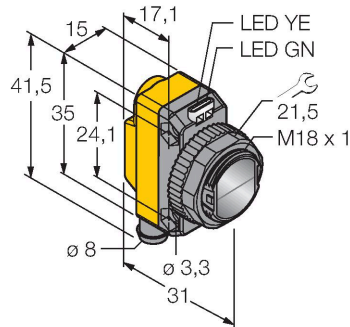


QS18VN6RQ7

Photoelectric Sensor – Opposed Mode Sensor (Emitter/Receiver)



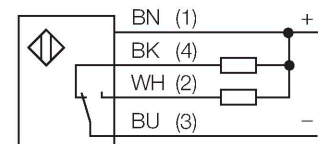
Technical data

Type	QS18VN6RQ7
ID	3066427
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, NPN
Current output	100 mA
Switching frequency	≤ 400 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.75 ms
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	Connector, M8 × 1, PVC
Number of cores	4
Ambient temperature	-20...+70 °C
Protection class	IP67

Features

- Male connector, M8 × 1, 4-pin
- Protection class IP67
- LED all-round visible
- Operating voltage: 10...30 VDC
- NPN switching output, changeover

Wiring diagram



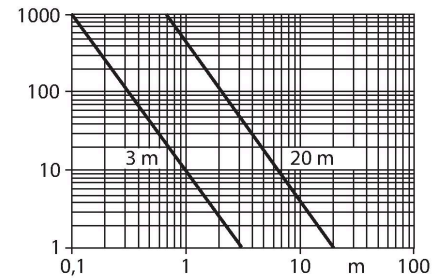
Functional principle

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.

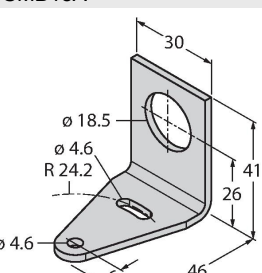
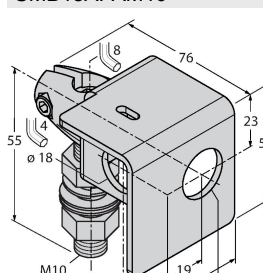
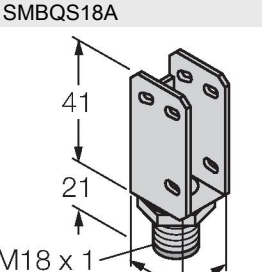
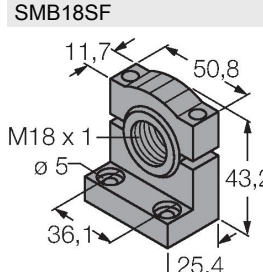
Excess gain curve
Excess gain in relation to the distance (type 6EB/RB)

Technical data

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	 Technical drawing of the SMB18A mounting bracket. It is a rectangular bracket made of stainless steel, designed for sensors with an 18 mm thread. The drawing shows a side view with dimensions: a top flange width of 30 mm, a main body width of 46 mm, a total height of 41 mm, and a bottom flange height of 26 mm. A central circular hole has a diameter of 18.5 mm. There are two smaller circular holes on the bottom flange, each with a diameter of 4.6 mm. A fillet with a radius of 24.2 mm connects the main body to the bottom flange. A small hole with a diameter of 4.6 mm is located on the side of the bottom flange, 6 mm from the corner. Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread	SMB18AFAM10	 Technical drawing of the SMB18AFAM10 mounting bracket. It is a rectangular bracket made of material VA 1.4401, designed for M10 x 1.5 thread sensors with a thread length of 18 mm. The drawing shows a 3D perspective view with dimensions: a top flange width of 76 mm, a main body width of 51 mm, a total height of 51 mm, and a bottom flange height of 23 mm. A central circular hole has a diameter of 19.8 mm. There are two smaller circular holes on the bottom flange, each with a diameter of 4.6 mm. A fillet with a radius of 24.2 mm connects the main body to the bottom flange. A small hole with a diameter of 4.6 mm is located on the side of the bottom flange, 6 mm from the corner. The thread is M10 x 1.5 with a length of 18 mm. Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm
SMBQS18A	3069721	 Technical drawing of the SMBQS18A mounting bracket. It is a rectangular bracket made of stainless steel, designed for 18 mm thread sensors. The drawing shows a side view with dimensions: a top flange width of 41 mm, a main body width of 21 mm, a total height of 41 mm, and a bottom flange height of 19.4 mm. A central circular hole has a diameter of 18 mm. There are two smaller circular holes on the bottom flange, each with a diameter of 4.6 mm. A fillet with a radius of 24.2 mm connects the main body to the bottom flange. A small hole with a diameter of 4.6 mm is located on the side of the bottom flange, 6 mm from the corner. Mounting bracket, stainless steel, for 18 mm thread	SMB18SF	 Technical drawing of the SMB18SF mounting bracket. It is a rectangular bracket made of PBT black, designed for sensors with an 18 mm thread, rotatable. The drawing shows a side view with dimensions: a top flange width of 50.8 mm, a main body width of 36.1 mm, a total height of 43.2 mm, and a bottom flange height of 25.4 mm. A central circular hole has a diameter of 18 mm. There are two smaller circular holes on the bottom flange, each with a diameter of 4.6 mm. A fillet with a radius of 24.2 mm connects the main body to the bottom flange. A small hole with a diameter of 4.6 mm is located on the side of the bottom flange, 6 mm from the corner. Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable

Accessories

Dimension drawing	Type	ID	
	PKG4M-2/TEL	6625061	Connection cable, female M8, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com
	PKW4M-2/TEL	6625067	Connection cable, female M8, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com