



Photoelectric sensors  
ZoneControl, Photoelectric proximity sensor,  
Background suppression

IRT-P232C83



**Model Name** > IRT-P232C83  
**Part No.** > 1063100

#### At a glance

- All-in-one ZoneControl solution: sensor, logic and actuator
- Single accumulation or single accumulation with sleep
- Ideal for pneumatic actuators or motor-driven rollers
- Daisy chain connection cable included for zone lengths of 1 m and 2 m
- Output options with flying leads, M12 or integrated valve
- Integrated with SICK's patented optical ASIC: SIRIC
- IP 65 housing for harsh wash down environments

#### Your benefits

- 30% lower current draw reduces the size of the power supply and 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
- Daisy chain connectivity ensures changes or additions to the system can be made quickly
- Sleep mode, which switches the rollers off after 9 s of inactivity, dramatically reduces power costs
- Mounting between the rollers prevents damage and sensor interference
- The all-in-one solution with sensor, logic and valve reduces wiring and programming costs



*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)                                       |
| Actuator:                       | Electrical                                             |
| Max. number of sensors::        | Ca. 30, Ca. 50 <sup>2) 3)</sup>                        |
| Logical principle of operation: | Single accumulation with sleep                         |
| Type of Release:                | Single release                                         |

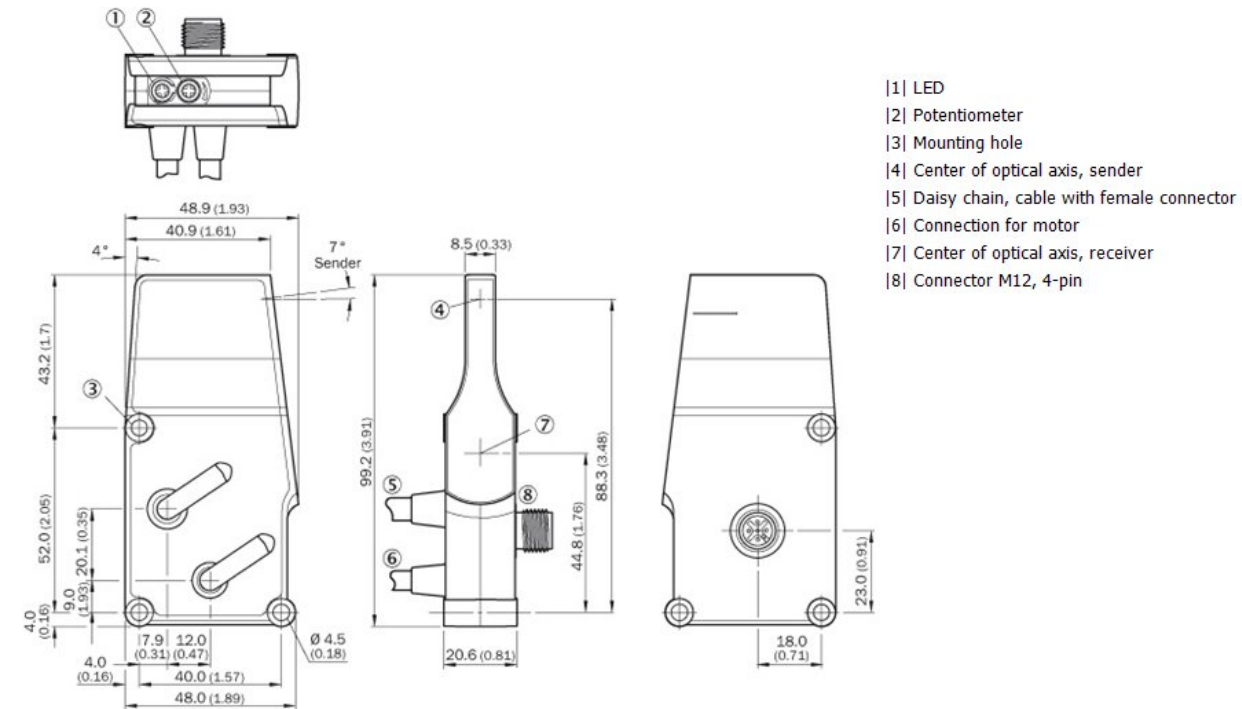
1) Average service life of 100,000 h at  $T_A = +25\text{ °C}$  2) When powerd from the end of the IR daisy chain 3) When powerd from center of the IR daisy chain

