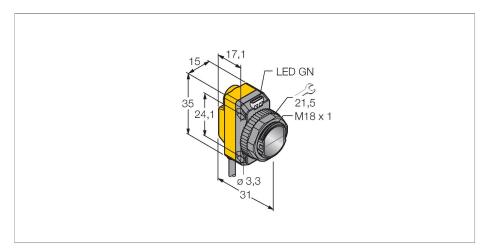


# QS186E Photoelectric Sensor – Opposed Mode Sensor (Emitter)



#### Technical data

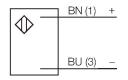
ID         3061618           Optical data         Function         Opposed mode sensor           Operating mode         Emitter           Light type         IR           Wavelength         940 nm           Range         020000 mm           Electrical data         Operating voltage           Operating voltage         1030 VDC           Residual ripple         < 10 % Uss           DC rated operational current         ≤ 100 mA           Short-circuit protection         yes           Reverse polarity protection         yes           Readiness delay         ≤ 100 ms           Mechanical data         Design           Design         Rectangular with thread, QS18           Dimensions         Ø 18 x 31 x 15 x 35 mm           Housing material         Plastic, ABS           Lens         plastic, Acrylic           Electrical connection         Cable, 2 m, PVC           Number of cores         2           Core cross-section         0.35 mm²           Ambient temperature         -20+70 °C           Protection class         IP67           Power-on indication         LED, Green	Туре	QS186E
Function       Opposed mode sensor         Operating mode       Emitter         Light type       IR         Wavelength       940 nm         Range       020000 mm         Electrical data       Operating voltage         Operating voltage       1030 VDC         Residual ripple       < 10 % U <sub>ss</sub> DC rated operational current       ≤ 100 mA         Short-circuit protection       yes         Reverse polarity protection       yes         Readiness delay       ≤ 100 ms         Mechanical data       Sectangular with thread, QS18         Dimensions       Ø 18 x 31 x 15 x 35 mm         Housing material       Plastic, ABS         Lens       plastic, Acrylic         Electrical connection       Cable, 2 m, PVC         Number of cores       2         Core cross-section       0.35 mm²         Ambient temperature       -20+70 °C         Protection class       IP67         Power-on indication       LED, Green	ID	3061618
Operating mode Emitter   Light type IR   Wavelength 940 nm   Range 020000 mm   Electrical data 0perating voltage   Operating voltage 1030 VDC   Residual ripple < 10 % U <sub>ss</sub> DC rated operational current ≤ 100 mA   Short-circuit protection yes   Reverse polarity protection yes   Readiness delay ≤ 100 ms   Mechanical data Sesign   Design Rectangular with thread, QS18   Dimensions Ø 18 x 31 x 15 x 35 mm   Housing material Plastic, ABS   Lens plastic, Acrylic   Electrical connection Cable, 2 m, PVC   Number of cores 2   Core cross-section 0.35 mm²   Ambient temperature -20+70 °C   Protection class IP67   Power-on indication LED, Green	Optical data	
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Electrical data  Operating voltage  1030 VDC  Residual ripple  < 10 % U <sub>ss</sub> DC rated operational current  ≤ 100 mA  Short-circuit protection  yes  Reverse polarity protection  yes  Readiness delay  ≤ 100 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  Cable, 2 m, PVC  Number of cores  2  Core cross-section  0.35 mm²  Ambient temperature  -20+70 °C  Protection class  IP67  Power-on indication  LED, Green	Wavelength	940 nm
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Housing material  Plastic, ABS  Lens  plastic, Acrylic  Electrical connection  Cable, 2 m, PVC  Number of cores  2  Core cross-section  0.35 mm²  Ambient temperature  -20+70 °C  Protection class  IP67  Power-on indication  LED, Green	Design	Rectangular with thread, QS18
Lens plastic, Acrylic  Electrical connection Cable, 2 m, PVC  Number of cores 2  Core cross-section 0.35 mm²  Ambient temperature -20+70 °C  Protection class IP67  Power-on indication LED, Green	Dimensions	Ø 18 x 31 x 15 x 35 mm
Electrical connection  Cable, 2 m, PVC  Number of cores  2  Core cross-section  0.35 mm²  Ambient temperature  -20+70 °C  Protection class  IP67  Power-on indication  LED, Green	Housing material	Plastic, ABS
Number of cores     2       Core cross-section     0.35 mm²       Ambient temperature     -20+70 °C       Protection class     IP67       Power-on indication     LED, Green	Lens	plastic, Acrylic
Core cross-section 0.35 mm²  Ambient temperature -20+70 °C  Protection class IP67  Power-on indication LED, Green	Electrical connection	Cable, 2 m, PVC
Ambient temperature -20+70 °C  Protection class IP67  Power-on indication LED, Green	Number of cores	2
Protection class IP67 Power-on indication LED, Green	Core cross-section	0.35 mm <sup>2</sup>
Power-on indication LED, Green	Ambient temperature	-20+70 °C
	Protection class	IP67
Excess gain indication LED	Power-on indication	LED, Green
	Excess gain indication	LED



#### **Features**

- Cable, PVC, 2 m
   Protection class IP67
   LED all-round visible
- ■Operating voltage: 10...30 VDC

#### Wiring diagram



## Functional principle

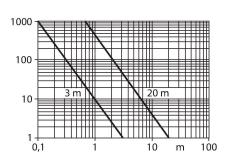
Opposed mode sensors consist of an emitter and receiver. They are installed opposite to each other so that the light from the emitter is aimed directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors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

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

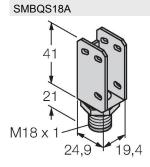


### Accessories

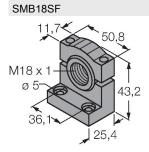
© 18.5 © 4.6 R 24.2 © 4.6 R 24.2 0 4.6 3033200 Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread

SMB18AFAM10

3012558 Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm



3069721 Mounting bracket, stainless steel, for 18 mm thread



Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable

3052519