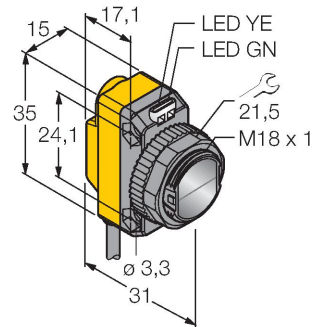


QS186LE11 W/30' Photoelectric Sensor – Laser Emitter



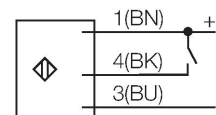
Technical data

Type	QS186LE11 W/30'
ID	3074166
Optical data	
Function	Opposed mode sensor
Operating mode	Laser Emitter
Light type	Red
Wavelength	650 nm
Range	0...15000 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
Readiness delay	≤ 250 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, 9 m, PVC
Number of cores	4
Core cross-section	0.35 mm ²
Ambient temperature	-10...+50 °C
Protection class	IP67
Special features	Laser
Power-on indication	LED, Green

Features

- Cable, PVC, 9 m
- Protection class IP67
- LED all-round visible
- 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.

Activation

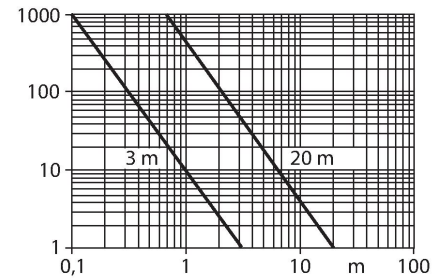
By connecting the control input (PIN 2 WH) to ground (-) the laser beam is turned on. The laser beam is turned off again by feeding 10 ... 30 VDC to the control input or by non-connecting the wire.

Excess gain curve

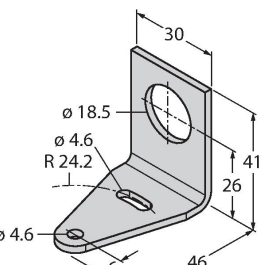
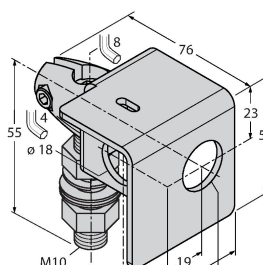
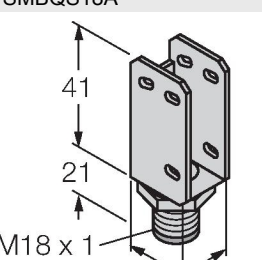
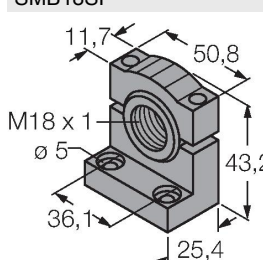
Excess gain in relation to the distance (type 6EB/RB)

Technical data

Excess gain indication	LED
Tests/approvals	
MTTF	530 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE



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 mounting hole diameter of $\varnothing 18.5$, a central hole diameter of $\varnothing 4.6$, a radius of R 24.2, and a mounting hole offset of 6 mm. The total height is 41 mm, with a 26 mm section for the sensor. Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread	SMB18AFAM10	 Technical drawing of the SMB18AFAM10 mounting bracket. It is a square 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 mounting hole diameter of $\varnothing 18$, and a central hole diameter of $\varnothing 19.8$. The total height is 51 mm, with a 23 mm section for the sensor. The mounting hole is offset by 16 mm from the bottom edge. 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 mounting hole diameter of $\varnothing 18$, and a central hole diameter of $\varnothing 19.4$. The total height is 24.9 mm, with a 19.4 mm section for the sensor. Mounting bracket, stainless steel, for 18 mm thread	SMB18SF	 Technical drawing of the SMB18SF mounting bracket. It is a square bracket made of PBT black, designed for sensors with an 18 mm thread, which are rotatable. The drawing shows a 3D perspective view with dimensions: a top flange width of 50.8 mm, a main body width of 43.2 mm, a mounting hole diameter of $\varnothing 18$, and a central hole diameter of $\varnothing 5$. The total height is 36.1 mm, with a 25.4 mm section for the sensor. Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable