



Photoelectric sensors  
W27-2, Through-beam photoelectric sensor

WS/WE27-2R830



**Model Name** > [WS/WE27-2R830](#)  
**Part No.** > [1016075](#)



*Illustration may differ*

#### At a glance

- Intense visible red emitter LED with consistent light spot for PinPoint versions
- Long sensing ranges with IR LED achieve up to 2500 mm
- Precise background suppression for detection of multi-colored objects
- Universal DC or DC/AC supply voltage
- IO-Link provides access to sensor information and optimizes operating processes.
- Reflex Array Sensor: Minimum Detectable Object > 12 mm with a 50 mm detection area for the standard resolution variant
- Reflex Array Sensor: Minimum Detectable Object > 5 mm with a 24 mm detection area for the high resolution variant
- Classification: EX II 3D IP67 T70°C, EX II 3G EEx nA II T4 X according to Directive 94/9/EC (ATEX)
- Corresponds to category 3D/3G
- Conform to standards and ready-to-install: Sensor + protective housing (stainless steel 1.4301)
- UL approval

#### Your benefits

- Quick and easy commissioning due to a highly visible red PinPoint LED
- PinPoint technology can replace laser photoelectric proximity sensors in some applications. No laser safety regulations and a longer operating life due to PinPoint technology
- Resistant to ambient light, optical reflections, and crosstalk from other photoelectric devices
- Less contamination due to high operating reserves, reducing downtime
- Resistant to vibrations, reducing downtime
- Operation in harsh environments with temperatures as low as -40 °C
- Reflex Array Sensor: Reliable detection regardless of target position within the array: detection height 50 mm (MDO: > 12 mm) or detection height 24 mm (MDO: > 5 mm)
- Reflex Array Sensor: Less installation effort compared to light grids or multiple single-point photoelectric sensors
- Ready-to-install sensors including metal housing conform with the 3G/3D category for explosive zones (ATEX)



#### Features

Sensor/detection principle:	Through-beam photoelectric sensor
Dimensions (W x H x D):	24.6 mm x 80 mm x 53.5 mm
Housing design (light emission):	Rectangular

Sensing range max.:	0 m ... 35 m
Sensing range:	0 m ... 35 m
Type of light:	Visible red light
Light source:	LED <sup>1)</sup>
Time type:	Off delay, On delay, Switch on delay and time delay off
Delay time:	Adjustable via time delay selector switch: 0.5 ... 10 s
Angle of dispersion:	Ca. 3 °
Adjustment:	Potentiometer
Light spot size (distance):	Ø 1,200 mm (25 m)

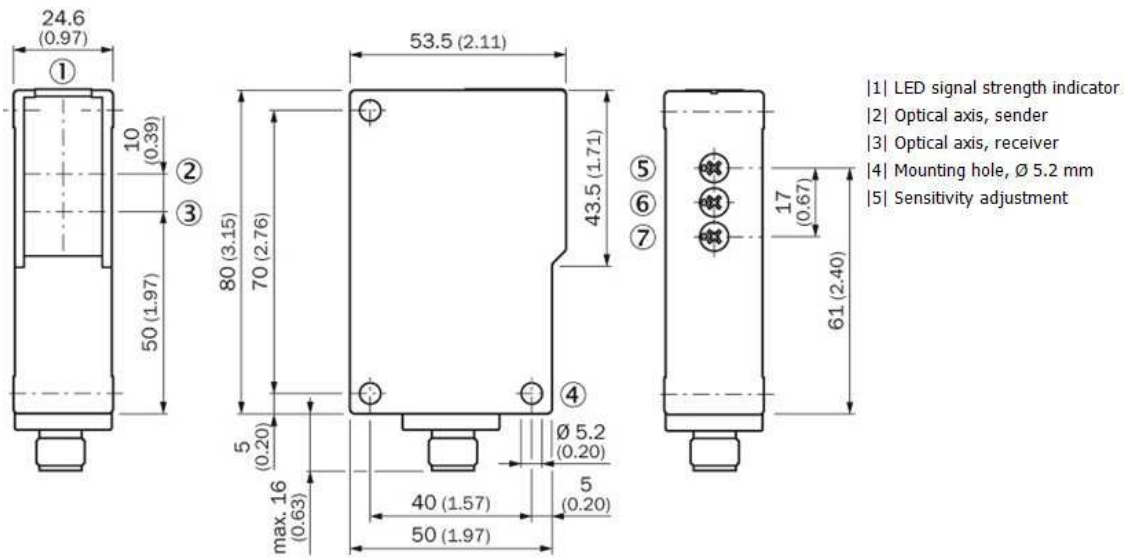
<sup>1)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

