

ONLINE DATA SHEET
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Photoelectric sensors
ZoneControl, Photoelectric proximity sensor, Background suppression

RT-P3231



SICK
Sensor Intelligence.

Photoelectric sensors
ZoneControl, Photoelectric proximity sensor, Background suppression

Model Name > RT-P3231
Part No. > 1063131



Illustration may differ

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

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

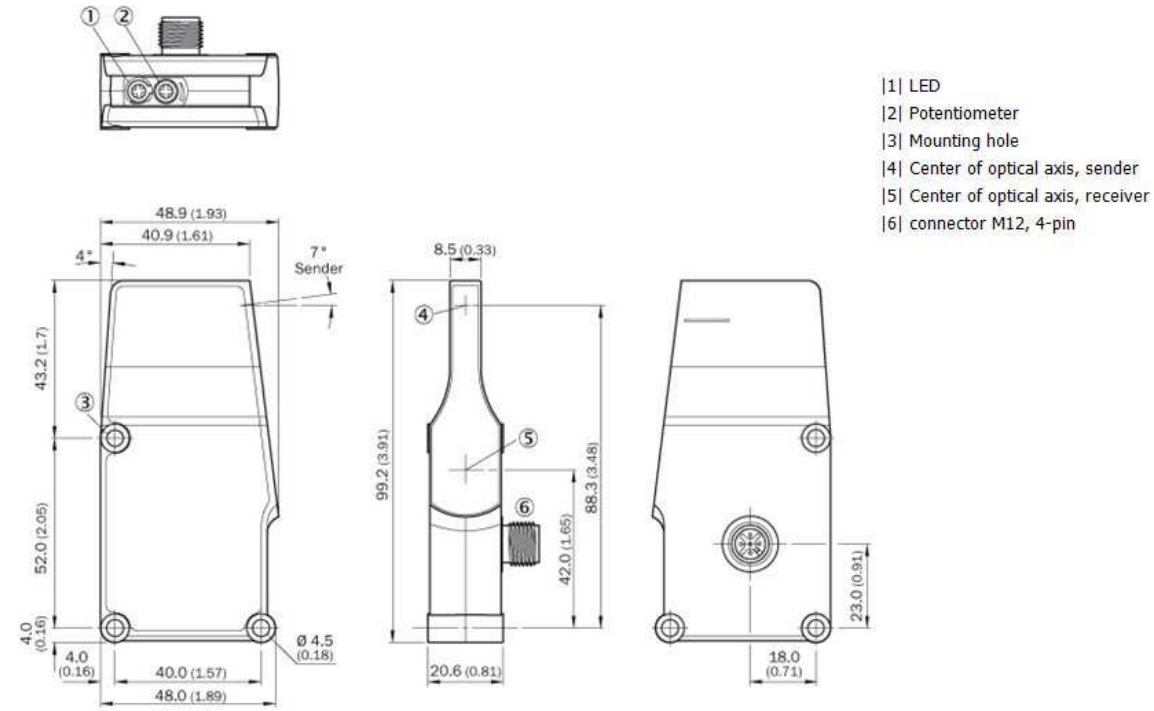
Supply voltage:	10 V DC ... 30 V DC [1)]
Ripple:	< 5 Vpp [2)]
Power consumption:	< 20 mA [3)]
Output type:	PNP
Switching mode:	Light/dark switching
Output current Imax.:	≤ 100 mA

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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 PNP HIGH/LOW:	Approx. VS - 0.5 V / 0 V
Housing material:	ABS, Plastic

