



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

VTE180-2P42442



Model Name > [VTE180-2P42442](#)
Part No. > [6041807](#)



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

Sensing range max.:	1 mm ... 450 mm ¹⁾
Sensing range:	1 mm ... 400 mm
Housing design (light emission):	Cylindrical, straight, straight
Light source:	LED ²⁾
Type of light:	Visible red light
Wave length:	645 nm
Sensitivity adjustment:	Potentiometer, 270°
Housing length:	69.8 mm
Thread diameter (housing):	M18 x 1
Sensor/detection principle:	Photoelectric proximity sensor, Background blanking
Light spot (distance):	20 mm (400 mm)
Optical axis:	Axial

¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life 100,000 h at Ta = +25 °C

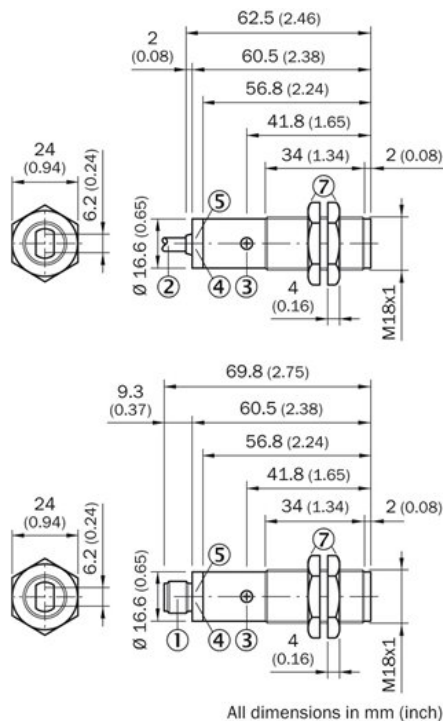
Mechanics/electronics

Enclosure rating:	IP 67
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	± 10 % ²⁾

Power consumption:	$\leq 30 \text{ mA}$ ³⁾
Switching output:	PNP, light/dark-switching, Selectable via L/D control wire, open collector
Output current I _{max} :	$\leq 100 \text{ mA}$
Response time:	$\leq 0.5 \text{ ms}$ ⁵⁾
Switching frequency:	1,000 Hz ⁶⁾
Connection type:	Connector M12, 4-pin
Protection class:	III
Circuit protection:::	A B ⁷⁾ 8) 9) D
Weight:	47 g
Housing material:	Nickel-plated brass and PC
Optics material:	PMMA
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C
Items supplied:	Fastening nuts (2 x)
Output state-LED:	-
Signal voltage PNP HIGH/LOW:	Approx. VS - 1.8 V / 0 V
Angle of dispersion:	Ca. 1.5 °

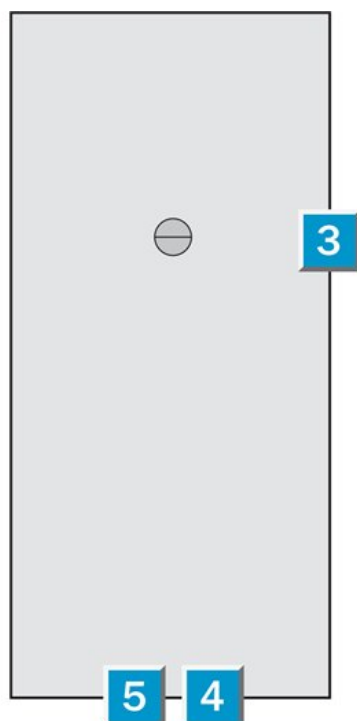
¹⁾ Limit values ²⁾ May not exceed or fall short of V_S ³⁾ Without load ⁴⁾ Control wire open: dark-switching D.ON ⁵⁾ Signal transit time with resistive load ⁶⁾ With light/dark ratio 1:1 ⁷⁾ A = V_S connections reverse-polarity protected ⁸⁾ B = inputs and output reverse-polarity protected ⁹⁾ D = outputs overcurrent and short-circuit protected

