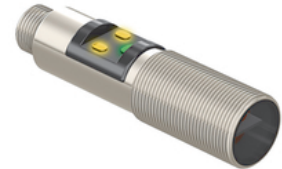
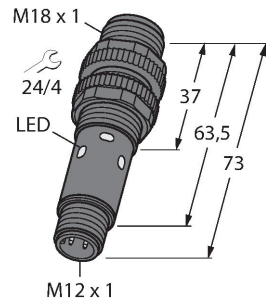


M18-3NAEL-Q8

Photoelectric Sensor – Opposed Mode Sensor (Emitter)



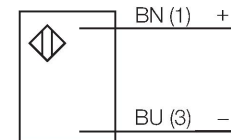
Technical data

Type	M18-3NAEL-Q8
ID	3088157
Optical data	
Function	Opposed mode sensor
Operating mode	Emitter
Light type	Red
Wavelength	645 nm
Range	0...25000 mm
Electrical data	
Operating voltage	10...30 VDC
No-load current	≤ 17 mA
Short-circuit protection	yes / Cyclic
Reverse polarity protection	yes
Readiness delay	≤ 100 ms
Response time typical	< 1.5 ms
Mechanical data	
Design	Tube, M18
Dimensions	Ø 18 x 73 mm
Housing material	Metal, Nickel-plated brass
Lens	Acrylic
Electrical connection	Connector, M12 × 1, PVC
Number of cores	4
Ambient temperature	-40...+70 °C
Protection class	IP67 IP69
Special features	Wash down
Power-on indication	LED, Green

Features

- M12 × 1 male connector, 4-pin
- Protection classes IP67/IP69K
- Ambient temperature: -40...+70° C
- Operating voltage: 10...30 VDC

Wiring diagram



Functional principle

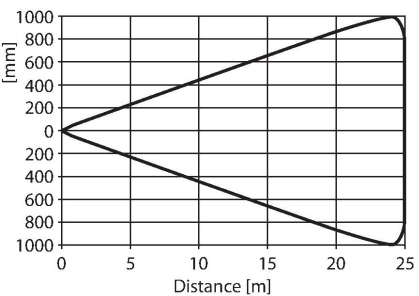
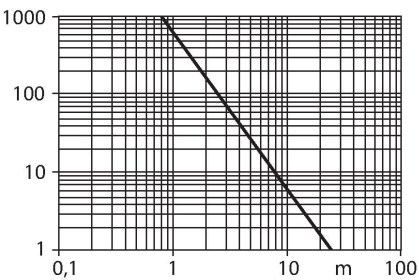
Opposed mode sensors consist of an emitter and a receiver. They are installed opposite to each other whereby the emitted light aims directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque objects. The high light/dark contrast and the very high excess gain are typical for this function mode and enable operation over large distances and under difficult conditions.

Excess gain curve
Excess gain in relation to distance

Technical data

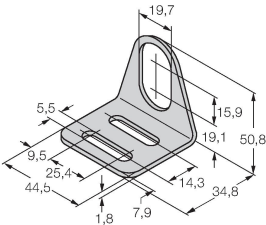
Excess gain indication	LED
Tests/approvals	
Approvals	CE, cULus

Excess Gain Curve



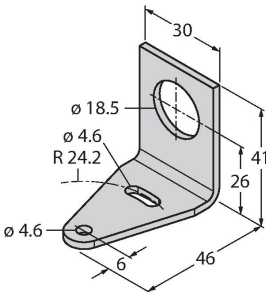
Accessories

MW-186945004



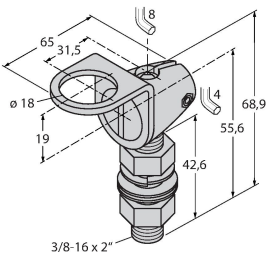
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

SMB18A3033200



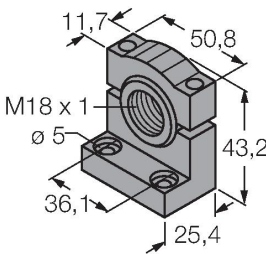
Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread

SMB18FAM103011184



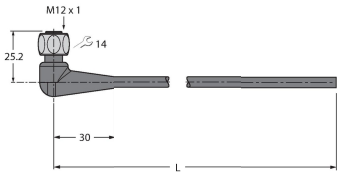
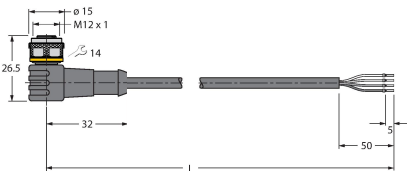
Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm

SMB18SF3052519



Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable

Accessories

Dimension drawing	Type	ID	
	RKH4.4-2/TFG	6933086	Connection cable, M12 female, straight, 4-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray temperature range -40...+105 °C; other cable lengths and designs available, see www.turck.com
	WKH4.4-2/TFG	6933093	Connection cable, M12 female, angled, 4-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray temperature range -40...+105 °C; other cable lengths and designs available, see www.turck.com
	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
	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