



Photoelectric sensors  
ZoneControl, Photoelectric proximity sensor,  
Background suppression

RT-P3231



**Model Name** > [RT-P3231](#)  
**Part No.** > [1063131](#)

**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 <sup>1)</sup>
Angle of dispersion:	7 °
Adjustment:	Potentiometer, 9 turns
Light spot size (distance):	Ø 20 mm (500 mm)

<sup>1)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C

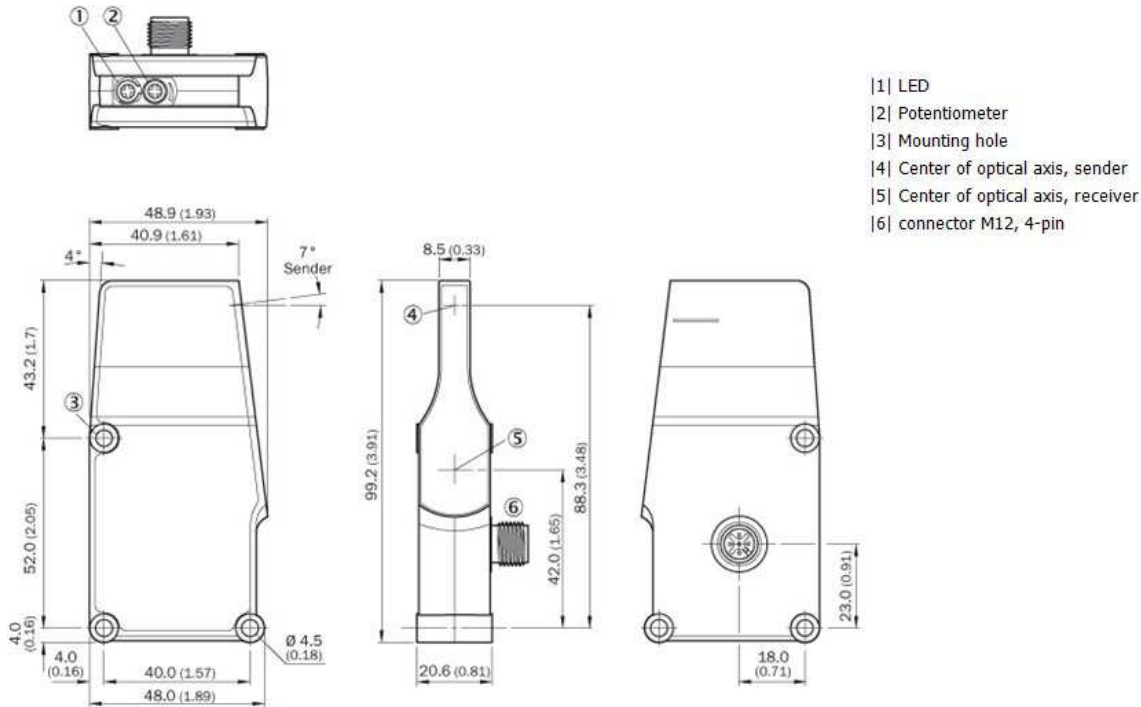
**Mechanics/electronics**

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

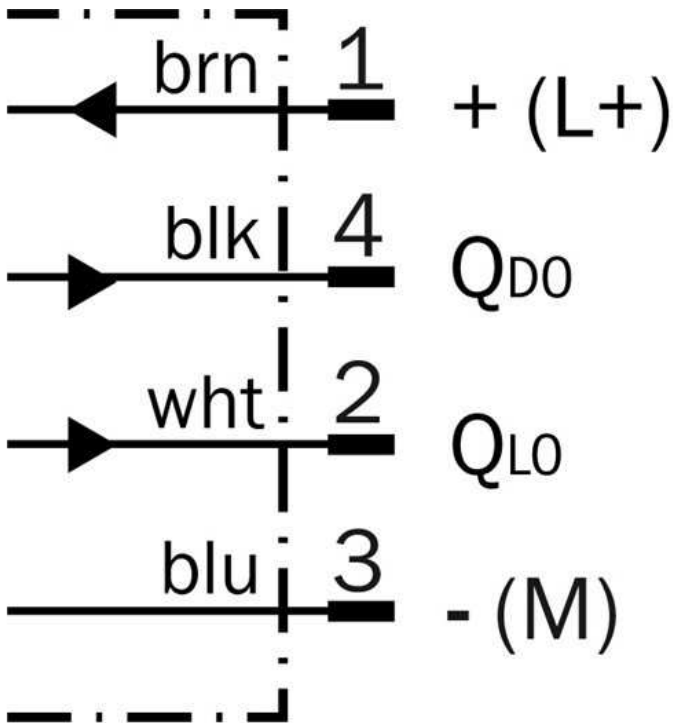
Response time:	2 ms
Switching frequency:	± 250 Hz
Connection type:	Connector M12, 4-pin <sup>4)</sup>
Circuit protection:::	A, C, D <sup>5) 6) 7)</sup>
Protection class:	III
Weight:	175 g
Special device:	-
Enclosure rating:	IP 67
Ambient temperature operation:	-40 °C ... +60 °C
Ambient storage temperature:	-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<sub>V</sub> tolerances 3) Without load and valve deenergized 4) Do not bend below 0 °C 5) A = V<sub>S</sub> connections reverse-polarity protected 6) C = interference suppression 7) D = outputs overcurrent and short-circuit protected

