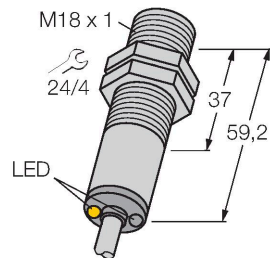


# M186E W/30

## Photoelectric Sensor – Opposed Mode Sensor (Emitter)



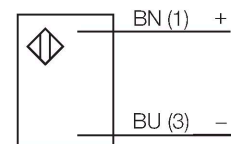
### Technical data

|                        |                                                 |
|------------------------|-------------------------------------------------|
| Type                   | M186E W/30                                      |
| ID                     | 3050465                                         |
| <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                 | Tube, M18                                       |
| Dimensions             | Ø 18 x 59.2 mm                                  |
| Housing material       | Metal, Stainless steel                          |
| Lens                   | plastic, Polycarbonate                          |
| Electrical connection  | Cable, 9 m, PVC                                 |
| Number of cores        | 2                                               |
| Core cross-section     | 0.5 mm <sup>2</sup>                             |
| Ambient temperature    | -40...+70 °C                                    |
| Protection class       | IP69                                            |
| Special features       | Chemical-resistant<br>Encapsulated<br>Wash down |
| Power-on indication    | LED, Green                                      |
| Excess gain indication | LED                                             |

### Features

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

### Wiring diagram



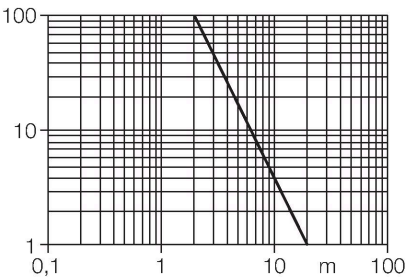
### Functional principle

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

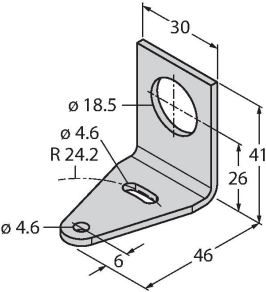
Technical data

| Tests/approvals |    |
|-----------------|----|
| Approvals       | CE |



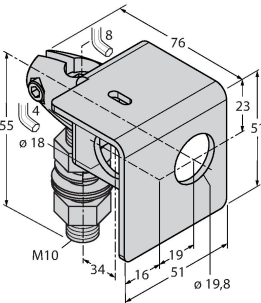
Accessories

SMB18A 3033200



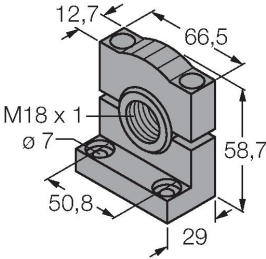
Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread

SMB18AFAM10 3012558



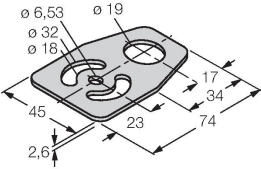
Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm

SMB3018SC 3053952



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

SMBAMS18P 3073134



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