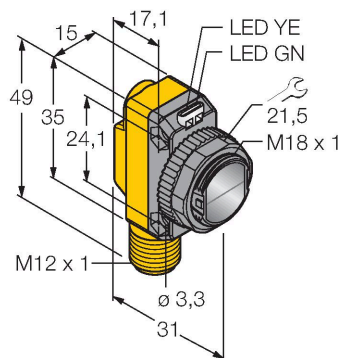# QS18VP6RQ8-02790
Photoelectric Sensor –   Opposed Mode Sensor (Emitter/Receiver)


Technical data

Type	QS18VP6RQ8-02790
ID no.	3002790
Optical data	
Function	Opposed mode sensor
Operating mode	Receiver
Range	0…20000 mm
Electrical data	
Operating voltage	10…30 VDC
Residual ripple	< 10 % U_{ss}
DC rated operational current	≤ 100 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO/NC, PNP
Current output	100 mA
Switching frequency	≤ 400 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.75 ms
Setting option	Potentiometer
Mechanical data	
Design	Rectangular with thread, QS18
Dimensions	Ø 18 x 31 x 15 x 35 mm
Housing material	Plastic, ABS
Lens	plastic, Acrylic
Electrical connection	Connectors, M12 × 1, PVC
Number of cores	4
Ambient temperature	-20…+70 °C

Features

■ Male M12 × 1, 4-pin
■ Protection class IP67
■ Sensitivity adjustable via potentiometer
■ Light/dark operation
■ Operating voltage: 10…30 VDC
■ PNP switching output, changeover

Wiring diagram
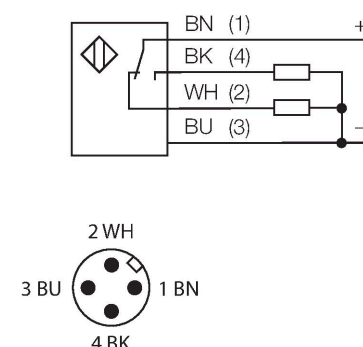
## Functional principle

Opposed mode sensors consist of an emitter and receiver. They are installed opposite to 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. The excellent light/dark contrast and the high excess gain allow operation over larger distances and under difficult conditions.

Excess gain curve
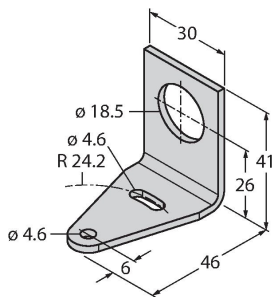Excess gain in relation to the distance (type 6EB/RB)

Technical data

Protection class	IP67
Special features	Potentiometer
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED, yellow, flashing
Tests/approvals	
MTTF	2952 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus
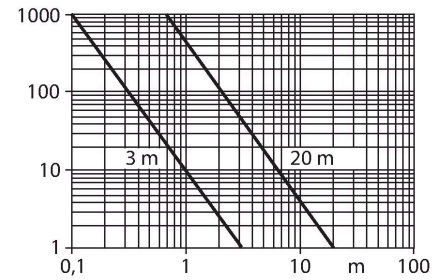
Accessories

SMB18A	**3033200**
	Mounting bracket, rectangular, 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
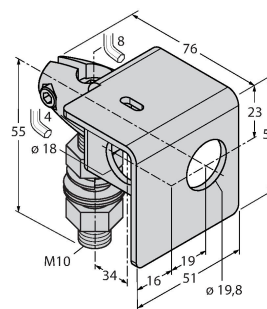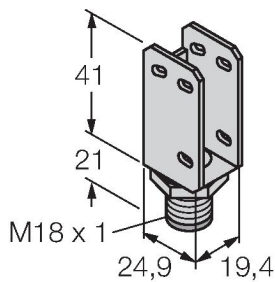
SMBQS18A	**3069721**
	Mounting bracket, stainless steel, for 18 mm thread
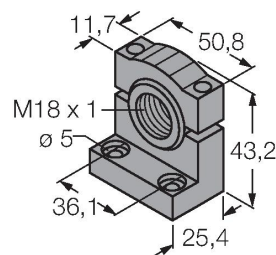
SMB18SF	**3052519**
	Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable