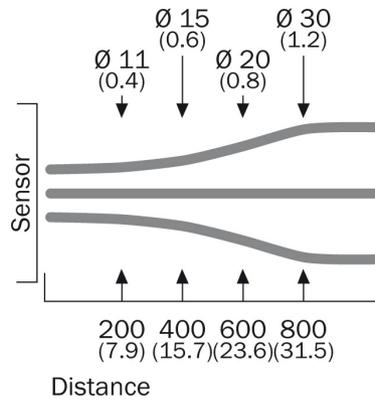


- |1| Sensing range on white, 90 % remission
- |2| Sensing range on grey, 18 % remission
- |3| Sensing range on black, 6 % remission

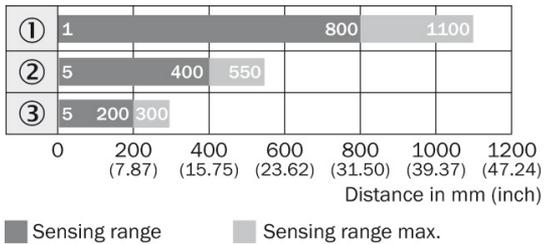
**Connection type**



**Light spot size**



**Sensing range diagram**



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