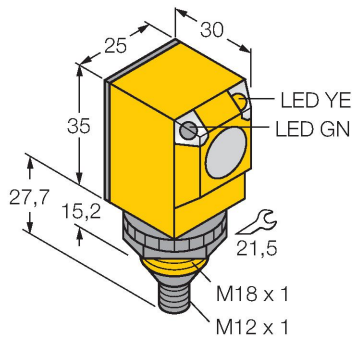


# Q25SP6FF50Q

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



### Technical data

|                             |                                        |
|-----------------------------|----------------------------------------|
| Type                        | Q25SP6FF50Q                            |
| ID no.                      | 3031939                                |
| <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             | ≤ 35 mA                                |
| Short-circuit protection    | yes / Cyclic                           |
| Reverse polarity protection | yes                                    |
| Output function             | Connection programmable, PNP           |
| Switching frequency         | ≤ 160 Hz                               |
| Readiness delay             | ≤ 100 ms                               |
| Response time typical       | < 3 ms                                 |
| Overcurrent release         | > 220 mA                               |
| <b>Mechanical data</b>      |                                        |
| Design                      | Rectangular, Q25                       |
| Dimensions                  | Ø 18 x 30 x 25 x 62.7 mm               |
| Housing material            | Plastic, Thermoplastic material        |
| Lens                        | plastic, Acrylic                       |
| Electrical connection       | Connectors, 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
- PNP 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

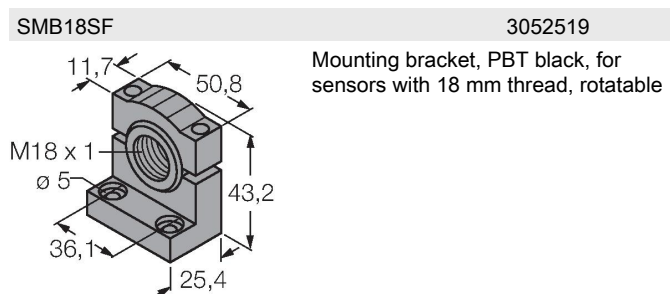
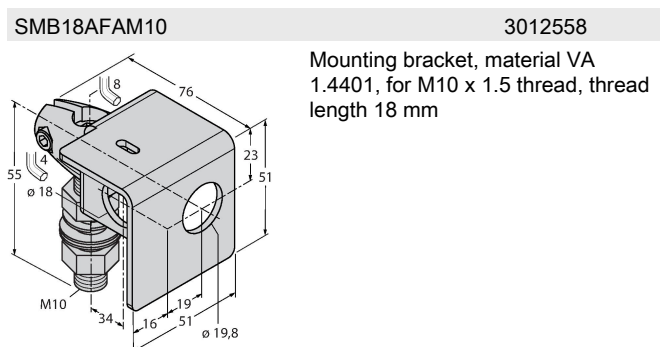
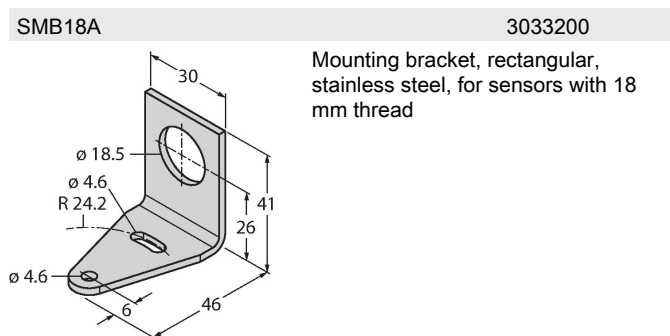
Excess gain in relation to the distance

## Technical data

|                        |                                                 |
|------------------------|-------------------------------------------------|
| Protection class       | 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



Accessories

| Dimension drawing                                                                 | Type          | ID no.  |                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 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 <a href="http://www.turck.com">www.turck.com</a> |
|  | 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>   |