

# Photoelectric Sensor

## Diffuse Mode Sensor with Fixed-Field Background Suppression

### S30RW3FF200 W/30

Type	S30RW3FF200 W/30
ID	3033949

Optical data	
Function	Proximity switch
Operating mode	Background suppression, non-adjustable
Light type	IR
Wavelength	880 nm
Range	0...200 mm

Electrical data	
Operating voltage $U_s$	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	Cable, 9 m, PVC
Number of cores	3
Ambient temperature	-40...+70 °C
Protection class	IP67

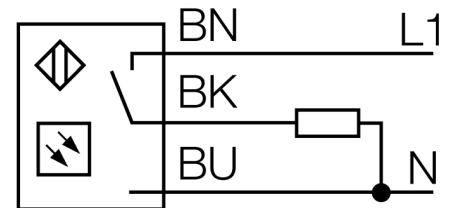
Special features	
Power-on indication	LED, Green
Switching state	LED, Yellow
Excess gain indication	LED

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



- Cable, 2 m
- Protection class IP67
- Ambient temperature: -40...+70 °C

#### Wiring Diagram

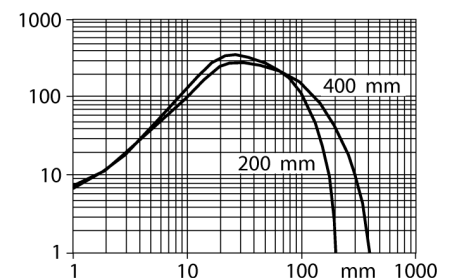


#### Functional principle

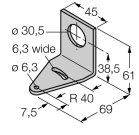
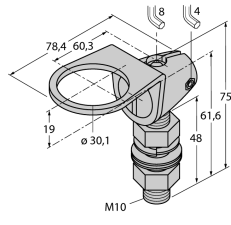
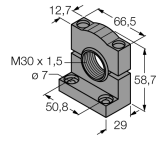
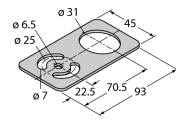
The emitter and receiver are incorporated in a single housing. The light reflection of the target is detected and triggers the sensor to switch. Thus the switching distance largely depends on the reflectivity of the target.

#### 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	 <p>Technical drawing of a rectangular stainless steel mounting bracket. Dimensions include: overall width 45 mm, hole diameter <math>\varnothing 30.5</math> mm, hole offset 6.3 mm from the left edge, hole diameter <math>\varnothing 6.3</math> mm, hole offset 6.1 mm from the top edge, hole diameter <math>\varnothing 7.5</math> mm, and a radius of R 40 mm.</p>
SMB30FAM10	3011185	Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm	 <p>Technical drawing of a stainless steel mounting bracket with an M10 x 1.5 thread. Dimensions include: overall width 78.4 mm, hole diameter <math>\varnothing 60.3</math> mm, hole offset 19 mm from the left edge, hole diameter <math>\varnothing 30.1</math> mm, hole offset 1 mm from the top edge, overall height 75 mm, mounting hole diameter <math>\varnothing 8</math> mm, mounting hole offset 4 mm from the right edge, and a distance of 61.6 mm from the top edge to the start of the thread. The thread length is 30 mm.</p>
SMB30SC	3052521	Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable	 <p>Technical drawing of a black PBT rotatable mounting bracket for a 30 mm thread. Dimensions include: overall width 66.5 mm, hole diameter <math>\varnothing 12.7</math> mm, hole offset 12.7 mm from the left edge, hole diameter <math>\varnothing 7</math> mm, hole offset 50.8 mm from the left edge, overall height 58.7 mm, and a distance of 29 mm from the bottom edge to the start of the thread. The thread is M30 x 1.5.</p>
SMBAMS30P	3073135	Mounting bracket, stainless steel, for sensors with 30 mm thread	 <p>Technical drawing of a stainless steel mounting bracket for a 30 mm thread. Dimensions include: overall width 45 mm, hole diameter <math>\varnothing 6.5</math> mm, hole offset 25 mm from the left edge, hole diameter <math>\varnothing 31</math> mm, hole offset 22.5 mm from the left edge, hole diameter <math>\varnothing 7</math> mm, hole offset 70.5 mm from the left edge, and a distance of 93 mm from the left edge to the start of the thread.</p>