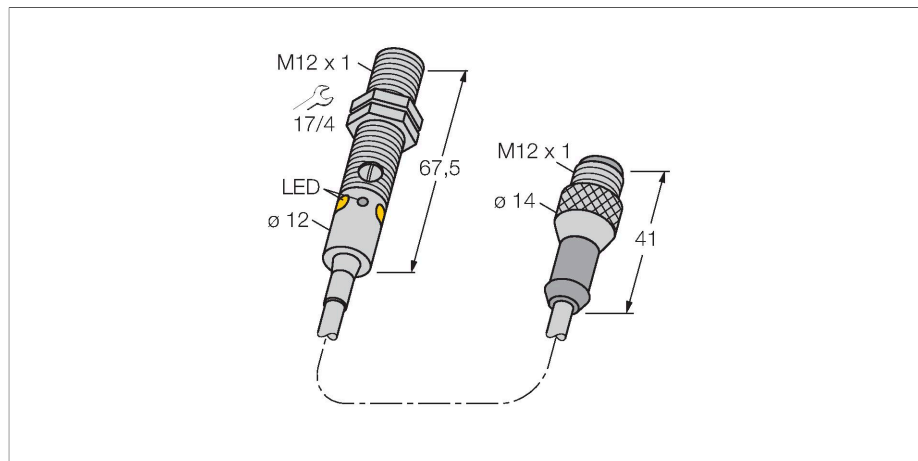


M12RPRQPMA20

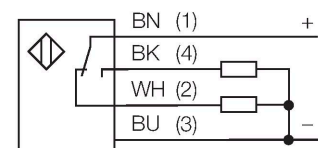
Photoelectric Sensor – Opposed Mode Sensor (Emitter/Receiver)



Features

- Cable with male end M12 × 1, 4-pin, PUR, 150 mm
- Protection classes IP67 / IP68
- Metal housing
- LED all-round visible
- Indication of insufficient excess gain
- Sensitivity adjustable via potentiometer
- Operating voltage: 10...30 VDC
- PNP switching output (PIN 4), dark operation
- PIN 2 not assigned

Wiring diagram



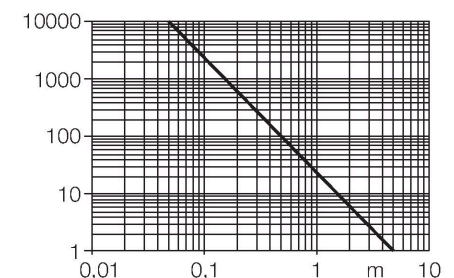
Technical data

Type	M12RPRQPMA20
ID no.	3019167
Optical data	
Function	Opposed mode sensor (receiver)
Range	0...5000 mm
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	< 10 % U_{ss}
DC rated operational current	≤ 100 mA
No-load current	≤ 20 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	Complementary contact, PNP
Switching frequency	≤ 500 Hz
Mechanical data	
Design	Threaded barrel, M12
Dimensions	Ø 12 x 67.5 mm
Housing material	Metal, CuZn, Nickel-plated
Lens	plastic, PMMP
Electrical connection	Cable with connector, M12 × 1, 0.15 m, PUR
Ambient temperature	-20...+60 °C
Protection class	IP67
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing

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 extremely high excess gain are typical of this sensing mode, thus allowing operation over larger distances and under difficult conditions.

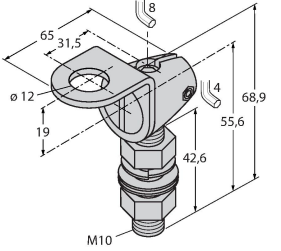
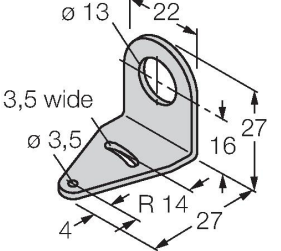
Excess Gain Curve



Technical data

Excess gain indication	LED, yellow, flashing
Tests/approvals	
MTTF	46 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE

Accessories

<p>SMB12FAM10</p> 	<p>3011221</p> <p>Mounting bracket, stainless steel, for M12, M10 x 1.5 thread</p>	<p>SMB12MM</p> <p>Mounting bracket, stainless steel, for M12</p>	<p>3027635</p>
<p>SMBQS12PD</p> 	<p>3059606</p> <p>Mounting bracket; material VA 1.4401, for Q12 & M12 series</p>		