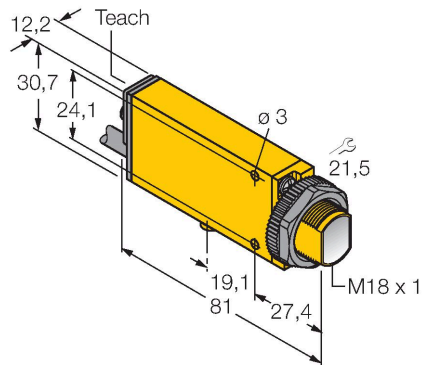


# SM2A312LPQD

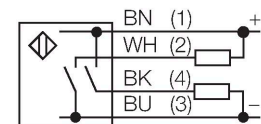
## Photoelectric Sensor – Retroreflective Sensor with Polarizing Filter



### Features

- Cable, PVC, 2 m
- Protection class IP67
- Sensitivity adjustable via potentiometer
- Alignment indicator
- Operating voltage: 24...240 VAC
- Switching output, bipolar
- Light/dark operation

### Wiring diagram



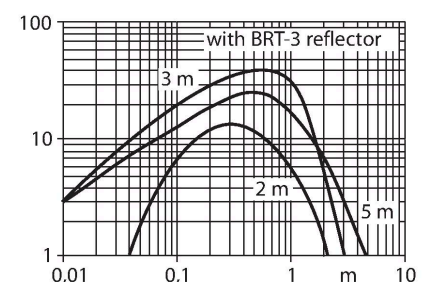
### Technical data

|                                |                                         |
|--------------------------------|-----------------------------------------|
| Type                           | SM2A312LPQD                             |
| ID no.                         | 3049775                                 |
| <b>Optical data</b>            |                                         |
| Function                       | Retroreflective Sensor                  |
| Operating mode                 | Polarized                               |
| Reflector included in delivery | no                                      |
| Light type                     | Red polarized                           |
| Wavelength                     | 650 nm                                  |
| Range                          | 0...3000 mm                             |
| <b>Electrical data</b>         |                                         |
| Operating voltage              | 24...240 VAC                            |
| Output function                | Relay output                            |
| Readiness delay                | ≤ 300 ms                                |
| Response time typical          | < 4 ms                                  |
| Setting option                 | Potentiometer                           |
| <b>Mechanical data</b>         |                                         |
| Design                         | Rectangular with thread, Mini Beam      |
| Dimensions                     | Ø 18 mm                                 |
| Housing material               | Plastic, Thermoplastic material, Yellow |
| Lens                           | plastic, Acrylic                        |
| Electrical connection          | Connectors, 1/2", PVC                   |
| Number of cores                | 3                                       |
| Ambient temperature            | -20...+70 °C                            |
| Protection class               | IP67                                    |
| Special features               | Encapsulated                            |
| Excess gain indication         | LED                                     |

### Functional principle

Retro-reflective sensors incorporate emitter and receiver in a single 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



## Technical data

### Tests/approvals

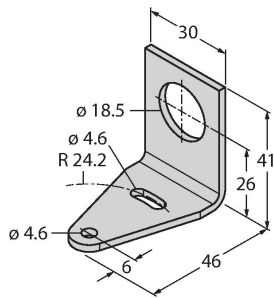
Approvals

CE, cURus, CSA

## Accessories

SMB18A

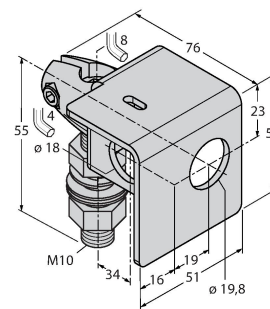
3033200



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

SMB18AFAM10

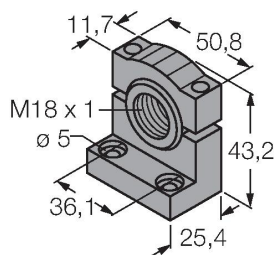
3012558



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

SMB18SF

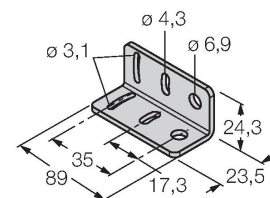
3052519



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

SMB312B

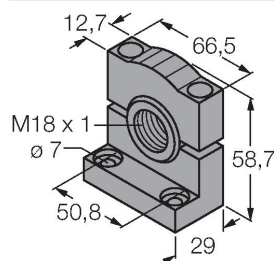
3025519



Mounting bracket, stainless steel, for MINI-BEAM NAMUR

SMB3018SC

3053952



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

Accessories

| Dimension drawing                                                                                                                                                                                                              | Type  | ID no.  |                                                                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------|-------------------------------------------------------------------------------------------------|
| <p>Technical drawing of a round reflector. The front view shows a circle with a central hole of diameter 5.2 mm [0.21]. The side view shows a cylinder with an outer diameter of 81 mm [3.19] and a height of 7 mm [0.28].</p> | BRT-3 | 3016164 | Round reflector, reflection coefficient 1.0, material acrylic, ambient temperature -20...+60 °C |