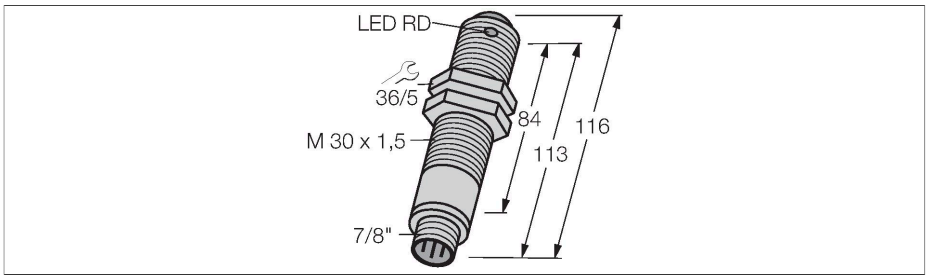
# SM2A30PRLNCQD
# Photoelectric Sensor – Opposed Mode Sensor (Receiver)



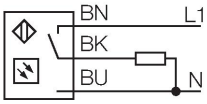

## Technical data

| | |
|---|---|
| Type | SM2A30PRLNCQD |
| ID | 3027300 |
| **Optical data** | |
| Function | Opposed mode sensor |
| Operating mode | Receiver |
| Range | 0…150000 mm |
| **Electrical data** | |
| Operating voltage | 24…240 VAC |
| AC rated operational current | ≤ 200 mA |
| Output function | Dark operation, Relay output |
| Switching frequency | ≤ 40 Hz |
| Readiness delay | ≤ 0 ms |
| Response time typical | < 10 ms |
| **Mechanical data** | |
| Design | Tube, SM30 |
| Dimensions | Ø 30 x 116 mm |
| Housing material | Plastic, Thermoplastic material |
| Lens | plastic, Acrylic |
| Electrical connection | Connector, 7/8", PVC |
| Number of cores | 3 |
| Core cross-section | 0.5 $mm^2$ |
| Ambient temperature | -40…+70 °C |
| Storage temperature | -40…+70 °C |
| Relative humidity | 0…90 % |
| Protection class | IP67 |
| Special features | Encapsulated |
| Power-on indication | LED, Green |
| Switching state | LED, Yellow |
| Excess gain indication | LED |
| **Tests/approvals** | |
| Approvals | CE, cURus, CSA |

## Features

- 7/8" connector, 3-pin
- Protection class IP67
- Ambient temperature: -40 °C…+70 °C
- Modulation frequency A, requires transmitters with the same frequency
- Operating voltage: 24…240 VAC
- Semiconductor relay output, SPST, dark operation

## Wiring diagram





## Functional principle

Opposed mode sensors consist of an emitter and a receiver. They are installed opposite to each other whereby the emitted light aims directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque objects. The excellent light/dark contrast and the very high excess gain are typical for this function mode and enable operation over large distances and under difficult conditions.
Excess gain curve
Excess gain in relation to distance

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## Accessories

| Dimension drawing | Type | ID | |
|---|---|---|---|
| | SM30CC-306 | 3045133 | Connecting cable, PVC jacket, 2 m, 7/8" female connector, straight, 3-pin |

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