



Photoelectric sensors  
V18, Photoelectric proximity sensor, energetic

VTE18-3E4612



**Model Name** > [VTE18-3E4612](#)  
**Part No.** > [6013303](#)



*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.:              | 5 mm ... 400 mm <sup>1)</sup>             |
| Sensing range:                   | 5 mm ... 350 mm                           |
| Type of light:                   | Infrared light                            |
| Light source:                    | LED <sup>2)</sup>                         |
| Light spot (distance):           | 20 mm (400 mm)                            |
| 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

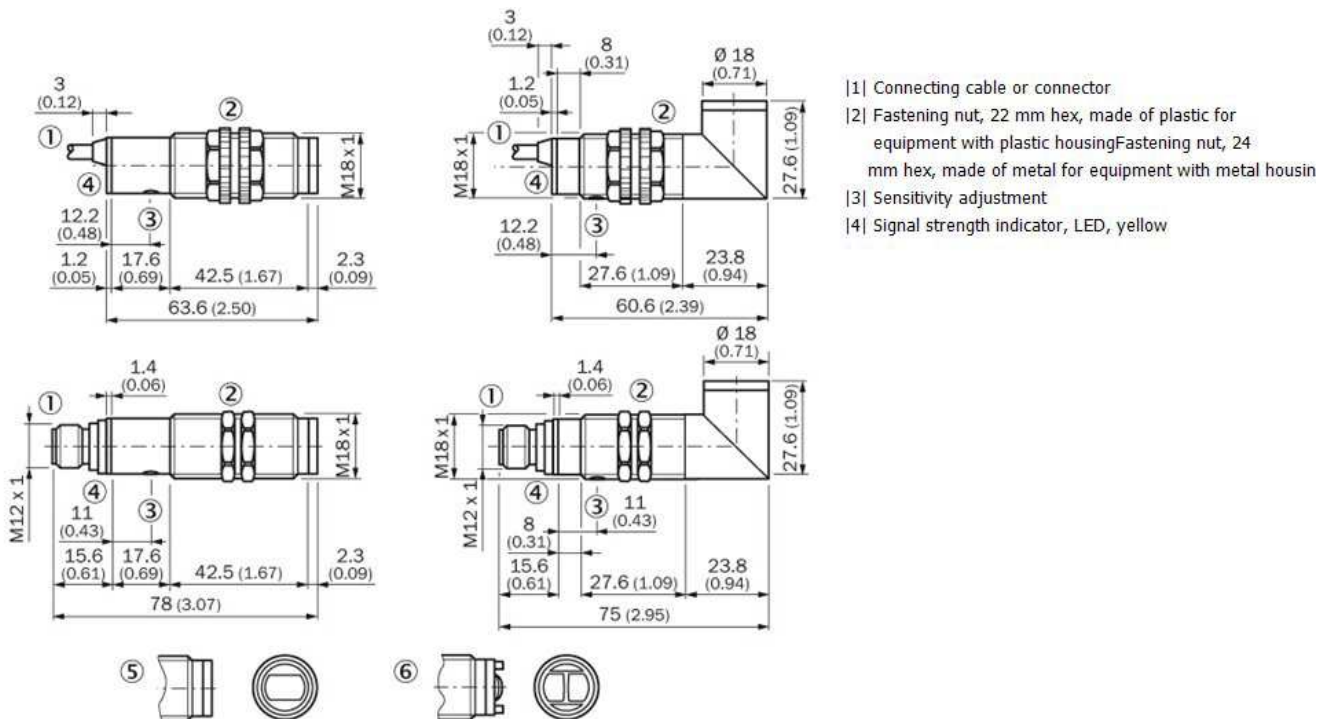
**Mechanics/electronics**

|                                    |                                      |
|------------------------------------|--------------------------------------|
| 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:                       | NPN, Light-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: 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

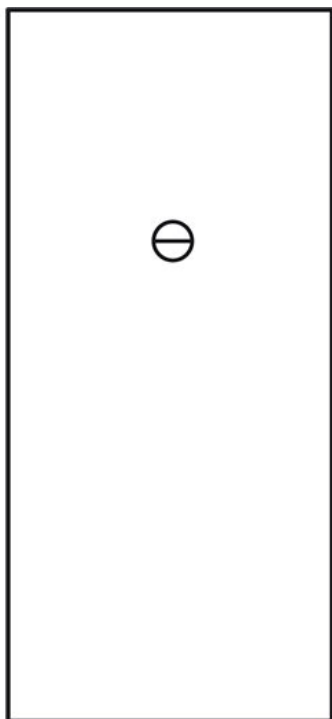
1) Limit values 2) May not exceed or fall short of  $V_S$  tolerances 3) Without load 4) Signal transit time with resistive load 5) With light/dark ratio 1:1 6) Do not bend below 0 °C 7) A =  $V_S$  connections reverse-polarity protected 8) B = inputs and output reverse-polarity protected 9) C = interference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

