



Photoelectric sensors V18, Through-beam photoelectric sensor

VS/VE18-3F3212



Model Name > [VS/VE18-3F3212](#)
Part No. > [6013690](#)



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 ¹⁾
Light spot diameter (distance):	700 mm (14 m)
Sensitivity adjustment:	Potentiometer, 270°
Angle of dispersion:	2.8 °

¹⁾ Average service life of 100,000 h at $T_A = +25\text{ °C}$

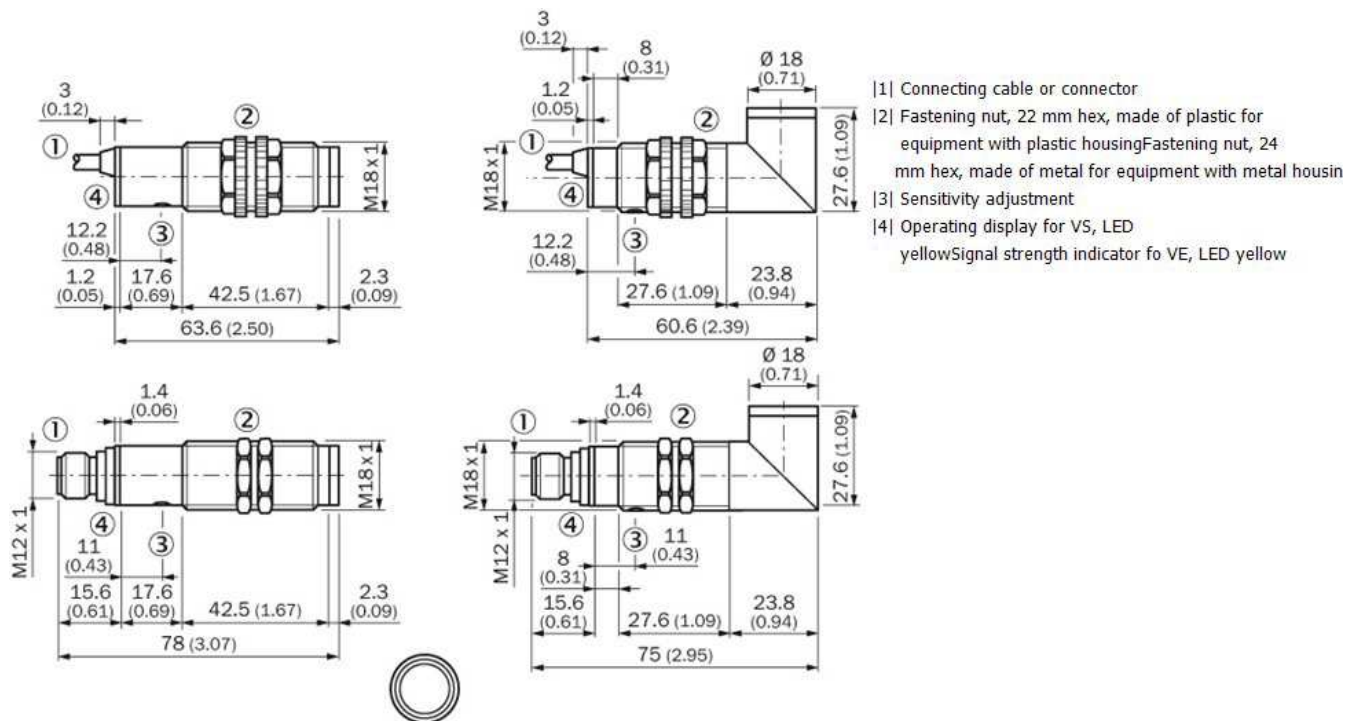
Mechanics/electronics

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

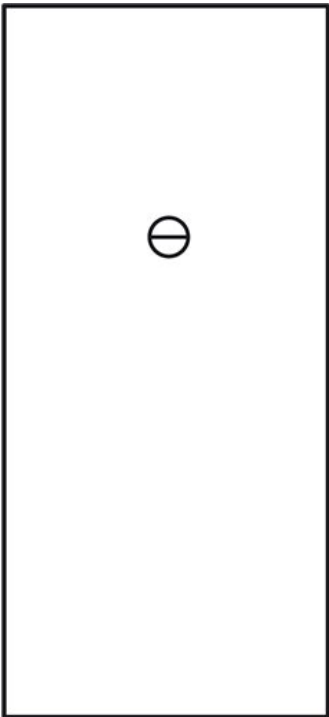
Conductor cross-section:	0.14 mm ²
Cable diameter:	3.1 mm
Circuit protection:::	A, B, C, D ^{7) 8) 9) 10)}
Protection class:	III
Weight:	240 g
Housing material:	Nickel-plated brass
Enclosure rating:	IP 67
Test input sender off:	TE to 0 V
Ambient temperature operation:	-25 °C ... 70 °C
UL File-No.:	UL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

