



Photoelectric sensors
W280-2, Photoelectric retro-reflective sensor,
Standard optics

WL280-2H1631



Model Name > [WL280-2H1631](#)
Part No. > [6044740](#)



Illustration may differ

At a glance

- Highly visible red light spot thanks to the BrightLight LED
- Potentiometer for sensitivity control
- Light/dark switching (DC devices)
- Rotatable connector, cable connector or terminal chamber
- Versions for 10 - 30 V DC or 24 - 240 V DC/AC voltage supply
- Stainless steel mounting bracket and P250 reflector are included in delivery
- AC/DC devices (-2Hxxxx) are compliant with EN 61000-6-3 (electromagnetic interference for "residential, commercial and light-industrial environments")

Your benefits

- Less contamination due to high operating reserves, reducing downtime
- Simple and fast commissioning with the highly visible light spot of the BrightLight LED
- DC and AC/DC devices available in the same housing, allowing electrical flexibility
- Potentiometer adjustment for application-specific operation
- Light/dark switching provides application flexibility
- All necessary mounting and operating accessories are included in delivery, enabling quick and easy setup: since mounting bracket (stainless steel 1.4301) and reflector are included in delivery scope
- Polarizing filter ensures reliable detection, even with shiny targets



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor, Standard optics
Dimensions (W x H x D):	23.5 mm x 74.5 mm x 63 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0.01 m ... 15 m ¹⁾
Sensing range::	0.01 m ... 11 m, 0.01 m ... 13 m ^{2) 3)}
Type of light:	Visible red light
Light source:	BrightLight LED ⁴⁾
Adjustment:	Potentiometer
Light spot size (distance):	Ø 260 mm (8 m)

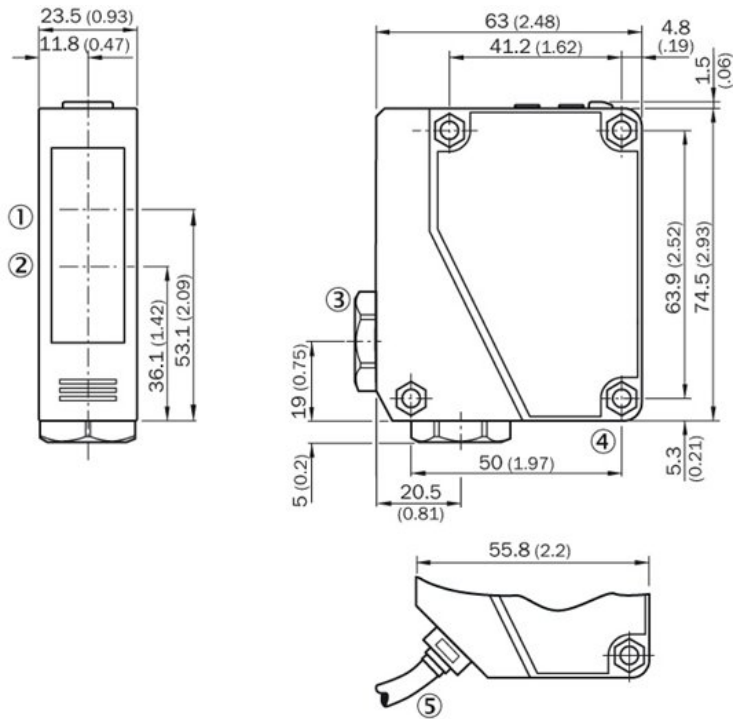
^{1) 2)} PL80A ³⁾ P250 ⁴⁾ Average service life of 100,000 h at T_A = +25 °C

Mechanics/electronics

Supply voltage::	24 V AC ... 240 V AC, 24 V DC ... 240 V DC ^{1) 2)}
Power consumption:	≤ 5 VA
Output type:	Relay ³⁾
Output function:	Change-over contacts
Switching mode:	Light switching ⁴⁾
Output characteristic:	Electrically isolated
Switching current (switching voltage):	3 A (240 V AC), 3 A (30 V DC)
Response time:	≤ 15 ms
Switching frequency:	33 Hz ⁵⁾
Connection type:	Cable, 5-wire, 5 m ⁶⁾
Conductor cross-section:	0.76 mm ²
Circuit protection::	A, C ^{7) 8)}
Protection class:	II ⁹⁾
Overvoltage category:	222
Weight:	150 g
Polarisation filter:	✓
Interference emission:	EN 61000-6-3 (only -2Hxxx) ¹⁰⁾
Special device:	-
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 66 IP 67
Items supplied:	Mounting bracket BEF-W280, Reflector P250
Usage category:	AC-15, DC-13, According to EN 60947-1
EMC:	EN 60947-5-2 ¹¹⁾
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-40 °C ... 70 °C

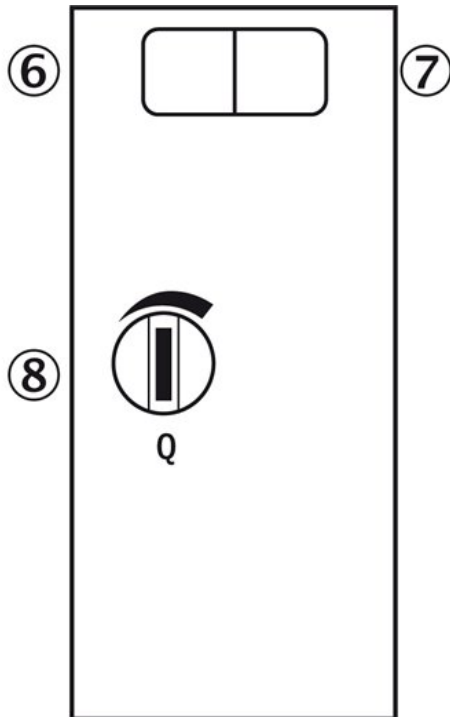
^{1) 2)} ±10 % ^{3) 4)} Provide suitable spark suppression for inductive or capacitive loads ⁵⁾ With light/dark ratio 1:1 ⁶⁾ Do not bend below 0 °C ⁷⁾ A = V_S connections
 reverse-polarity protected ⁸⁾ C = interference suppression ⁹⁾ Rated voltage 250 V AC/DC ¹⁰⁾ In the case of a DC supply (relating to EN 61000-6-3) the length of cable
 between the supply source and the sensor must be < 30 m ¹¹⁾ The AC/DC devices meet the interference suppression requirements for industrial use (interference
 suppression class A). When used in residential areas it can cause interference.

Dimensional drawing



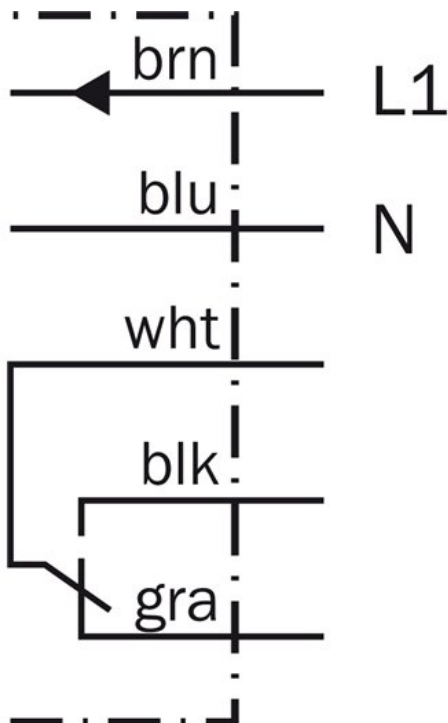
- [1] Center of optical axis, receiver
- [2] Center of optical axis, sender
- [3] Cable entry gland 3/8" for cable diameter 6 to 8 mm
- [4] Mounting hole, Ø 4.3 mm
- [5] Cable, 2 m, 5-wire, Ø 6,3 mm

Adjustments possible

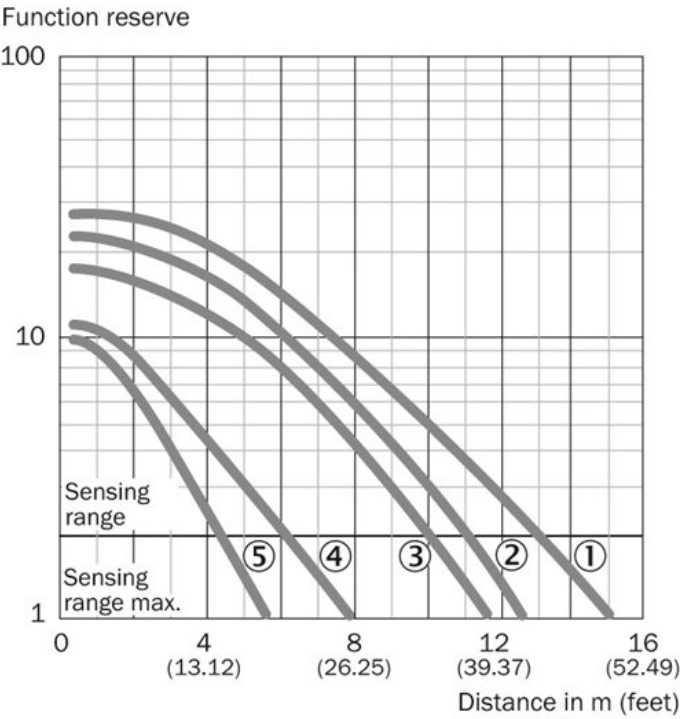


- [6] LED indicator green: Stability indicator
- [7] Status indicator LED, yellow: Status of received light beam
- [8] Sensitivity adjustment: poti

Connection diagram

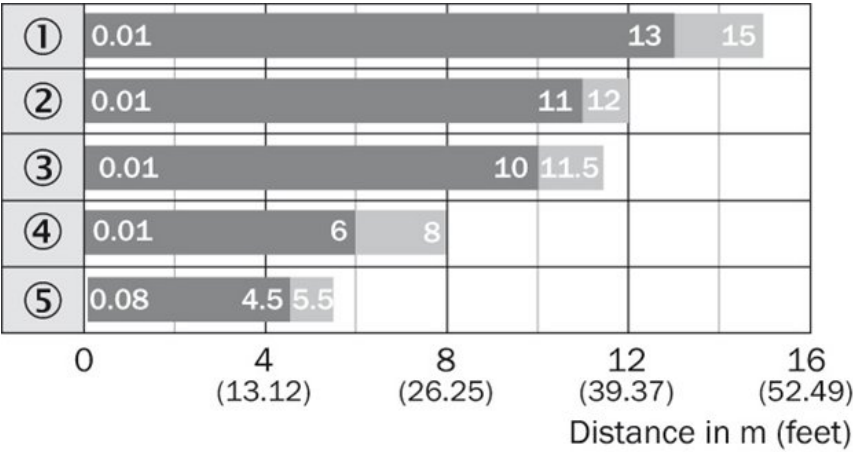


Characteristic curve



- [1] Reflector type PL80A, C110A
- [2] Reflector type P205
- [3] Reflector type PL50A, PL40A, PL30A, PL31A
- [4] Reflector type PL20A
- [5] Reflective tape Diamond Grade
(100 mm x 100 mm/3.94 inch x 3.94 inch)

Sensing range diagram



- |1| Reflector type PL80A, C110A
- |2| Reflector type P205
- |3| Reflector type PL50A, PL40A, PL30A, PL31A
- |4| Reflector type PL20A
- |5| Reflective tape Diamond Grade
(100 mm x 100 mm/3.94 inch x 3.94 inch)

■ Sensing range ■ Sensing range max.

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