



Photoelectric sensors
V18, Photoelectric proximity sensor, Background
blinking

VTF18-3E5612



Model Name > [VTF18-3E5612](#)
Part No. > [6013015](#)



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:	63.6 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

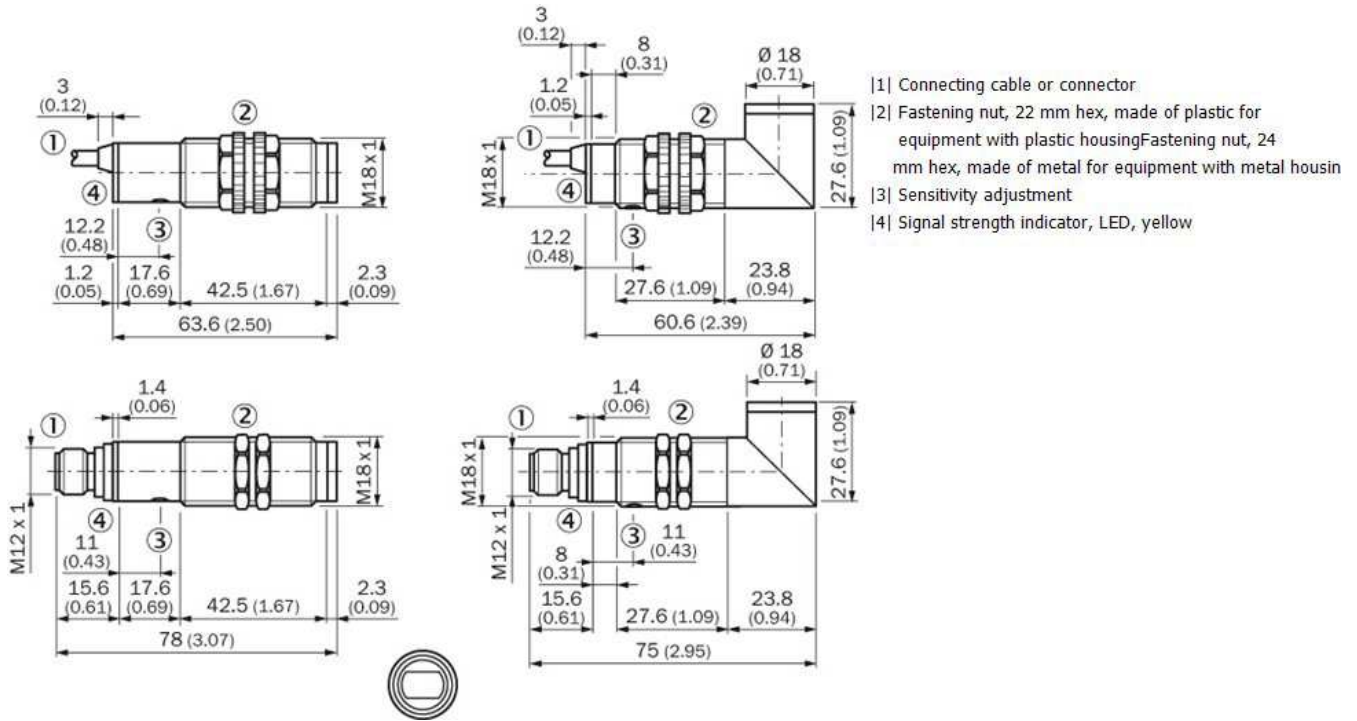
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	≤ 10 % ²⁾
Power consumption:	≤ 30 mA ³⁾
Output type:	NPN, Light-switching, open collector
Output current I _{max.} :	100 mA
Response time:	≤ 2 ms ⁴⁾
Switching frequency:	250 Hz ⁵⁾
Electrical connection:	Cable, 3-wire, 2 m ⁶⁾
Cable material:	PVC
Conductor cross-section:	0.14 mm ²

