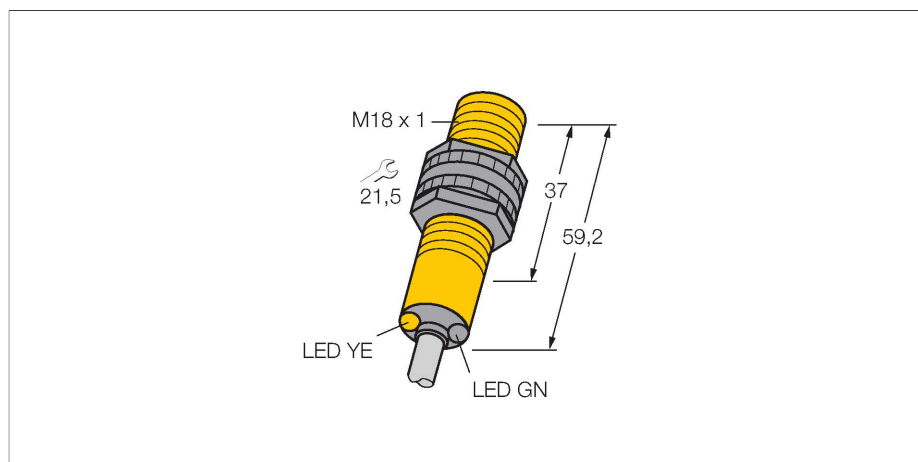


# S186E

## Photoelectric Sensor – Opposed Mode Sensor (Emitter)



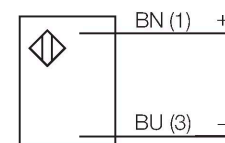
### Technical data

Type	S186E
ID no.	3029409
<b>Optical data</b>	
Function	Opposed mode sensor
Operating mode	Emitter
Light type	IR
Wavelength	950 nm
Range	0...20000 mm
<b>Electrical data</b>	
Operating voltage	10...30 VDC
Residual ripple	< 10 % U <sub>ss</sub>
Readiness delay	≤ 100 ms
<b>Mechanical data</b>	
Design	Threaded barrel, S18
Dimensions	Ø 18 mm
Housing material	Plastic, Thermoplastic material
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 IP69
Special features	Wash down
Power-on indication	LED, Green
Excess gain indication	LED

### Features

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

### 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

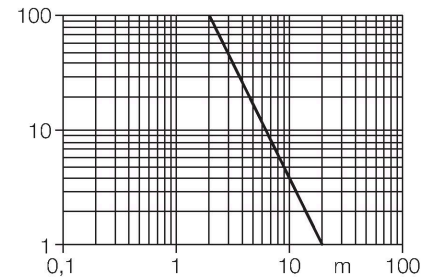
Excess gain in relation to the distance

## Technical data

### Tests/approvals

Approvals

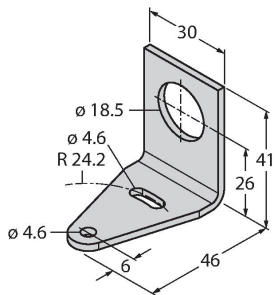
CE, UL, CSA



## Accessories

SMB18A

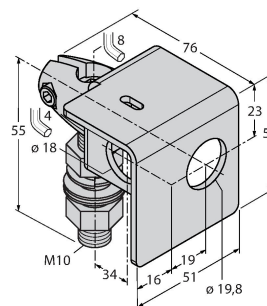
3033200



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

SMB18AFAM10

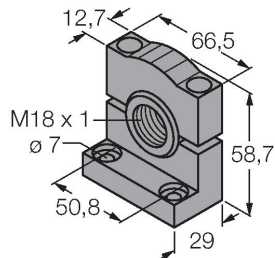
3012558



Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm

SMB3018SC

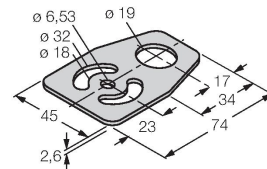
3053952



Mounting bracket, PTB black, for sensors with 18 mm thread

SMBAMS18P

3073134



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