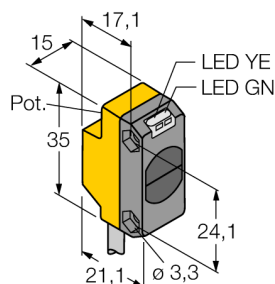


# Photoelectric Sensor

## Opposed Mode Sensor (Emitter/Receiver)

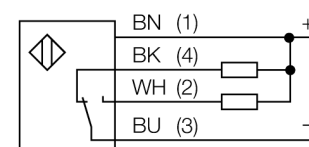
### QS18VN6RB W/30



|                                  |                                            |
|----------------------------------|--------------------------------------------|
| Type                             | QS18VN6RB W/30                             |
| ID                               | 3061671                                    |
| <b>Optical data</b>              |                                            |
| Function                         | Opposed mode sensor                        |
| Operating mode                   | Receiver                                   |
| Range                            | 0...3000 mm                                |
| <b>Electrical data</b>           |                                            |
| Operating voltage $U_s$          | 10...30 VDC                                |
| Residual ripple                  | < 10 % $U_s$                               |
| DC rated operating current $I_s$ | ≤ 100 mA                                   |
| Short-circuit protection         | yes                                        |
| Reverse polarity protection      | yes                                        |
| Output function                  | NO/NC, NPN                                 |
| Switching frequency              | ≤ 400 Hz                                   |
| Readiness delay                  | ≤ 100 ms                                   |
| Response time typical            | < 0.75 ms                                  |
| <b>Mechanical data</b>           |                                            |
| Design                           | Rectangular, QS18                          |
| Housing material                 | Plastic, ABS                               |
| Lens                             | plastic, Acrylic                           |
| Electrical connection            | Cable, 9 m, PVC                            |
| Number of cores                  | 4                                          |
| Core cross-section               | 0.35 mm <sup>2</sup>                       |
| Ambient temperature              | -20...+70 °C                               |
| Protection class                 | IP67                                       |
| <b>Power-on indication</b>       |                                            |
| Power-on indication              | LED, Green                                 |
| Switching state                  | LED, Yellow                                |
| Error indication                 | LED, green, Flashing                       |
| Excess gain indication           | LED, yellow, flashing                      |
| <b>Tests/approvals</b>           |                                            |
| MTTF                             | 2952 years acc. to SN 29500 (Ed. 99) 40 °C |
| Approvals                        | CE, cURus                                  |

- Cable, PVC, 9 m
- Protection class IP67
- LED all-round visible
- Operating voltage: 10...30 VDC
- NPN switching output, changeover

#### Wiring Diagram

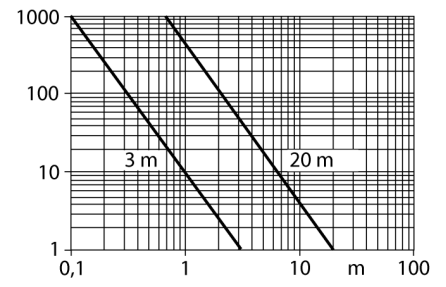


#### Functional principle

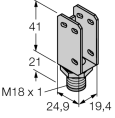
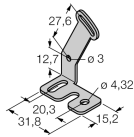
Opposed mode sensors consist of an emitter and receiver. They are installed opposite to each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors 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)



## Accessories

| Type code | Ident no. |                                                     | Dimension drawing                                                                   |
|-----------|-----------|-----------------------------------------------------|-------------------------------------------------------------------------------------|
| SMBQS18A  | 3069721   | Mounting bracket, stainless steel, for 18 mm thread |  |
| SMBQS18AF | 3067467   | Mounting bracket, stainless steel, for 18 mm thread |  |