



Photoelectric sensors W15, Photoelectric proximity sensor, Background suppression

WTB15-P2431



Model Name > **WTB15-P2431**
Part No. > **1044305**



Illustration may differ

At a glance

- Photoelectric proximity sensor with background suppression and 200 mm sensing distance
- Suppression of background reflections based on OES3 ASIC technology, with second LED emitter
- Red PinPoint LED
- Mounting flexibility: M18 front mount using plastic nut or snap ring, side assembly with 24.1 mm through holes
- Flush mounting possible using the snap ring
- Transparent back cover

Your benefits

- Photoelectric proximity sensor with best-in-class background suppression, reducing product loss and increasing throughput
- Reliable object detection, even in difficult environments
- Perfect light spot visibility and light spot geometry simplifies alignment
- Completely compatible with many competitor models, making it easy to install and commission
- Flush mounting reduces setup time and prevents obstructions to material flow on conveyor sections
- Clearly visible LED indicators reduce setup time and simplify troubleshooting



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	16.2 mm x 48.5 mm x 31.9 mm
Housing design (light emission):	Hybrid
Thread diameter (housing):	M18 x 1
Sensing range max.:	4 mm ... 200 mm ¹⁾
Sensing range:	15 mm ... 200 mm
Type of light:	Visible red light
Light source:	PinPoint LED ²⁾
Wave length:	650 nm
Adjustment:	Potentiometer, 5-turn
Light spot size (distance):	7 mm (50 mm)

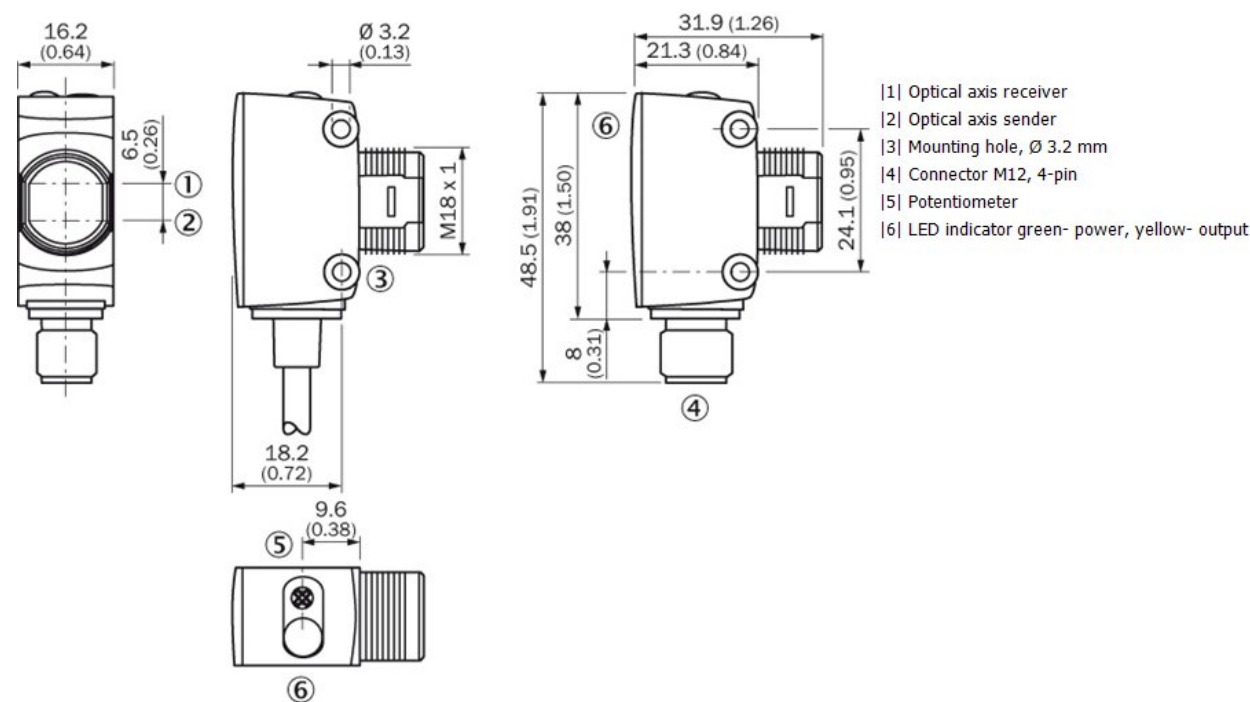
¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

