



Photoelectric sensors
V18, Photoelectric proximity sensor, Background
blinking

VTF18-3F5240



Model Name > [VTF18-3F5240](#)
Part No. > [6012972](#)



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)
Sensitivity adjustment:	Potentiometer, 270°

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

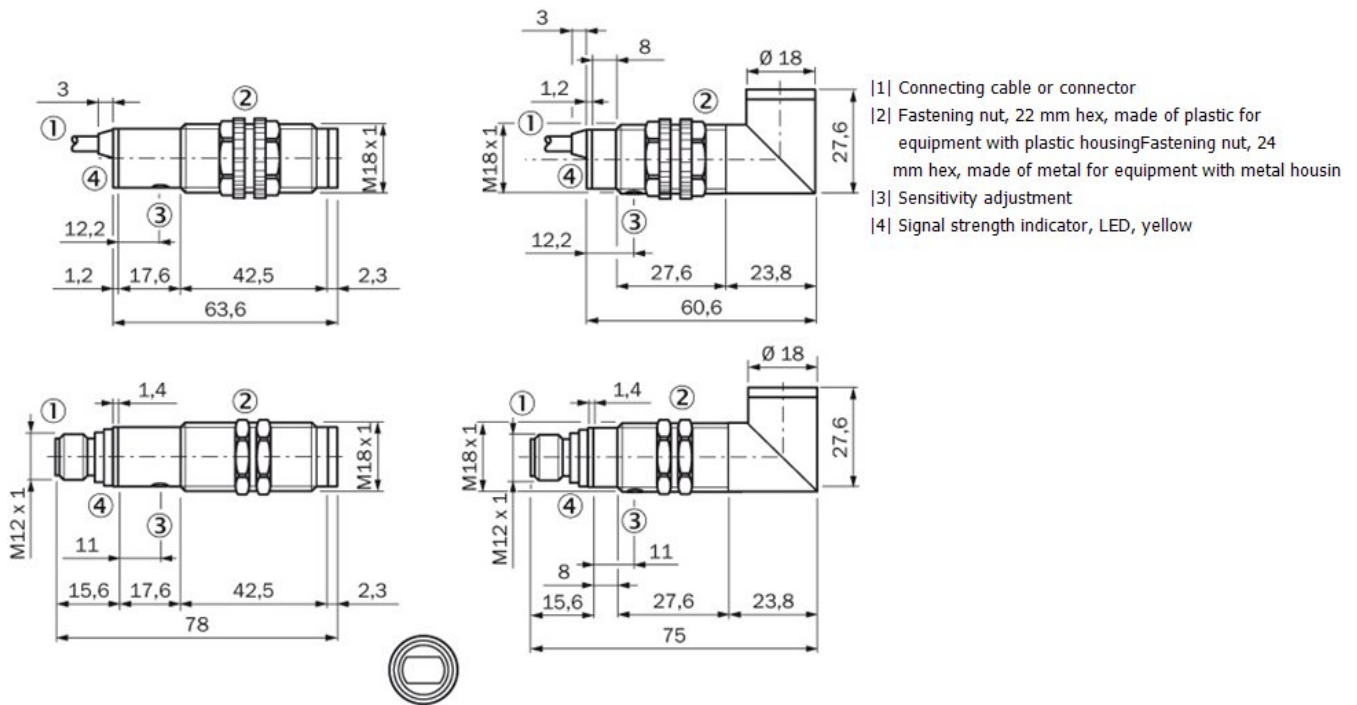
Mechanics/electronics

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

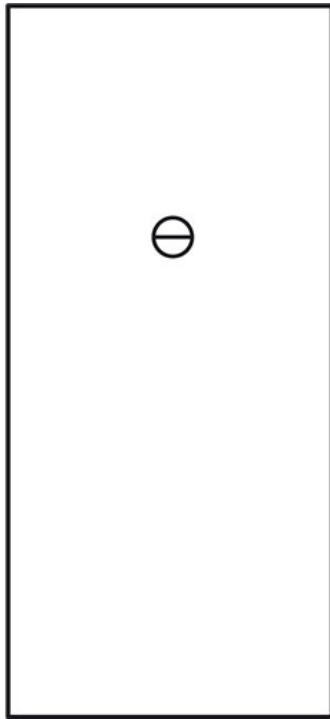
Protection class: III
 Weight: 120 g
 Housing material: Nickel-plated brass
 Optics material: PMMA
 Enclosure rating: IP 67
 Special design: Focused optics
 Ambient operating temperature: -25 °C ... 70 °C
 UL File-No.: UL No. NMFT2.E175606

1) Limit values 2) May not exceed or fall short of V_S 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

