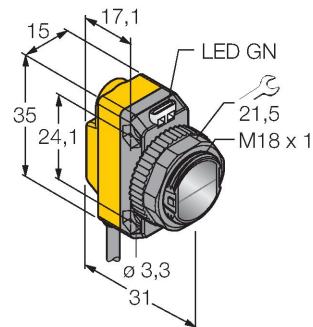


# QS186LE

## Photoelectric Sensor – Laser Emitter



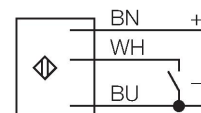
### Technical data

|                              |                               |
|------------------------------|-------------------------------|
| Type                         | QS186LE                       |
| ID                           | 3070252                       |
| <b>Optical data</b>          |                               |
| Function                     | Opposed mode sensor           |
| Operating mode               | Laser Emitter                 |
| Light type                   | Red                           |
| Wavelength                   | 650 nm                        |
| Laser class                  | ▲ 1                           |
| Range                        | 0...15000 mm                  |
| <b>Electrical data</b>       |                               |
| Operating voltage            | 10...30 VDC                   |
| Residual ripple              | < 10 % U <sub>ss</sub>        |
| DC rated operational current | ≤ 100 mA                      |
| No-load current              | ≤ 35 mA                       |
| Short-circuit protection     | yes                           |
| Reverse polarity protection  | yes                           |
| Readiness delay              | ≤ 0.25 s                      |
| Readiness delay              | ≤ 250 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, PMMA                 |
| Electrical connection        | Cable, 2 m, PVC               |
| Number of cores              | 2                             |
| Core cross-section           | 0.5 mm <sup>2</sup>           |
| Ambient temperature          | -10...+50 °C                  |

### Features

- Cable, PVC, 2 m
- Protection class IP67
- LED all-round visible
- Cable 2 m
- Laser class 1

### Wiring diagram



### Functional principle

Opposed mode sensors consist of an emitter and a receiver. They are installed opposite to each other whereby the emitted light aims 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 objects. The high light/dark contrast and the very high excess gain are typical for this function mode and enable operation over large distances and under difficult conditions.

#### Activation

By connecting the control input (PIN 2 WH) to ground (-) the laser beam is turned on. The laser beam is turned off again by feeding 10 ... 30 VDC to the control input or by non-connecting the wire.

#### Excess gain curve

Excess gain in relation to the distance (type 6EB/RB)