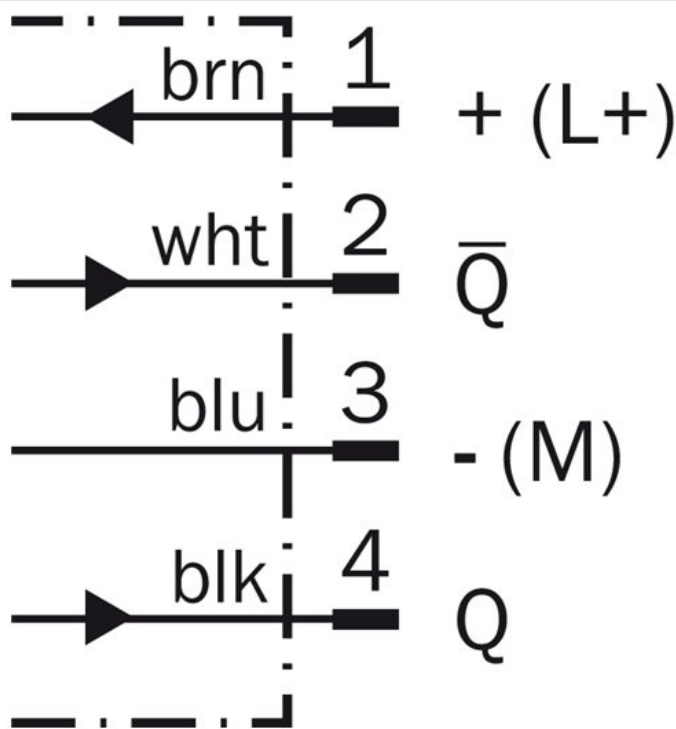
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	≤ 30 mA ³⁾
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark-switching
Output current I _{max} :	≤ 100 mA
Response time:	< 0.5 ms ⁴⁾
Switching frequency:	1,000 Hz ⁵⁾
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, D ⁶⁾ ⁷⁾ ⁸⁾
Protection class:	II ⁹⁾
Weight:	10 g
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67
Items supplied:	Snap-ring and M18 nut
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File No.:	NRKH7.E189383

¹⁾ Limit values, operation in short-circuit protected network max. 8 A 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⁾ A = V_S connections reverse-polarity protected ⁷⁾ B = inputs and output reverse-polarity protected ⁸⁾ D = outputs overcurrent and short-circuit protected ⁹⁾ Reference voltage 50 V DC

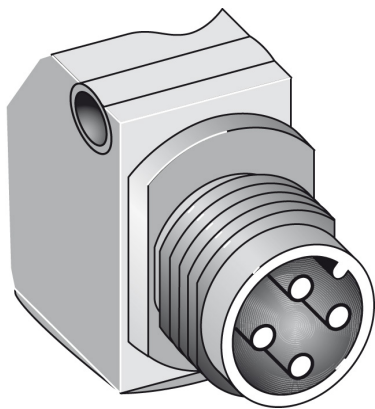
Dimensional drawing



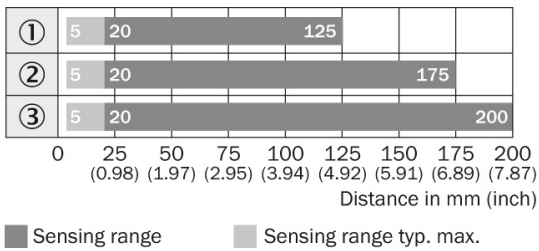
Connection diagram



Connection type



Sensing range diagram



- 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

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