



## Fotoprzełączniki W12-3, Fotoprzełącznik odbiciowy, Tłumienie tła

WTB12-3N2413



Nazwa modelu > **WTB12-3N2413**

Numer części > **1041428**



Produkt może różnić się od ilustracji

#### At a glance

- State of the art technology provides precise background suppression
- Withstands harsh environments
- PinPoint LED technology with highly visible light spot; variants available with IR LED for highly critical applications
- Rugged die-cast zinc housing, with optional Teflon® coating
- Versatile mounting options due to dovetail mounting - mounting holes and oblong holes
- Flexible sensing ranges and hysteresis settings
- Key lock function, remote teach, quality monitoring
- Diagnostics messages (contamination and short-circuit)

#### Your benefits

- State of the art technology, e.g. OES3 provides precise background suppression and reliable detection of challenging objects
- High immunity to ambient light, optical reflections and crosstalk ensures fewer false readings and less downtime
- Highly visible status LEDs simplify sensing distance adjustments and reduce installation time
- A rugged metal housing withstands high-pressure cleaners and cleaning agents, reducing downtime
- Complementary outputs in one housing reduce inventory and procurement costs
- IO-Link enables quick remote diagnostics and maintenance (optional)
- Easy installation using SICK accessories



#### Cechy

|                                            |                                          |
|--------------------------------------------|------------------------------------------|
| Zasada działania czujnika/Sposób detekcji: | Fotoprzełącznik odbiciowy, Tłumienie tła |
| Wymiary (Szer. x Wys. x Głęb.):            | 15,6 mm x 48,5 mm x 42 mm                |
| Housing design (light emission):           | Prostopadłościenna                       |
| Maks. strefa działania:                    | 20 mm ... 600 mm <sup>1)</sup>           |
| Sensing range:                             | 20 mm ... 600 mm                         |
| Rodzaj światła:                            | Światło podczerwone                      |
| Nadajnik światła:                          | LED <sup>2)</sup>                        |
| Długość fali:                              | 850 nm                                   |
| Teach-in:                                  | Double teach-in button                   |
| Nastawa:                                   | Teach-in                                 |
| Średnica plamki świetlnej (odległość):     | 15 x 15 mm (200 mm)                      |

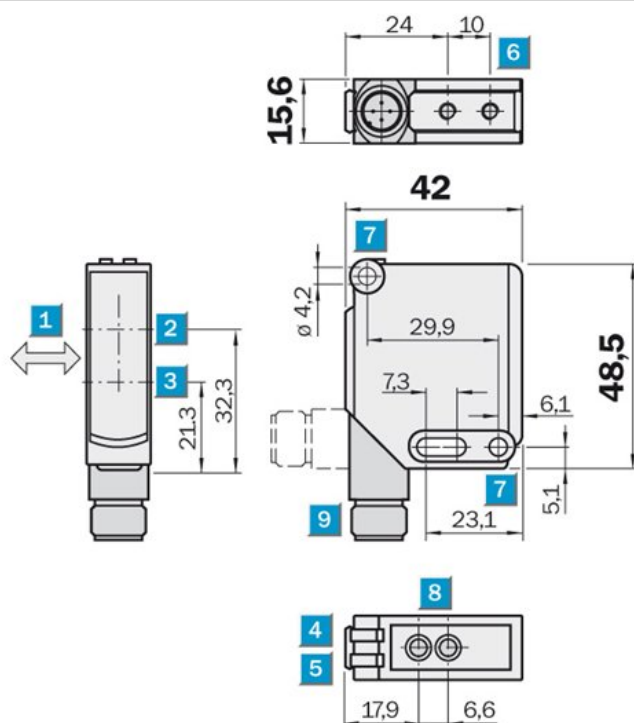
1) Obiekt odbijający 90% światła (standardowy biały zgodnie z normą DIN 5033) 2) Average service life of 100,000 h at  $T_A = +25\text{ °C}$

