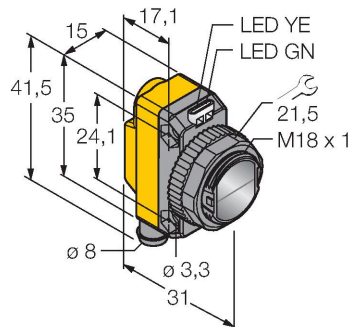


# QS186EQ7

## Photoelectric Sensor – Opposed Mode Sensor (Emitter)



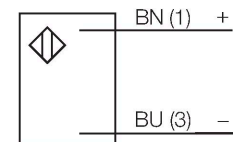
### Technical data

|                              |                               |
|------------------------------|-------------------------------|
| Type                         | QS186EQ7                      |
| ID                           | 3066425                       |
| <b>Optical data</b>          |                               |
| Function                     | Opposed mode sensor           |
| Operating mode               | Emitter                       |
| Light type                   | IR                            |
| Wavelength                   | 940 nm                        |
| Range                        | 0...20000 mm                  |
| <b>Electrical data</b>       |                               |
| Operating voltage            | 10...30 VDC                   |
| Residual ripple              | < 10 % U <sub>ss</sub>        |
| DC rated operational current | ≤ 100 mA                      |
| Short-circuit protection     | yes                           |
| Reverse polarity protection  | yes                           |
| Readiness delay              | ≤ 100 ms                      |
| <b>Mechanical data</b>       |                               |
| Design                       | Rectangular with thread, QS18 |
| Dimensions                   | Ø 18 x 31 x 15 x 35 mm        |
| Housing material             | Plastic, ABS                  |
| Lens                         | plastic, Acrylic              |
| Electrical connection        | Connector, M8 × 1, PVC        |
| Number of cores              | 4                             |
| Ambient temperature          | -20...+70 °C                  |
| Protection class             | IP67                          |
| Power-on indication          | LED, Green                    |
| Excess gain indication       | LED                           |

### Features

- Male connector, M8 × 1, 4-pin
- Protection class IP67
- LED all-round visible
- Operating voltage: 10...30 VDC

### Wiring diagram



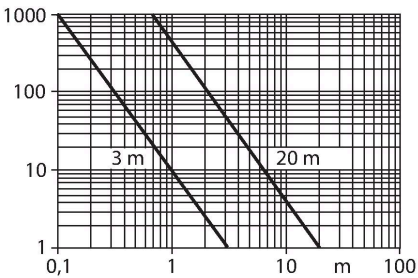
### Functional principle

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 (type 6EB/RB)

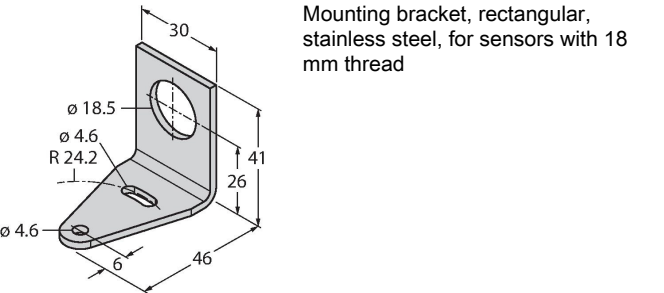
Technical data

| Tests/approvals |                                           |
|-----------------|-------------------------------------------|
| MTTF            | 530 years acc. to SN 29500 (Ed. 99) 40 °C |
| Approvals       | CE, cURus                                 |

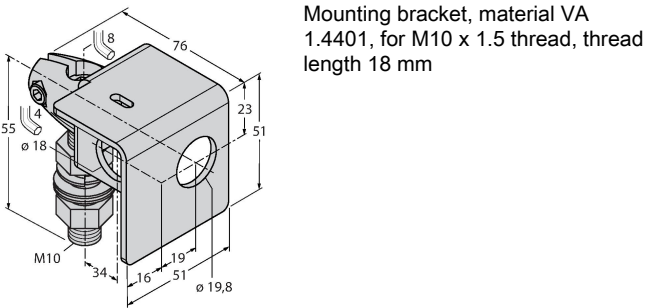


Accessories

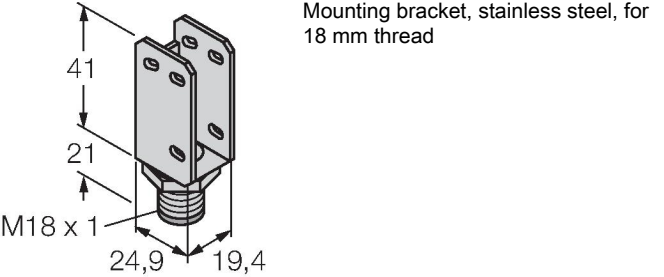
|        |         |
|--------|---------|
| SMB18A | 3033200 |
|--------|---------|



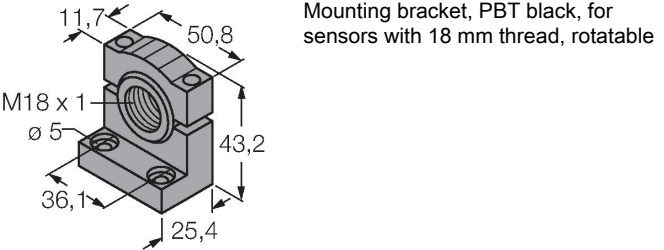
|             |         |
|-------------|---------|
| SMB18AFAM10 | 3012558 |
|-------------|---------|



|          |         |
|----------|---------|
| SMBQS18A | 3069721 |
|----------|---------|



|         |         |
|---------|---------|
| SMB18SF | 3052519 |
|---------|---------|



Accessories

| Dimension drawing | Type        | ID      |                                                                                                                                                                                                                 |
|-------------------|-------------|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | PKG4M-2/TEL | 6625061 | Connection cable, female M8, 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> |
|                   | PKW4M-2/TEL | 6625067 | Connection cable, female M8, 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>   |