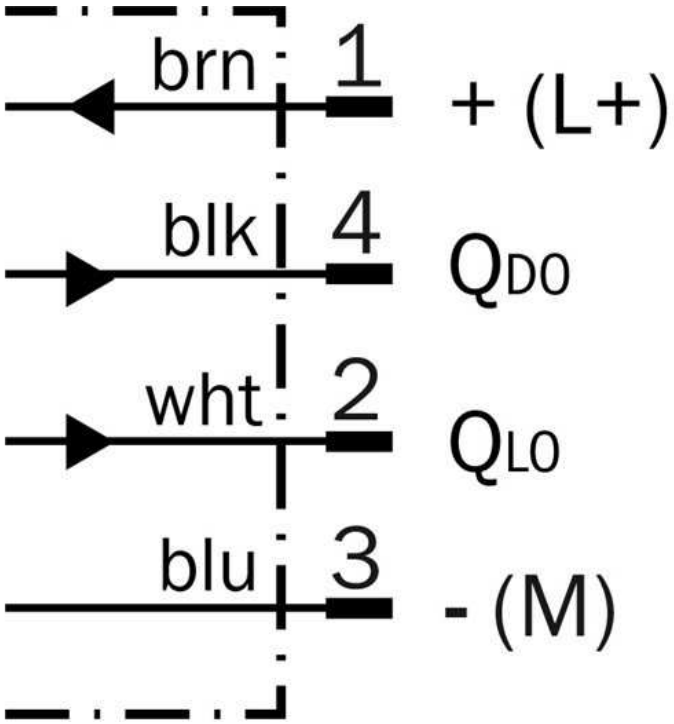
[1] Limit values [2] May not exceed or fall below U_V tolerances [3] Without load and valve deenergized [4] Do not bend below 0 °C [5] A = V_S connections reverse-polarity protected [6] C = interference suppression [7] D = outputs overcurrent and short-circuit protected

Dimensional drawing

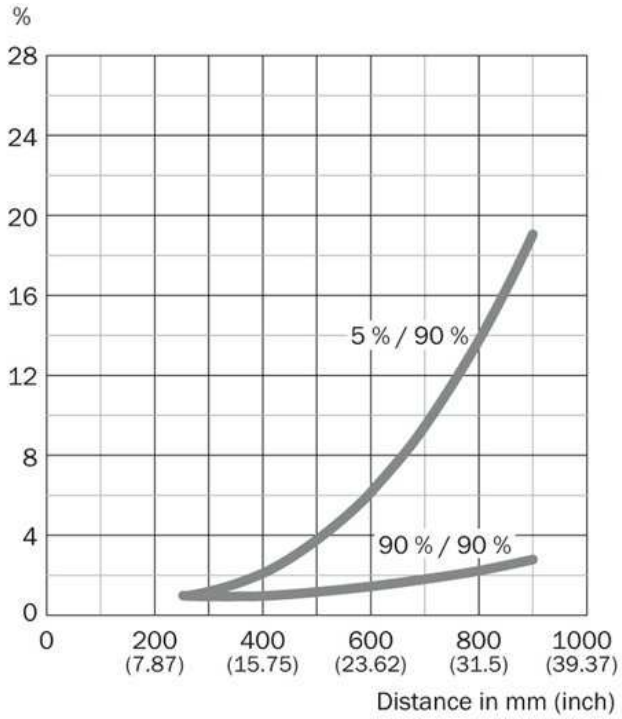


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Connection diagram

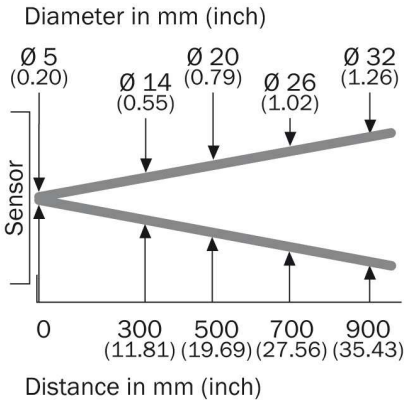


Characteristic curve



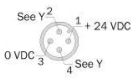
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Light spot size



PIN assignment

M12



	Rx-(P/N)Y22x Rx-(P/N)Y32x Rx-(P/N)Y42x	P = PNP N = NPN	Rx-(P/N)Y23x Rx-(P/N)Y33x Rx-(P/N)Y43x	P = PNP N = NPN	Rx-BY22x Rx-BY32x Rx-BY42x	B = PNP / NPN
Y	PIN4	PIN2	PIN4	PIN2	PIN4	PIN2
1	Q_{L1}	not connected	not connected	Q_{L1}	QP_{L1}	QN_{L1}
2	Q_{L2}	not connected	not connected	Q_{L2}	QP_{L2}	QN_{L2}
3	Q_{L3}	Q_{L3}	Q_{L3}	Q_{L3}	-	-
4	Q_{L4}	Alarm	Alarm	Q_{L4}	-	-
5	Q_{L5}	Health	Health	Q_{L5}	-	-
6	Q_{L6}	Alarm	Alarm	Q_{L6}	-	-
7	Q_{L7}	Health	Health	Q_{L7}	-	-

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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**

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