



## Photoelectric sensors V18, Photoelectric proximity sensor, energetic

VTE18-4P2712



**Model Name** > [VTE18-4P2712](#)  
**Part No.** > [6013477](#)



*Illustration may differ*

#### At a glance

- Cylindrical M18 housing
- Three sensing distances of 200 mm, 400 mm or 800 mm
- 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, energetic |
| Housing design (light emission): | Cylindrical, straight, straight           |
| Housing length:                  | 63.6 mm                                   |
| Thread diameter (housing):       | M18 x 1                                   |
| Optical axis:                    | axial                                     |
| Sensing range max.:              | 3 mm ... 200 mm <sup>1)</sup>             |
| Sensing range:                   | 3 mm ... 170 mm                           |
| Type of light:                   | Infrared light                            |
| Light source:                    | LED <sup>2)</sup>                         |
| Light spot (distance):           | 10 mm (200 mm)                            |
| Sensitivity adjustment:          | Potentiometer, 270°                       |
| Angle of dispersion:             | 2.8 °                                     |

<sup>1)</sup> Object with 90 % reflectance (referred to standard white DIN 5033) <sup>2)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

#### Mechanics/electronics

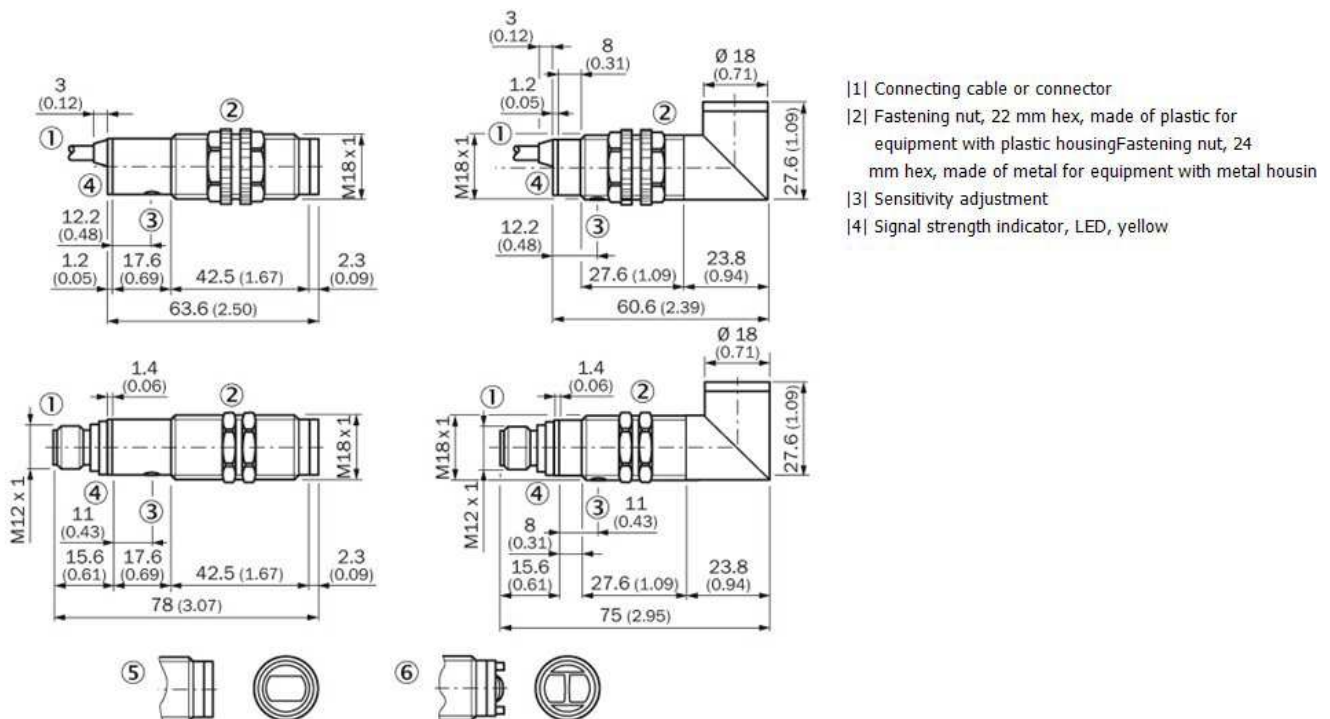
|                                   |                                                                            |
|-----------------------------------|----------------------------------------------------------------------------|
| Supply voltage:                   | 10 V DC ... 30 V DC <sup>1)</sup>                                          |
| Residual ripple:                  | ≤ 10 % <sup>2)</sup>                                                       |
| Power consumption:                | ≤ 30 mA <sup>3)</sup>                                                      |
| Output type:                      | PNP, Light/dark-switching, Selectable via L/D control wire, open collector |
| Output current I <sub>max</sub> : | 100 mA                                                                     |
| Response time:                    | ≤ 2 ms <sup>5)</sup>                                                       |
| Switching frequency:              | 250 Hz <sup>6)</sup>                                                       |
| Electrical connection:            | Cable, 4-wire, 2 m <sup>7)</sup>                                           |

|                                |                                                                      |
|--------------------------------|----------------------------------------------------------------------|
| Cable material:                | PVC                                                                  |
| Conductor cross-section:       | 0.14 mm <sup>2</sup>                                                 |
| Cable diameter:                | 5 mm                                                                 |
| Circuit protection:::          | A, B, C, D <sup>8)</sup> <sup>9)</sup> <sup>10)</sup> <sup>11)</sup> |
| Protection class:              | III                                                                  |
| Weight:                        | 100 g                                                                |
| Housing material:              | PBT/PC                                                               |
| Optics material:               | PMMA                                                                 |
| Enclosure rating:              | IP 67                                                                |
| Ambient temperature operation: | -25 °C ... 70 °C                                                     |
| UL File-No.:                   | UL No. NMFT2.E175606                                                 |

