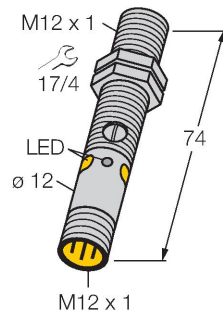


M12PFF50Q8

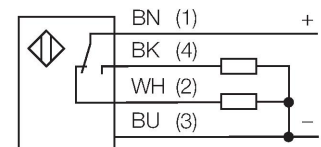
Photoelectric Sensor – Diffuse Mode Sensor with Fixed-Field Background Suppression



Features

- Male M12 × 1, 4-pin
- Protection classes IP67 / IP68
- Metal housing
- LED all-round visible
- Indication of insufficient excess gain
- Operating voltage: 10...30 VDC
- PNP switching output, complementary contact

Wiring diagram



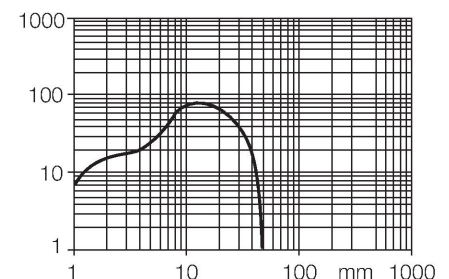
Technical data

Type	M12PFF50Q8
ID	3077195
Optical data	
Function	Proximity switch
Operating mode	Background suppression, non-adjustable
Light type	Red
Wavelength	680 nm
Range	0...50 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	≤ 1000 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.5 ms
Mechanical data	
Design	Tube, M12
Dimensions	Ø 12 x 74 mm
Housing material	Metal, Nickel-plated brass, Nickel Plated
Lens	plastic, PMMA
Electrical connection	Connector, M12 × 1, PVC
Number of cores	4

Functional principle

Diffuse mode sensors with background suppression operate with a single emitter and several receiver elements. The target position and the photoelectric structure of the sensor determine which of the receiving elements receives the most light. The sensor electronics determine whether the reflecting object is within or outside the measuring range. These sensors come with a fixed cut-off point.

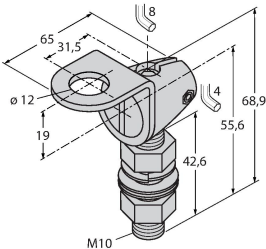
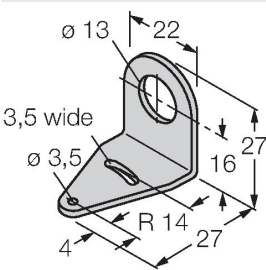
Excess Gain Curve



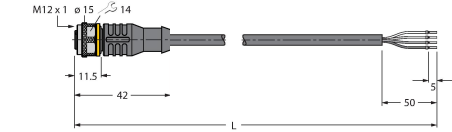
Technical data

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

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

Accessories

Dimension drawing	Type	ID	
	RKC4.4T-2/TEL	6625013	Connection cable, female M12, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com

Dimension drawing	Type	ID	
	WKC4.4T-2/TEL	6625025	Connection cable, female M12, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com