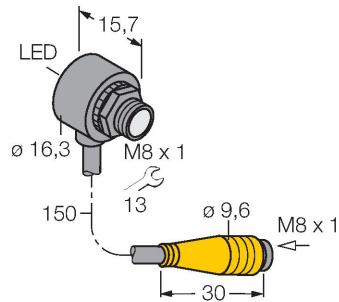


# T8AP6RQ

## Photoelectric Sensor – Opposed Mode Sensor (Emitter/Receiver)

### Miniature Sensor



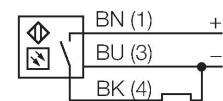
#### Technical data

|                              |                                           |
|------------------------------|-------------------------------------------|
| Type                         | T8AP6RQ                                   |
| ID                           | 3066668                                   |
| <b>Optical data</b>          |                                           |
| Function                     | Opposed mode sensor                       |
| Operating mode               | Receiver                                  |
| Range                        | 0...2000 mm                               |
| <b>Electrical data</b>       |                                           |
| Operating voltage            | 10...30 VDC                               |
| Residual ripple              | < 10 % U <sub>ss</sub>                    |
| DC rated operational current | ≤ 50 mA                                   |
| No-load current              | ≤ 25 mA                                   |
| Short-circuit protection     | yes                                       |
| Reverse polarity protection  | yes                                       |
| Output function              | NO contact, light operation, PNP          |
| Switching frequency          | ≤ 666 Hz                                  |
| Readiness delay              | ≤ 100 ms                                  |
| Response time typical        | < 1 ms                                    |
| <b>Mechanical data</b>       |                                           |
| Design                       | Tube, T8                                  |
| Dimensions                   | Ø 8 x 15.8 mm                             |
| Housing material             | Plastic, Thermoplastic material, Black    |
| Lens                         | plastic, Acrylic                          |
| Electrical connection        | Cable with connector, M8 × 1, 0.15 m, PVC |
| Number of cores              | 3                                         |

#### Features

- Cable with male end, PVC, M8 × 1, 150 mm
- Protection class IP67
- Ambient temperature: -20...+55 °C
- Ideal for confined spaces
- Operating voltage: 10...30 VDC
- PNP switching output, light operation

#### Wiring diagram



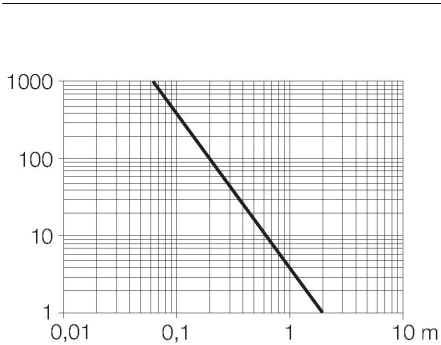
#### Functional principle

Opposed mode sensors consist of an emitter and receiver. They are installed opposite each other so that the light from the emitter is aimed 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 targets. An excellent contrast between light and dark conditions and an extremely high excess gain are typical of this sensing mode, thus allowing operation over larger distances and under difficult conditions.

Technical data

|                        |                      |
|------------------------|----------------------|
| Core cross-section     | 0.1 mm <sup>2</sup>  |
| Ambient temperature    | -20...+55 °C         |
| Protection class       | IP67                 |
| Power-on indication    | LED, Green           |
| Switching state        | LED, Red             |
| Error indication       | LED, green, Flashing |
| Excess gain indication | LED                  |
| Alarm display          | LED red Flashing     |
| Tests/approvals        |                      |
| Approvals              | CE                   |

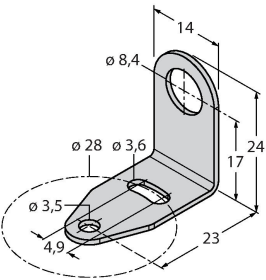
Excess gain curve  
Excess gain in relation to the distance



Accessories

SMB8MM 3067363

Mounting bracket, material VA 1.4401, for T8 or T8L series



Accessories

| Dimension drawing | Type        | ID      |                                                                                                                                                                                                                 |
|-------------------|-------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | PKG3M-2/TEL | 6625058 | Connection cable, female M8, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a> |
|                   | PKW3M-2/TEL | 6625064 | Connection cable, female M8, angled, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>   |