



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

VTE180-2N42447



Model Name > VTE180-2N42447
Part No. > 6037482



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, straight
Housing length:	69.8 mm
Thread diameter (housing):	M18 x 1
Optical axis:	Axial
Sensing range max.:	1 mm ... 500 mm ¹⁾
Sensing range:	1 mm ... 350 mm ²⁾
Type of light:	Visible red light
Light source:	LED ³⁾
Wave length:	645 nm
Angle of dispersion:	Ca. 1.5 °
Adjustment:	Potentiometer, 270 °
Light spot size (distance):	Ø 20 mm (400 mm)

^{1) 2)} Object with 90 % reflectance (referred to standard white, DIN 5033) ³⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	± 10 % ²⁾

1) Limit values, operation in short-circuit protected network max. 8 A 2) May not exceed or fall short of V_S tolerances 3) Without load 4) 5) Control wire open: light-switching L.ON 6) Signal transit time with resistive load 7) With light/dark ratio 1:1 8) A = V_S connections reverse-polarity protected 9) B = inputs and output reverse-polarity protected 10) D = outputs overcurrent and short-circuit protected

Technical drawing of a Tee fitting (1/2" NPT x 1" NPT) with a 1" NPT Outlet. The drawing includes a side view and a top view. Dimensions are provided in inches (") and millimeters (mm).

Top View Dimensions:

- Overall Length: 62.5 (2.46)
- Distance from End to Center of Tee: 60.5 (2.38)
- Distance from End to Center of Tee (Alternative): 56.8 (2.24)
- Distance from End to Center of Tee (Alternative): 41.8 (1.65)
- Distance from End to Center of Tee (Alternative): 34 (1.34)
- Distance from End to Center of Tee (Alternative): 2 (0.08)
- Distance from End to Center of Tee (Alternative): 16.6 (0.65)
- Distance from End to Center of Tee (Alternative): 7 (0.28)

Side View Dimensions:

- Overall Width: 22 (0.87)
- Distance from End to Center of Tee: 6.2 (1.03)

Bottom View Dimensions:

- Overall Length: 69.8 (2.75)
- Distance from End to Center of Tee: 60.5 (2.38)
- Distance from End to Center of Tee (Alternative): 56.8 (2.24)
- Distance from End to Center of Tee (Alternative): 41.8 (1.65)
- Distance from End to Center of Tee (Alternative): 34 (1.34)
- Distance from End to Center of Tee (Alternative): 2 (0.08)
- Distance from End to Center of Tee (Alternative): 16.6 (0.65)
- Distance from End to Center of Tee (Alternative): 7 (0.28)

Side View Dimensions:

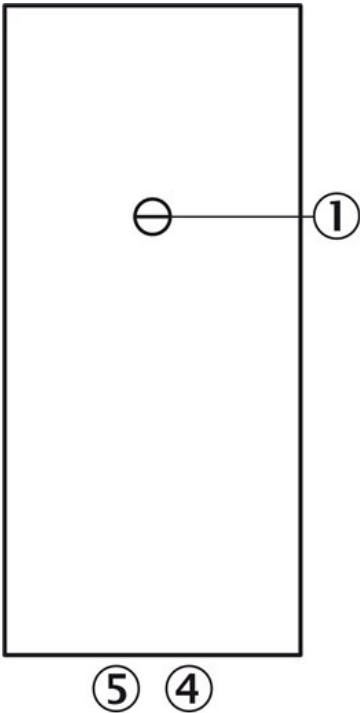
- Overall Width: 22 (0.87)
- Distance from End to Center of Tee: 6.2 (1.03)

Notes:

