



Photoelectric sensors  
W18-3, Photoelectric retro-reflective sensor,  
autocollimation

WL18-3P230



**Model Name** > [WL18-3P230](#)  
**Part No.** > [1025910](#)



*Illustration may differ*

**At a glance**

- Sender LED with visible red light
- Autocollimation optics with polarizing filter
- Sensitivity control via potentiometer
- Immune to ambient light
- Optional test input for system diagnostics
- Rugged plastic housing

**Your benefits**

- Fast installation due to highly visible red light saves time
- Reliable detection of shiny objects without a blind zone due to autocollimation optics and a polarizing filter
- Quick and easy sensing range adjustment due to 270° potentiometer
- Crosstalk and ambient light immunity reduce false readings and downtime
- Reliable availability in the field



**Features**

Sensor/detection principle:	Photoelectric retro-reflective sensor, autocollimation
Dimensions (W x H x D):	17.6 mm x 75.5 mm x 33.5 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0 m ... 7 m <sup>1)</sup>
Sensing range:	0 m ... 5 m <sup>2)</sup>
Type of light:	Visible red light
Light source:	LED <sup>3)</sup>
Wave length:	645 nm
Angle of dispersion:	1.8 °
Adjustment:	Potentiometer, 1-turn
Light spot size (distance):	Ø 40 mm (2 m)
Continuous threshold adaption:	-

1) 2) PL80A <sup>3)</sup> Average service life of 100,000 h at T<sub>A</sub> = +25 °C

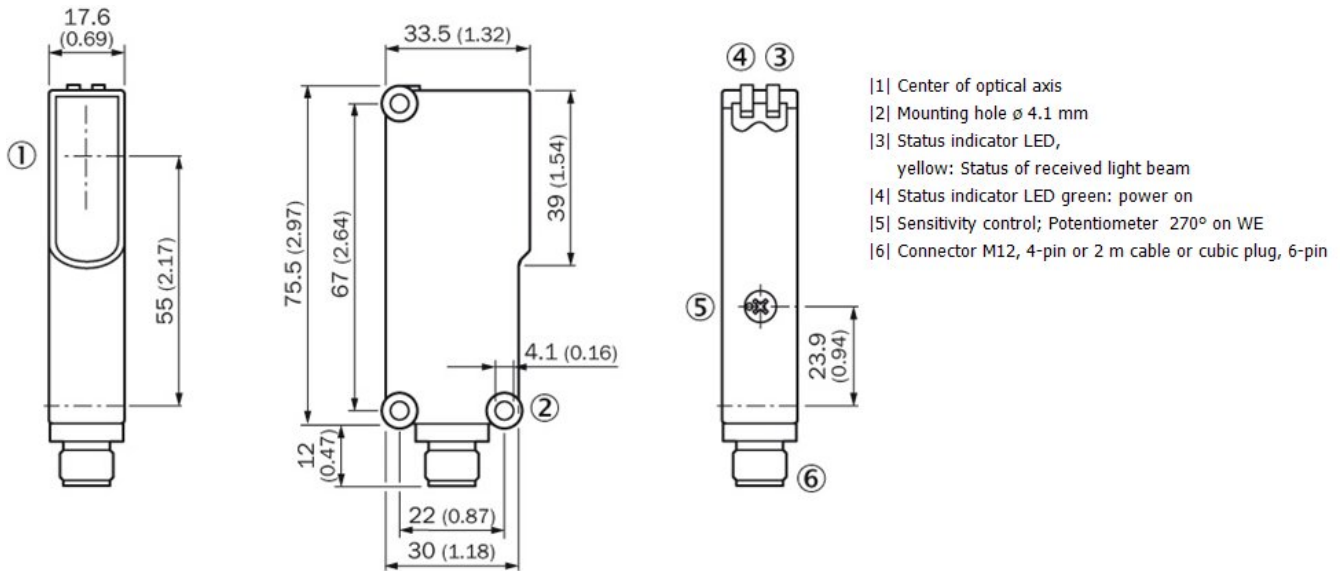
**Mechanics/electronics**

Supply voltage:	10 V DC ... 30 V DC <sup>1)</sup>
Ripple:	< 5 Vpp <sup>2)</sup>
Power consumption:	40 mA <sup>3)</sup>
Output type:	PNP

