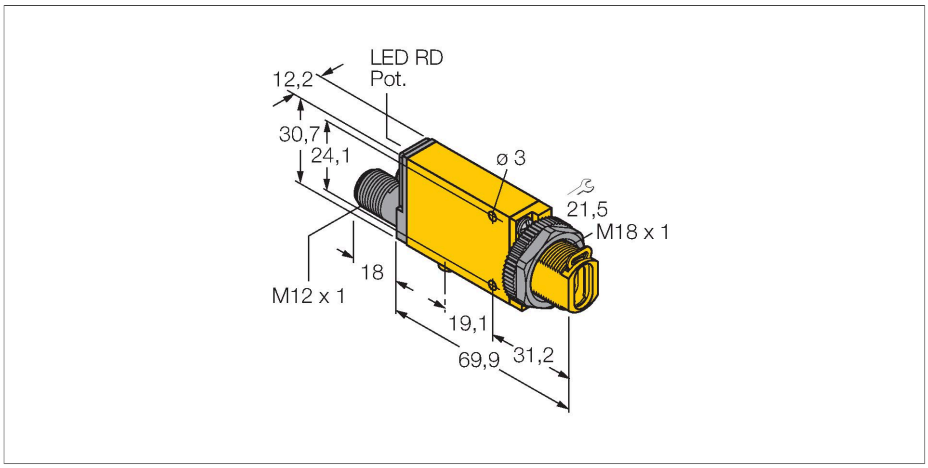
SM312FMHSQD
Photoelectric Sensor – Photoelectric Sensor for Glass Fibers



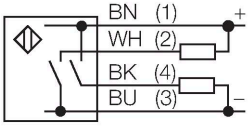
Technical data

Type	SM312FMHSQD
ID	3027000
Optical data	
Function	Fiber optic sensor
Operating mode	Glass fiber
Fiber-optic type	glass
Light type	IR
Wavelength	880 nm
Electrical data	
Operating voltage	10…30 VDC
Residual ripple	< 10 % U_{ss}
DC rated operational current	≤ 150 mA
No-load current	≤ 25 mA
Output function	NO contact, PNP/NPN
Switching frequency	≤ 500 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.3 ms
Overcurrent release	> 220 mA
Setting option	Potentiometer
Mechanical data	
Design	Rectangular with thread, Mini Beam
Dimensions	71.3 x 12.3 x 30.7 mm
Housing material	Plastic, Thermoplastic material, Yellow
Electrical connection	Connector, M12 × 1, PVC
Number of cores	4
Ambient temperature	-20…+70 °C
Relative humidity	0…90 %

Features

- Male M12 × 1, 4-pin
- Protection class IP67
- Sensitivity adjusted via potentiometer
- Alignment indicator
- Operating voltage: 10…30 VDC
- Switching output, bipolar
- Light/dark operation

Wiring diagram



Functional principle

Glass or plastic fibers are the optimum choice for high-temperature applications and limited spaces. Optical fibers transfer the light from the sensor to a remote object. Individual fibers are used for opposed sensing mode, whereas bifurcated fibers are suited for diffuse sensing mode.

Excess gain curve
Excess gain in relation to distance

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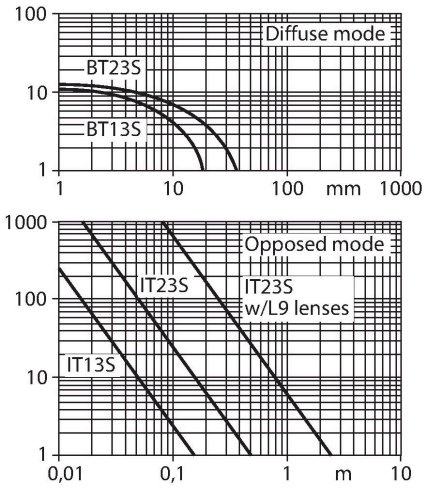
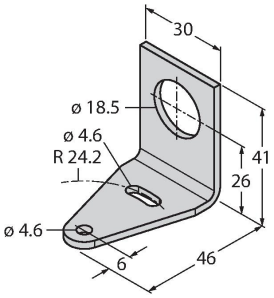
Technical data

Protection class	IP67
Special features	Wash down
Switching state	LED, Red
Excess gain indication	LED, red, flashing
Tests/approvals	
Approvals	CE, cURus, CSA



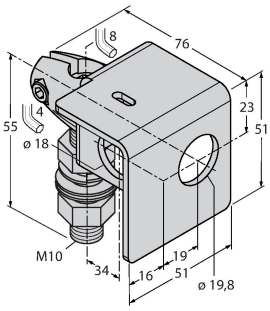
Accessories

SMB18A 3033200



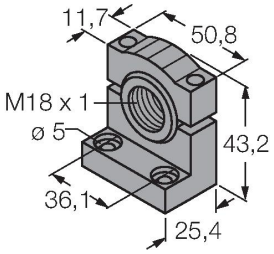
Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread

SMB18AFAM10 3012558



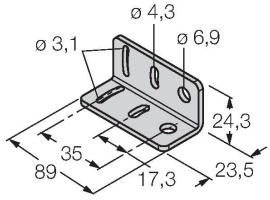
Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm

SMB18SF 3052519



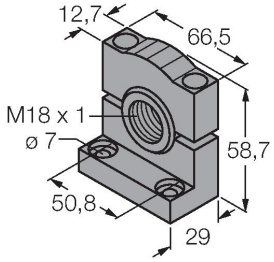
Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable

SMB312B 3025519



Mounting bracket, stainless steel, for MINI-BEAM NAMUR

SMB3018SC 3053952



Mounting bracket, PTB black, for sensors with 18 mm thread

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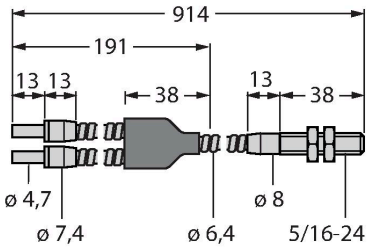
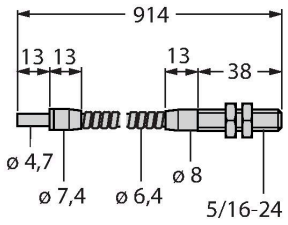
Accessories

Dimension drawing	Type	ID	
	BT23S	3017276	Glass fiber, sensing mode: Diffuse mode, threaded sleeve (brass), bundle diameter 3.2 mm, flexible stainless steel jacket, ambient temperatures -140… +250 °C
	IT23S	3017355	Glass fiber, sensing mode: Opposed mode, threaded sleeve (brass), bundle diameter 3.2 mm, flexible stainless steel jacket, ambient temperatures -140… +250 °C

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