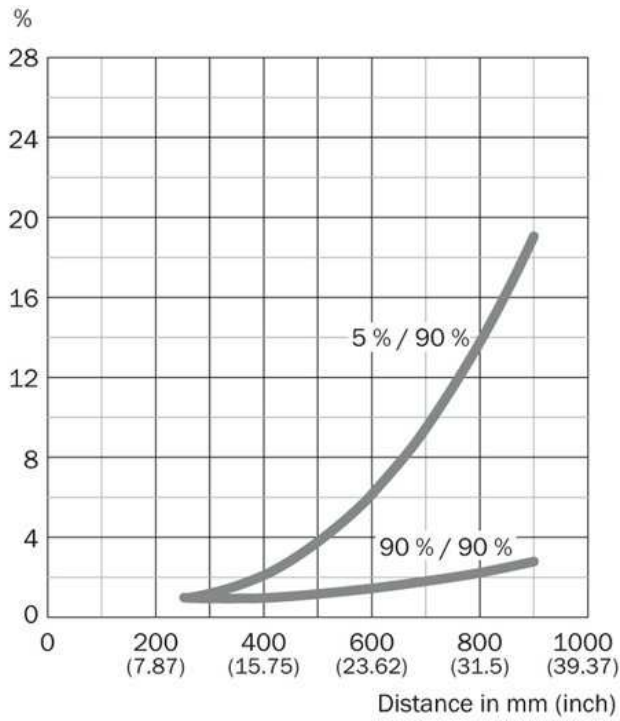
## Dimensional drawing



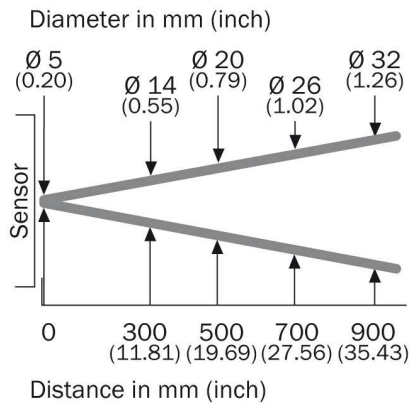
Connection diagram



Characteristic curve

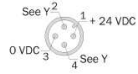


## Light spot size



## PIN assignment

M12



	Rz-(P/N)Y22x Rz-(P/N)Y32x Rz-(P/N)Y42x	P = PNP N = NPN	Rz-(P/N)Y23x Rz-(P/N)Y33x Rz-(P/N)Y43x	P = PNP N = NPN	Rz-8Y22x Rz-8Y32x Rz-8Y42x	B = PNP / NPN
Y	PNV	PNZ	PNV	PNZ	PNV	PNZ
1	Q <sub>1</sub>	not connected	not connected	Q <sub>11</sub>	Q <sub>11</sub>	Q <sub>11</sub>
2	Q <sub>2</sub>	not connected	not connected	Q <sub>12</sub>	Q <sub>12</sub>	Q <sub>12</sub>
3	Q <sub>3</sub>	Q <sub>3</sub>	Q <sub>3</sub>	Q <sub>13</sub>	-	-
4	Q <sub>4</sub>	Alarm	Alarm	Q <sub>14</sub>	-	-
5	Q <sub>5</sub>	Health	Health	Q <sub>15</sub>	-	-
6	Q <sub>6</sub>	Alarm	Alarm	Q <sub>16</sub>	-	-
7	Q <sub>7</sub>	Health	Health	Q <sub>17</sub>	-	-

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