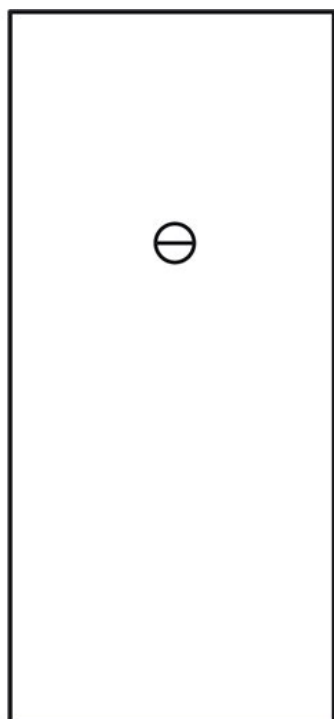
Cable diameter:	3.1 mm
Circuit protection:::	A, B, C, D ^{7) 8) 9) 10)}
Protection class:	III
Weight:	100 g
Housing material:	PBT/PC
Optics material:	PMMA
Enclosure rating:	IP 67
Special feature:	Focused optics
Ambient temperature operation:	-25 °C ... 70 °C
UL File-No.:	UL No. NMFT2.E175606

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) Do not bend below 0 °C 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

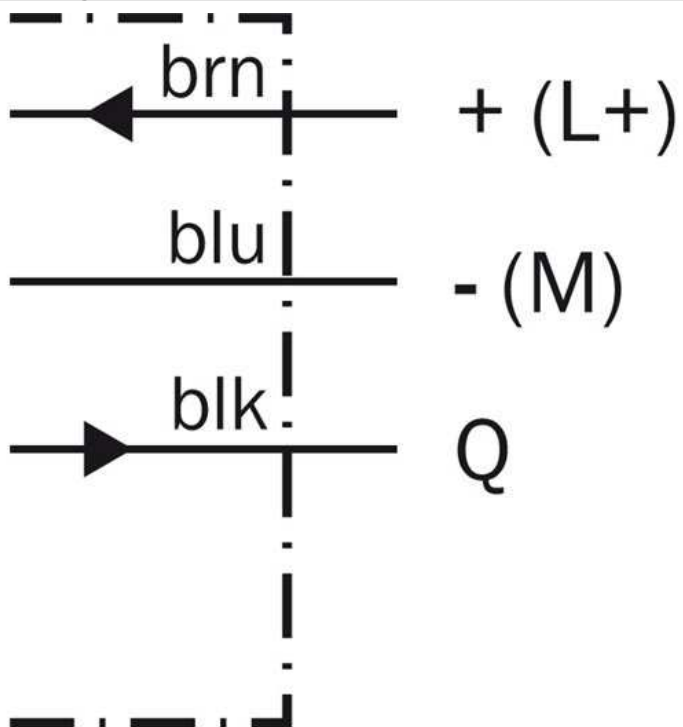
Dimensional drawing



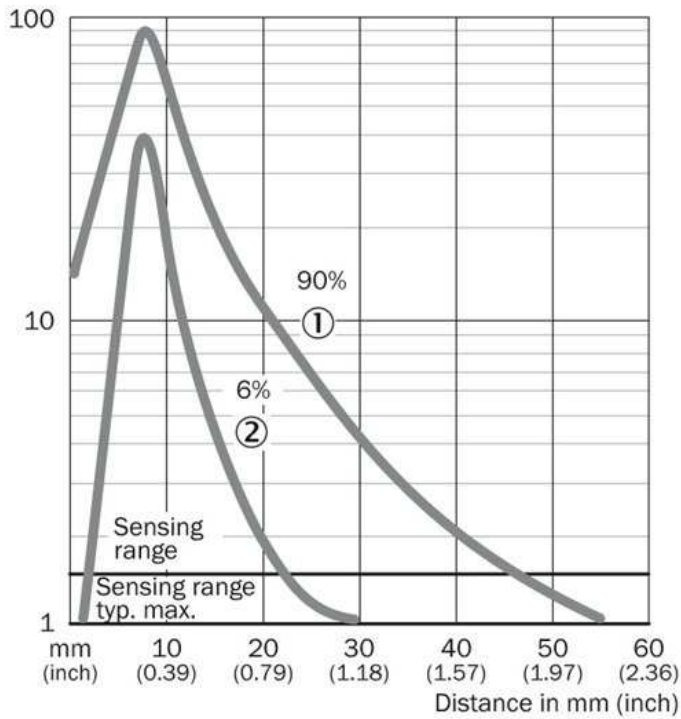
Adjustments possible



Connection diagram



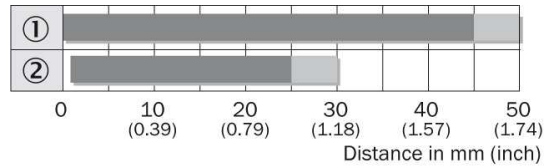
Characteristic curve



Connection type



Sensing range diagram



■ Operating distance ■ Scanning distance typ. max.

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

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