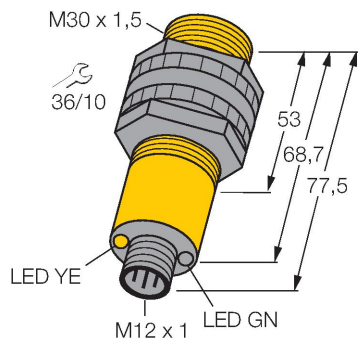


# S30SP6RQ

## Photoelectric Sensor – Opposed Mode Sensor (Receiver)



### Features

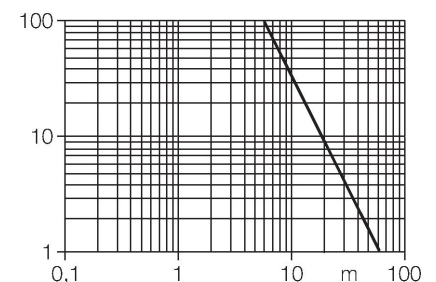
- M12 × 1 male connector, 4-pin
- Protection classes IP67/IP69K
- Ambient temperature: -40 °C...+70 °C
- Selectable light/dark operation or light operation with alarm function
- Operating voltage: 10...30 VDC
- PNP switching output, changeover

### Wiring diagram



### Functional principle

Opposed mode sensors consist of an emitter and receiver. They are installed opposite each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque targets. An excellent contrast between light and dark conditions and an extremely high excess gain are typical of this sensing mode, thus allowing operation over larger distances and under difficult conditions. Excess gain curve  
Excess gain in relation to the distance



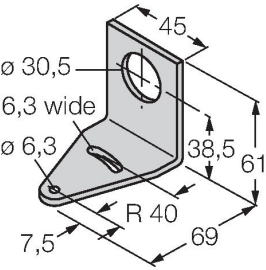
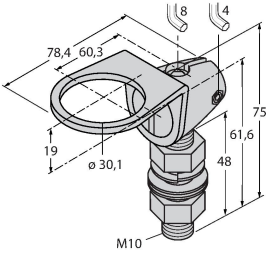
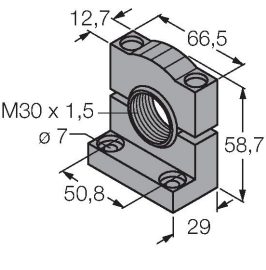
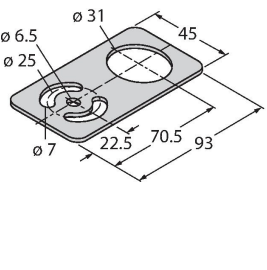
### Technical data

|                             |                                 |
|-----------------------------|---------------------------------|
| Type                        | S30SP6RQ                        |
| ID                          | 3033378                         |
| <b>Optical data</b>         |                                 |
| Function                    | Opposed mode sensor             |
| Operating mode              | Receiver                        |
| Range                       | 0...60000 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, PNP    |
| Switching frequency         | ≤ 160 Hz                        |
| Readiness delay             | ≤ 100 ms                        |
| Response time typical       | < 3 ms                          |
| Overcurrent release         | > 220 mA                        |
| <b>Mechanical data</b>      |                                 |
| Design                      | Tube, S30                       |
| Dimensions                  | Ø 30 x 77.5 mm                  |
| Housing material            | Plastic, Thermoplastic material |
| Lens                        | plastic, Acrylic                |
| Electrical connection       | Connector, M12 × 1, PVC         |
| Number of cores             | 4                               |
| Ambient temperature         | -40...+70 °C                    |
| Protection class            | IP69                            |
| Special features            | Encapsulated<br>Wash down       |

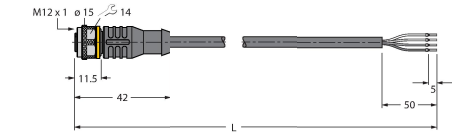
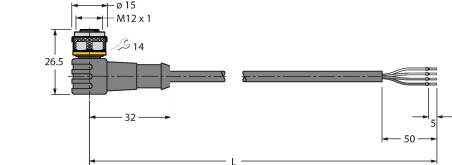
Technical data

|                        |                      |
|------------------------|----------------------|
| 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        |                      |
| Approvals              | CE, UL, CSA          |

Accessories

|                                                                                     |                                                                              |                                                                                      |                                                                              |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| <b>SMB30A</b>                                                                       | <b>3032723</b>                                                               | <b>SMB30FAM10</b>                                                                    | <b>3011185</b>                                                               |
|   | Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread |   | Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm |
| <b>SMB30SC</b>                                                                      | <b>3052521</b>                                                               | <b>SMBAMS30P</b>                                                                     | <b>3073135</b>                                                               |
|  | Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable        |  | Mounting bracket, stainless steel, for sensors with 30 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 <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>   |