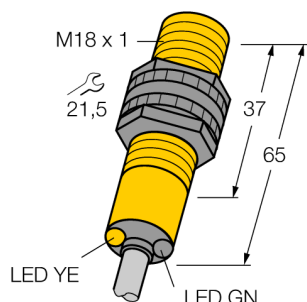


# Photoelectric Sensor

## Diffuse Mode Sensor with Fixed-Field Background Suppression

### S18AW3FF25 W/30



- Cable, 2 m
- Protection class IP67
- Ambient temperature: -40...+70 °C

|      |                 |
|------|-----------------|
| Type | S18AW3FF25 W/30 |
| ID   | 3058420         |

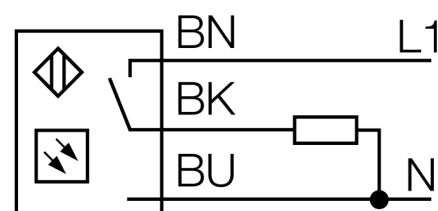
|                |                                        |
|----------------|----------------------------------------|
| Optical data   |                                        |
| Function       | Proximity switch                       |
| Operating mode | Background suppression, non-adjustable |
| Light type     | IR                                     |
| Wavelength     | 880 nm                                 |
| Range          | 0...25 mm                              |

|                              |                               |
|------------------------------|-------------------------------|
| Electrical data              |                               |
| Operating voltage $U_s$      | 20...250VAC                   |
| AC rated operational current | ≤ 200 mA                      |
| Output function              | Light operation, Relay output |
| Switching frequency          | ≤ 40 Hz                       |
| Readiness delay              | ≤ 100 ms                      |
| Response time typical        | < 16 ms                       |

|                       |                                 |
|-----------------------|---------------------------------|
| Mechanical data       |                                 |
| Design                | Tube, S18                       |
| Dimensions            | Ø 18 x 65 mm                    |
| Housing material      | Plastic, Thermoplastic material |
| Lens                  | plastic, Acrylic                |
| Electrical connection | Cable, 9 m, PVC                 |
| Number of cores       | 3                               |
| Core cross-section    | 0.5 mm <sup>2</sup>             |
| Ambient temperature   | -40...+70 °C                    |
| Protection class      | IP67<br>IP69                    |

|                        |             |
|------------------------|-------------|
| Special features       |             |
| Power-on indication    | LED, Green  |
| Switching state        | LED, Yellow |
| Excess gain indication | LED         |

#### Wiring Diagram

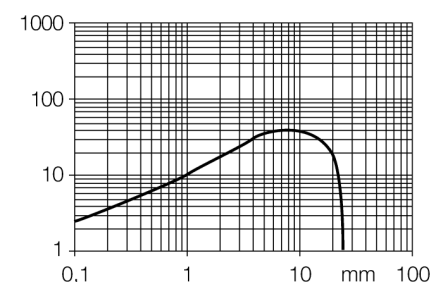


#### Functional principle

The emitter and receiver are incorporated in a single housing. The light reflection of the target is detected and triggers the sensor to switch. Thus the switching distance largely depends on the reflectivity of the target.

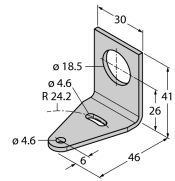
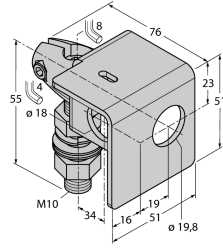
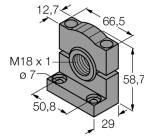
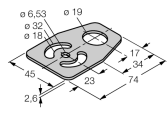
#### Excess gain curve

Excess gain in relation to the distance



| Tests/approvals |                                           |
|-----------------|-------------------------------------------|
| MTTF            | 448 years acc. to SN 29500 (Ed. 99) 40 °C |
| Approvals       | CE, UL, CSA                               |

## Accessories

| Type code   | Ident no. |                                                                                 | Dimension drawing                                                                     |
|-------------|-----------|---------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 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 |    |
| SMB3018SC   | 3053952   | Mounting bracket, PTB black, for sensors with 18 mm thread                      |   |
| SMBAMS18P   | 3073134   | Mounting bracket, stainless steel, for sensors with 18 mm thread                |  |