



Photoelectric sensors
W4-3, Photoelectric proximity sensor,
Background suppression

WTV4-3P2140S33



Model Name > [WTV4-3P2140S33](#)
Part No. > [1029887](#)



Illustration may differ

At a glance

- Sensing range from 4 - 50 mm
- Reliable detection of planar, highly transparent and shiny objects at distances of 20 to 25 mm
- 5-turn potentiometer for precise adjustment
- Large, consistent light spot
- Rugged plastic housing with M3 threaded metal inserts
- IR versions available for detection of jet-black objects with a remission < 1%
- Versions available with linear light spot

Your benefits

- Low-cost machine design since shiny and transparent objects are directly detected, making a separate reflector or through-beam system unnecessary
- Less mounting and setup time since no alignment is required
- Rugged mounting system with M3 threaded metal inserts reduces maintenance costs due to a long service life
- Reliable object detection due to best-in-class background suppression and high immunity to ambient light



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	16 mm x 39.5 mm x 12 mm
Housing design (light emission):	Rectangular
Sensing range max.:	4 mm ... 50 mm ¹⁾
Sensing range:	15 mm ... 50 mm ²⁾
Type of light:	Visible red light
Light source:	PinPoint LED ³⁾
Wave length:	650 nm
Light spot size (distance):	Ø 10 mm (40 mm)

^{1) 2)} Object with 90 % reflectance (referred to standard white DIN 5033) ³⁾ Average service life of 100,000 h at T_A = +25 °C

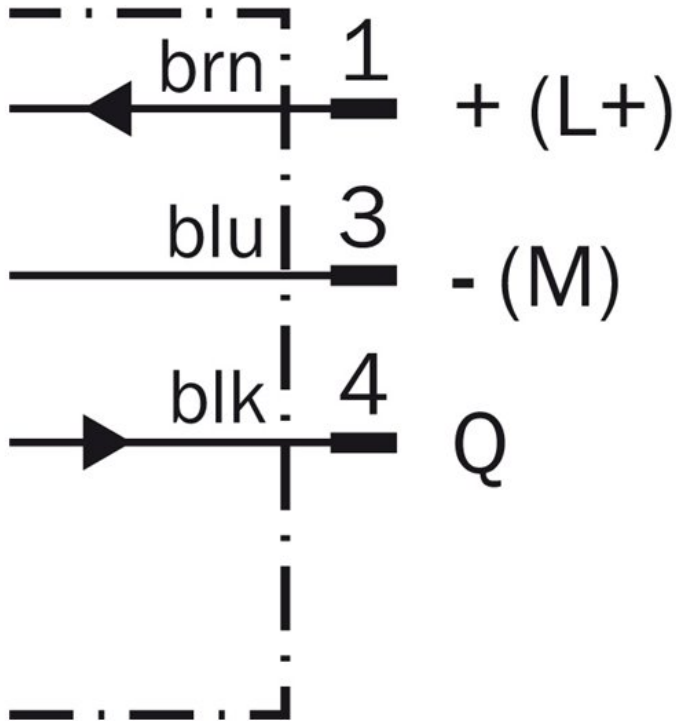
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	≤ 20 mA ³⁾
Switching output:	PNP
Switching mode:	Light switching

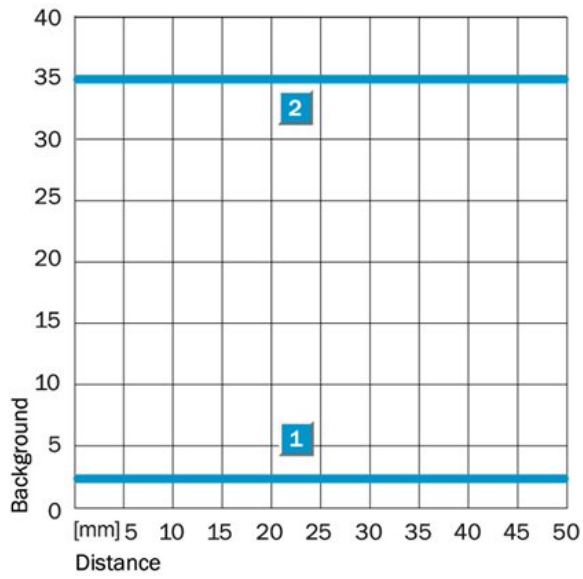
Output current I _{max} ..:	≤ 100 mA
Response time:	< 0.5 ms ⁴⁾
Switching frequency:	1,000 Hz ⁵⁾
Connection type:	Connector M8, 3-pin
Circuit protection:::	A, C, D ^{6) 7) 8)}
Protection class:	III
Weight:	30 g
Special device:	-
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67 IP 66
Special feature:	V-optics
Ambient operating temperature:	-40 °C ... 60 °C
Ambient storage temperature:	-40 °C ... 75 °C
UL File No.:	NRKH.E181493 & NRKH7.E181493

¹⁾ Limit values ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ Signal transit time with resistive load ⁵⁾ With light/dark ratio 1:1 ⁶⁾ A = V_S
 connections reverse-polarity protected ⁷⁾ C = interference suppression ⁸⁾ D = outputs overcurrent and short-circuit protected

Connection diagram



Characteristic curve

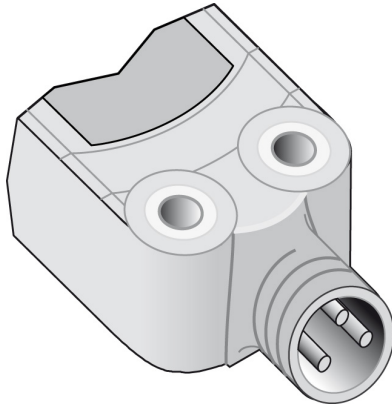


|1| Black-white shift 90% / 6%

|2| Distance to the background with transparent objects

1	Black-white shift 90 %/6 %
2	Distance to background detecting transparent objects

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