## Mechanika/elektronika

|                                |                                                   |
|--------------------------------|---------------------------------------------------|
| Napięcie zasilania:            | 10 V DC ... 30 V DC <sup>1)</sup>                 |
| Tętnienia resztkowe:           | $\leq 5\text{ Vss}$ <sup>2)</sup>                 |
| Current consumption:           | $\leq 55\text{ mA}$ <sup>3)</sup>                 |
| Wyjście przełączające:         | NPN                                               |
| Tryb przełączania:             | Komplementarne                                    |
| Tryb przełączania:             | Przełączanie jasno/ciemno, wybierane              |
| Napięcie sygnału NPN HIGH/LOW: | Approx. $V_S / < 2.5\text{ V}$                    |
| Output current $I_{max}$ :     | 100 mA                                            |
| Czas reakcji:                  | $\leq 330\text{ }\mu\text{s}$ <sup>4)</sup>       |
| Switching frequency:           | 1.500 Hz <sup>5)</sup>                            |
| Sposób przyłączenia:           | Connector M12, 4-pin                              |
| Układ zabezpieczenia:::        | A, C, D <sup>6)</sup> <sup>7)</sup> <sup>8)</sup> |
| Klasa ochronności:             | II                                                |
| Ciężar:                        | 120 g                                             |
| Special device:                | -                                                 |
| Tworzywo, obudowa:             | Metal                                             |
| Rodzaj zabezpieczenia:         | IP 66<br>IP 67                                    |
| Ambient operating temperature: | -40 °C ... 60 °C                                  |
| Ambient storage temperature:   | -40 °C ... 75 °C                                  |
| UL File No.:                   | NRKH.E181493 & NRKH7.E181493                      |

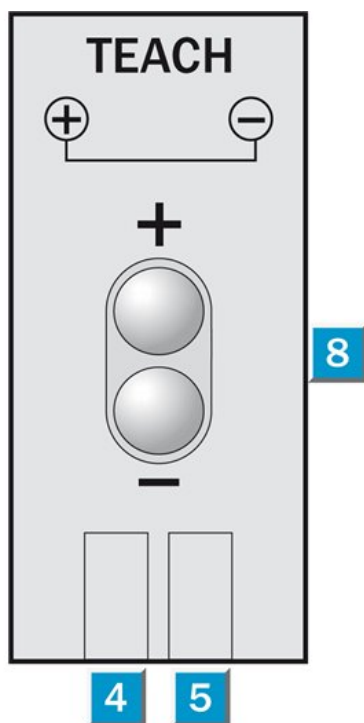
1) Limit values, operation in short-circuit protected network max. 8 A 2) May not exceed or fall short of  $V_S$  tolerances 3) Bez obciążenia 4) Signal transit time with resistive load 5) With light/dark ratio 1:1 6)  $A = V_S$  connections reverse-polarity protected 7) C = interference suppression 8) D = outputs overcurrent and short-circuit protected

## Dimensional drawing



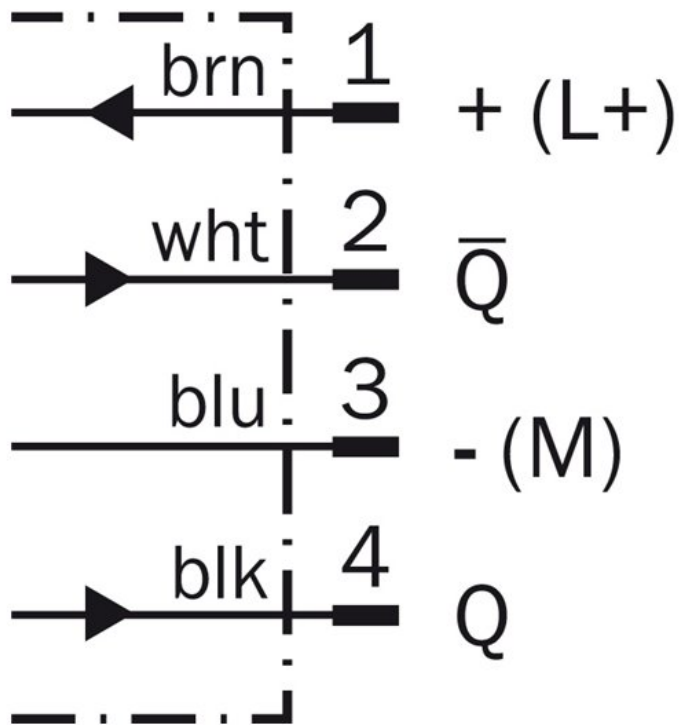
- [1] Standard direction of the material being scanned
- [2] Optical axis, receiver
- [3] Optical axis, sender
- [4] Status indicator LED green: power on
- [5] Status indicator LED, yellow: Status of received light beam
- [6] M4 threaded mounting hole, 4 mm deep
- [7] Mounting hole, Ø 4.2 mm
- [8] Sensing range adjustment: double teach button
- [9] Connection

## Adjustments possible

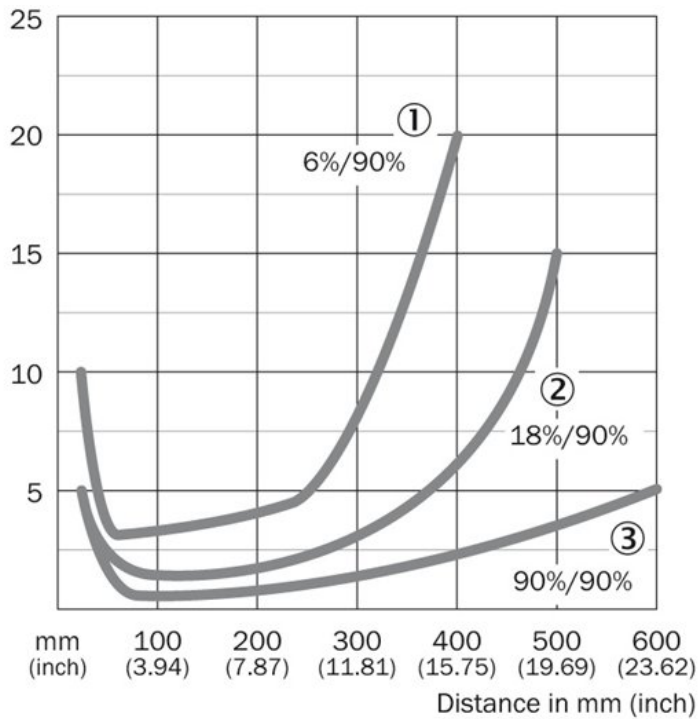


- [4] Green LED indicator: supply voltage active
- [5] LED indicator yellow: Light received
- [8] Sensing range adjustment: double teach button

## Connection diagram

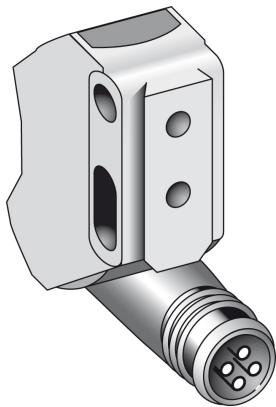


## Characteristic curve

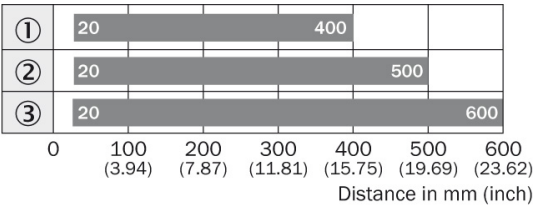


- |1| Sensing range on black, 6 % remission
- |2| Sensing range on grey, 18 % remission
- |3| Sensing range on white, 90 % remission

Connection type



Sensing range diagram



■ Sensing range

- ① Sensing range on black, 6 % remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90 % remission

**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

**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 +972-4-6801000  
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

**Nederland**

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 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 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)