

# Photoelectric Sensor

## Diffuse Mode Sensor with Fixed-Field Background Suppression

### S30RW3FF400Q3

|      |               |
|------|---------------|
| Type | S30RW3FF400Q3 |
| ID   | 3036904       |

|                |                                        |
|----------------|----------------------------------------|
| Optical data   |                                        |
| Function       | Proximity switch                       |
| Operating mode | Background suppression, non-adjustable |
| Light type     | IR                                     |
| Wavelength     | 880 nm                                 |
| Range          | 0...400 mm                             |

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

|                       |                                 |
|-----------------------|---------------------------------|
| Mechanical data       |                                 |
| Design                | Tube, S30                       |
| Dimensions            | $\varnothing 30$ mm             |
| Housing material      | Plastic, Thermoplastic material |
| Lens                  | plastic, Acrylic                |
| Electrical connection | Connector, M12 $\times$ 1, PVC  |
| Number of cores       | 5                               |
| Ambient temperature   | -40...+70 °C                    |
| Protection class      | IP69                            |

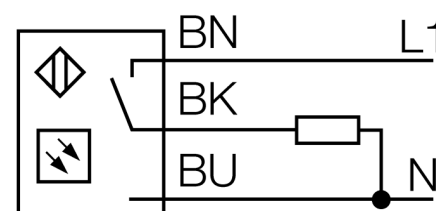
|                        |              |
|------------------------|--------------|
| Special features       |              |
|                        | Encapsulated |
|                        | Wash down    |
| Power-on indication    | LED, Green   |
| Switching state        | LED, Yellow  |
| Excess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

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



- M12  $\times$  1 male connector, 4-pin
- Protection classes IP67/IP69K
- Ambient temperature: -40 °C...+70 °C

#### Wiring Diagram

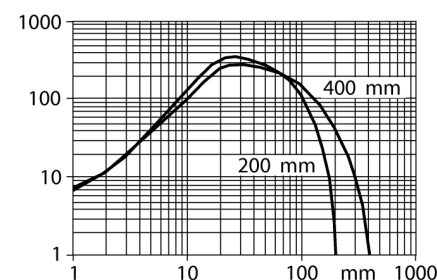


#### Functional principle

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



## Accessories

| Type code  | Ident no. |                                                                              | Dimension drawing |
|------------|-----------|------------------------------------------------------------------------------|-------------------|
| SMB30A     | 3032723   | Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread |                   |
| SMB30FAM10 | 3011185   | Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm |                   |
| SMB30SC    | 3052521   | Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable        |                   |
| SMBAMS30P  | 3073135   | Mounting bracket, stainless steel, for sensors with 30 mm thread             |                   |