



Photoelectric sensors
ZoneControl, Photoelectric proximity sensor,
Background suppression

RT-N3221



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Model Name > [RT-N3221](#)
Part No. > [1063162](#)

At a glance

- Wide range of output options: PNP/NPN/FET, light/dark switching, and ON or OFF delay
- Potentiometer integrated into the power and status LED
- Integrated with SICK's patented optical ASIC: SIRIC
- AC power options
- IP 67 housing for harsh wash down environments

Your benefits

- 30% lower current draw reduces the size of the power supply and the yearly electric costs
- Next-generation SIRIC optical ASIC provides ambient light immunity, which eliminates false trips and ensures high productivity
- Variety of features and choices ensure application requirements are met
- Background suppression reduces mounting effort since no reflector is required
- Mounting between the rollers prevents damage and sensor interference



Illustration may differ



Features

Sensor/detection principle:	Photoelectric proximity sensor, Background suppression
Dimensions (W x H x D):	20.6 mm x 99.2 mm x 48.9 mm
Sensing range:	60 mm ... 900 mm
Type of light:	Infrared light
Light source:	LED ¹⁾
Angle of dispersion:	7 °
Adjustment:	Potentiometer, 9 turns
Light spot size (distance):	Ø 20 mm (500 mm)

¹⁾ Average service life: 100,000 h at T_U = +25 °C

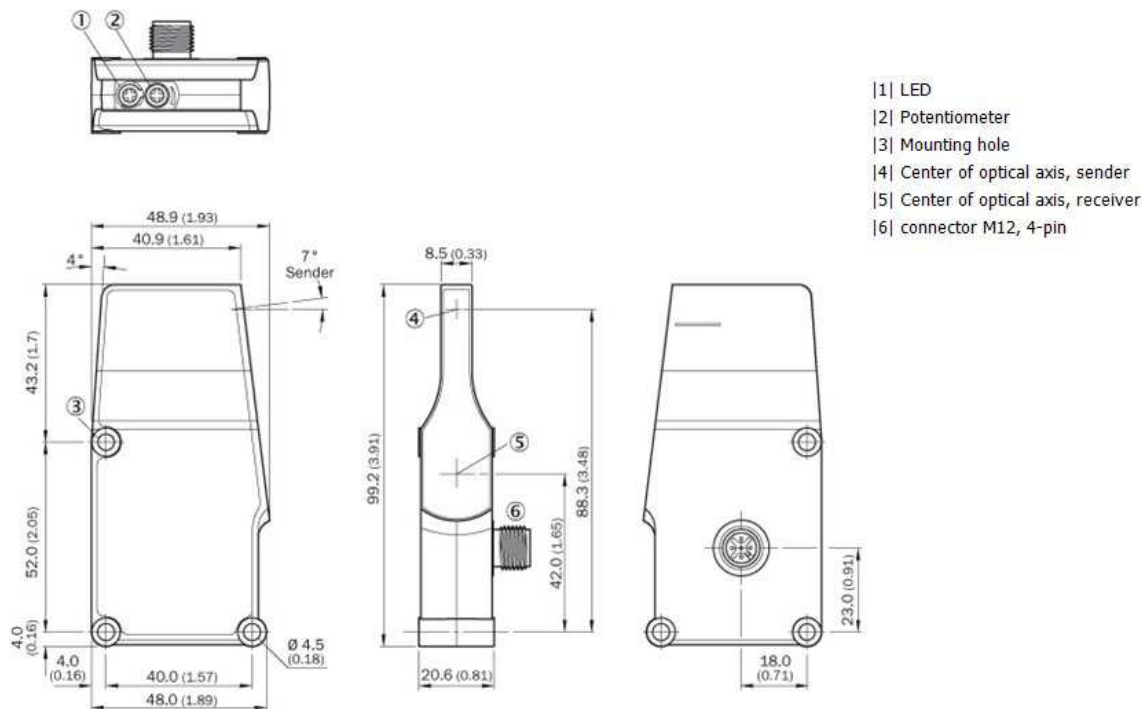
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	< 5 Vpp ²⁾
Power consumption:	< 20 mA ³⁾
Output type:	NPN
Switching mode:	Light/dark switching
Output current I _{max.} :	≤ 100 mA

