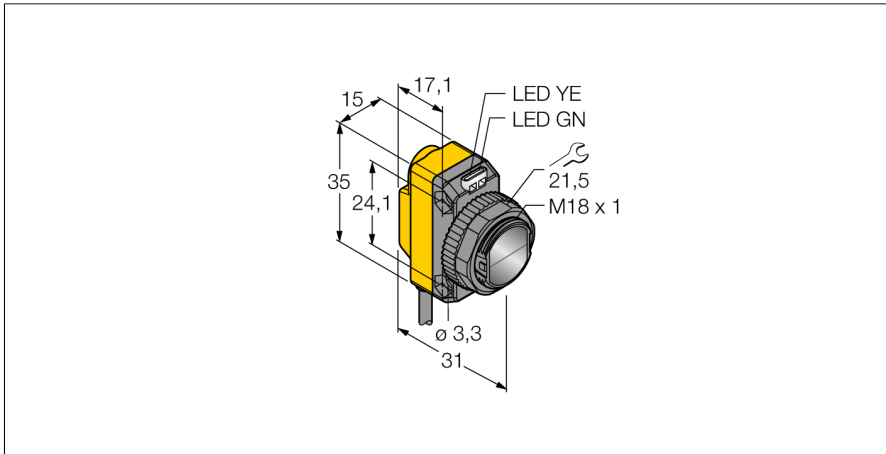


# Photoelectric Sensor Laser Emitter QS186LE214 W/30



Type	QS186LE214 W/30
ID	3075970

Optical data	
Function	Opposed mode sensor
Operating mode	Laser Emitter
Light type	IR
Wavelength	650 nm
Range	0...15000 mm

Electrical data	
Operating voltage $U_s$	10...30 VDC
Residual ripple	< 10 % $U_s$
DC rated operating current $I_s$	≤ 100 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Readiness delay	≤ 10 ms

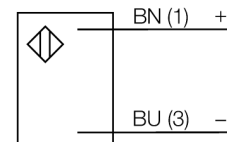
Mechanical data	
Design	Rectangular with thread, QS18
Dimensions	Ø 18 x 31 x 15 x 35 mm
Housing material	Plastic, ABS
Lens	plastic, PMMA
Electrical connection	Cable, 9 m, PVC
Number of cores	4
Core cross-section	0.35 mm <sup>2</sup>
Ambient temperature	-10...+50 °C
Protection class	IP67

Special features	
Power-on indication	Laser
Excess gain indication	LED, Green
	LED

Tests/approvals	
MTTF	530 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus

- Cable, PVC, 9 m
- Protection class IP67
- LED all-round visible
- Operating voltage: 10...30 VDC

### Wiring Diagram



### Functional principle

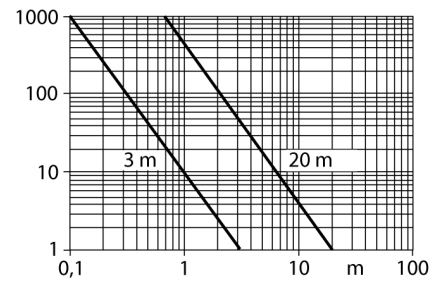
Opposed mode sensors consist of an emitter and a receiver. They are installed opposite to each other whereby the emitted light aims directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for 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

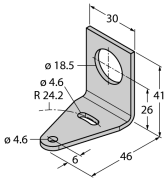
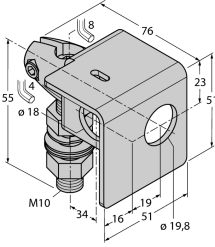
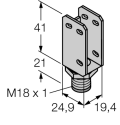
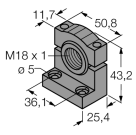
By connecting the control input (PIN 2 WH) to ground (-) the laser beam is turned on. The laser beam is turned off again by feeding 10 ... 30 VDC to the control input or by non-connecting the wire.

### Excess gain curve

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



## Accessories

Type code	Ident no.		Dimension drawing
SMB18A	3033200	Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread	 <p>Technical drawing of a rectangular stainless steel mounting bracket. Dimensions include: top width 30, total height 41, mounting hole diameter <math>\phi 18.5</math>, hole offset <math>\phi 4.6</math>, radius <math>R24.2</math>, bottom width 46, and bottom hole diameter <math>\phi 4.6</math>.</p>
SMB18AFAM10	3012558	Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm	 <p>Technical drawing of a mounting bracket for M10 x 1.5 thread. Dimensions include: top width 76, total height 51, mounting hole diameter <math>\phi 18</math>, hole offset 55, and a 4mm offset from the top edge. The bottom features an M10 thread with a 19mm thread length and a 16mm distance to the bottom edge. Other dimensions shown are 8, 23, 34, and <math>\phi 19.8</math>.</p>
SMBQS18A	3069721	Mounting bracket, stainless steel, for 18 mm thread	 <p>Technical drawing of a mounting bracket for 18 mm thread. Dimensions include: total height 41, hole offset 21, and a 19.4mm distance from the bottom edge to the hole center. The thread is labeled M18 x 1.</p>
SMB18SF	3052519	Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable	 <p>Technical drawing of a rotatable mounting bracket for 18 mm thread. Dimensions include: top width 50.8, total height 43.2, hole offset 11.7, hole diameter <math>\phi 5</math>, and a 36.1mm distance from the bottom edge to the hole center. The thread is labeled M18 x 1.</p>