



Photoelectric sensors

WTF12-3P2433

**Model Name** > [WTF12-3P2433](#)

**Part No.** > [1041405](#)



### At a glance

- Precise foreground suppression
- Robust sensors for industrial use
- PinPoint technology for versatile detection of objects
- High performance in metal housing, optionally available with Teflon coating
- Dovetail mounting - mounting holes and oblong holes for a very wide range of securing options
- All-round, easily visible status LEDs
- Scanning distance setting with potentiometer or teach-in
- IO link communication available

### Your benefits

Reliable detection of objects, precise foreground suppression for universal application possibilities and detection of objects

Effective suppression of optical interference factors from the industrial environment

PinPoint technology for simple and fast sensor alignment due to highly visible light spots

User-friendly sensors, simple scanning distance setting and installation plus simple sensor diagnosis due to easily visible status LEDs mean there is no need for specialist personnel or expensive training.

Less downtime and robust metal housing resistant to high-pressure cleaner, cleaning agents and disinfectant, optionally available with Teflon coating

IO link enables remote diagnosis and remote maintenance

Easily installed with SICK accessories



### Features

Dimensions (W x H x D):	15.6 mm x 48.5 mm x 42 mm
Sensing range max.:	30 mm ... 175 mm <sup>1)</sup>
Sensing range:	30 mm ... 175 mm <sup>2)</sup>
Light source:	LED
Type of light:	visible red light
Wave length:	640 nm
Light spot diameter (distance):	2 mm (60 mm)
Enclosure rating:	IP 66 IP 67

Adjustment: adjustable  
 Sensitivity adjustment: Adjustable Teach  
 Teach-in: doppelt

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

### Mechanics/electronics

Supply voltage: 10 V DC <sup>2)</sup>... 30 V DC <sup>1)</sup>  
 Ripple:  $\leq 5 \text{ Vpp}$  <sup>2)</sup>  
 Power consumption:  $\leq 45 \text{ mA}$  <sup>3)</sup>  
 Switching output: PNP, light/dark-switching, Complementary  
 Output current I<sub>max.</sub>: 100 mA  
 Response time:  $\leq 330 \mu\text{s}$  <sup>4)</sup>  
 Switching frequency: 1,500 Hz With light/dark ratio 1:1  
 Connection type: Connector M12, 4-pin  
 Number of cores: 4  
 Protection class: II  
 Circuit protection::: A  
 C <sup>5) 6) 7)</sup>  
 D

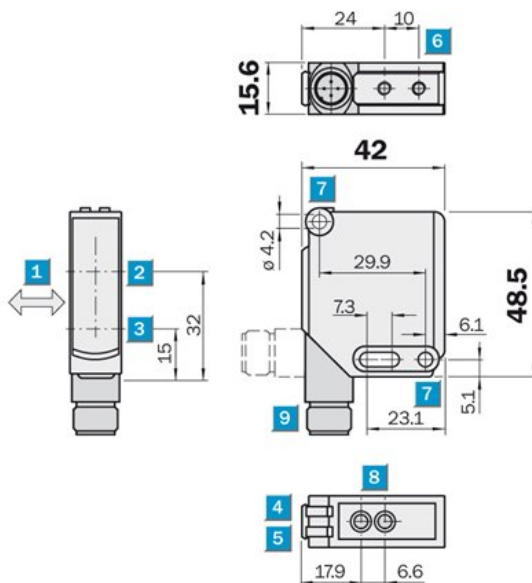
Weight: 120 g  
 Signal voltage PNP HIGH/LOW:  $> V_s - 2.5 \text{ V} / \text{approx. } 0 \text{ V}$

<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A <sup>2) 3)</sup> Without load <sup>4)</sup> Signal transit time with resistive load <sup>5)</sup> A = VS connections reverse-polarity protected <sup>6)</sup> C = interference suppression <sup>7)</sup> D = outputs overcurrent and short-circuit protected

### Ambient data

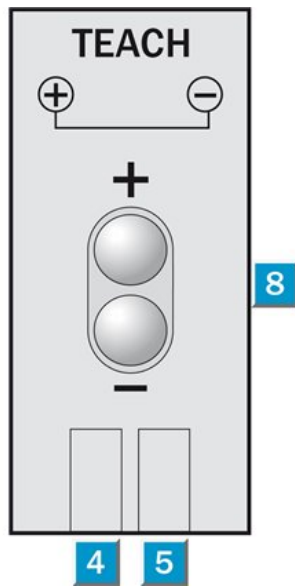
Ambient temperature, operation: -40 °C ... 60 °C  
 Ambient temperature, storage: -40 °C ... 75 °C

### Dimensional drawing



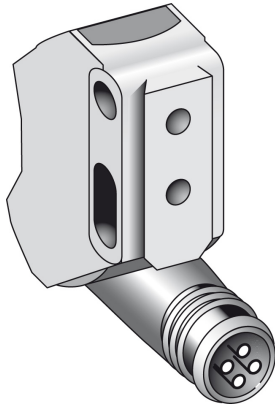
- [1] Standard direction of the material being scanned
- [2] Optical axis, receiver
- [3] Optical axis, sender
- [4] Status indicator LED, green: supply voltage active
- [5] Status indicator LED, yellow: Status of received light beam
- [6] M4 threaded mounting hole, 4 mm deep
- [7] Mounting hole,  $\varnothing 4.2 \text{ mm}$
- [8] Scanning distance adjustment, Poti
- [9] Connection

## Adjustment possible



- |4| Status indicator LED, green: supply voltage active
- |5| Status indicator LED, yellow: Status of received light beam
- |8| Scanning distance adjustment, double Teach button

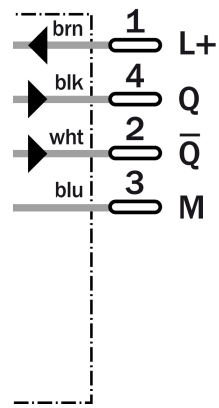
## Connection type



## Characteristic curve

Image Unavailable

## Connection diagram



## Sensing range diagram

Image Unavailable

**Australia**

Phone +61 3 9497 4100  
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 sac@sick.com.br

**Ceská Republika**

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

**China**

Phone +852-2763 6966  
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 +972-4-999-0590  
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

**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

**Republic of Korea**

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

**Republika Slovenija**

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

**România**

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

**Russia**

Phone +7 495 775 05 34  
E-Mail info@sick-automation.ru

**Schweiz**

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

**Singapore**

Phone +65 6744 3732  
E-Mail admin@sicksgp.com.sg

**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 +90 216 587 74 00  
E-Mail info@sick.com.tr

**United Arab Emirates**

Phone +971 4 8865 878  
E-Mail info@sick.ae

**USA/Canada/México**

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

More representatives and agencies  
in all major industrial nations at  
[www.sick.com](http://www.sick.com)