



Photoelectric sensors  
V18, Through-beam photoelectric sensor

VS/VE18-3P3212



**Model Name** > [VS/VE18-3P3212](#)  
**Part No.** > [6013687](#)



*Illustration may differ*

**At a glance**

- Cylindrical M18 housing
- Sensing distance up to 20 m
- 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:	Through-beam photoelectric sensor
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 m ... 20 m
Sensing range:	0 m ... 14 m
Type of light:	Infrared light
Light source:	LED <sup>1)</sup>
Light spot diameter (distance):	700 mm (14 m)
Sensitivity adjustment:	Potentiometer, 270°
Angle of dispersion:	2.8 °

<sup>1)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

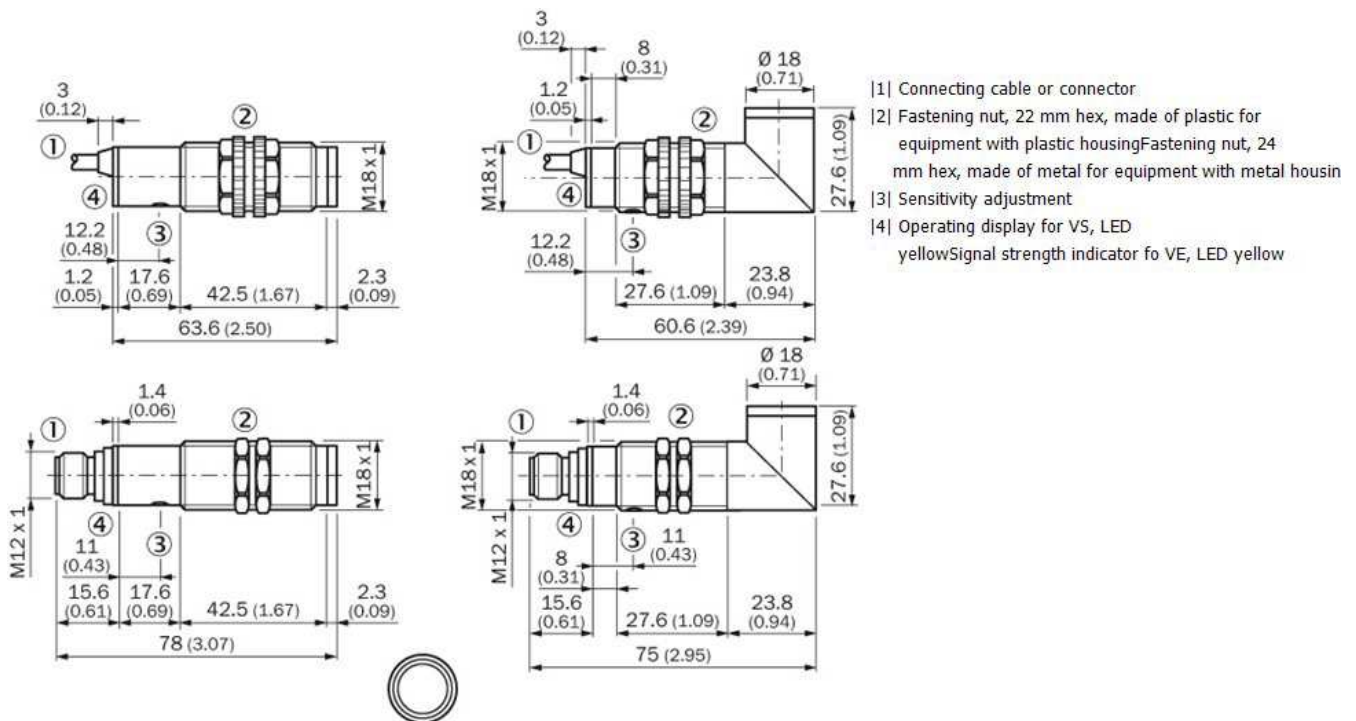
**Mechanics/electronics**

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, Dark-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:	Cable, 3-wire, 2 m <sup>6)</sup>
Cable material:	PVC

