

# T18SN6FF50 W/30

## Photoelectric Sensor – Diffuse Mode Sensor with Fixed-Field Background Suppression



### Technical data

|                             |                                        |
|-----------------------------|----------------------------------------|
| Type                        | T18SN6FF50 W/30                        |
| ID                          | 3033915                                |
| <b>Optical data</b>         |                                        |
| Function                    | Proximity switch                       |
| Operating mode              | Background suppression, non-adjustable |
| Light type                  | IR                                     |
| Wavelength                  | 880 nm                                 |
| Range                       | 0...50 mm                              |
| <b>Electrical data</b>      |                                        |
| Operating voltage           | 10...30 VDC                            |
| No-load current             | ≤ 25 mA                                |
| Short-circuit protection    | yes / Cyclic                           |
| Reverse polarity protection | yes                                    |
| Output function             | Connection programmable, NPN           |
| Switching frequency         | ≤ 160 Hz                               |
| Readiness delay             | ≤ 100 ms                               |
| Response time typical       | < 3 ms                                 |
| Overcurrent release         | > 220 mA                               |
| <b>Mechanical data</b>      |                                        |
| Design                      | Tube, T18                              |
| Dimensions                  | Ø 18 x 30 x 30 x 41.5 mm               |
| Housing material            | Plastic, Thermoplastic material        |
| Lens                        | plastic, Acrylic                       |
| Electrical connection       | Cable, 9 m, PVC                        |
| Number of cores             | 4                                      |
| Core cross-section          | 0.5 mm <sup>2</sup>                    |

### Features

- Cable, 2 m
- Protection class IP67
- Ambient temperature: -40...+70 °C
- Operating voltage: 10...30 VDC
- NPN switching output, changeover

### Wiring diagram



### Functional principle

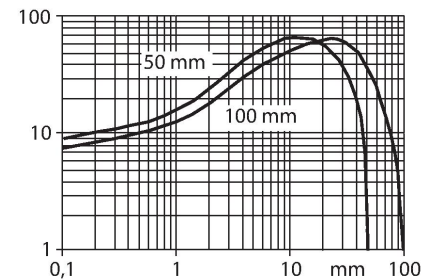
The emitter and receiver are incorporated in a single housing. The light reflection of the target is detected and triggers the sensor to switch. Thus the switching distance largely depends on the reflectivity of the target.

Excess gain curve

Excess gain in relation to the distance

## Technical data

|                        |                                                 |
|------------------------|-------------------------------------------------|
| Ambient temperature    | -40...+70 °C                                    |
| Protection class       | IP67<br>IP69                                    |
| Special features       | Chemical-resistant<br>Encapsulated<br>Wash down |
| Power-on indication    | LED, Green                                      |
| Switching state        | LED, Yellow                                     |
| Error indication       | LED, green, Flashing                            |
| Excess gain indication | LED                                             |
| Alarm display          | LED yellow Flashing                             |
| <b>Tests/approvals</b> |                                                 |
| MTTF                   | 448 years acc. to SN 29500 (Ed. 99) 40 °C       |
| Approvals              | CE, UL, CSA                                     |



## Accessories

**SMB1815SF**

**3053279**

Mounting bracket, PBT black, for PICO-GUARD points

**SMB18A**

**3033200**

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

**SMB18FM**

**3079421**

mounting bracket, black, M22 x1.5 mm, male thread, female thread M18 x 1, for sensors with 18 mm thread

**SMBAMS18P**

**3073134**

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