



Photoelectric sensors
W27-3, Photoelectric proximity sensor,
Background suppression

WTB27-3P1111



Model Name > [WTB27-3P1111](#)
Part No. > [1027752](#)



Illustration may differ

At a glance

- Precise background suppression with no scanning distance drift
- PinPoint technology: intense red LED with consistent light spot
- Resistant to ambient light, optical reflections, and crosstalk from other photoelectric devices
- Sensing distance adjustment with potentiometer or teach-in pushbutton
- Operating temperature: -40 °C to +60 °C
- UL approval

Your benefits

- PinPoint technology can replace laser photoelectric proximity sensors in some applications. No laser safety regulations and a longer operating life due to PinPoint technology
- Less downtime due to ASIC (application-specific integrated circuit) chip technology by SICK
- Resistant to ambient light, optical reflections, and immune to crosstalk from other photoelectric devices, reducing false detection
- Remote configuration through IO-Link saves time
- Durable housing with reinforced mounting holes withstands harsh conditions
- Reliable operation in harsh environments with temperatures as low as -40 °C



Features

Dimensions (W x H x D):	24.6 mm x 80.6 mm x 54 mm
Sensing range max.:	30 mm ... 1,600 mm
Sensing range:	100 mm ... 1,600 mm
Housing desig (light emission):	Cuboid
Light source:	LED ²⁾
Type of light:	Infrared light
Wave length:	880 nm
Adjustment of operating distance:	Potentiometer
Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Light spot (distance):	25 mm (800 mm)

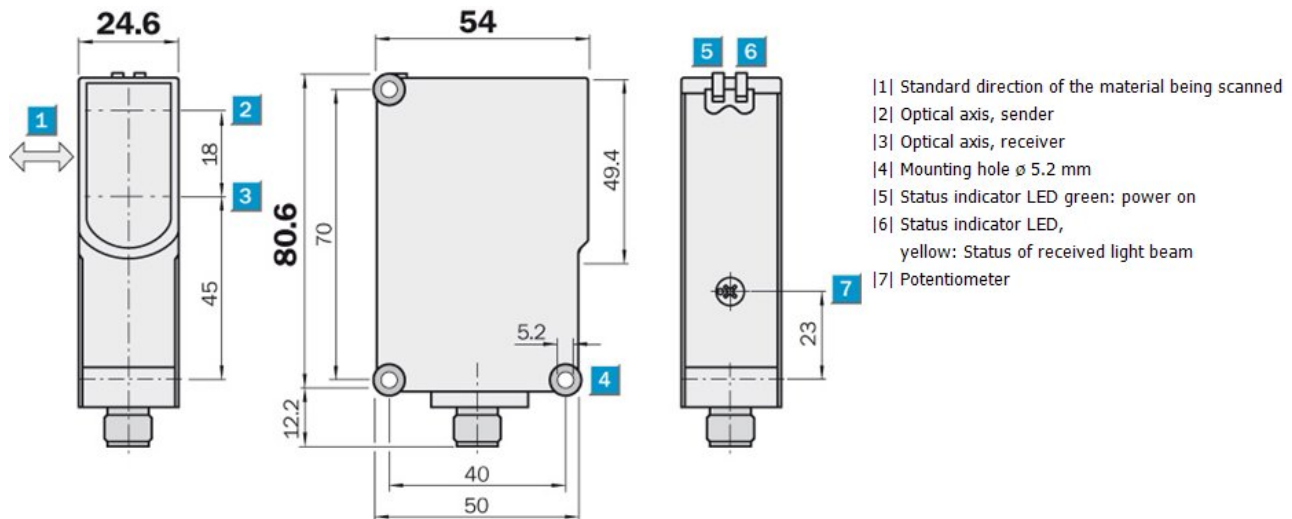
¹⁾ Object with 90 % reflectance (referred to standard white DIN 5033) ²⁾ Average service life 100,000 h at Ta = +25 °C

