

# S18SN6FF25Q

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



### Technical data

|                             |                                        |
|-----------------------------|----------------------------------------|
| Type                        | S18SN6FF25Q                            |
| ID                          | 3037298                                |
| <b>Optical data</b>         |                                        |
| Function                    | Proximity switch                       |
| Operating mode              | Background suppression, non-adjustable |
| Light type                  | IR                                     |
| Wavelength                  | 880 nm                                 |
| Range                       | 0...25 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, S18                              |
| Dimensions                  | Ø 18 x 84.1 mm                         |
| Housing material            | Plastic, Thermoplastic material        |
| Lens                        | plastic, Acrylic                       |
| Electrical connection       | Connector, M12 × 1, PVC                |
| Number of cores             | 4                                      |
| Ambient temperature         | -40...+70 °C                           |

### Features

- M12 × 1 male connector, 4-pin
- Protection classes IP67/IP69K
- Ambient temperature: -40 °C...+70 °C
- Operating voltage: 10...30 VDC
- NPN switching output, changeover

### Wiring diagram



### Functional principle

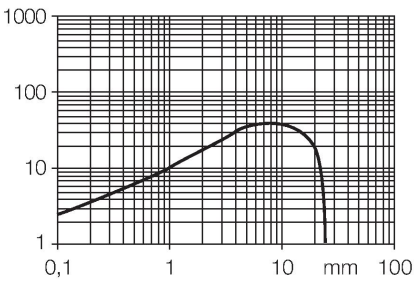
The emitter and receiver are incorporated in a single housing. The light reflection of the target is detected and triggers the sensor to switch. Thus the switching distance largely depends on the reflectivity of the target.

Excess gain curve

Excess gain in relation to the distance

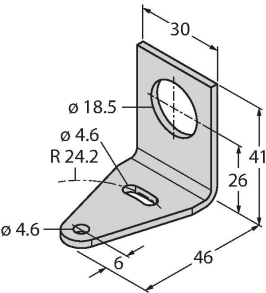
Technical data

|                        |                                           |
|------------------------|-------------------------------------------|
| Protection class       | IP67<br>IP69                              |
| Special features       | 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                       |
| Tests/approvals        |                                           |
| MTTF                   | 448 years acc. to SN 29500 (Ed. 99) 40 °C |
| Approvals              | CE, UL, CSA                               |



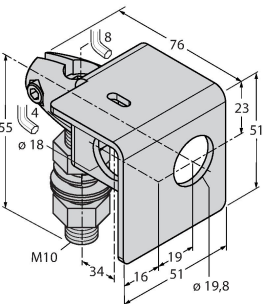
Accessories

SMB18A 3033200



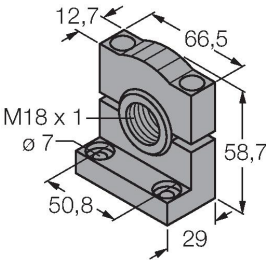
Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread

SMB18AFAM10 3012558



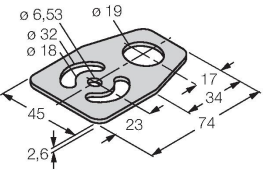
Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm

SMB3018SC 3053952



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

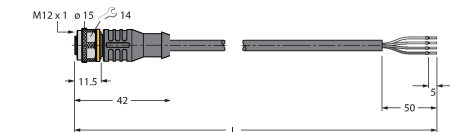
SMBAMS18P 3073134



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

Accessories

| Dimension drawing | Type          | ID      |  |
|-------------------|---------------|---------|--|
|                   | RKC4.4T-2/TEL | 6625013 |  |



Connection cable, female M12, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see [www.turck.com](http://www.turck.com)

| Dimension drawing                                                                 | Type          | ID      |                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|---------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | WKC4.4T-2/TEL | 6625025 | Connection cable, female M12, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a> |