## Mechanics/electronics

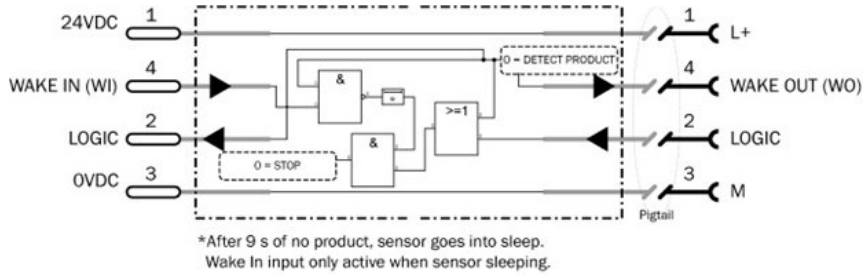
|                                    |                                       |
|------------------------------------|---------------------------------------|
| Supply voltage:                    | 10 V DC ... 30 V DC <sup>1)</sup>     |
| Ripple:                            | < 5 Vpp <sup>2)</sup>                 |
| Power consumption:                 | < 20 mA <sup>3)</sup>                 |
| Output type:                       | PNP                                   |
| 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                                 |
| Housing material:                  | ABS, Plastic                          |
| Enclosure rating:                  | IP 67                                 |
| Ambient operating temperature:     | -40 °C ... +60 °C                     |
| Ambient storage temperature:       | -40 °C ... +60 °C                     |
| Shock/vibration:                   | According to IEC 68                   |
| UL File No.:                       | NRKH.E189383 & NRKH7.E189383          |
| Signal voltage PNP HIGH/LOW:       | Approx. VS - 0.5 V / 0 V              |
| Connection type for daisy chain:   | Cable with receptacle, M12, 4-pin 2 m |
| Mode of operation solenoid valve:  | HIGH to Drive                         |

1) Limit values 2) May not exceed or fall short of  $V_S$  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

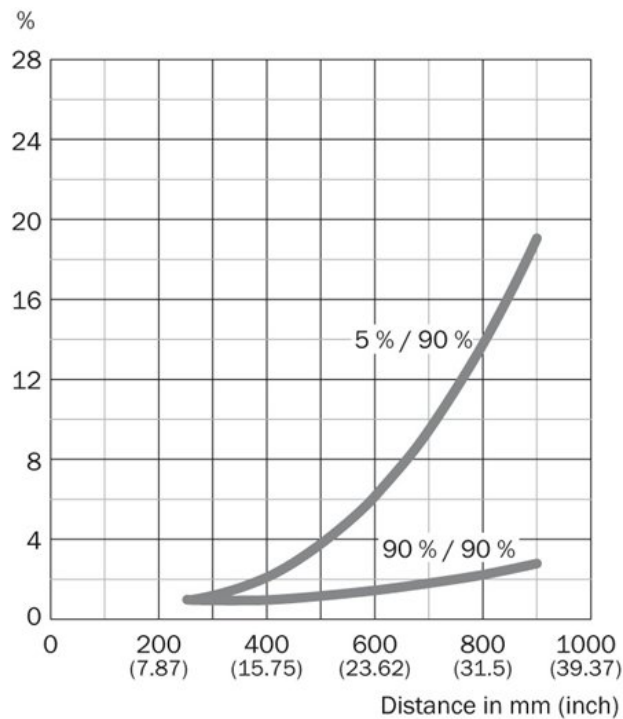
## Dimensional drawing



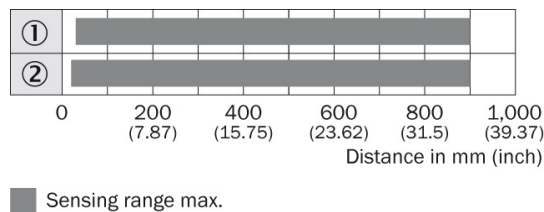
## Connection diagram



Characteristic curve

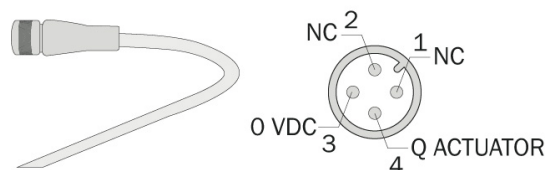


Sensing range diagram



Connection to conveyor

xC8x: 4-PIN M12 Pigtail, 300 mm



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