Mechanics/electronics

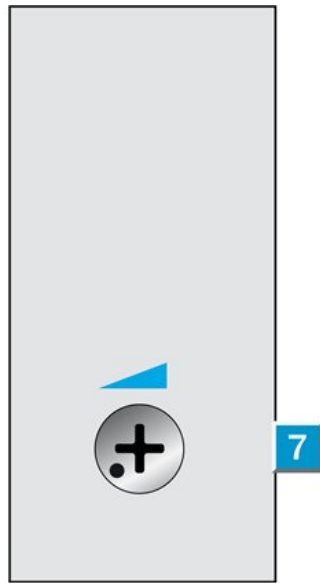
Enclosure rating:	IP 66 IP 67
Supply voltage:	10 V DC ... 30 V DC ¹⁾
Residual ripple:	≤ 5 Vpp ²⁾
Power consumption:	≤ 40 mA ³⁾
Switching output:	PNP, light/dark-switching, Complementary
Output current I _{max} :	≤ 100 mA ⁴⁾
Response time:	≤ 1.5 ms ⁵⁾
Switching frequency:	350 Hz ⁵⁾
Connection type:	Cable, 4-wire, 2 m ⁶⁾
Cable material:	PVC
Protection class:	II ⁷⁾
Circuit protection:::	A B ^{8) 9) 10)} C
Weight:	180 g
Housing material:	ABS
Optics material:	PMMA
Ambient temperature, operation:	-40 °C ... 60 °C
Ambient temperature, storage:	-40 °C ... 75 °C
Signal voltage PNP HIGH/LOW:	approx. VS - 2.5 V / 0 V
Special device:	-
IO-Link:	-
UL File-No.:	UL No. NRKH.E181493 & cUL No. NRKH7.E181493

¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S ³⁾ Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ Do not bend below 0 °C ⁷⁾ Reference voltage 50 V DC ⁸⁾ A = V_S connections reverse-polarity protected ⁹⁾ B = inputs and output reverse-polarity protected ¹⁰⁾ C = interference suppression

Dimensional drawing

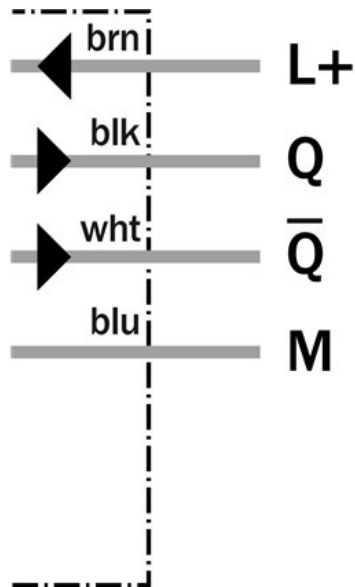


Einstell-Möglichkeiten

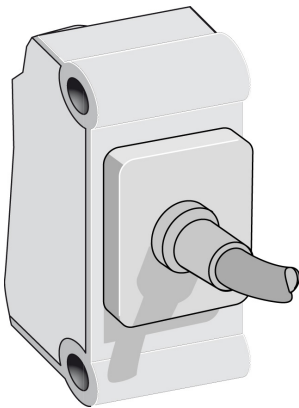


|7| Scanning distance adjustment, Poti

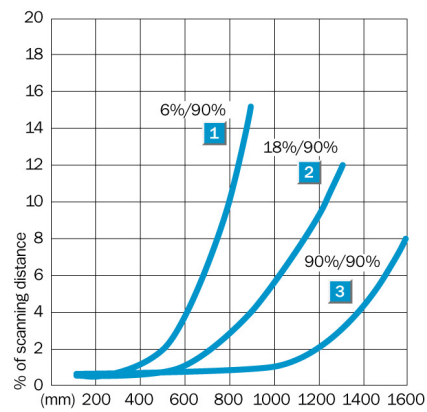
Connection diagram



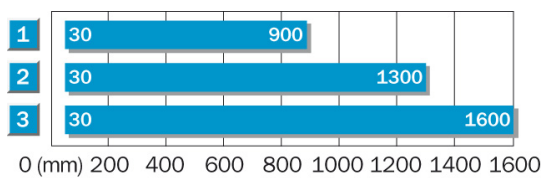
Connection type



Characteristic curve



Sensing range diagram



1	Scanning distance on black, 6% remission
2	Scanning distance on grey, 18% remission
3	Scanning distance on white, 90% remission

Australia

Phone +61 3 9497 4100
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(952) 941-6780
1 800-325-7425 – tollfree
E-Mail info@sickusa.com

Ceská Republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +852-2763 6966
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 +972-4-999-0590
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

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

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

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 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