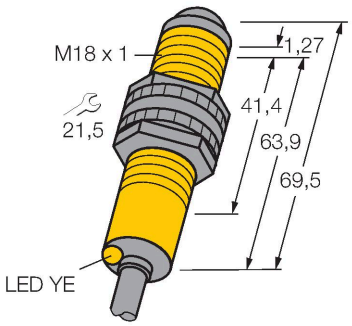
S186ELD
Photoelectric Sensor – Laser Emitter



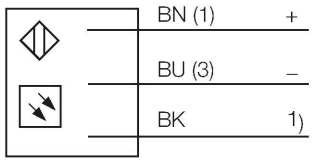
Technical data

Type	S186ELD
ID no.	3031407
Optical data	
Function	Opposed mode sensor
Operating mode	Laser Emitter
Light type	Red
Wavelength	650 nm
Laser class	⚠ 1
Beam diameter	(elliptic) 2.5 mm
Range	0…15000 mm
Electrical data	
Operating voltage	10…30 VDC
Residual ripple	< 10 % U_{ss}
No-load current	≤ 35 mA
Readiness delay	≤ 100 ms
Mechanical data	
Design	Threaded barrel, S18
Dimensions	Ø 18 x 69.5 mm
Housing material	Plastic, Thermoplastic material
Lens	plastic, Acrylic
Electrical connection	Cable, 2 m, PVC
Number of cores	2
Core cross-section	0.34 mm²
Ambient temperature	-10…+50 °C
Protection class	IP67 IP69
Special features	Wash down

Features

- Cable, PVC, 2 m
- Protection classes IP67/IP69K
- Ambient temperature: -10…+50 °C
- Operating voltage: 10…30 VDC

Wiring diagram

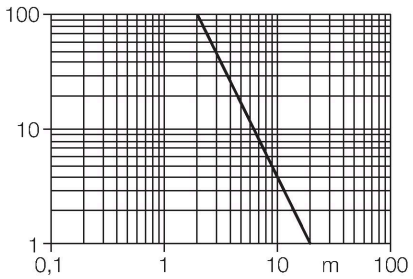


Functional principle

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

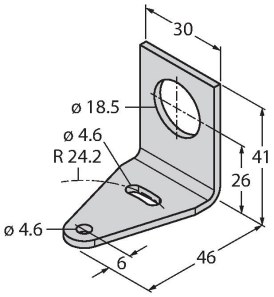
Technical data

Power-on indication	LED, Green
Excess gain indication	LED
Tests/approvals	
Approvals	CE, UL, CSA



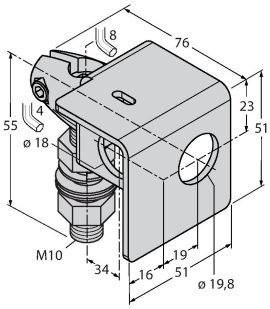
Accessories

SMB18A 3033200



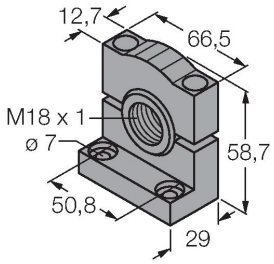
Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread

SMB18AFAM10 3012558



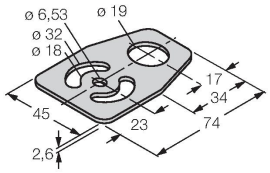
Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm

SMB3018SC 3053952



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

SMBAMS18P 3073134



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