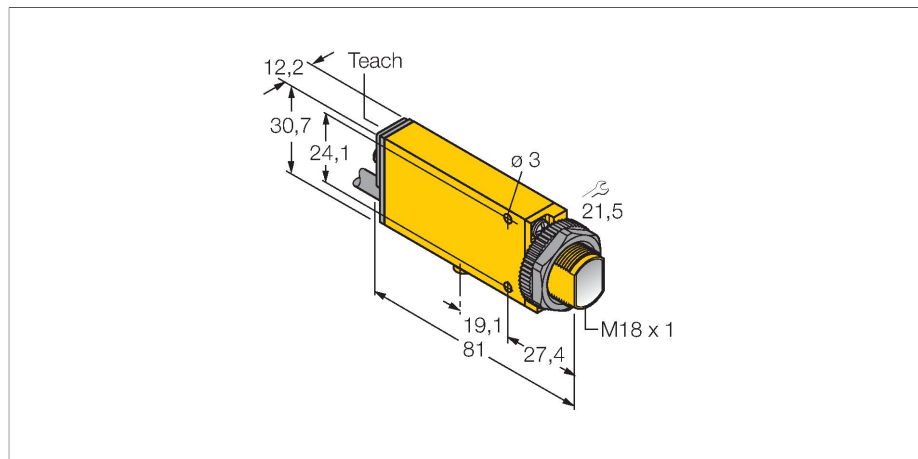


# SMU315LPQDP

## Photoelectric Sensor – Retroreflective Sensor with Polarizing Filter



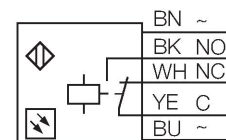
### Technical data

|                                |                                         |
|--------------------------------|-----------------------------------------|
| Type                           | SMU315LPQDP                             |
| ID                             | 3063160                                 |
| <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 VDC                            |
| Operating voltage              | 24...240 VAC                            |
| DC rated operational current   | ≤ 3000 mA                               |
| AC rated operational current   | ≤ 3000 mA                               |
| Output function                | NO/NC, Relay output                     |
| Switching frequency            | ≤ 25 Hz                                 |
| Readiness delay                | ≤ 0 ms                                  |
| Response time typical          | < 20 ms                                 |
| Max. DC switching capacity     | 1 W                                     |
| Setting option                 | Potentiometer                           |
| <b>Mechanical data</b>         |                                         |
| Design                         | Rectangular with thread, Mini Beam      |
| Dimensions                     | Ø 18 x 81 x 12.3 x 30.7 mm              |
| Housing material               | Plastic, Thermoplastic material, Yellow |
| Lens                           | plastic, Acrylic                        |
| Electrical connection          | Cable with connector, 1/2", 0.15 m, PVC |

### Features

- Cable, PVC, 2 m
- Protection class IP67
- Sensitivity adjustable via potentiometer
- Alignment indicator
- Operating voltage: 24...240 VDC or 24...240 VAC
- Relay output

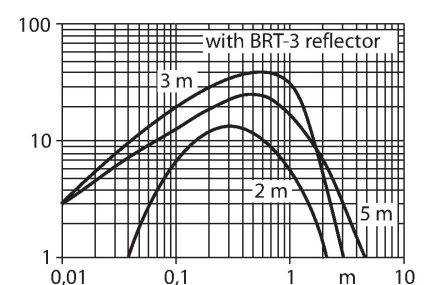
### Wiring diagram



### 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

|                        |                     |
|------------------------|---------------------|
| Number of cores        | 5                   |
| Core cross-section     | 0.5 mm <sup>2</sup> |
| Ambient temperature    | -20...+55 °C        |
| Protection class       | IP67                |
| Switching state        | LED, Red            |
| Excess gain indication | LED, red, flashing  |
| Tests/approvals        |                     |
| Approvals              | CE, cURus, CSA      |

## Accessories

|  |                                                                                                                  |  |                                                                                                                         |
|--|------------------------------------------------------------------------------------------------------------------|--|-------------------------------------------------------------------------------------------------------------------------|
|  | <b>SMB18A</b><br><b>3033200</b><br>Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread |  | <b>SMB18AFAM10</b><br><b>3012558</b><br>Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm |
|  | <b>SMB18SF</b><br><b>3052519</b><br>Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable        |  | <b>SMB312B</b><br><b>3025519</b><br>Mounting bracket, stainless steel, for MINI-BEAM NAMUR                              |
|  | <b>SMB3018SC</b><br><b>3053952</b><br>Mounting bracket, PTB black, for sensors with 18 mm thread                 |  |                                                                                                                         |

Accessories

| Dimension drawing                                                                                                                                                                                                                                                               | Type  | ID      |                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---------|-------------------------------------------------------------------------------------------------|
| <p>Technical drawing of a round reflector (BRT-3). The front view shows a circle with a central hole of diameter <math>\varnothing 5.2</math> [0.21]. The side view shows a cylinder with a height of 7 [0.28] and an outer diameter of <math>\varnothing 81</math> [3.19].</p> | BRT-3 | 3016164 | Round reflector, reflection coefficient 1.0, material acrylic, ambient temperature -20...+60 °C |