



Photoelectric sensors
V18, Photoelectric proximity sensor, Background
blanking

VTF18-3P5640



Model Name > [VTF18-3P5640](#)
Part No. > [6013023](#)



Illustration may differ

At a glance

- Cylindrical M18 housing
- Sensing distance up to 50 mm or 100 mm
- Precise background blanking
- 3- or 4-wire
- Straight or right-angle housing
- Metal or plastic housing

Your benefits

- Simple, standardized design ensures easy mounting, alignment and replacement
- Compact, space-saving design easily fits in tight application spaces



Features

| | |
|----------------------------------|---|
| Sensor/detection principle: | Photoelectric proximity sensor, Background blanking |
| Housing design (light emission): | Cylindrical, straight, straight |
| Housing length: | 78 mm |
| Thread diameter (housing): | M18 x 1 |
| Optical axis: | axial |
| Sensing range max.: | 0 mm ... 50 mm ¹⁾ |
| Sensing range: | 0 mm ... 45 mm |
| Type of light: | Infrared light |
| Light source: | LED ²⁾ |
| Light spot (distance): | 3 mm (25 mm) |

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

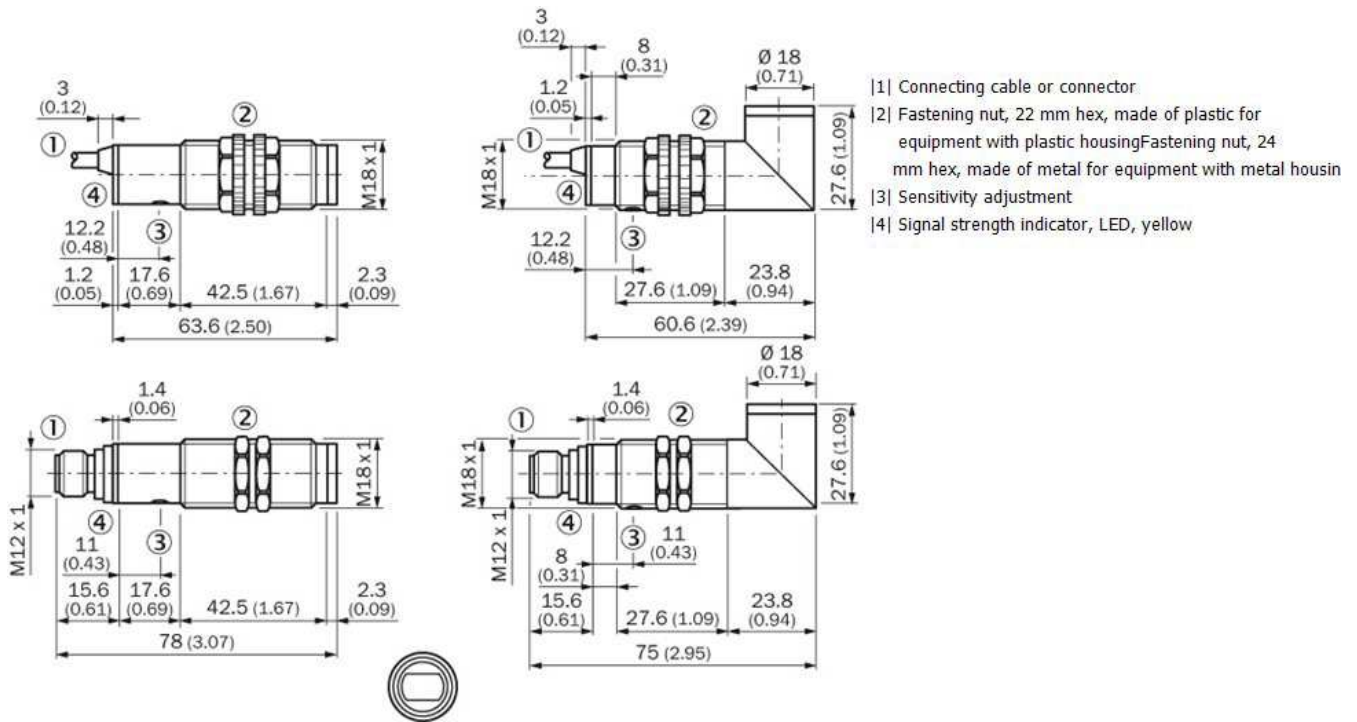
Mechanics/electronics

| | |
|------------------------------------|-------------------------------------|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Residual ripple: | ≤ 10 % ²⁾ |
| Power consumption: | ≤ 30 mA ³⁾ |
| Output type: | PNP, Dark-switching, open collector |
| Output current I _{max} .: | 100 mA |
| Response time: | ≤ 2 ms ⁴⁾ |
| Switching frequency: | 250 Hz ⁵⁾ |
| Electrical connection: | Connector M12, 4-pin |
| Circuit protection::: | A, B, C, D ^{6) 7) 8) 9)} |
| Protection class: | III |

