



## Photoelectric sensors V18, Photoelectric proximity sensor, Background blanking

VTF18-4N5640



**Model Name** > [VTF18-4N5640](#)  
**Part No.** > [6013020](#)



Illustration may differ

#### At a glance

- Cylindrical M18 housing
- Sensing distance up to 50 mm or 100 mm
- Precise background blanking
- 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, Background blanking |
| Housing design (light emission): | Cylindrical, straight, straight                     |
| Housing length:                  | 78 mm                                               |
| Thread diameter (housing):       | M18 x 1                                             |
| Optical axis:                    | Axial                                               |
| Sensing range max.:              | 0 mm ... 50 mm <sup>1)</sup>                        |
| Sensing range:                   | 0 mm ... 45 mm                                      |
| Type of light:                   | Infrared light                                      |
| Light source:                    | LED <sup>2)</sup>                                   |
| Light spot (distance):           | 3 mm (25 mm)                                        |

<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

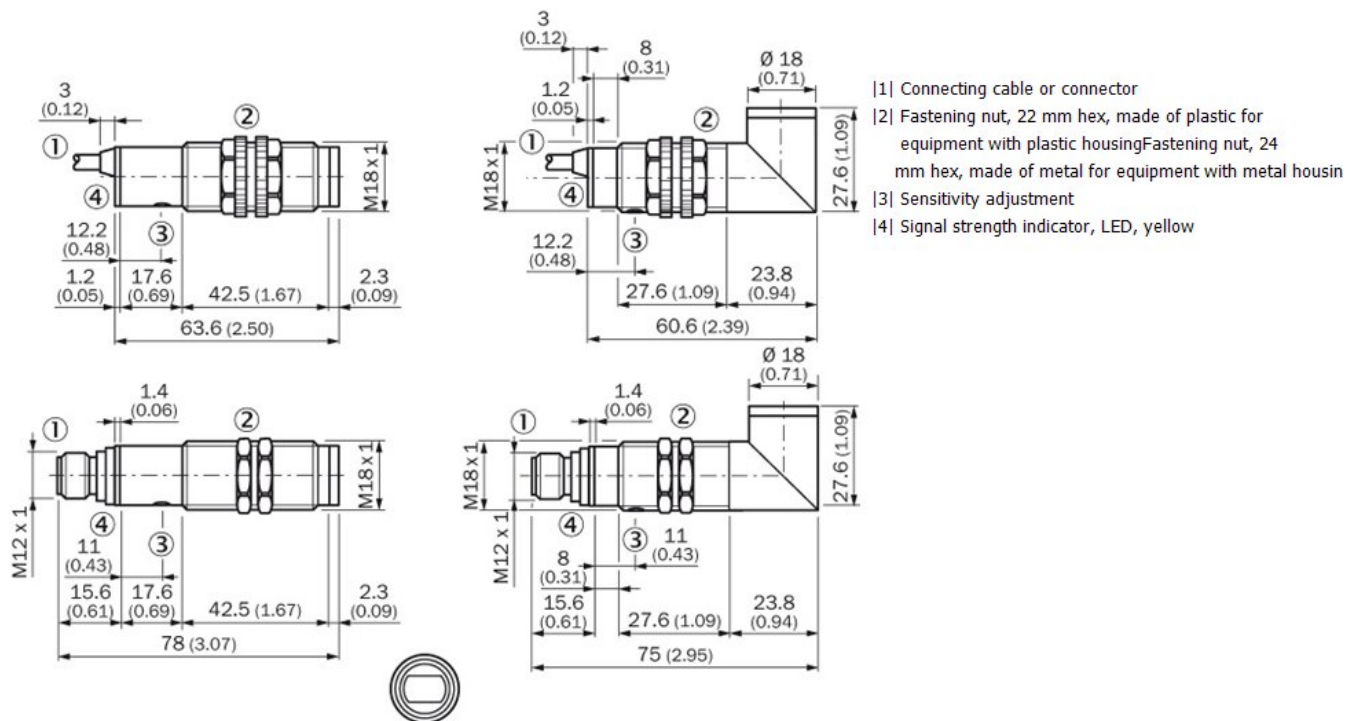
|                                    |                                                                            |
|------------------------------------|----------------------------------------------------------------------------|
| Supply voltage:                    | 10 V DC ... 30 V DC <sup>1)</sup>                                          |
| Ripple:                            | ≤ 10 % <sup>2)</sup>                                                       |
| Power consumption:                 | ≤ 30 mA <sup>3)</sup>                                                      |
| Output type:                       | NPN, Light/dark-switching, Selectable via L/D control wire, open collector |
| Output current I <sub>max.</sub> : | 100 mA <sup>4)</sup>                                                       |
| Response time:                     | ≤ 2 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)</sup> <sup>8)</sup> <sup>9)</sup> <sup>10)</sup>        |

|                                |                      |
|--------------------------------|----------------------|
| Protection class:              | III                  |
| Weight:                        | 100 g                |
| Housing material:              | PBT/PC               |
| Optics material:               | PMMA                 |
| Enclosure rating:              | IP 67                |
| Special feature:               | Focused optics       |
| Ambient operating temperature: | -25 °C ... 70 °C     |
| UL File-No.:                   | UL No. NMFT2.E175606 |

