



Photoelectric sensors  
V18, Photoelectric proximity sensor, Background  
blanking

VTF18-3F1940



**Model Name** > [VTF18-3F1940](#)  
**Part No.** > [6012936](#)



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, angled, angled 90°
Housing length:	75 mm
Thread diameter (housing):	M18 x 1
Optical axis:	radial
Sensing range max.:	3 mm ... 100 mm <sup>1)</sup>
Sensing range:	3 mm ... 90 mm
Type of light:	Infrared light
Light source:	LED <sup>2)</sup>
Light spot (distance):	3 mm (50 mm)
Sensitivity adjustment:	Potentiometer, 270°

<sup>1)</sup> Object with 90 % reflectance (referred to standard white DIN 5033) <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

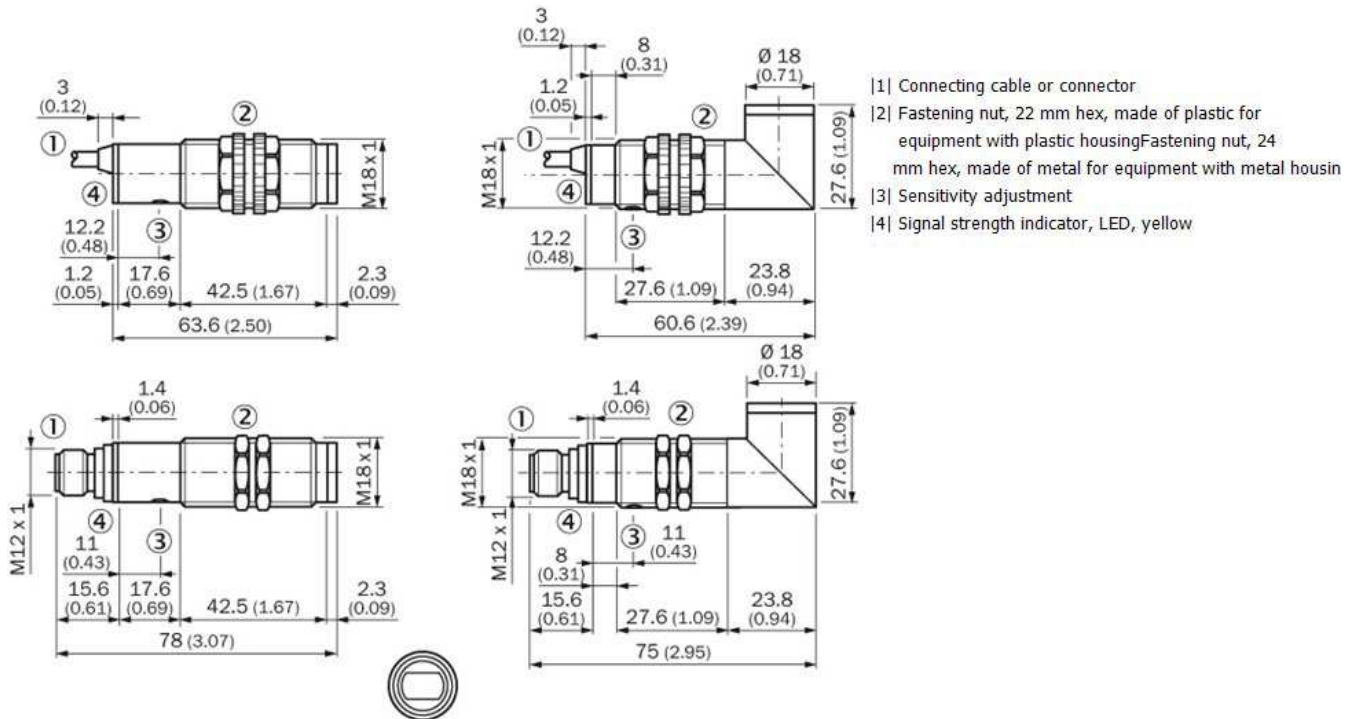
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Residual ripple:	≤ 10 % <sup>2)</sup>
Power consumption:	≤ 30 mA <sup>3)</sup>
Output type:	PNP, Light-switching, open collector
Output current I <sub>max.</sub> :	100 mA
Response time:	≤ 2 ms <sup>4)</sup>
Switching frequency:	250 Hz <sup>5)</sup>
Electrical connection:	Connector M12, 4-pin
Circuit protection:::	A, B, C, D <sup>6) 7) 8) 9)</sup>

