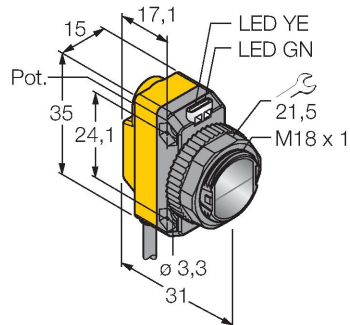


# QS18VN6LLP W/30'

## Photoelectric Sensor – Retroreflective Laser Sensor with Polarizing Filter



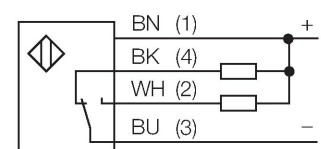
### Technical data

|                                |                               |
|--------------------------------|-------------------------------|
| Type                           | QS18VN6LLP W/30'              |
| ID no.                         | 3073236                       |
| <b>Optical data</b>            |                               |
| Function                       | Retroreflective Sensor        |
| Operating mode                 | Polarized                     |
| Reflector included in delivery | yes                           |
| Light type                     | Red polarized                 |
| Wavelength                     | 650 nm                        |
| Laser class                    | ▲ 1                           |
| Beam diameter                  | 4 at 10000 mm                 |
| Range                          | 100...10000 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                           |
| Output function                | NO/NC, NPN                    |
| Current output                 | 100 mA                        |
| Switching frequency            | ≤ 700 Hz                      |
| Readiness delay                | ≤ 200 ms                      |
| Response time typical          | < 0.7 ms                      |
| Setting option                 | Potentiometer                 |
| <b>Mechanical data</b>         |                               |
| Design                         | Rectangular with thread, QS18 |
| Dimensions                     | Ø 18 x 31 x 15 x 35 mm        |

### Features

- Cable, PVC, 9 m
- Protection class IP67
- LED, all-round visible
- Sensitivity adjusted via potentiometer
- Microprism reflector BRT-51X51BM recommended for ranges up to 10 m and self-adhesive reflector film BRT-TVHG-2X2 for ranges up to 1.5 m; included in scope of delivery
- Operating voltage: 10...30 VDC
- NPN switching output, changeover

### Wiring diagram



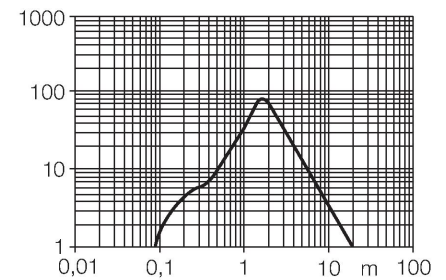
### Functional principle

Retro-reflective sensors incorporate emitter and receiver in the same compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages of opposed mode sensors (good contrast and high excess gain). Further it is merely required to install and wire a single device. A smaller sensing range and susceptibility of devices without polarisation filter can be of disadvantage when shiny objects have to be detected.

Excess gain curve  
Excess gain in relation to the distance  
(reflector type BRT-51X51BM)

## Technical data

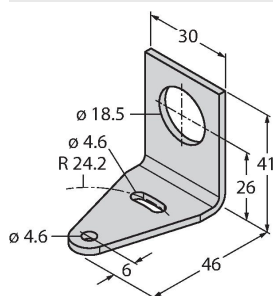
|                        |                       |
|------------------------|-----------------------|
| Housing material       | Plastic, ABS          |
| Lens                   | plastic, Acrylic      |
| Electrical connection  | Cable, 9 m, PVC       |
| Number of cores        | 4                     |
| Core cross-section     | 0.35 mm <sup>2</sup>  |
| Ambient temperature    | -10...+50 °C          |
| Protection class       | IP67                  |
| Special features       | Laser                 |
| Power-on indication    | LED, Green            |
| Switching state        | LED, Yellow           |
| Error indication       | LED, green, Flashing  |
| Excess gain indication | LED, yellow, flashing |
| <b>Tests/approvals</b> |                       |
| Approvals              | CE, cURus             |



## Accessories

### SMB18A

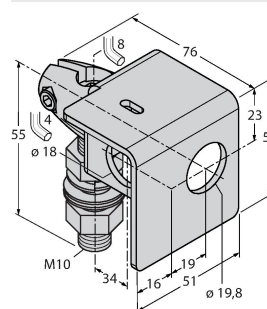
3033200



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

### SMB18AFAM10

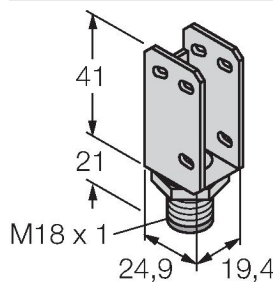
3012558



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

### SMBQS18A

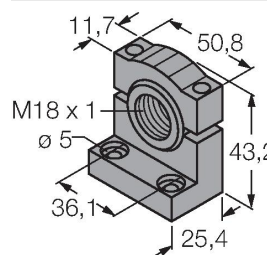
3069721



Mounting bracket, stainless steel, for 18 mm thread

### SMB18SF

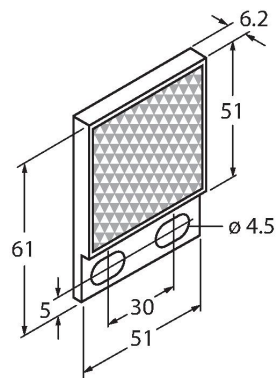
3052519



Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable

Accessories

| Dimension drawing | Type        | ID no.  |                                                                                                                              |
|-------------------|-------------|---------|------------------------------------------------------------------------------------------------------------------------------|
|                   | BRT-51X51BM | 3071791 | Rectangular reflector, reflection coefficient 2.0, material acrylic, ambient temperature -20 ... +60 °C, microprism geometry |



|             |         |                                                                                                       |
|-------------|---------|-------------------------------------------------------------------------------------------------------|
| BRT-TVHG2X2 | 3057260 | Rectangular reflective foil, reflection coefficient 0.8, ambient temperature -20 ... +60 °C, 4 sheets |
|-------------|---------|-------------------------------------------------------------------------------------------------------|