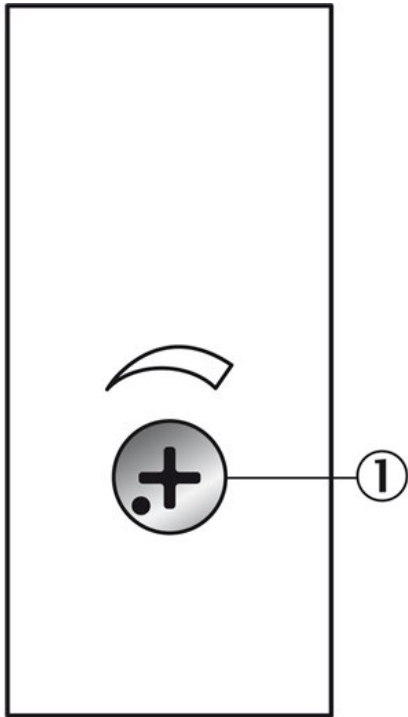
Output function:	Complementary
Switching mode:	Light/dark-switching
Output current I <sub>max</sub> :	100 mA
Response time:	< 500 μs <sup>4)</sup>
Switching frequency:	1,000 Hz <sup>5)</sup>
Connection type:	Cable, 4-wire, 5 m <sup>6)</sup>
Cable material:	PVC
Circuit protection:::	A, C, D <sup>7) 8) 9)</sup>
Weight:	260 g
Polarisation filter:	✓
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

<sup>1)</sup> Limit values, operation in short-circuit protected network max. 8 A   
<sup>2)</sup> May not exceed or fall short of V<sub>S</sub> tolerances   
<sup>3)</sup> Without load   
<sup>4)</sup> Signal transit time with resistive load   
<sup>5)</sup> With light/dark ratio 1:1   
<sup>6)</sup> Do not bend below 0 °C   
<sup>7)</sup> A = V<sub>S</sub> connections reverse-polarity protected   
<sup>8)</sup> C = interference suppression   
<sup>9)</sup> D = outputs overcurrent and short-circuit protected

