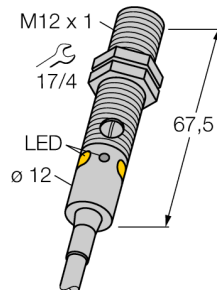


Photoelectric Sensor

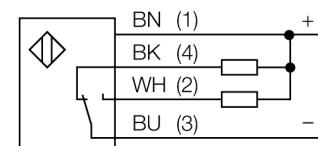
Retroreflective Sensor with Polarizing Filter

M12NLP W/30



- Cable, PVC, 9 m, 4-wire
- Protection classes IP67 / IP68
- Metal housing
- LED all-round visible
- Indication of insufficient excess gain
- Sensitivity adjustable via potentiometer
- Operating voltage: 10...30 VDC
- NPN switching output, changeover

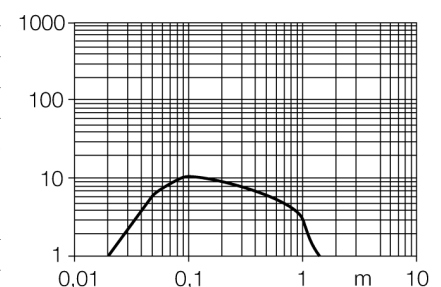
Wiring Diagram



Functional principle

Retro-reflective sensors incorporate emitter and receiver in a single compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages of opposed mode sensors (good contrast and high excess gain). Further it is merely required to install and wire a single device. A smaller sensing range and susceptibility of devices without polarisation filter can be of disadvantage when shiny objects have to be detected.

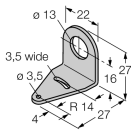
Excess Gain Curve



Type	M12NLP W/30
ID	3077207
Optical data	
Function	Retroreflective Sensor
Operating mode	Polarized
Reflector included in delivery	no
Light type	Red polarized
Wavelength	660 nm
Range	20...1500 mm
Electrical data	
Operating voltage U_s	10...30 VDC
Residual ripple	< 10 % U_s
DC rated operating current I_s	≤ 100 mA
No-load current I_0	≤ 20 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	Complementary contact, NPN
Switching frequency	≤ 1000 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.5 ms
Setting option	Potentiometer
Mechanical data	
Design	Tube, M12
Dimensions	Ø 12 x 67.5 mm
Housing material	Metal, Nickel-plated brass, Nickel Plated
Lens	plastic, PMMA
Electrical connection	Cable, 9 m, PVC
Number of cores	4
Core cross-section	0.35 mm ²
Ambient temperature	-20...+60 °C
Protection class	IP67 IP68

Special features	Encapsulated Wash down
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED, yellow, flashing
Tests/approvals	
MTTF	46 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE

Accessories

Type code	Ident no.		Dimension drawing
SMB12FAM10	3011221	Mounting bracket, stainless steel, for M12, M10 x 1.5 thread	
SMB12MM SMBQS12PD	3027635 3059606	Mounting bracket, stainless steel, for M12 Mounting bracket; material VA 1.4401, for Q12 & M12 series	

Function accessories

Type code	Ident no.		Dimension drawing
BRT-84	3058979	Round reflector, reflection coefficient 1.4, material acrylic, ambient temperature -20 ... +60 °C	