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

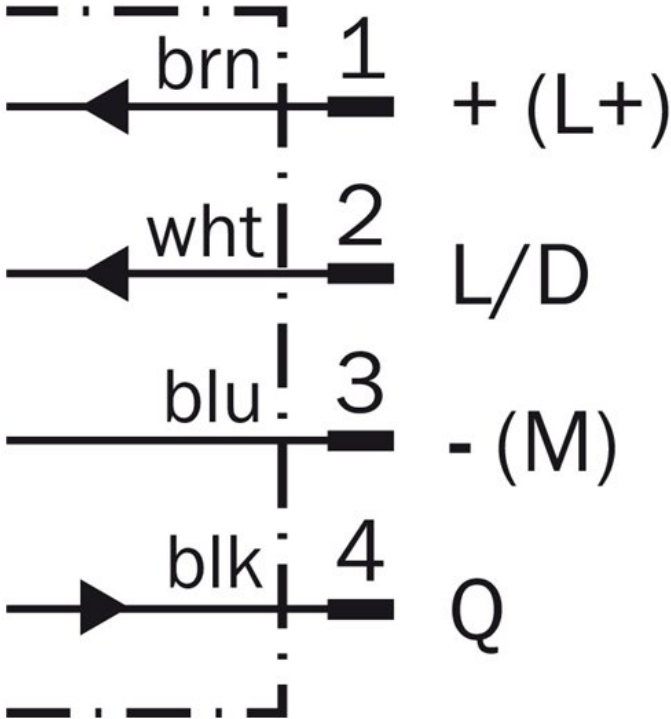
## Dimensional drawing



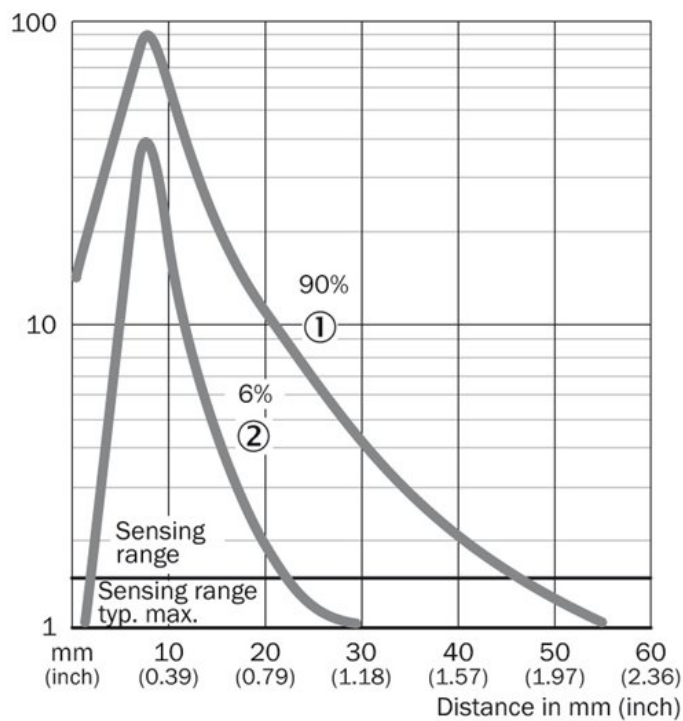
Adjustments possible



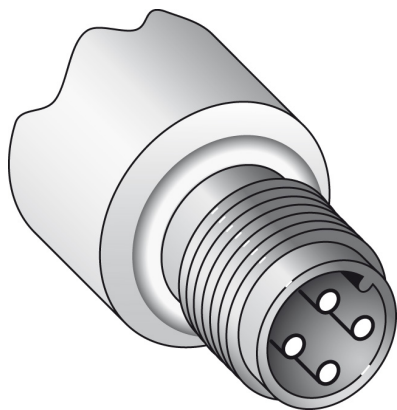
Connection diagram



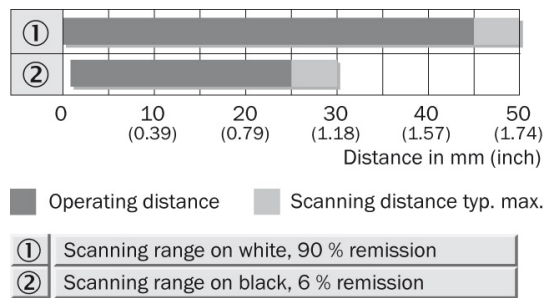
Characteristic curve



Connection type



Sensing range diagram



#### **Australia**

Phone +61 3 9457 0600  
1800 334 802 – 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 sac@sick.com.br

#### **Canada**

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

#### **Ceská 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 kundenservice@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 +972-4-6801000  
E-Mail info@sick-sensors.com

#### **Italia**

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

#### **Japan**

Phone +81 (0)3 3358 1341  
E-Mail support@sick.jp

#### **Magyarország**

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

#### **Nederlands**

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

#### **Norge**

Phone +47 67 81 50 00  
E-Mail austefjord@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 admin@sicksgp.com.sg

#### **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 8865 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)