



## Photoelectric sensors V18, Through-beam photoelectric sensor

VS/VE18-4N3740



**Model Name** > [VS/VE18-4N3740](#)  
**Part No.** > [6013758](#)



*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:                  | 78 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  $T_A = +25\text{ °C}$

#### Mechanics/electronics

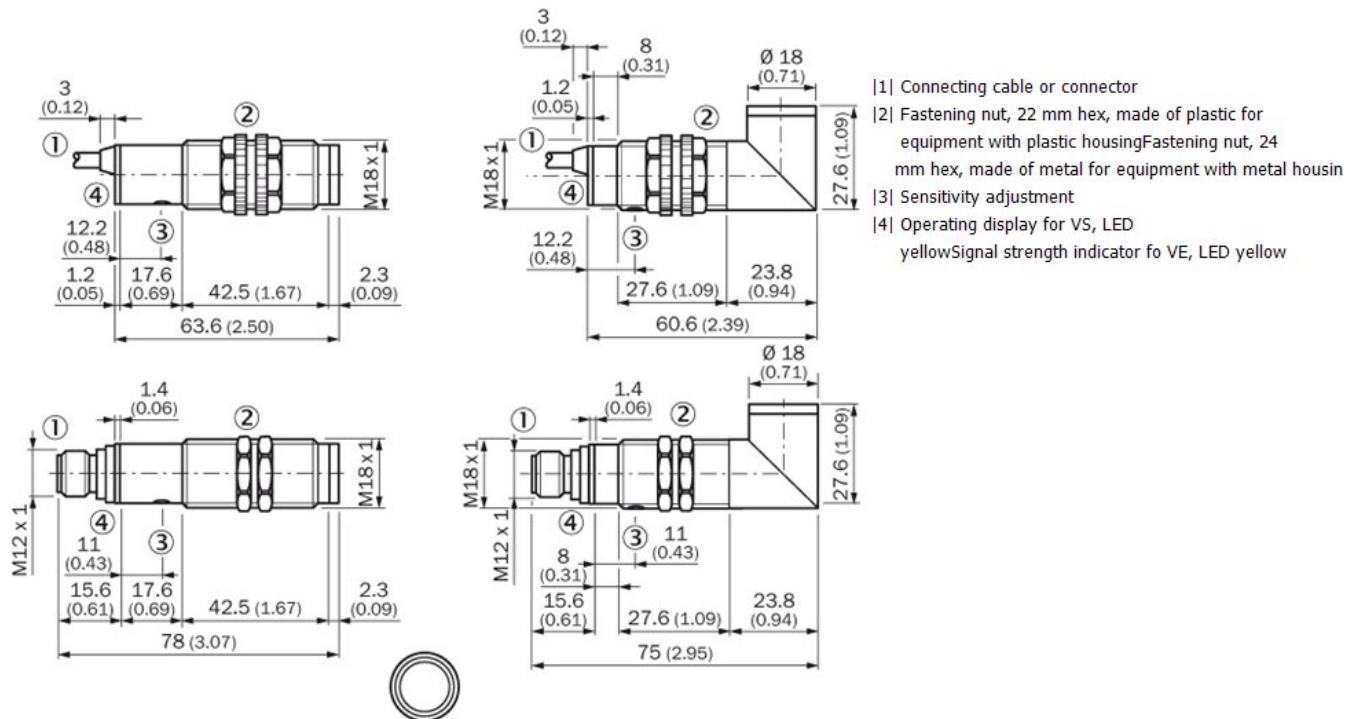
|                                   |                                                                            |
|-----------------------------------|----------------------------------------------------------------------------|
| Supply voltage:                   | 10 V DC ... 30 V DC <sup>1)</sup>                                          |
| Ripple:                           | $\leq 10\%$ <sup>2)</sup>                                                  |
| Power consumption:                | $\leq 30\text{ mA}$ <sup>3)</sup>                                          |
| Output type:                      | NPN, Light/dark-switching, Selectable via L/D control wire, open collector |
| Switching mode selector:          | Selectable via L/D control wire                                            |
| Output current I <sub>max</sub> : | 100 mA                                                                     |
| Response time:                    | $\leq 2\text{ ms}$ <sup>5)</sup>                                           |
| Switching frequency:              | 250 Hz <sup>6)</sup>                                                       |

|                                |                                         |
|--------------------------------|-----------------------------------------|
| Connection type:               | Connector M12, 4-pin                    |
| Circuit protection:::          | A, B, C, D <sup>7) 8) 9) 10)</sup>      |
| Protection class:              | III                                     |
| Weight:                        | 200 g                                   |
| Housing material:              | PBT/PC                                  |
| Enclosure rating:              | IP 67                                   |
| Test input sender off:         | TE to 0 V                               |
| Ambient operating temperature: | -25 °C ... 70 °C                        |
| UL File-No.:                   | UL No. NMFT2.E175606                    |
| Switching mode characteristic: | Open collector                          |
| SCHALTARTFUSSNOTE:             | Control wire open: light-switching L.ON |