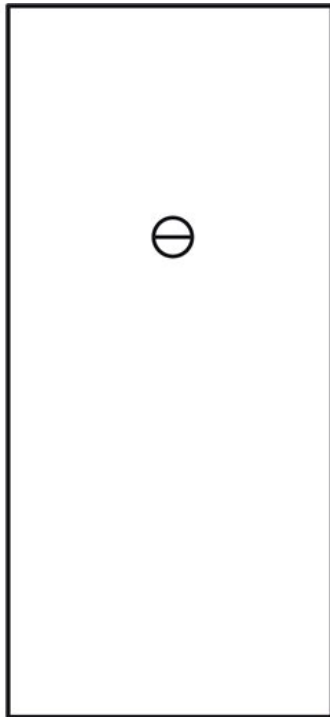
Protection class: III  
 Weight: 100 g  
 Housing material: PBT/PC  
 Optics material: PMMA  
 Enclosure rating: IP 67  
 Special feature: Focused optics  
 Ambient temperature operation: -25 °C ... 70 °C  
 UL File-No.: UL No. NMFT2.E175606

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

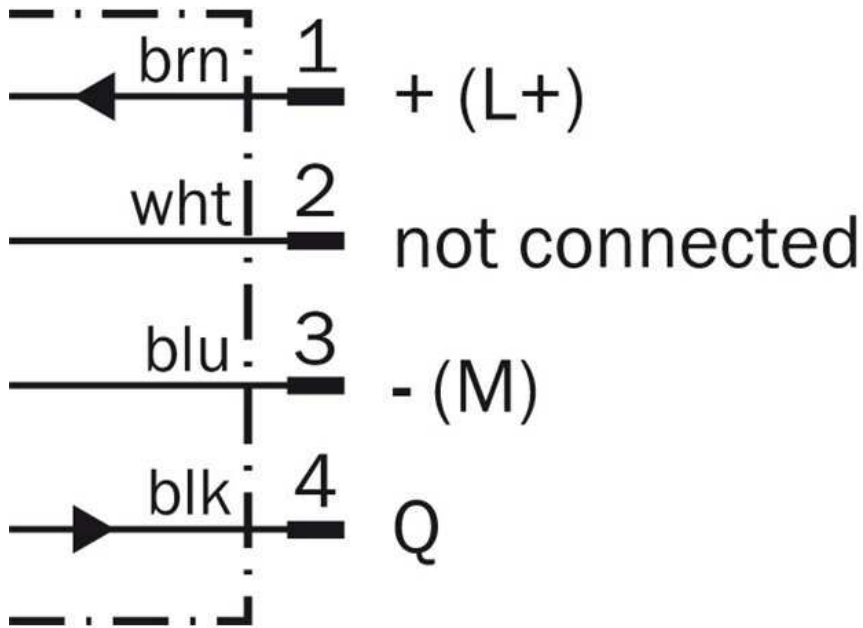
### Dimensional drawing



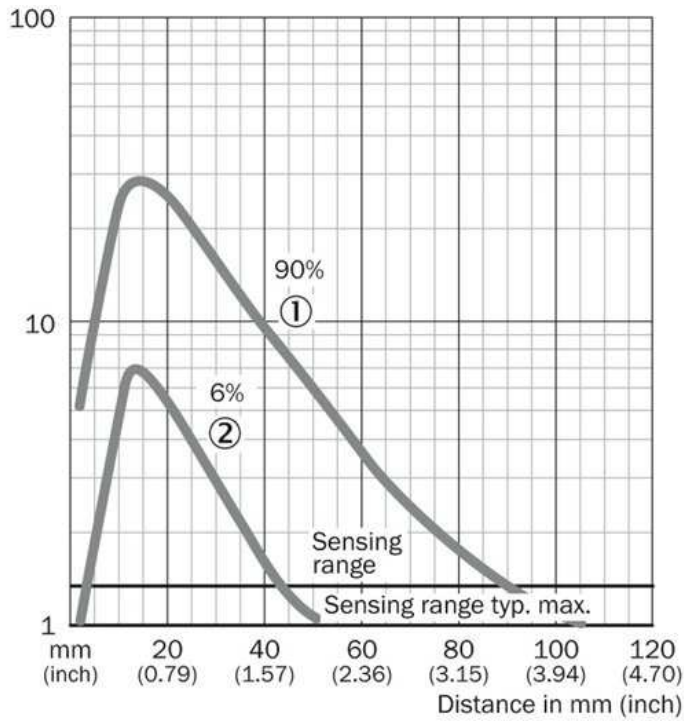
Adjustments possible



Connection diagram



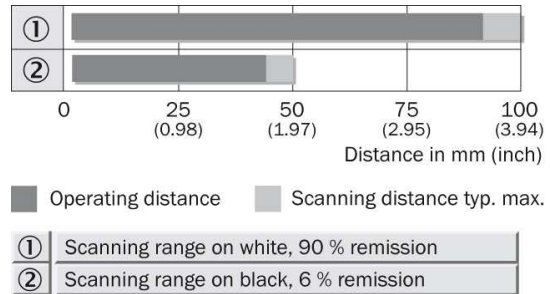
**Characteristic curve**



**Connection type**



**Sensing range diagram**



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