

Photoelectric Sensor

Opposed Mode Sensor (Emitter/Receiver)

QS18RNWR

Type	QS18RNWR
ID	3079598
Optical data	
Function	Opposed mode sensor
Operating mode	Receiver
Range	0...20000 mm
Electrical data	
Operating voltage U_s	20...270 VDC
Operating voltage U_a	20...270VAC
Residual ripple	< 10 % U_s
DC rated operating current I_s	≤ 100 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO/NC
Switching frequency	≤ 400 Hz
Readiness delay	≤ 100 ms
Response time typical	< 16.6 ms
Mechanical data	
Design	Rectangular with thread, QS18
Dimensions	Ø 18 x 31 x 15 x 35 mm
Housing material	Plastic, ABS
Lens	plastic, PMMA
Electrical connection	Cable, 2 m, PVC
Number of cores	3
Core cross-section	0.35 mm ²
Ambient temperature	-25...+70 °C
Protection class	IP67
Power-on indication	
Power-on indication	LED, Green
Switching state	LED, Yellow
Excess gain indication	LED, yellow, flashing
Tests/approvals	
MTTF	2952 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus



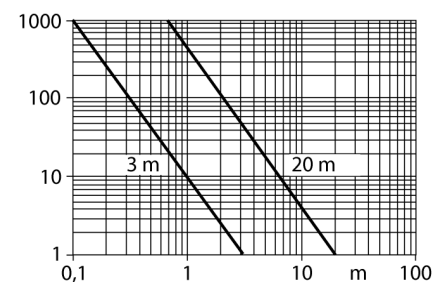
- Cable, PVC, 2 m
- Protection class IP67
- LED all-round visible
- Operating voltage: 20...270 VDC AC/DC

Functional principle

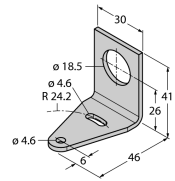
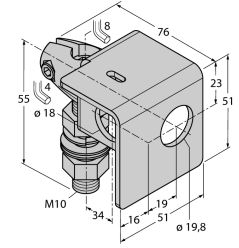
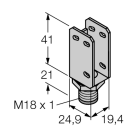
Opposed mode sensors consist of an emitter and receiver. They are installed opposite to each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors 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)



Accessories

Type code	Ident no.		Dimension drawing
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	