



Photoelectric sensors
W27-3, Photoelectric retro-reflective sensor,
Standard optics

WL27-3R2631S02



Model Name > [WL27-3R2631S02](#)
Part No. > [1029144](#)



Illustration may differ

At a glance

- Long sensing range with a high operating reserve
- Quick alignment with red emitting LED
- Resistant to ambient noise such as crosstalk from another sensor
- Optional front screen heating and time delays
- Operating temperature: -40 °C - +60 °C
- UL approval

Your benefits

- Resistant to contamination due to high operating reserve
- Optional features, such as time delays, enhance functionality when needed
- Resistant to vibrations, reducing downtime
- Reliable operation in harsh environments with temperatures as low as -40 °C
- Durable housing with reinforced mounting holes withstands harsh conditions
- Quick alignment with red emitting LED



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor, Standard optics
Dimensions (W x H x D):	24.6 mm x 80.6 mm x 54 mm
Housing design (light emission):	Rectangular
Sensing range max.:	0.1 m ... 15 m ¹⁾
Sensing range:	0.1 m ... 11 m ²⁾
Type of light:	Visible red light
Light source:	LED ³⁾
Light spot (distance):	220 mm (10 m)
Wave length:	660 nm
Sensitivity adjustment:	Potentiometer
Time type:	Switch on delay time delay off switch on delay and time delay off
Delay time:	Adjustable via time delay selector switch: 0.5 ... 1 s
Angle of dispersion:	1.5 °

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

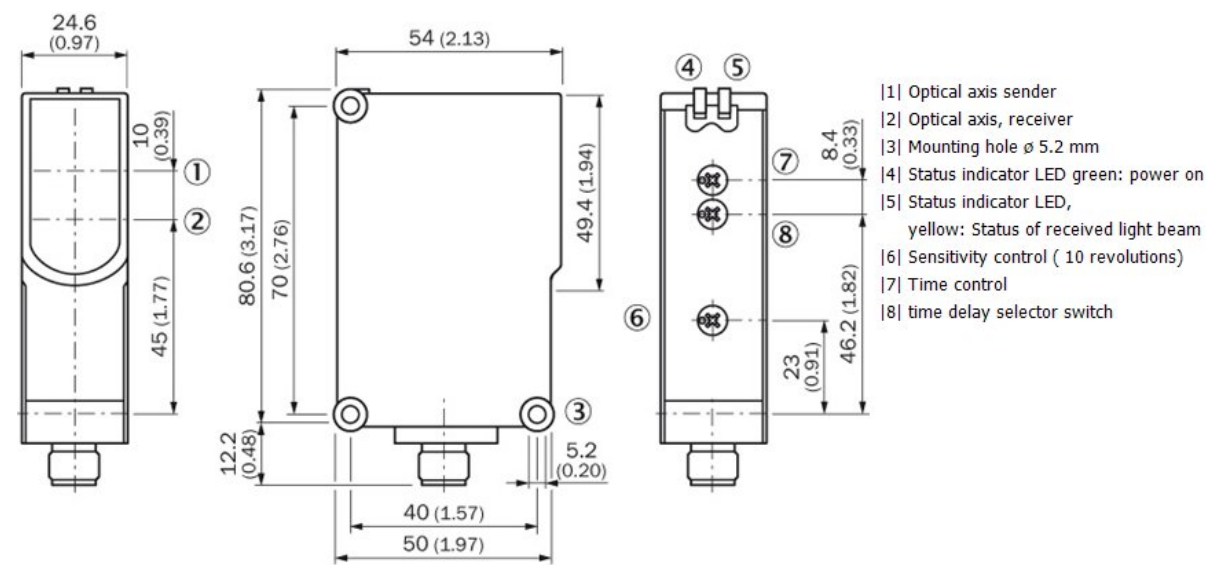
Mechanics/electronics

Supply voltage:	24 V AC/DC ... 240 V AC/DC ¹⁾
Power consumption:	≤ 2.5 VA
Output type:	Relay, Light/dark-switching, selectable via time delay selector switch, change-over contacts, electrically isolated ²⁾
Switching current (switching voltage):	0.11 A (250 V DC), 3 A (24 V DC), 3 A (250 V AC)
Response time:	≤ 10 ms
Switching frequency:	10 Hz ³⁾
Connection type:	Connector Q6, 6-pin, AC/UC-coding
Circuit protection:	A, C ⁴⁾ ⁵⁾
Protection class:	II ⁶⁾
Weight:	120 g
Polarisation filter:	✓
Special device:	✓
Housing material:	ABS
Optics material:	PMMA
Enclosure rating:	IP 65
Special features:	Time delay selectable from 0,05 s to 1,0 s
Usage category:	AC-15, DC-13, According to EN 60947-1
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File-No.:	UL No. NRKH.E181493 & cUL No. NRKH7.E181493

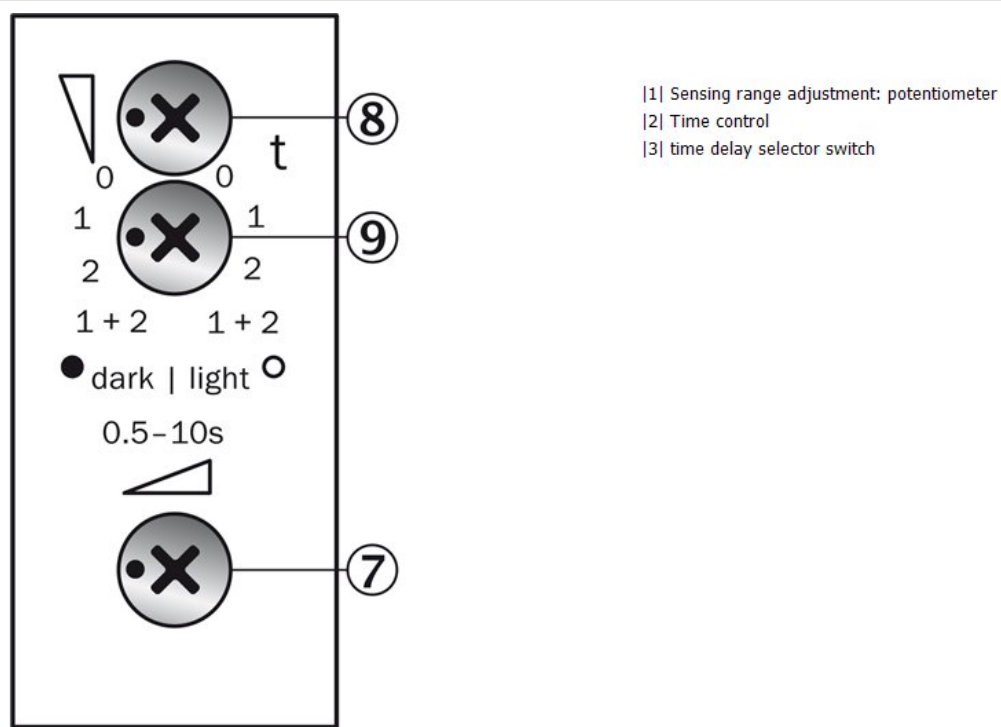
Provide suitable spark suppression for inductive or capacitive loads. Relay contacts are separated from the power supply by a basic isolation of 3 mm. Depending on the application, additional isolation might have to be applied in the user's circuit.;

¹⁾ +- 10 % ²⁾ Provide suitable spark suppression for inductive or capacitive loads. Relay contacts are separated from the power supply by a basic isolation of 3 mm. Depending on the application, additional isolation might have to be applied in the user's circuit. ³⁾ With light/dark ratio 1:1 ⁴⁾ A = V_S connections reverse-polarity protected ⁵⁾ C = interference suppression ⁶⁾ Reference voltage 250 V AC

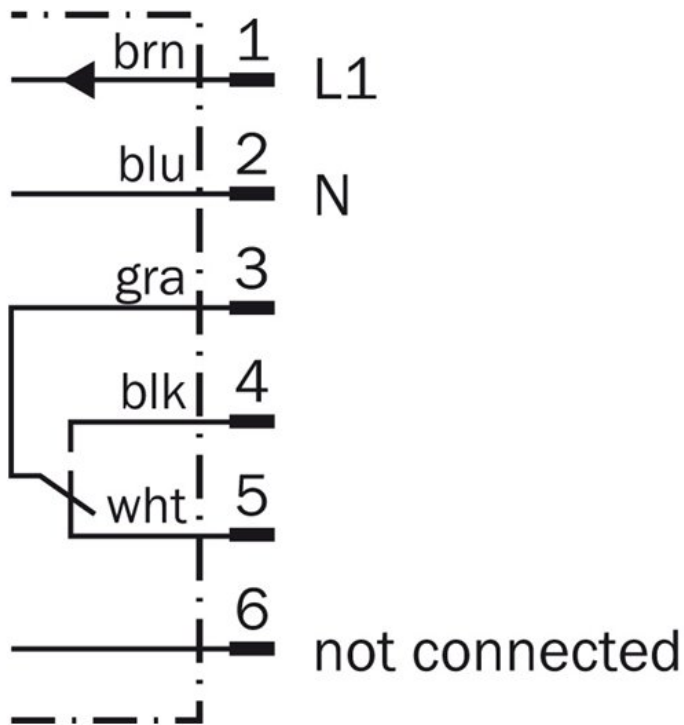
Dimensional drawing



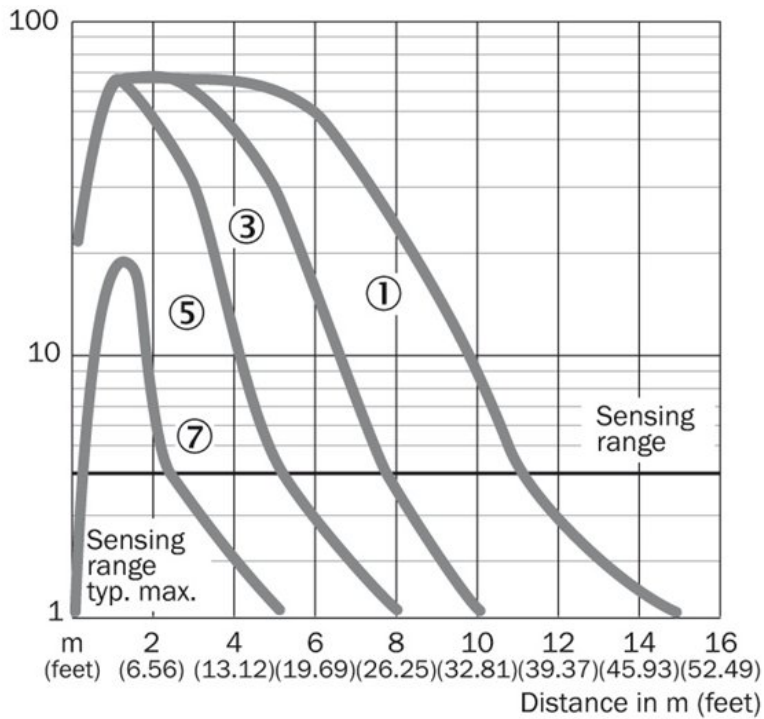
Adjustments possible



Connection diagram

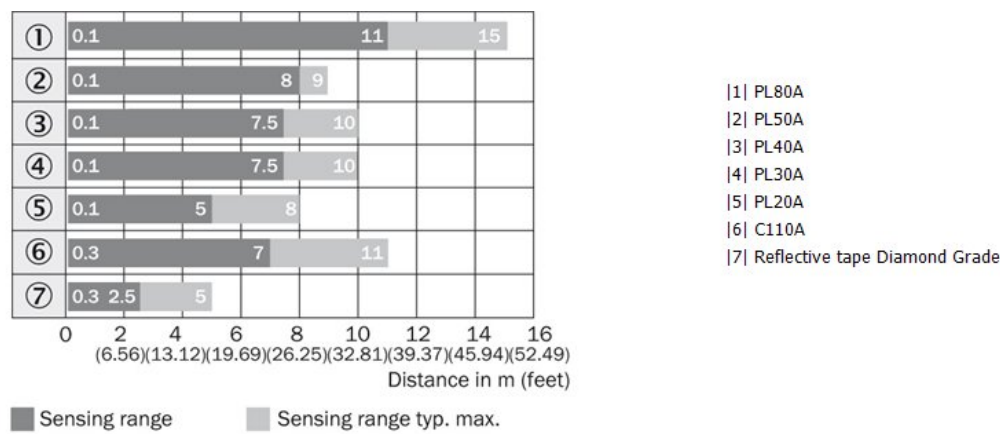


Characteristic curve



- [1] PL80A
- [3] PL40A
- [5] PL20A
- [7] Reflective tape Diamond Grade

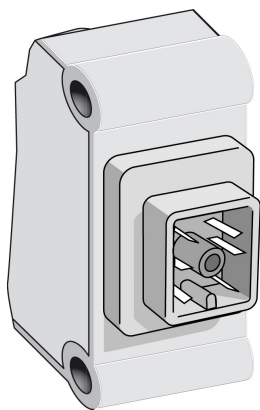
Sensing range diagram



Reflector type

- ① PL80A
- ② PL50A
- ③ PL40A
- ④ PL30A
- ⑤ PL20A
- ⑥ C110
- ⑦ Reflective tape Diamond Grade

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