Weight: 100 g
Housing material: PBT/PC
Optics material: PMMA
Enclosure rating: IP 67
Special feature: Focused optics
Ambient temperature operation: -25 °C ... 70 °C
UL File-No.: UL No. NMFT2.E175606

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) $A = V_S$
connections reverse-polarity protected 7) B = inputs and output reverse-polarity protected 8) C = interference suppression 9) D = outputs overcurrent and short-circuit protected

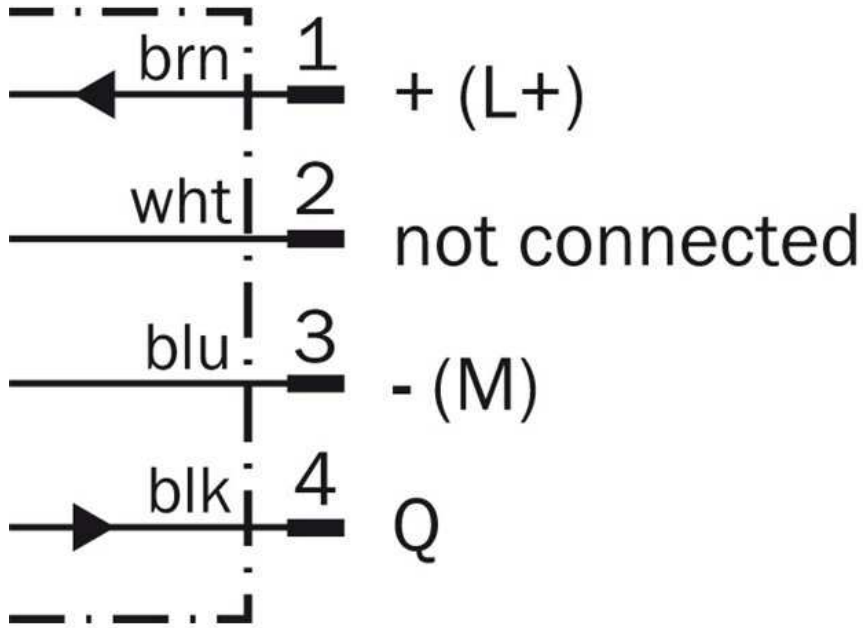
Dimensional drawing



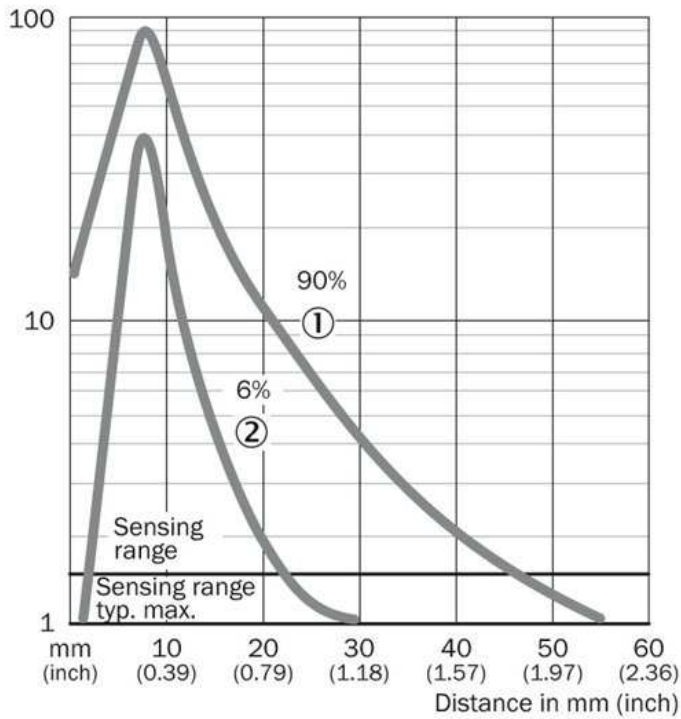
Adjustments possible



Connection diagram



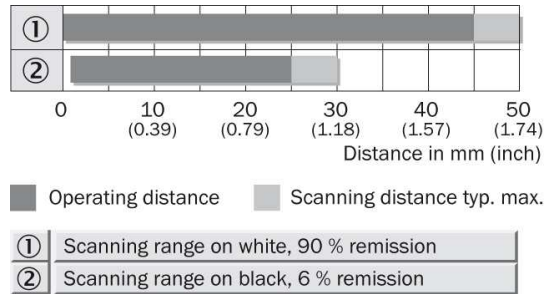
Characteristic curve



Connection type



Sensing range diagram



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