## Mechanics/electronics

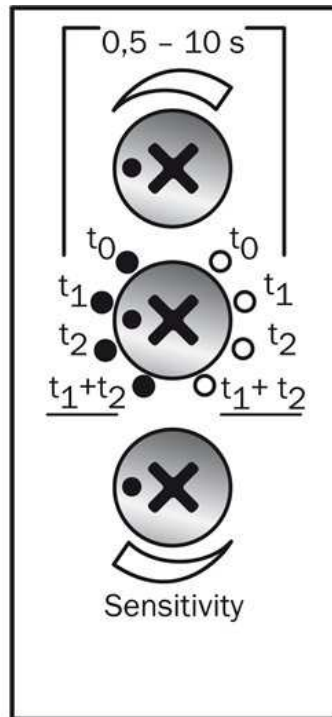
Supply voltage:	24 V AC/DC ... 240 V AC/DC <sup>1)</sup>
Power consumption:	< 2 VA
Output type:	Relay, electrically isolated <sup>2)</sup>
Output function:	Change-over contacts
Switching mode:	Light/dark switching <sup>3)</sup>
Switching mode selector:	Selectable via time delay selector switch
Switching current (switching voltage):	0.2 A (120 V DC), 4 A (24 V DC), 4 A (240 V AC)
Response time:	< 6 ms <sup>4)</sup>
Switching frequency:	10 Hz <sup>5)</sup>
Connection type:	Mini connector 7/8", 5-pin
Circuit protection:	A, C <sup>6) 7)</sup>
Protection class:	II <sup>8)</sup>
Weight:	200 g
Housing material:	ABS, Plastic
Enclosure rating:	IP 65
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

<sup>1)</sup> + 10 %, -20 % <sup>2) 3)</sup> Provide suitable spark suppression for inductive or capacitive loads <sup>4)</sup> Signal transit time with resistive load <sup>5)</sup> With light/dark ratio 1:1 <sup>6)</sup> A = V<sub>S</sub>  
<sup>7)</sup> C = interference suppression <sup>8)</sup> Reference voltage 250 V AC

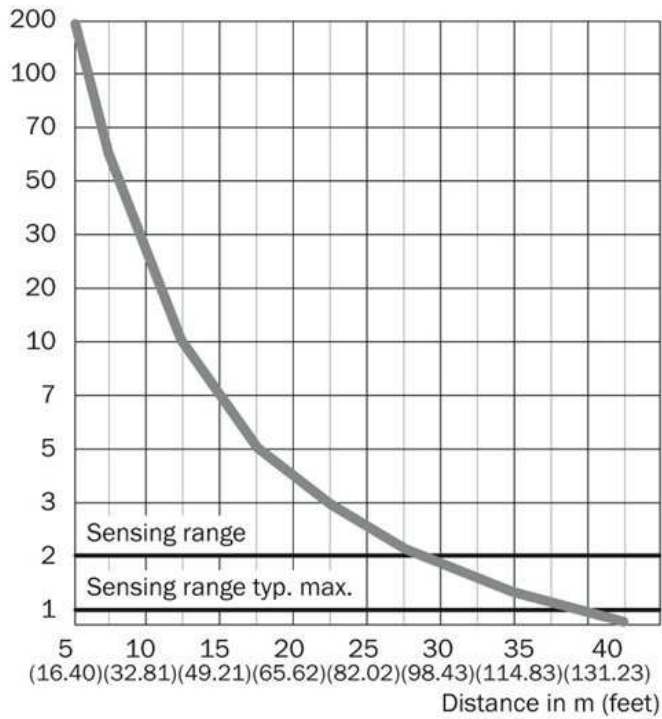
**Dimensional drawing**



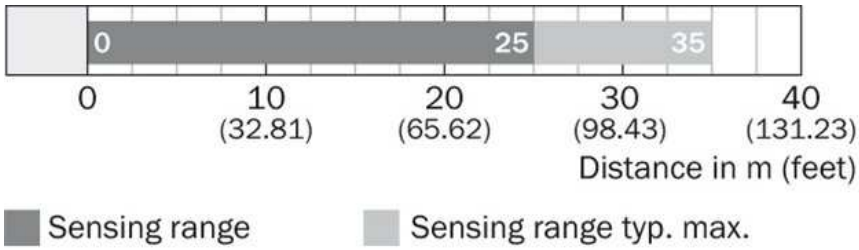
**Adjustments possible**



### Characteristic curve



### Sensing range diagram



**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)