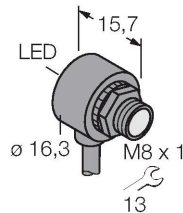


T8RN6R

Photoelectric Sensor – Opposed Mode Sensor (Emitter/Receiver)

Miniature Sensor



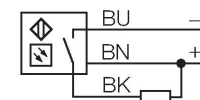
Technical data

Type	T8RN6R
ID	3066665
Optical data	
Function	Opposed mode sensor
Operating mode	Receiver
Range	0...2000 mm
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	< 10 % U _{ss}
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
Mechanical data	
Design	Tube, T8
Dimensions	Ø 8 x 15.8 mm
Housing material	Plastic, Thermoplastic material, Black
Lens	plastic, Acrylic
Electrical connection	Cable, 2 m, PVC
Number of cores	3

Features

- Cable, PVC, 2 m
- Protection class IP67
- Ambient temperature: -20...+55 °C
- Ideal for confined spaces
- Operating voltage: 10...30 VDC
- NPN switching output, dark operation

Wiring diagram

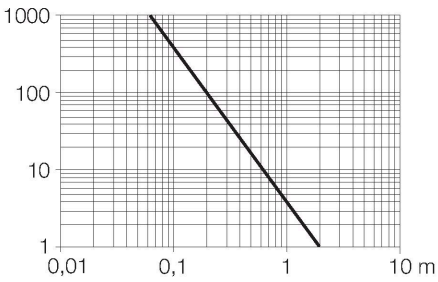


Functional principle

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

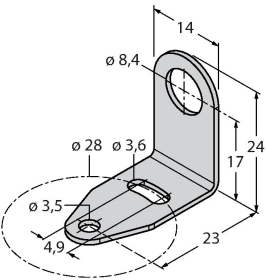
Technical data

Core cross-section	0.1 mm ²
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



Accessories

SMB8MM	3067363
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Mounting bracket, material VA 1.4401, for T8 or T8L series