



Photoelectric sensors  
Background suppression, Photoelectric proximity  
sensor, Product group W160T

WTB160T-E331



**Model Name** > [WTB160T-E331](#)  
**Part No.** > [6021863](#)



Vertical models

Large scanning distance (150 mm)

Scanning distance adjustable via teach-in

Additional teach-in mode for shiny and structured surfaces

LED indicator: function reserve

**The product has been discontinued. Please contact your SICK sales representative for more information about a replacement product.**



#### Product features

|                            |                                                                     |
|----------------------------|---------------------------------------------------------------------|
| Sensing range min ... max: | 20 mm ... 150 mm, 50 mm ... 150 mm                                  |
| Light source:              | LED                                                                 |
| Type of light:             | Red light                                                           |
| Light spot diameter:       | Approx. 10 mm at 150 mm distance                                    |
| Laser:                     | Red light                                                           |
| Sensing range max.:        | 20 mm ... 150 mm, 50 mm ... 150 mm                                  |
| Relating to:               | Object with 90 % reflectance (referred to standard white, DIN 5033) |
| Adjustment.:               | Teach-in: single teach-in button                                    |
| Wave length:               | 700 nm                                                              |

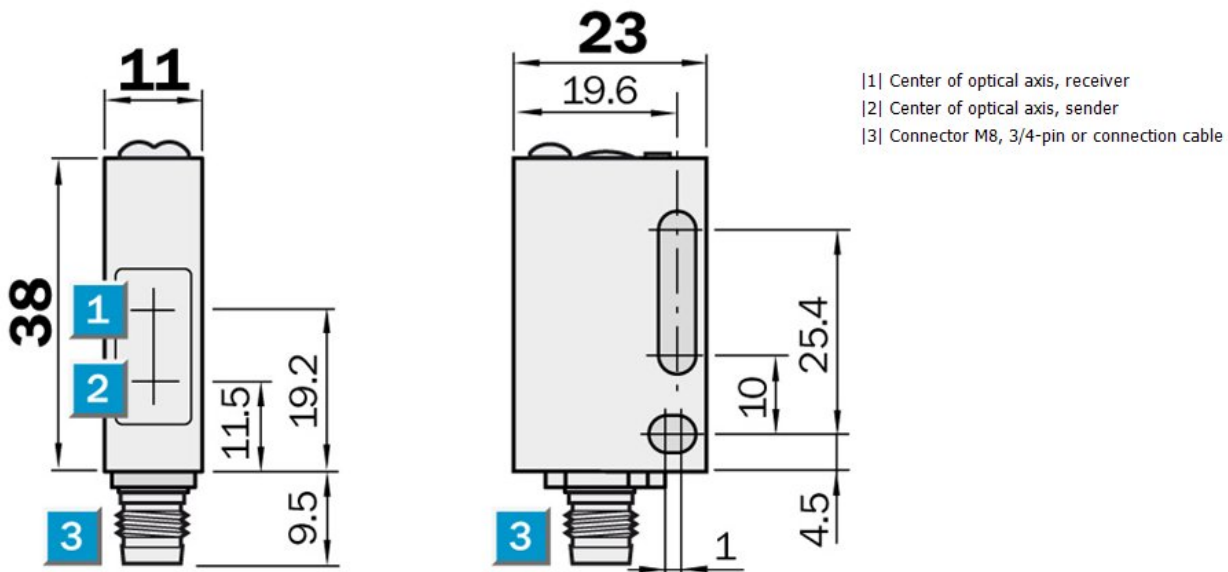
#### Technical data

|                             |                                        |
|-----------------------------|----------------------------------------|
| Design:                     | Rectangular                            |
| Dimensions (W x H x D):     | 11 mm x 38 mm x 23 mm                  |
| Supply voltage min ... max: | DC 10 ... 30 V <sup>1)</sup>           |
| Ripple:                     | ± 10 %                                 |
| Power consumption:          | ≤ 45 mA                                |
| Switching output:           | NPN: open collector: Q                 |
| Switching mode:             | Light/dark switching via rotary switch |
| Output current max.:        | 100 mA                                 |
| Response time:              | ≤ 2.5 ms                               |
| Switching frequency:        | 200 Hz                                 |
| Connection type:            | Connector, M8, 3-pin                   |

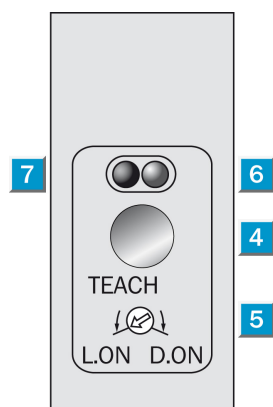
|                                             |                                                                                                                                                           |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Circuit protection:                         | $V_S$ connections reverse-polarity protected/In-/outputs short-circuit protected/Interference suppression/Outputs overcurrent and short-circuit protected |
| Enclosure rating:                           | IP 67: EN 60529, IP 69K: EN 40050                                                                                                                         |
| Ambient operation temperature, min ... max: | -25 °C ... ++55 °C                                                                                                                                        |
| Ambient storage temperature, min ... max:   | -40 °C ... ++70 °C                                                                                                                                        |
| Weight:                                     | Ca. 20 g                                                                                                                                                  |
| Housing material:                           | PBT                                                                                                                                                       |
| Series:                                     | W160T                                                                                                                                                     |
| Optics material:                            | PMMA                                                                                                                                                      |
| Front screen heating:                       | -                                                                                                                                                         |
| Polarisation filter:                        | -                                                                                                                                                         |
| Housing design:                             | Vertical                                                                                                                                                  |
| UL File No.:                                | NRNT2.E128350 & NRNT8.E128350                                                                                                                             |
| Signal voltage NPN HIGH/LOW:                | Approx. $V_S / < 1.8 \text{ V}$                                                                                                                           |

<sup>1)</sup> Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A

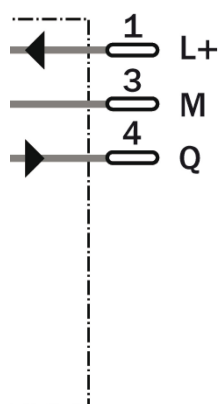
## Masszeichnung



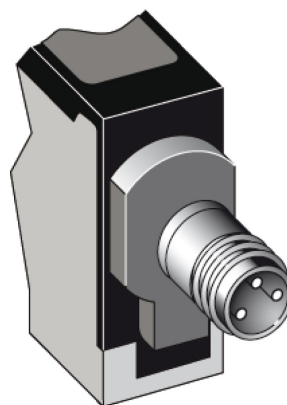
## Einstell-Möglichkeiten



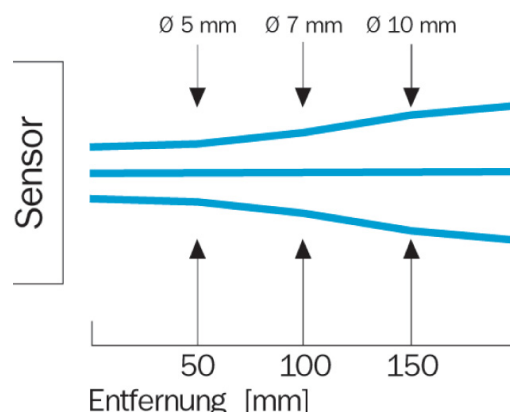
## Anschluss-Schema



## Anschlussart



## Light spot diameter



**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)