Conductor cross-section:	0.14 mm <sup>2</sup>
Cable diameter:	3.1 mm
Circuit protection:::	A, B, C, D <sup>7) 8) 9) 10)</sup>
Protection class:	III
Weight:	240 g
Housing material:	Nickel-plated brass
Enclosure rating:	IP 67
Test input sender off:	TE to 0 V
Ambient temperature operation:	-25 °C ... 70 °C
UL File-No.:	UL No. NMFT2.E175606
Switching mode characteristic:	Open collector

1) Limit values 2) May not exceed or fall short of V<sub>S</sub> 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<sub>S</sub> 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

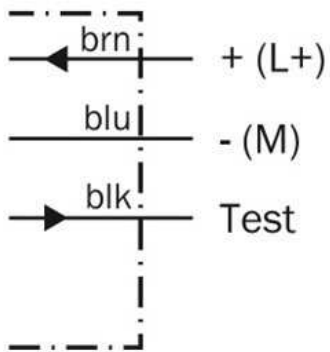


Adjustments possible

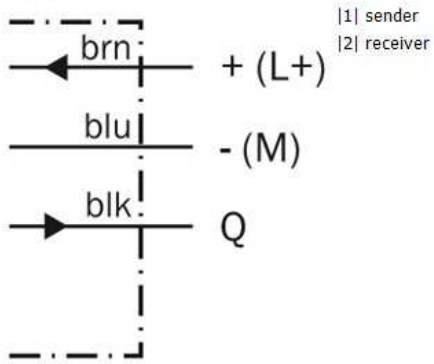


Connection diagram

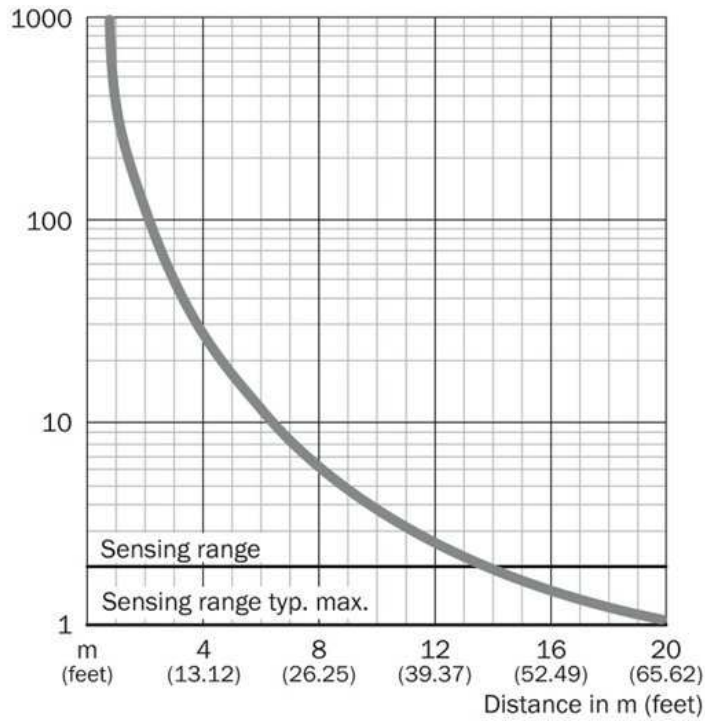
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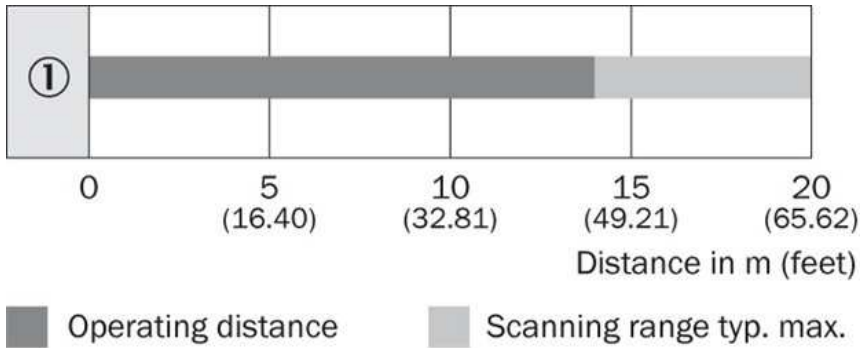
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### Characteristic curve



### Sensing range diagram



Connection type

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