Control wire open: light-switching L.ON;

1) Limit values 2) May not exceed or fall short of  $V_S$  tolerances 3) Without load 4) Control wire open: light-switching L.ON 5) Signal transit time with resistive load 6)  
 With light/dark ratio 1:1 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

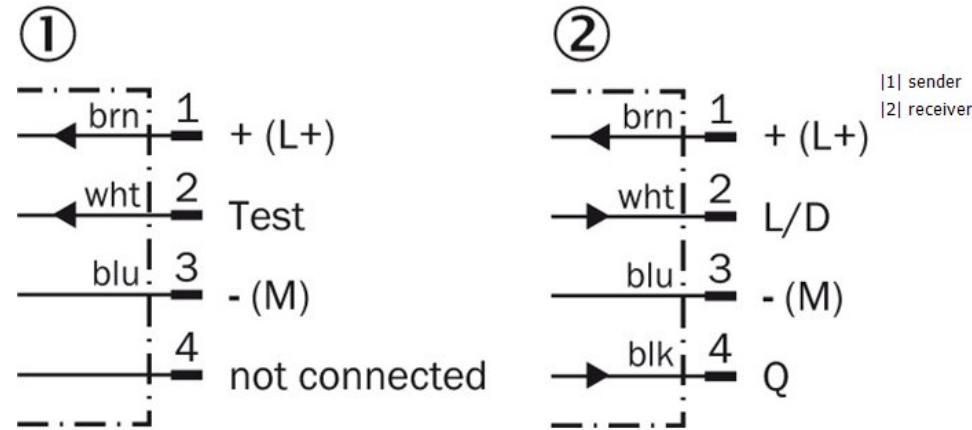
## Dimensional drawing



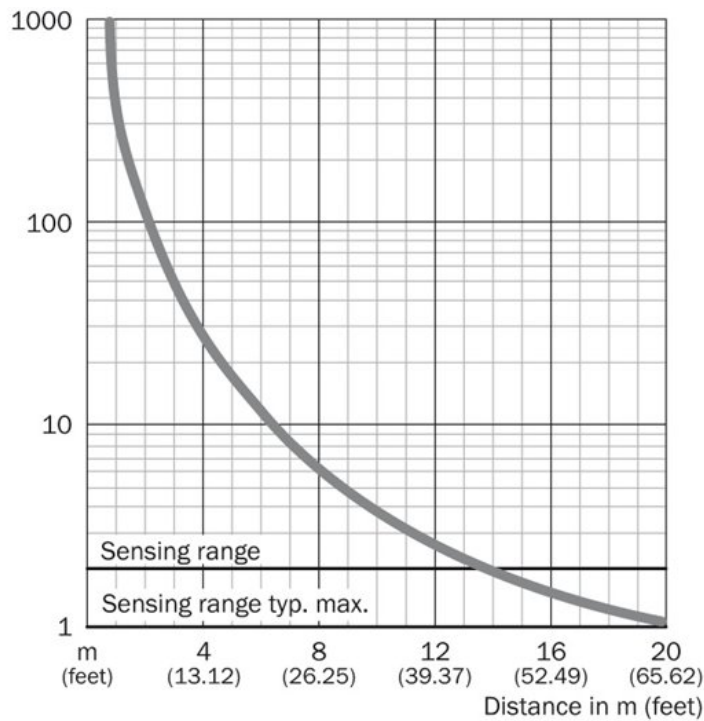
Adjustments possible



Connection diagram



Characteristic curve

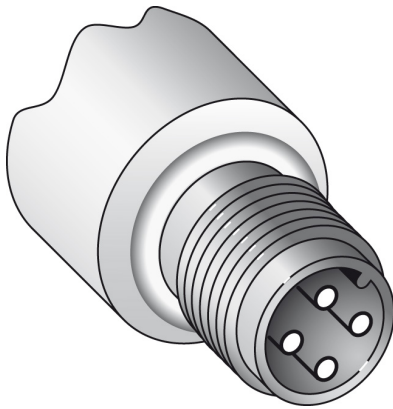


Sensing range diagram



## Connection type

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