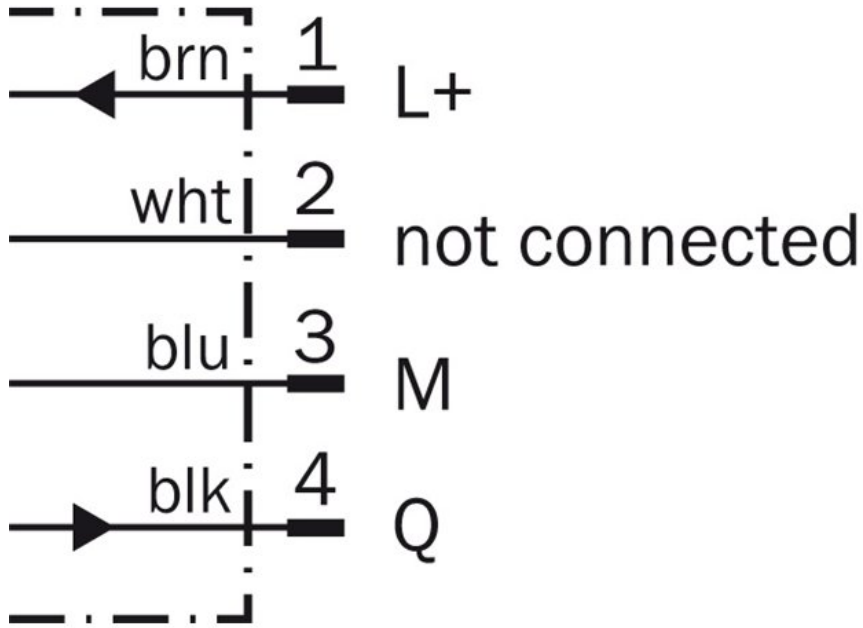
Dimensional drawing



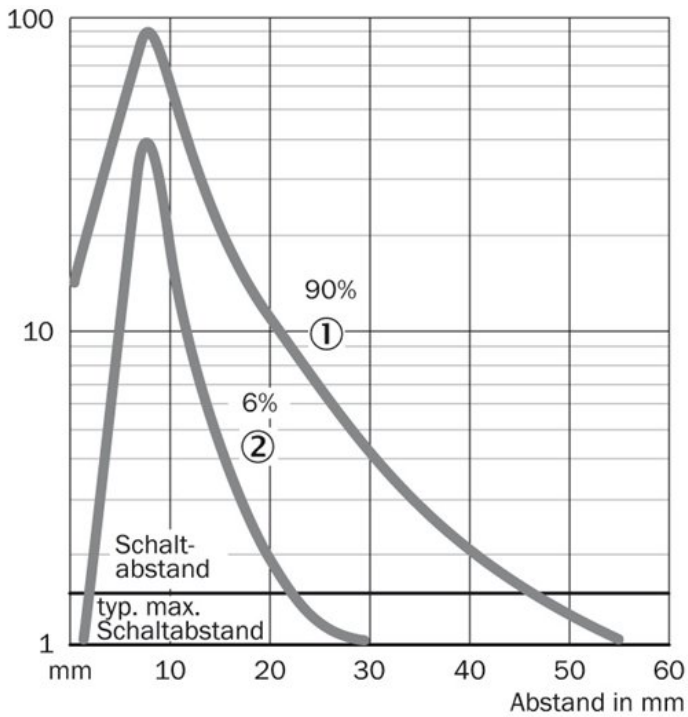
Adjustments possible



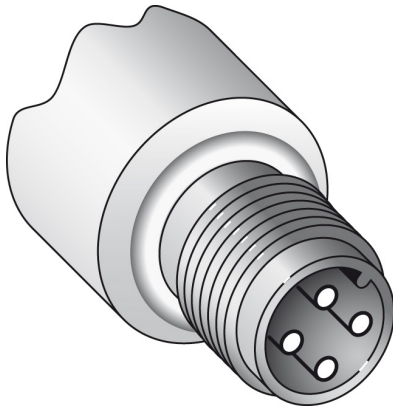
Connection diagram



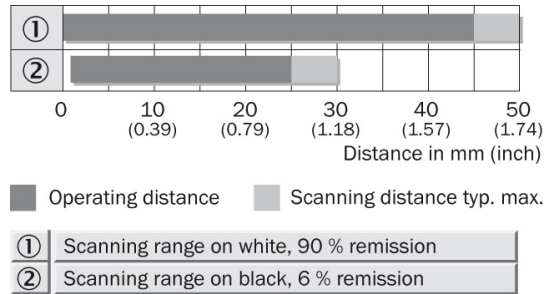
Characteristic curve



Connection type



Sensing range diagram



- ① Scanning range on white, 90 % remission
- ② Scanning range on black, 6 % remission

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