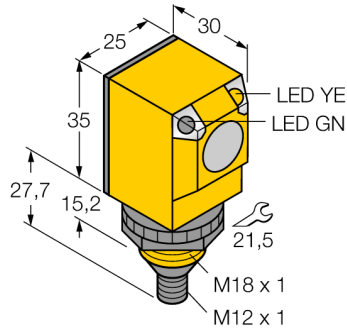


Photoelectric Sensor

Diffuse Mode Sensor with Fixed-Field Background Suppression

Q25RW3FF25Q1



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

Type	Q25RW3FF25Q1
ID	3058411

Optical data	
Function	Proximity switch
Operating mode	Background suppression, non-adjustable
Light type	IR
Wavelength	880 nm
Range	0...25 mm

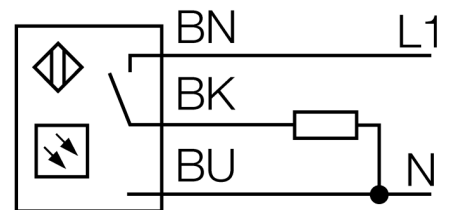
Electrical data	
Operating voltage U_s	20...250VAC
AC rated operational current	≤ 200 mA
Output function	Dark operation, Relay output
Switching frequency	≤ 40 Hz
Readiness delay	≤ 100 ms
Response time typical	< 16 ms

Mechanical data	
Design	Rectangular, Q25
Dimensions	Ø 18 x 30 x 25 x 62.7 mm
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Connector, 1/2", PVC
Number of cores	4
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

Wiring Diagram

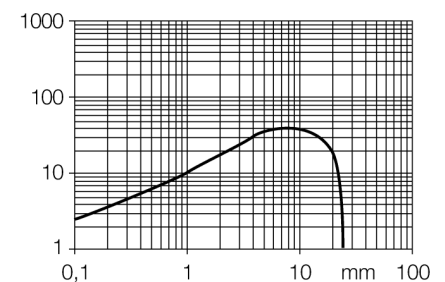


Functional principle

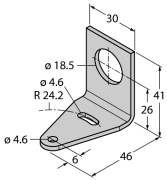
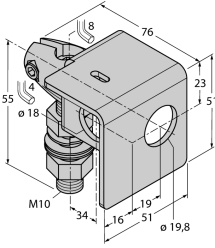
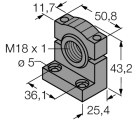
The emitter and receiver are incorporated in a single housing. The light reflection of the target is detected and triggers the sensor to switch. Thus the switching distance largely depends on the reflectivity of the target.

Excess gain curve

Excess gain in relation to the distance



Accessories

Type code	Ident no.		Dimension drawing
SMB18A	3033200	Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread	 <p>Technical drawing of the SMB18A mounting bracket. It is a rectangular stainless steel bracket with a 18 mm thread. Dimensions include: width 30 mm, height 41 mm, mounting hole diameter $\phi 18.5$, hole offset $\phi 4.6$, radius $R24.2$, and a base width of 46 mm.</p>
SMB18AFAM10	3012558	Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm	 <p>Technical drawing of the SMB18AFAM10 mounting bracket. It is a rectangular bracket made of VA 1.4401 material, designed for an M10 x 1.5 thread with a length of 18 mm. Dimensions include: total width 76 mm, height 23 mm, mounting hole diameter $\phi 18$, and a base width of 51 mm.</p>
SMB18SF	3052519	Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable	 <p>Technical drawing of the SMB18SF mounting bracket. It is a black PBT rotatable bracket for sensors with an 18 mm thread. Dimensions include: width 50.8 mm, height 43.2 mm, mounting hole diameter $\phi 5$, and a base width of 25.4 mm.</p>