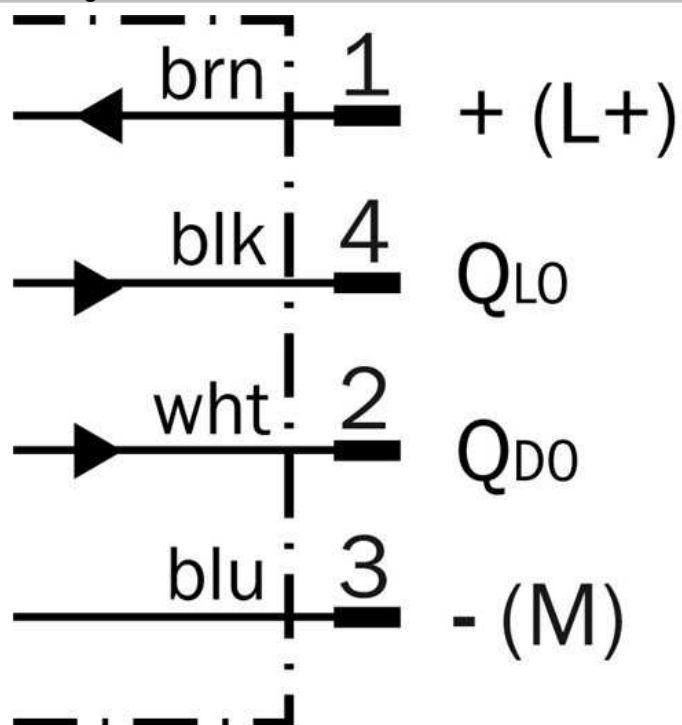
Response time:	2 ms
Switching frequency:	± 250 Hz
Connection type:	Connector M12, 4-pin ⁴⁾
Circuit protection:::	A, C, D ^{5) 6) 7)}
Protection class:	III
Weight:	175 g
Special device:	-
Enclosure rating:	IP 67
Ambient temperature operation:	-40 °C ... +60 °C
Ambient storage temperature:	-40 °C ... +75 °C
Shock and vibration resistance:	According to IEC 68
UL File No.:	NRKH.E189383 & NRKH7.E189383
Signal voltage NPN HIGH/LOW:	Approx. $V_S / < 2.0 \text{ V}$
Housing material:	ABS, Plastic

¹⁾ Limit values ²⁾ May not exceed or fall below U_V tolerances ³⁾ Without load and valve deenergized ⁴⁾ Do not bend below 0 °C ⁵⁾ $A = V_S$ connections reverse-polarity protected ⁶⁾ C = interference suppression ⁷⁾ D = outputs overcurrent and short-circuit protected

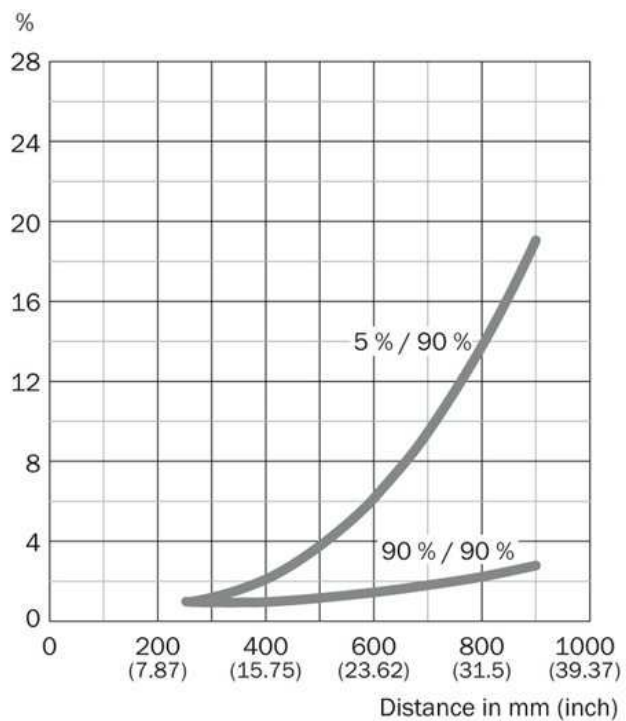
Dimensional drawing



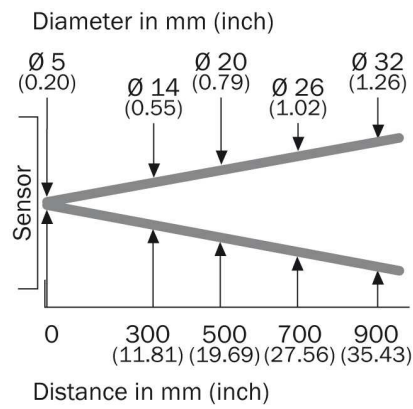
Connection diagram



Characteristic curve

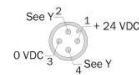


Light spot size



PIN assignment

M12



	Rs-(P/N)/Y22x		Rs-(P/N)/Y23x		Rs-8Y22x	
	Rs-(P/N)/Y32x	P = PNP	Rs-(P/N)/Y33x	P = PNP	Rs-8Y32x	
	Rs-(P/N)/Y42x	S = NPN	Rs-(P/N)/Y43x	S = NPN	Rs-8Y42x	S = PNP / NPN
1	PNV	PNV	PNV	PNV	PNV	PNV
2	Q ₁₁	not connected	not connected	Q ₁₁	Q ₁₁	Q ₁₁
3	Q ₁₂	Q ₁₂	Q ₁₂	Q ₁₂	Q ₁₂	Q ₁₂
4	Q ₁₃	Alarm	Alarm	Q ₁₃	-	-
5	Q ₁₄	Health	Health	Q ₁₄	-	-
6	Q ₁₅	Alarm	Alarm	Q ₁₅	-	-
7	Q ₁₆	Health	Health	Q ₁₆	-	-

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