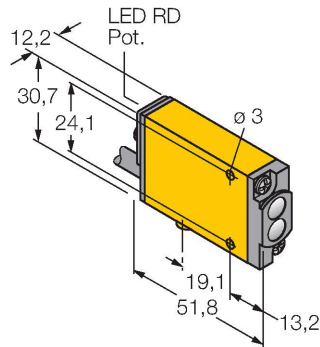


# SM2A312DBZ

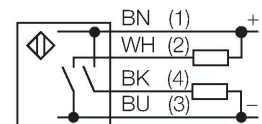
## Photoelectric Sensor – Diffuse Mode Sensor



### 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                   | SM2A312DBZ                              |
| ID                     | 3026473                                 |
| <b>Optical data</b>    |                                         |
| Function               | Proximity switch                        |
| Operating mode         | Diffuse                                 |
| Light type             | IR                                      |
| Wavelength             | 650 nm                                  |
| Range                  | 300 mm                                  |
| <b>Electrical data</b> |                                         |
| Operating voltage      | 24...240 VAC                            |
| Output function        | Relay output                            |
| Readiness delay        | ≤ 300 ms                                |
| Response time typical  | < 8 ms                                  |
| Setting option         | Potentiometer                           |
| <b>Mechanical data</b> |                                         |
| Design                 | Rectangular, Mini Beam                  |
| Housing material       | Plastic, Thermoplastic material, Yellow |
| Lens                   | plastic, Acrylic                        |
| Electrical connection  | Cable, 2 m, PVC                         |
| Number of cores        | 2                                       |
| Ambient temperature    | -20...+70 °C                            |
| Protection class       | IP67                                    |
| Special features       | Encapsulated                            |
| Excess gain indication | LED                                     |
| <b>Tests/approvals</b> |                                         |
| Approvals              | CE, cURus, CSA                          |

### Functional principle

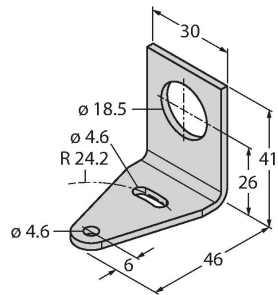
Diffuse mode sensors incorporate the emitter and receiver in a single housing. However, diffuse mode sensors do not detect the interruption of the light beam like opposed mode sensors, but the reflection of the target. A target is detected if it reflects a sufficient amount of light back to the receiver. The switching distance of diffuse mode sensors thus largely depends on the reflectivity of the target.

Excess gain curve  
Excess gain in relation to the distance

## Accessories

SMB18A

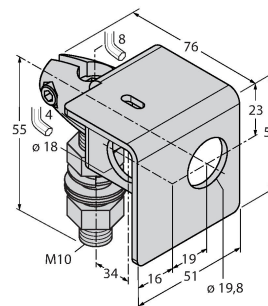
3033200



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

SMB18AFAM10

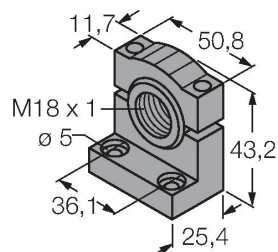
3012558



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

SMB18SF

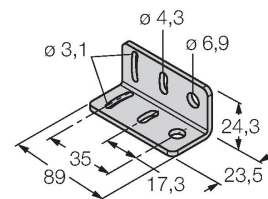
3052519



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

SMB312B

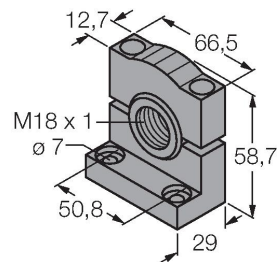
3025519



Mounting bracket, stainless steel, for MINI-BEAM NAMUR

SMB3018SC

3053952



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