- Ø 16.6 (0.65)
- M18x1

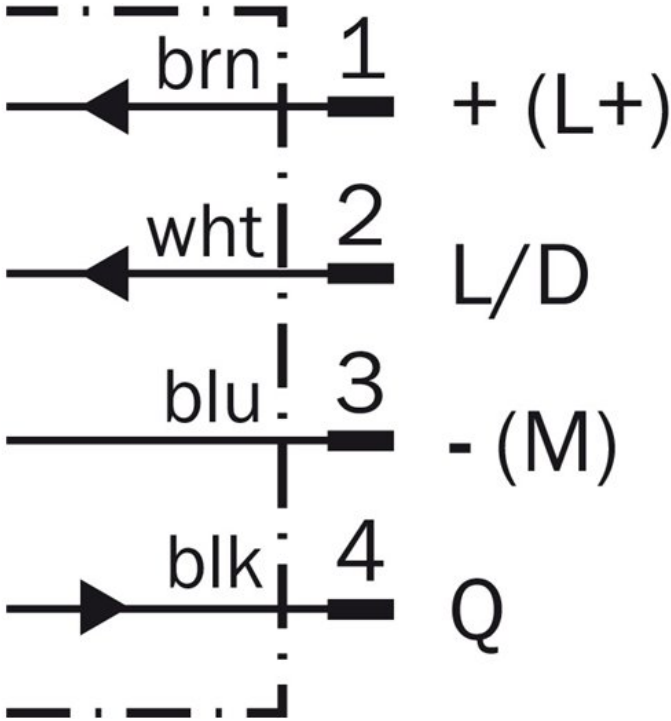
- 4/15/2015 8:53:59 AM

Adjustments possible

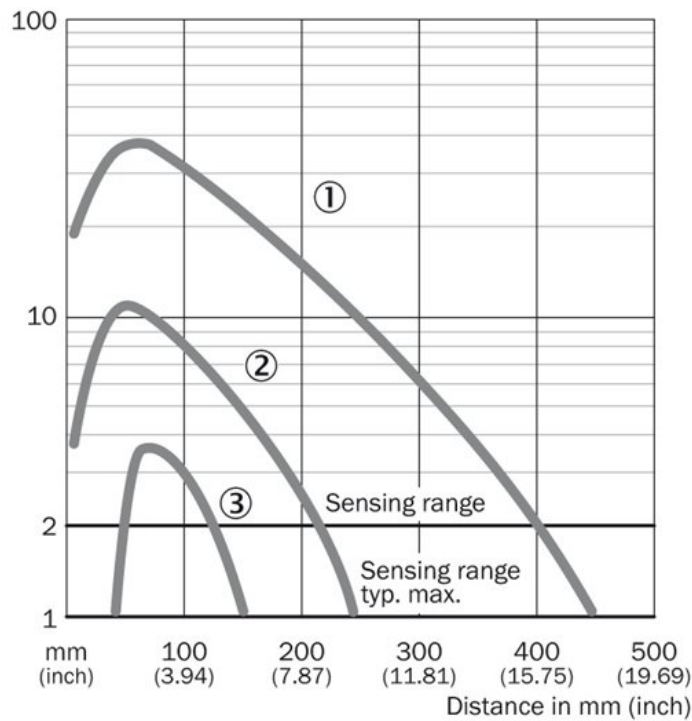


- |3| Sensitivity adjustment 270°
- |4| LED indicator orange: switching output active
- |5| LED indicator green

Connection diagram

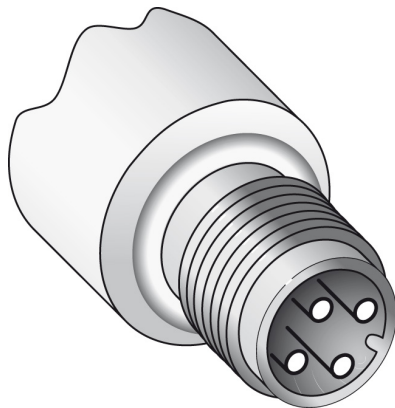


Characteristic curve

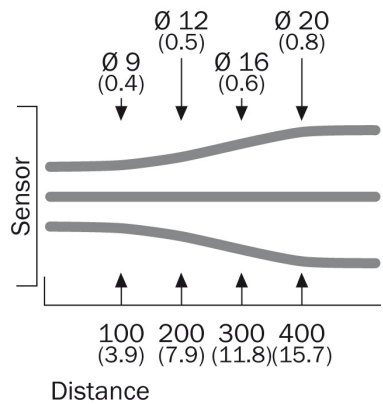


- |1| Sensing range on white, 90 % remission
- |2| Sensing range on grey, 18 % remission
- |3| Sensing range on black, 6 % remission

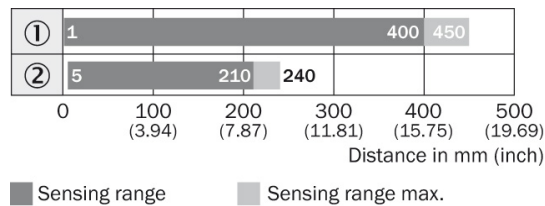
Connection type



Light spot size



Sensing range diagram



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