### Dimensional drawing



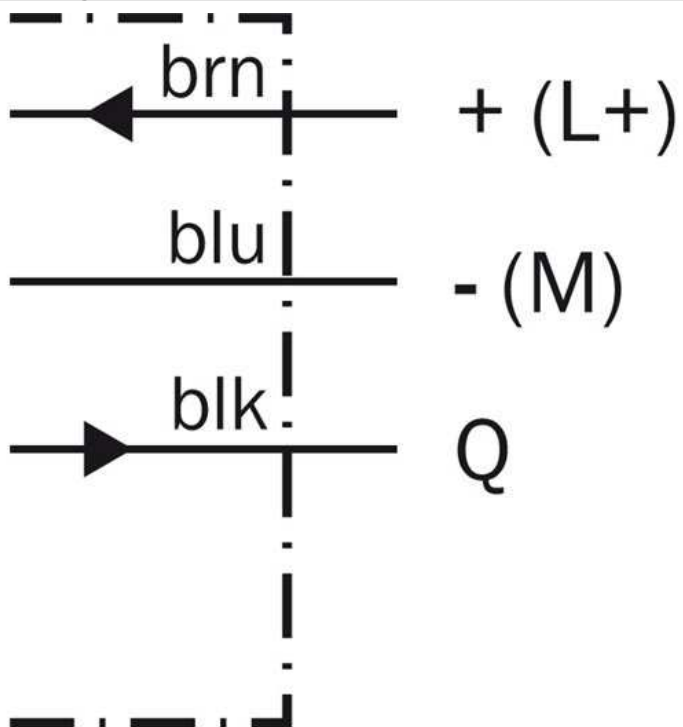
Adjustments possible

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Connection diagram

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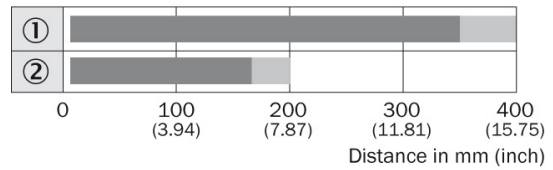
**Characteristic curve**



**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

**Australia**

Phone +61 3 9457 0600  
1800 33 48 02 – tollfree  
E-Mail sales@sick.com.au

**Belgium/Luxembourg**

Phone +32 (0)2 466 55 66  
E-Mail info@sick.be

**Brasil**

Phone +55 11 3215-4900  
E-Mail marketing@sick.com.br

**Canada**

Phone +1 905 771 14 44  
E-Mail information@sick.com

**Česká republika**

Phone +420 2 57 91 18 50  
E-Mail sick@sick.cz

**China**

Phone +86 4000 121 000  
E-Mail info.china@sick.net.cn  
Phone +852-2153 6300  
E-Mail ghk@sick.com.hk

**Danmark**

Phone +45 45 82 64 00  
E-Mail sick@sick.dk

**Deutschland**

Phone +49 211 5301-301  
E-Mail info@sick.de

**España**

Phone +34 93 480 31 00  
E-Mail info@sick.es

**France**

Phone +33 1 64 62 35 00  
E-Mail info@sick.fr

**Great Britain**

Phone +44 (0)1727 831121  
E-Mail info@sick.co.uk

**India**

Phone +91-22-4033 8333  
E-Mail info@sick-india.com

**Israel**

Phone +972-4-6881000  
E-Mail info@sick-sensors.com

**Italia**

Phone +39 02 27 43 41  
E-Mail info@sick.it

**Japan**

Phone +81 (0)3 5309 2112  
E-Mail support@sick.jp

**Magyarország**

Phone +36 1 371 2680  
E-Mail office@sick.hu

**Nederland**

Phone +31 (0)30 229 25 44  
E-Mail info@sick.nl

**Norge**

Phone +47 67 81 50 00  
E-Mail sick@sick.no

**Österreich**

Phone +43 (0)22 36 62 28 8-0  
E-Mail office@sick.at

**Polska**

Phone +48 22 837 40 50  
E-Mail info@sick.pl

**România**

Phone +40 356 171 120  
E-Mail office@sick.ro

**Russia**

Phone +7-495-775-05-30  
E-Mail info@sick.ru

**Schweiz**

Phone +41 41 619 29 39  
E-Mail contact@sick.ch

**Singapore**

Phone +65 6744 3732  
E-Mail sales.gsg@sick.com

**Slovenija**

Phone +386 (0)1-47 69 990  
E-Mail office@sick.si

**South Africa**

Phone +27 11 472 3733  
E-Mail info@sickautomation.co.za

**South Korea**

Phone +82 2 786 6321/4  
E-Mail info@sickkorea.net

**Suomi**

Phone +358-9-25 15 800  
E-Mail sick@sick.fi

**Sverige**

Phone +46 10 110 10 00  
E-Mail info@sick.se

**Taiwan**

Phone +886 2 2375-6288  
E-Mail sales@sick.com.tw

**Türkiye**

Phone +90 (216) 528 50 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 (0) 4 88 65 878  
E-Mail info@sick.ae

**USA/México**

Phone +1(952) 941-6780  
1 (800) 325-7425 – tollfree  
E-Mail info@sickusa.com

More representatives and agencies  
at [www.sick.com](http://www.sick.com)