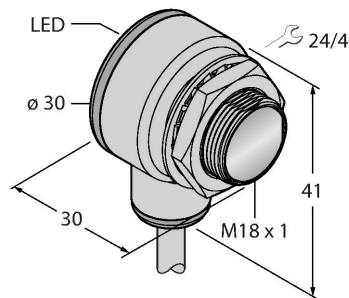


# TM186E

## Photoelectric Sensor – Opposed Mode Sensor (Emitter)



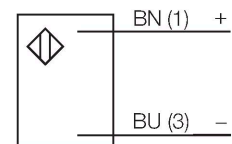
### Technical data

Type	TM186E
ID no.	3042006
<b>Optical data</b>	
Function	Opposed mode sensor
Operating mode	Emitter
Light type	Red
Wavelength	625 nm
Range	0...20000 mm
<b>Electrical data</b>	
Operating voltage	10...30 VDC
Residual ripple	< 10 % U <sub>ss</sub>
No-load current	≤ 25 mA
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, 2 m, PVC
Number of cores	2
Core cross-section	0.5 mm <sup>2</sup>
Ambient temperature	-40...+70 °C
Protection class	IP67
Special features	Encapsulated Wash down
Power-on indication	LED, Green

### Features

- Cable, 2 m
- Protection class IP67
- Ambient temperature: -40...+70 °C
- Metal housing
- Operating voltage: 10...30 VDC

### Wiring diagram



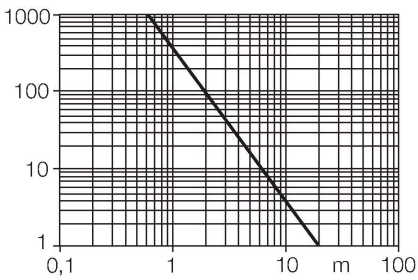
### Functional principle

Opposed mode sensors consist of an emitter and receiver. They are installed opposite to 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. The excellent light/dark contrast and the high excess gain allow operation over larger distances and under difficult conditions.

Excess gain curve  
Excess gain in relation to the distance

Technical data

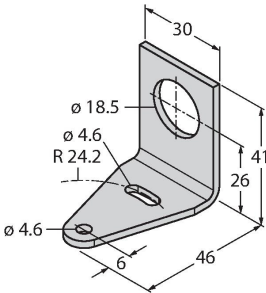
Excess gain indication	LED
Tests/approvals	
Approvals	CE, UL



Accessories

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

SMB18A	3033200
Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread	



SMBAMS18P	3073134
Mounting bracket, stainless steel, for sensors with 18 mm thread	