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

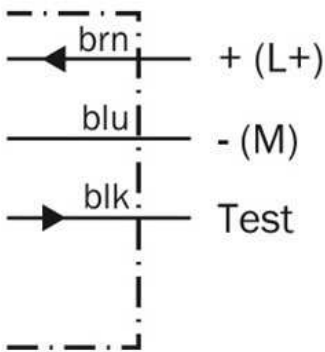


Adjustments possible

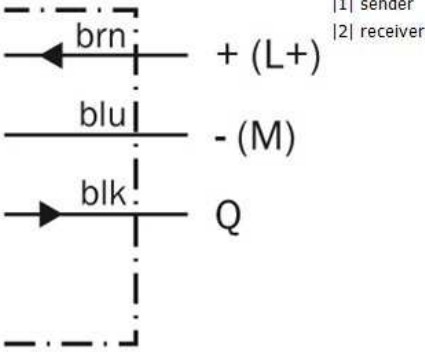


Connection diagram

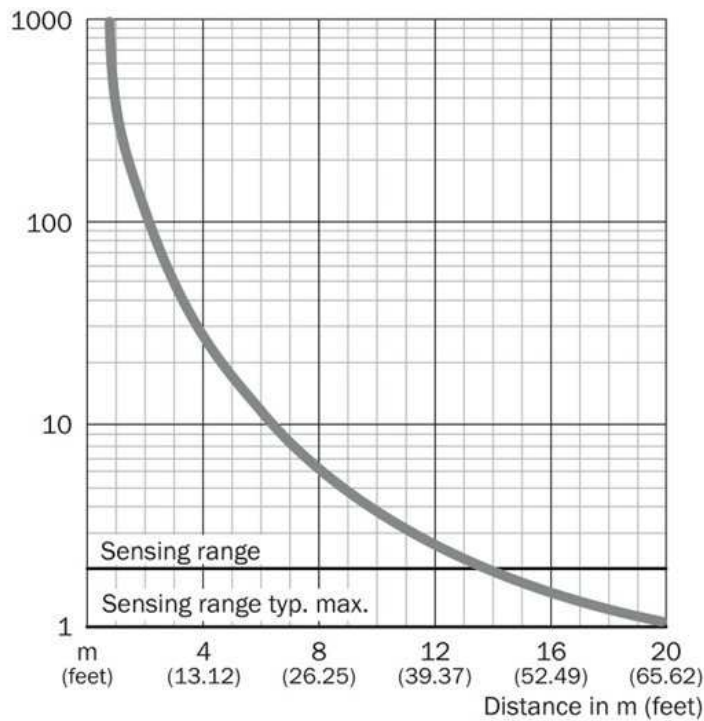
①



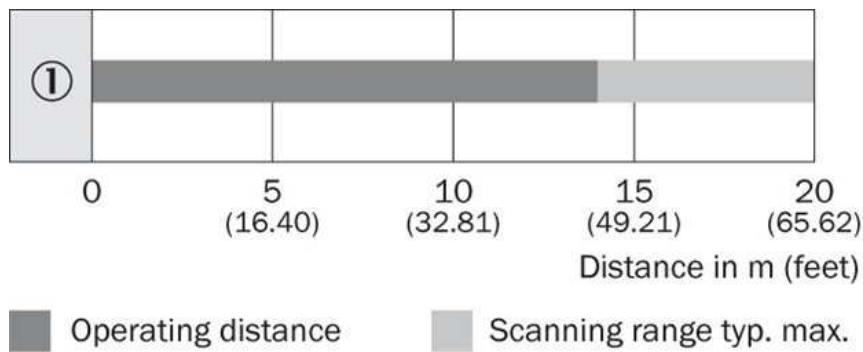
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Characteristic curve



Sensing range diagram



Connection type



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