Control wire open: dark-switching D.ON;

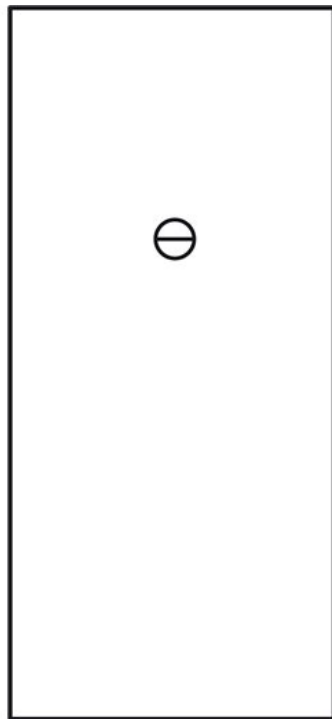
1) Limit values 2) May not exceed or fall short of  $V_{S8}$  tolerances 3) Without load 4) Control wire open: dark-switching D.ON 5) Signal transit time with resistive load 6)  
 With light/dark ratio 1:1 7) Do not bend below 0 °C 8)  $A = V_S$  connections reverse-polarity protected 9) B = inputs and output reverse-polarity protected 10) C =  
 interference suppression 11) D = outputs overcurrent and short-circuit protected

## Dimensional drawing



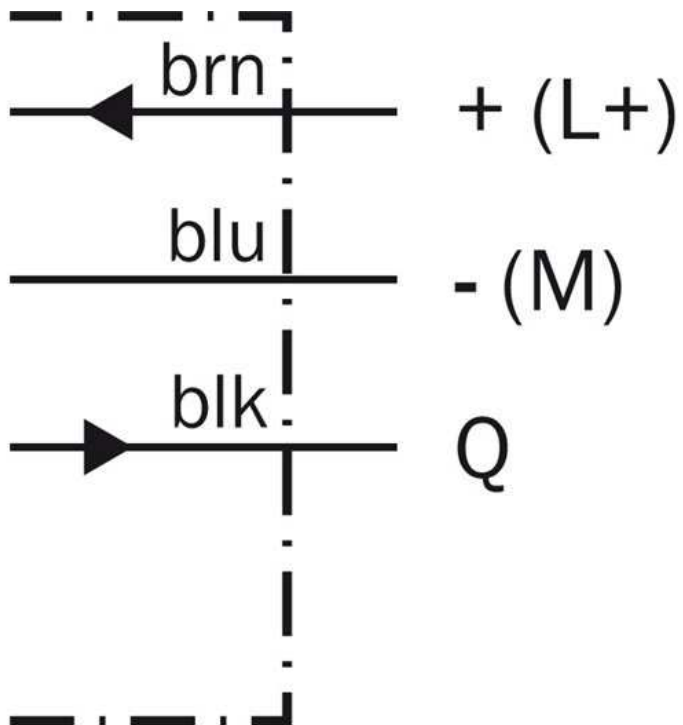
## Adjustments possible

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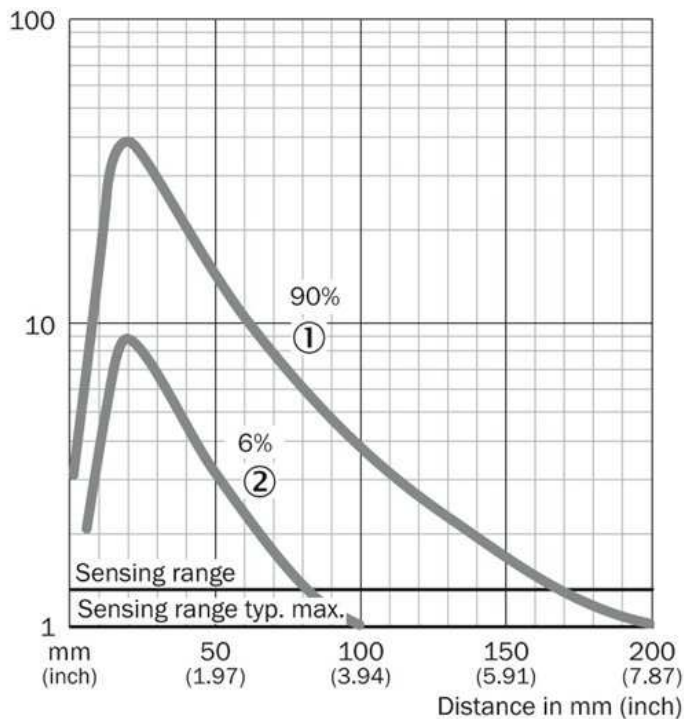


## Connection diagram

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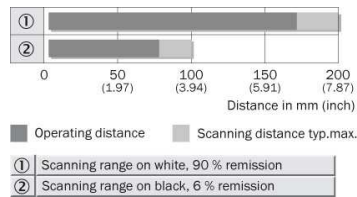
Characteristic curve



Connection type



Sensing range diagram



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