### Dimensional drawing

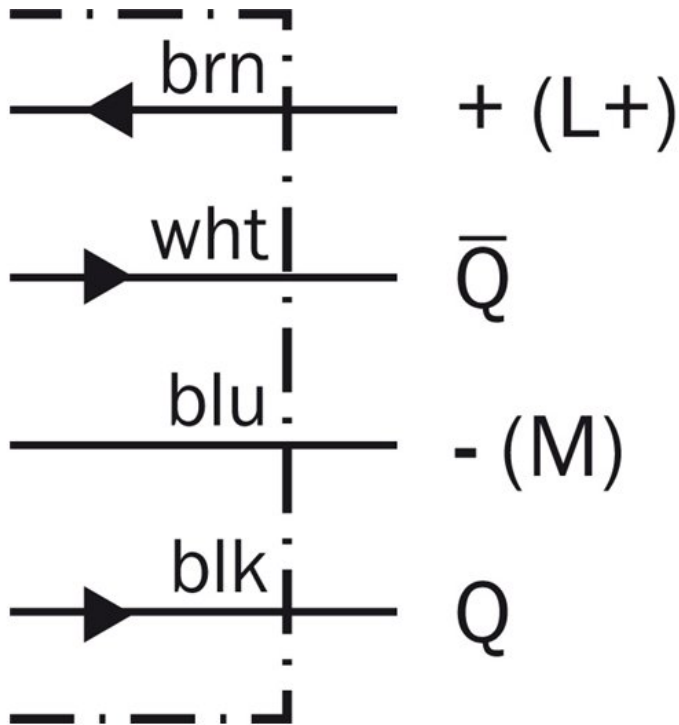


Adjustments possible

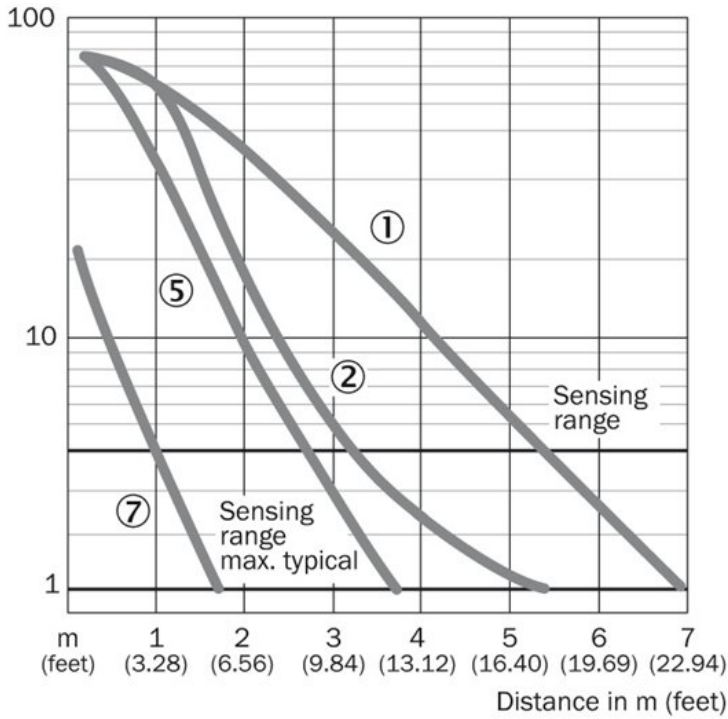


[1] Sensing range adjustment: potentiometer, 4-turn

Connection diagram

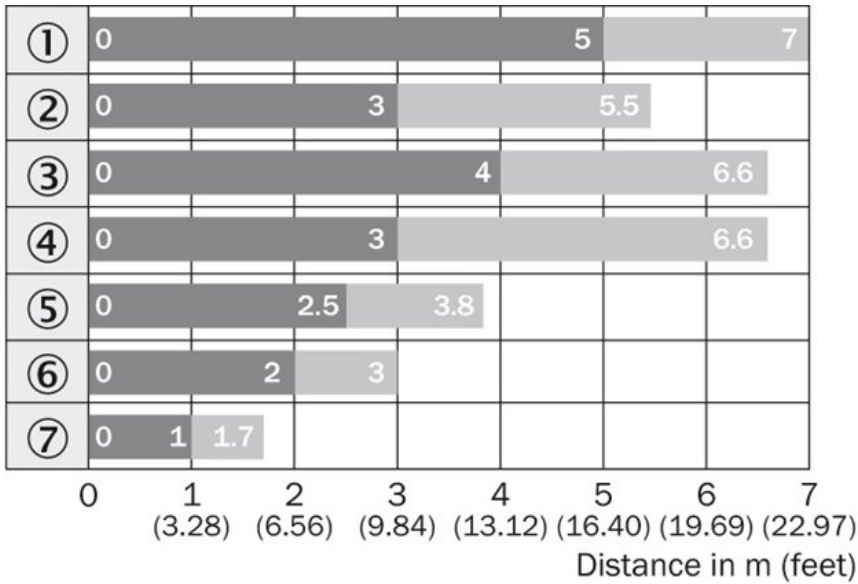


**Characteristic curve**



- |1| PL80A
- |2| C110A
- |5| PL30A
- |7| Reflective tape Diamond Grade

**Sensing range diagram**

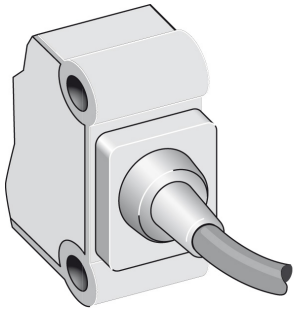


- |1| PL80A
- |2| C110A
- |3| PL50A
- |4| PL40A
- |5| PL30A
- |6| PL20A
- |7| Reflective tape Diamond Grade

■ Sensing range      ■ Sensing range max.

**Connection type**

---



**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](http://www.sick.com)