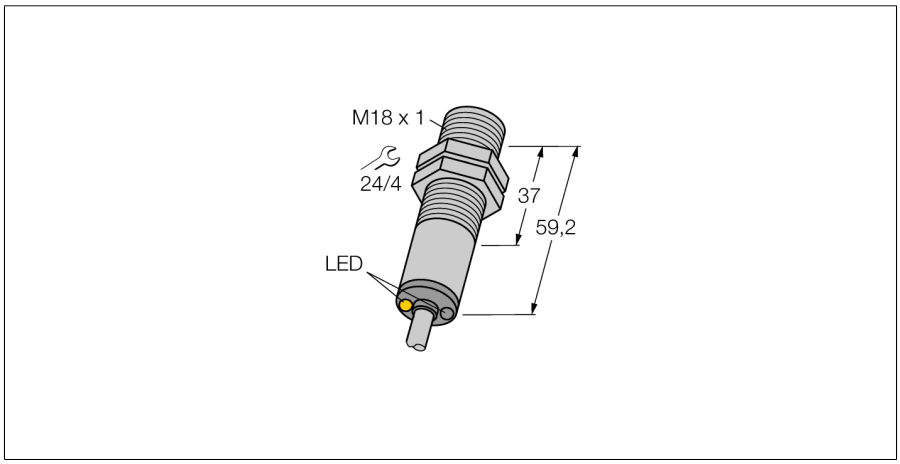
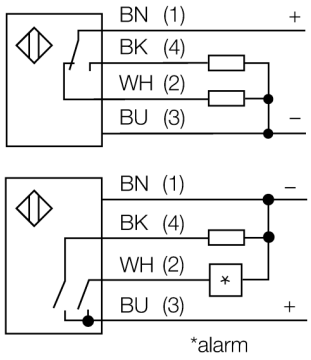
Photoelectric sensor
opposed mode sensor (receiver)
M18SP6R



Type code	M18SP6R
Ident no.	3048350
Operating mode	opposed mode sensor (receiver)
Range	0…20000 mm
Ambient temperature	-40…+70 °C
Operating voltage	10…30VDC
No-load current I_0	≤ 25 mA
Short-circuit protection	yes/ cyclic
Reverse polarity protection	yes
Output function	connection programmable, PNP
Switching frequency	≤ 160 Hz
Readiness delay	≤ 100 ms
Overcurrent release	> 220 mA
Design	cylindrical/threaded, M18
Dimensions	59.2 mm
Housing diameter	18 mm
Housing material	metal, V2A (1.4305)
Lens	plastic, Lexan
Connection	cable
Cable length	2 m
Cable cross section	4 x 0.5 mm²
Protection class	IP67
Power-on indication	LED green
Switching state	LED yellow
Error indication	LED green flashing
Alarm display	LED yellow flashing

- **Cable, 2 m**
- **Protection class IP67**
- **Ambient temperature: -40…+70 °C**
- **Metal housing**
- **Selectable light/dark operation or light operation with alarm function**
- **Operating voltage: 10…30 VDC**
- **PNP switching output, changeover**

Wiring diagram

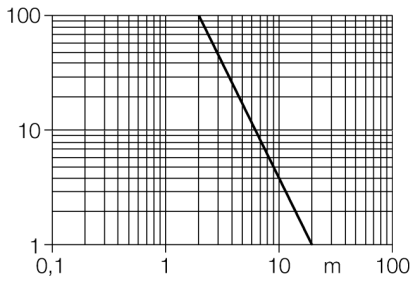


Functional principle

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



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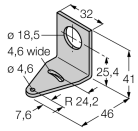
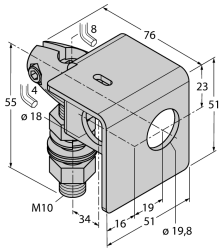
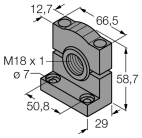
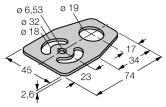
Industrial Automation

Accessories

Type code	Ident no.	Description	Dimension drawing
SMB18A	3033200	Mounting bracket, 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	

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