



Mid range distance sensors Dx30, DS30

DS30-N1241



Model Name > **DS30-N1241**
Part No. > **1042181**



At a glance

- Measuring range up to 2,000 mm on black and white
- Measuring range up to 3,000 mm on gray and white
- Time-of-flight technology provides best suppression of any object in the background (up to 150 m)
- Minimal black/white shift ensures precise and reliable switching
- Models with 1, 2 and 3 switching outputs available for maximum flexibility
- Operating temperature from -40 °C to +55 °C

Your benefits

- Precise, reliable detection of objects - regardless of color - ensures a reliable process
- Small housing enables fast, easy integration into any system
- Reliable background suppression and high ambient light immunity increase productivity by eliminating false trips and machine down times
- Cost-efficient design and high sensor performance offer low initial costs and ensures exceptional economic benefits over the sensor lifetime
- Wide temperature range makes sensor suitable for several applications – even cold storage warehouses
- State-of-the-art VCESL laser offers an extended lifetime of 100,000 h, increasing the overall sensor service life
- Multiple switching points enable up to three tasks for the price of one sensor



Performance

Measurement range:	200 mm ... 2,000 mm, 6 % remission 200 mm ... 2,000 mm, 18 % remission 200 mm ... 2,000 mm, 90 % remission
Resolution ¹⁾ :	10 mm, Teach resolution
Response time:	10 ms
Switching frequency:	50 Hz
Light source ²⁾ :	Laser, infrared
Typ. light spot size (distance):	20 mm x 20 mm (at 2 m)
Laser class:	1 (EN 60825-1)
Laser service life (MTTF at 25 °C):	100,000 h

¹⁾ 6 % ... 90 % remission ²⁾ Wave length: 850 nm

Interfaces

Output type ¹⁾: ²⁾: ³⁾: 2 x NPN (100 mA)

¹⁾ Output Q short-circuit protected ²⁾ NPN: HIGH = $\leq 2\text{ V}$ /LOW = V_S ³⁾ Complementary switching outputs (Q, /Q)

Mechanics/electronics

Supply voltage V_S ¹⁾: DC 10 V ... 30 V

Ripple ²⁾: $\leq 5\text{ Vpp}$

Warm-up time: $\leq 5\text{ min}$

Connection type: Male connector, M12, 4-pin

Indication: 2 x LED

Weight: 120 g

¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ May not fall short of or exceed V_S tolerances

Ambient data

Enclosure rating: IP 65

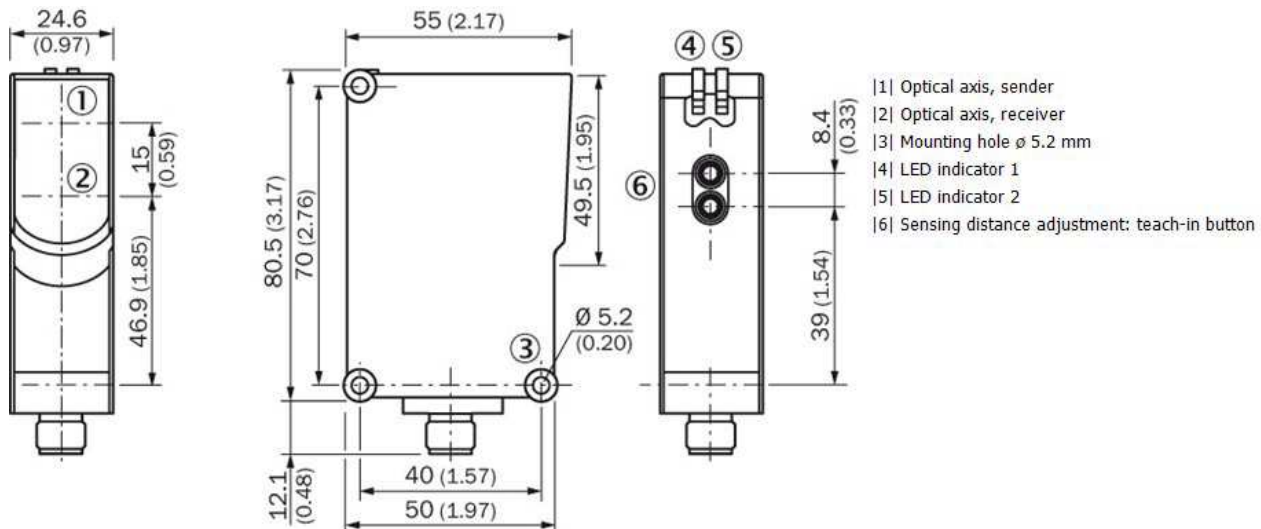
Protection class ¹⁾: II

Ambient temperature: Operation: $-40 \dots 55\text{ }^\circ\text{C}$, Storage: $-40 \dots 75\text{ }^\circ\text{C}$

Electromagnetic compatibility (EMC): EN 61000-6-2:2005-08, EN 61000-6-3:2001-10 + A11:2004-07/EN 60947-5-2:1998-10 + A1:1999-08 + A2:2004-02

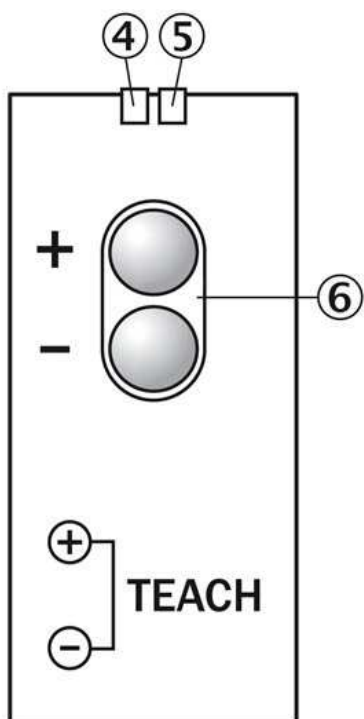
¹⁾ Reference voltage DC 50 V

Dimensional drawing



All dimensions in mm (inch)

Adjustment possible

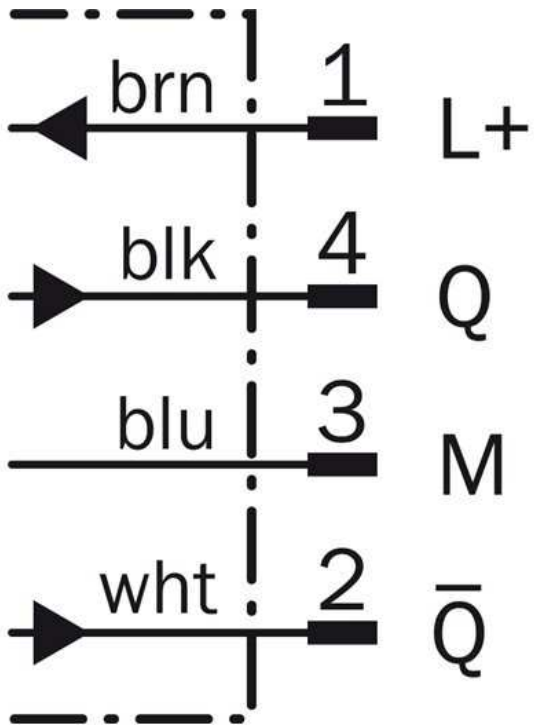


- |4| LED indicator 1
- |5| LED indicator 2
- |6| Sensing distance adjustment: teach-in button

Connection type



Connection 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