

# TM18RP6RQ5

## Photoelectric Sensor – Opposed Mode Sensor (Receiver)

### Technical data

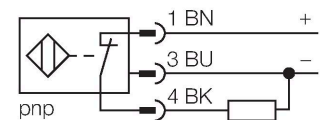
Type	TM18RP6RQ5
ID no.	3042056
<b>Optical data</b>	
Function	Opposed mode sensor
Operating mode	Receiver
Range	0...20000 mm
<b>Electrical data</b>	
Operating voltage	10...30 VDC
No-load current	≤ 25 mA
Short-circuit protection	yes / Cyclic
Reverse polarity protection	yes
Output function	NO contact, dark operation, PNP
Switching frequency	≤ 440 Hz
Readiness delay	≤ 100 ms
Response time typical	< 1.5 ms
<b>Mechanical data</b>	
Design	Rectangular with thread, TM18
Dimensions	Ø 18 x 30 x 30 x 41 mm
Housing material	Metal, Zinc Die-Cast with Nickel-Plating
Lens	plastic, Polycarbonate
Electrical connection	Cable with connector, M12 × 1, 0.15 m, PVC
Number of cores	4
Core cross-section	0.5 mm <sup>2</sup>
Ambient temperature	-40...+70 °C
Protection class	IP67 IP69
Special features	Encapsulated Wash down
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED
Alarm display	LED yellow Flashing
<b>Tests/approvals</b>	
Approvals	CE, UL



### Features

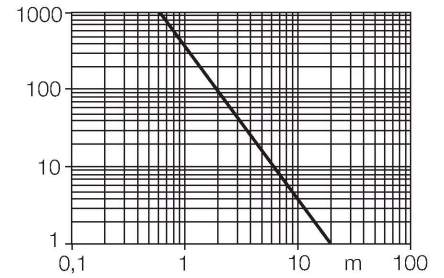
- Cable with male end M12 × 1, 4-pin, PUR, 150 mm
- Protection class IP67
- Ambient temperature: -40 °C...+70 °C
- Metal housing
- Operating voltage: 10...30 VDC
- PNP switching output, dark operation

### Wiring diagram



### Functional principle

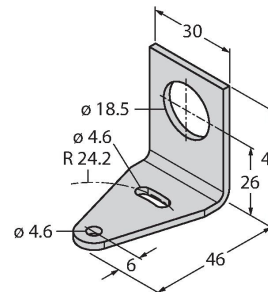
Opposed mode sensors consist of an emitter and receiver. They are installed opposite each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors 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



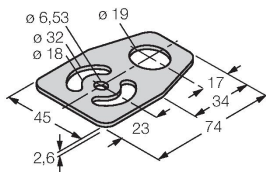
## Accessories

<b>SMBT18Y</b>	<b>3069554</b>
mounting bracket, rectangular, for sensors with 18 mm thread, 15.3 mm cable feedthrough or M12 x 1 male	

<b>SMB18A</b>	<b>3033200</b>
Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread	



<b>SMBAMS18P</b>	<b>3073134</b>
Mounting bracket, stainless steel, for sensors with 18 mm thread	



## Accessories

Dimension drawing	Type	ID no.	
	RKC4.4T-2/TEL	6625013	Connection cable, female M12, straight, 4-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>
	WKC4.4T-2/TEL	6625025	Connection cable, female M12, angled, 4-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>