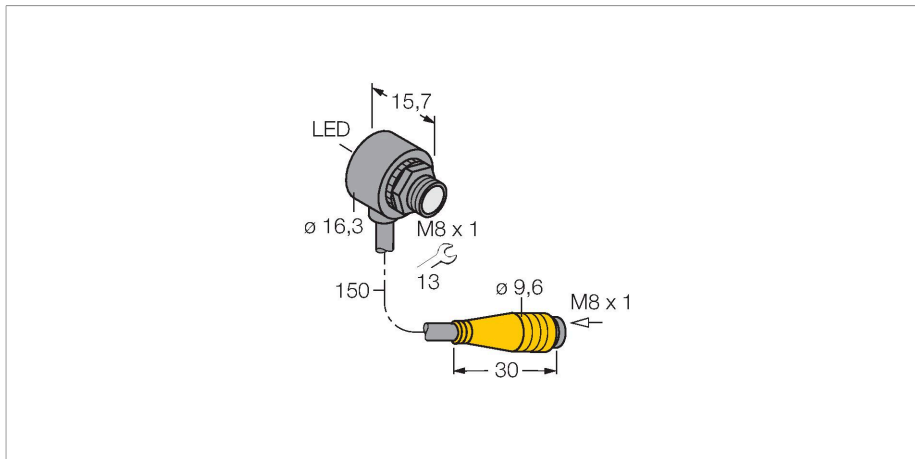


# T8RN6RQ

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

### Miniature Sensor



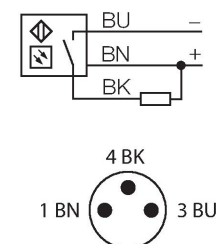
#### Technical data

Type	T8RN6RQ
ID no.	3066666
<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, dark operation, NPN
Switching frequency	≤ 666 Hz
Readiness delay	≤ 100 ms
Response time typical	< 1 ms
<b>Mechanical data</b>	
Design	Rectangular with thread, 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
- NPN switching output, dark operation

#### Wiring diagram

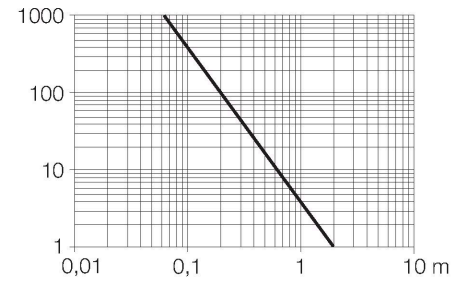


#### Functional principle

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. Excess gain curve  
Excess gain in relation to the distance

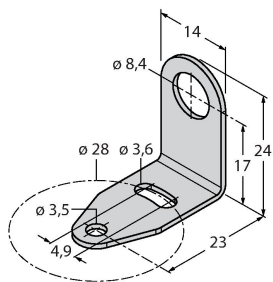
## Technical data

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
<b>Tests/approvals</b>	
Approvals	CE



## Accessories

SMB8MM 3067363



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

## Accessories

Dimension drawing	Type	ID no.	
	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>