Dimensional drawing



- [1] Plug M12, 4-pin
- [2] Connection cable 2 m
- [3] Sensitivity adjustment 270°
- [4] LED indicator orange: switching output active
- [5] LED indicator green: strength indicator
- [7] fastening nuts (2 x); width across 24, metal

Einstell-Möglichkeiten

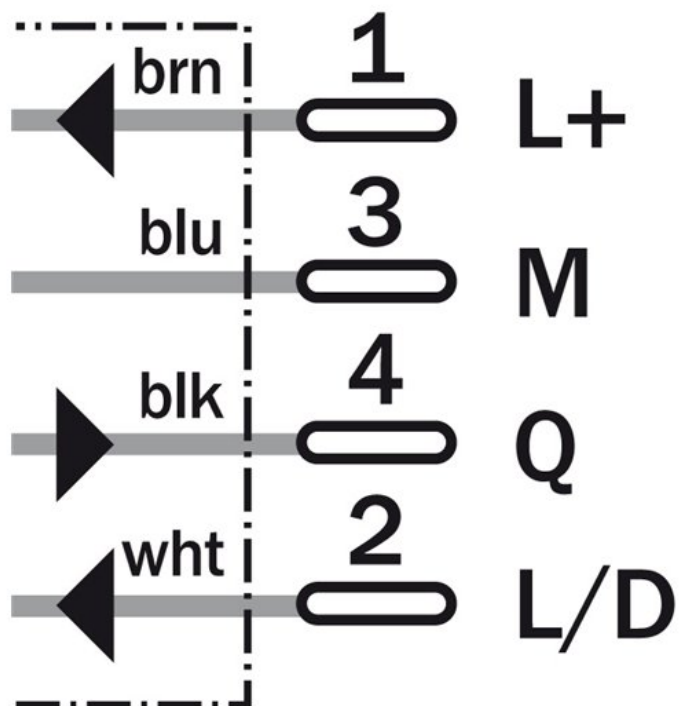


|3| Sensitivity adjustment 270°

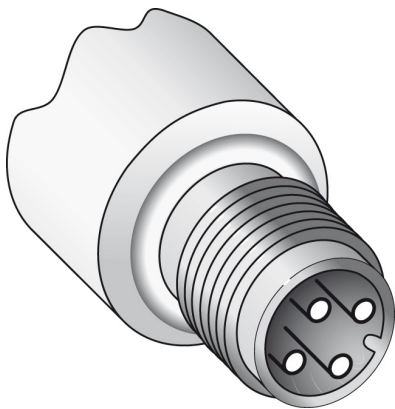
|4| LED indicator orange: switching output active

|5| LED indicator green

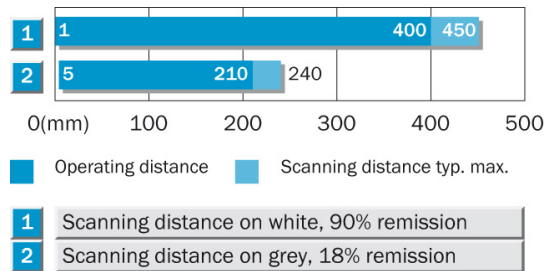
Connection diagram



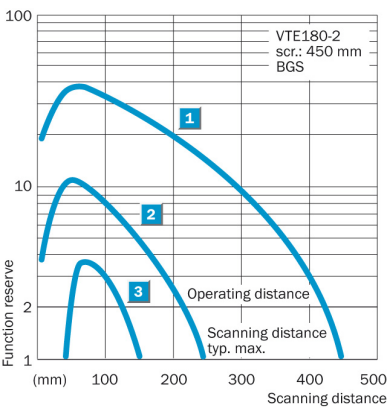
Connection type



Sensing range diagram



Characteristic curve



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