



Photoelectric sensors
V18, Photoelectric proximity sensor, Background
blanking

VTF18-4P1640



Model Name > [VTF18-4P1640](#)
Part No. > [6012885](#)



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.: | 3 mm ... 100 mm ¹⁾ |
| Sensing range: | 3 mm ... 90 mm |
| Type of light: | Infrared light |
| Light source: | LED ²⁾ |
| Light spot (distance): | 3 mm (50 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

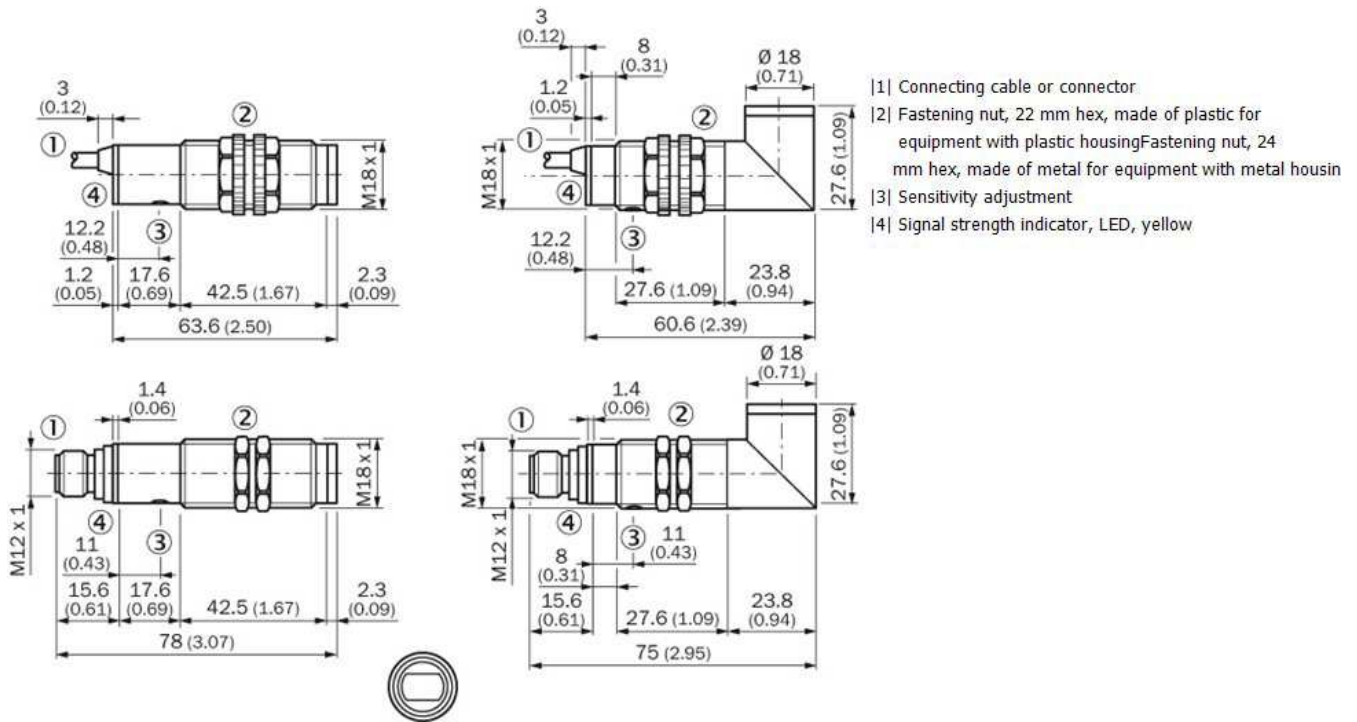
| | |
|------------------------------------|--|
| Supply voltage: | 10 V DC ... 30 V DC ¹⁾ |
| Residual ripple: | ≤ 10 % ²⁾ |
| Power consumption: | ≤ 30 mA ³⁾ |
| Output type: | NPN, Light/dark-switching, Selectable via L/D control wire, open collector |
| Output current I _{max.} : | 100 mA |
| Response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

| | |
|--------------------------------|----------------------|
| 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 |

Control wire open: dark-switching D.ON;

1) Limit values 2) May not exceed or fall short of V_S tolerances 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) C = interference suppression 10) D = outputs overcurrent and short-circuit protected

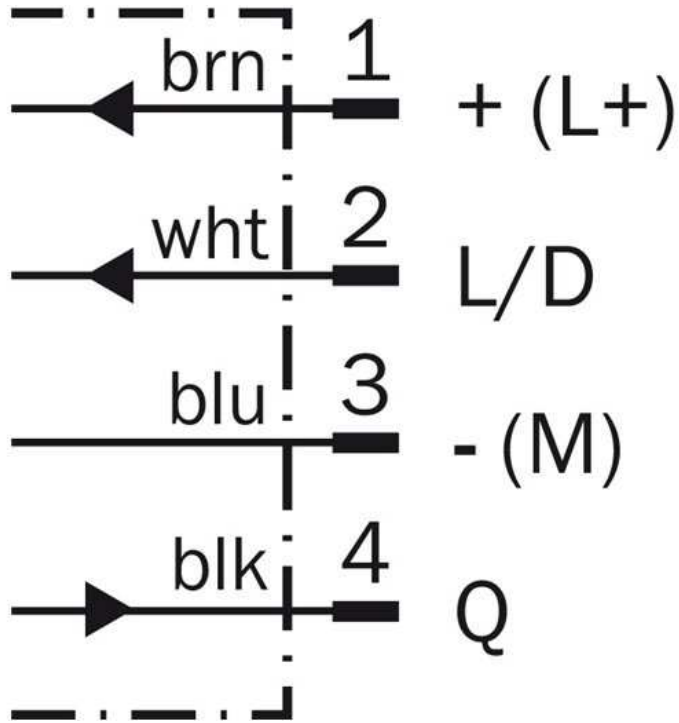
Dimensional drawing



Adjustments possible



Connection diagram



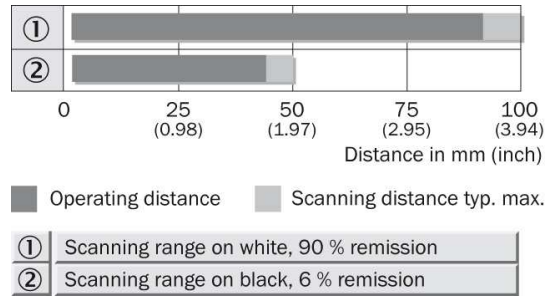
Characteristic curve



Connection type



Sensing range diagram



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