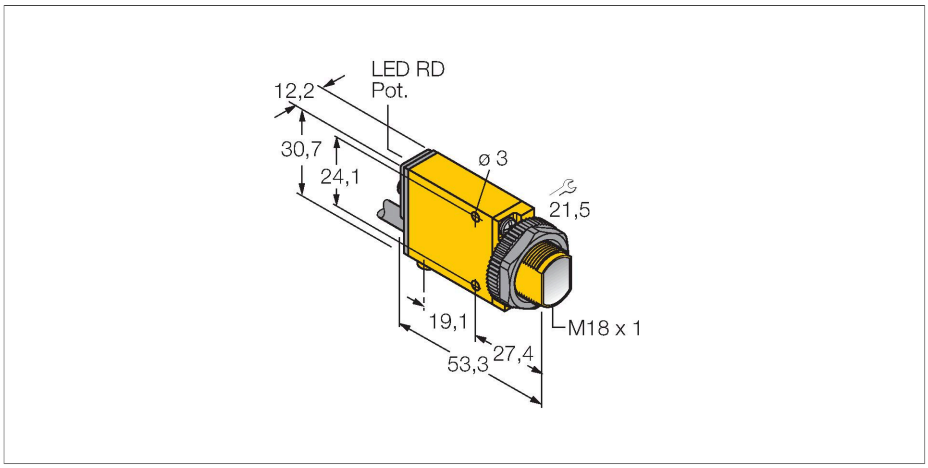
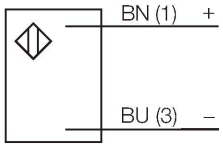
SM31ERLMHS
Photoelectric Sensor – Opposed Mode Sensor (Emitter)



Features

- Cable, PVC, 2 m
- Protection class IP67
- Operating voltage: 10…30 VDC

Wiring diagram



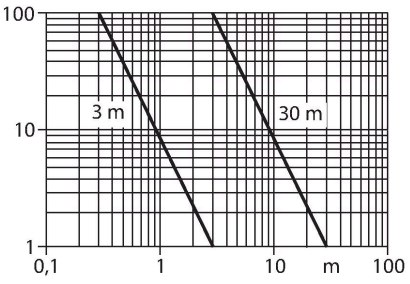
Technical data

Type	SM31ERLMHS
ID	3052029
Optical data	
Function	Opposed mode sensor
Operating mode	Emitter
Light type	IR
Wavelength	880 nm
Range	0…3000 mm
Electrical data	
Operating voltage	10…30 VDC
Residual ripple	< 10 % U_{ss}
No-load current	≤ 25 mA
Readiness delay	≤ 100 ms
Mechanical data	
Design	Rectangular, Mini Beam
Dimensions	53.3 x 12.3 x 30.7 mm
Housing material	Plastic, PBT, Yellow
Lens	plastic, Acrylic
Electrical connection	Cable, 2 m, PVC
Number of cores	4
Core cross-section	0.5 mm^2
Ambient temperature	-20…+70 °C
Protection class	IP67
Tests/approvals	
MTTF	853 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus, CSA

Functional principle

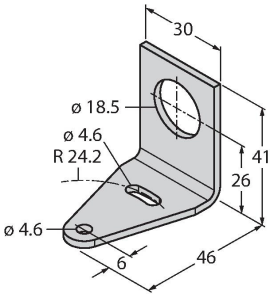
Opposed mode sensors consist of an emitter and receiver. They are installed opposite each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque targets. An excellent contrast between light and dark conditions and an extremly 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



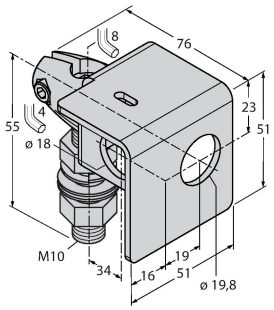
Accessories

SMB18A	3033200



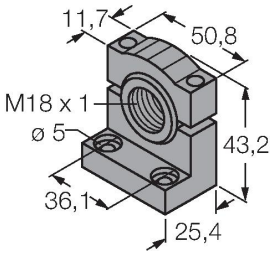
Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread

SMB18AFAM10	3012558



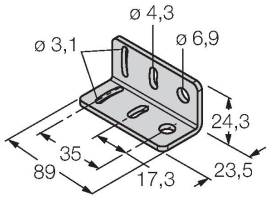
Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm

SMB18SF	3052519



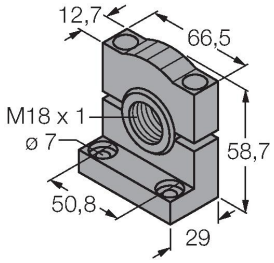
Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable

SMB312B	3025519



Mounting bracket, stainless steel, for MINI-BEAM NAMUR

SMB3018SC	3053952



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