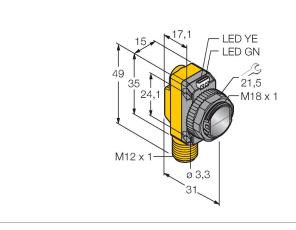


QS186LE211Q8 Photoelectric Sensor – Laser Emitter



Technical data

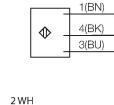
ID no. 3075965 Optical dataFunctionFunctionOpposed mode sensorOperating modeLaser EmitterLight typeIRWavelength 650 nm Laser class $\triangle 2$ Range 015000 mm Electrical dataOperating voltage1030 VDCResidual ripple< 10 % U _{**} DC rated operational current< 100 mAShort-circuit protectionyesReadiness delay< 10 msMechanical dataDesignRectangular with thread, QS18DimensionsØ 18 x 31 x 15 x 35 mmHousing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature-10+50 °CProtection classIP67Special featuresLaserPower-on indicationLED, Green	Туре	QS186LE211Q8		
FunctionOpposed mode sensorOperating modeLaser EmitterLight typeIRWavelength 650 nm Laser class $\bigtriangleup 2$ Range 015000 mm Electrical data \bigcirc Operating voltage 1030 VDC Residual ripple< $10 \% U_{ss}$ DC rated operational current< 100 mA Short-circuit protectionyesReverse polarity protectionyesReadiness delay< 10 ms Mechanical dataDimensions $\emptyset 18 \times 31 \times 15 \times 35 \text{ mm}$ Housing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature $-10+50 \ ^{\circ}C$ Protection classIP67Special featuresLaser	ID no.	3075965		
Operating modeLaser EmitterLight typeIRWavelength 650 nm Laser class $\bigtriangleup 2$ Range 015000 mm Electrical data $\bigcirc 015000 \text{ mm}$ Operating voltage 1030 VDC Residual ripple< $10 \% U_{s}$ DC rated operational current< 100 mA Short-circuit protectionyesReverse polarity protectionyesReadiness delay< 10 ms Mechanical dataDesignRectangular with thread, QS18Dimensions $\emptyset 18 \times 31 \times 15 \times 35 \text{ mm}$ Housing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature $-10+50 \ ^{\circ}C$ Protection classIP67Special featuresLaser	Optical data			
Light typeIRLight typeIRWavelength 650 nm Laser class $\triangle 2$ Range 015000 mm Electrical data 030 VDC Residual ripple $< 10 \% U_{ss}$ DC rated operational current $\leq 100 \text{ mA}$ Short-circuit protectionyesReadiness delay $\leq 10 \text{ ms}$ Mechanical data 0 ms DesignRectangular with thread, QS18Dimensions $\emptyset 18 \times 31 \times 15 \times 35 \text{ mm}$ Housing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature $-10+50 \ ^{\circ}C$ Protection classIP67Special featuresLaser	Function	Opposed mode sensor		
Light opeIntWavelength650 nmLaser class $▲$ 2Range015000 mmElectrical data \bigcirc 015000 mmOperating voltage1030 VDCResidual ripple< 10 % Uss	Operating mode	Laser Emitter		
Laser class $▲ 2$ Range015000 mmElectrical data 0 Operating voltage1030 VDCResidual ripple< 10 % Uss	Light type	IR		
Range 015000 mm Electrical dataOperating voltage 1030 VDC Residual ripple $< 10 \% U_{ss}$ DC rated operational current $\leq 100 \text{ mA}$ Short-circuit protectionyesReverse polarity protectionyesReadiness delay $\leq 10 \text{ ms}$ Mechanical data 0 ms Dimensions $\emptyset 18 \times 31 \times 15 \times 35 \text{ mm}$ Housing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature $-10+50 \ ^{\circ}C$ Protection classIP67Special featuresLaser	Wavelength	650 nm		
Image: Second SystemElectrical dataOperating voltage 1030 VDCResidual ripple< 10 % Us	Laser class	<u>A</u> 2		
Operating voltage 1030 VDCResidual ripple< 10% UsDC rated operational current< 100 mA Short-circuit protectionyesReverse polarity protectionyesReadiness delay $\leq 10 \text{ ms}$ Mechanical dataDesignRectangular with thread, QS18DimensionsØ 18 x 31 x 15 x 35 mmHousing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature $-10+50 \ ^{\circ}C$ Protection classIP67Special featuresLaser	Range	015000 mm		
Residual ripple< 10 % UssDC rated operational current $\leq 100 \text{ mA}$ Short-circuit protectionyesReverse polarity protectionyesReadiness delay $\leq 10 \text{ ms}$ Mechanical data \mathbb{P} DesignRectangular with thread, QS18DimensionsØ 18 x 31 x 15 x 35 mmHousing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature-10+50 °CProtection classIP67Special featuresLaser	Electrical data			
DC rated operational current≤ 100 mAShort-circuit protectionyesReverse polarity protectionyesReadiness delay≤ 10 msMechanical dataDesignRectangular with thread, QS18DimensionsØ 18 x 31 x 15 x 35 mmHousing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature-10+50 °CProtection classIP67Special featuresLaser	Operating voltage	1030 VDC		
Short-circuit protectionyesReverse polarity protectionyesReadiness delay≤ 10 msMechanical dataDesignRectangular with thread, QS18DimensionsØ 18 x 31 x 15 x 35 mmHousing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature-10+50 °CProtection classIP67Special featuresLaser	Residual ripple	< 10 % U _{ss}		
Reverse polarity protectionyesReadiness delay≤ 10 msMechanical dataDesignRectangular with thread, QS18DimensionsØ 18 x 31 x 15 x 35 mmHousing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature-10+50 °CProtection classIP67Special featuresLaser	DC rated operational current	≤ 100 mA		
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Mechanical dataDesignRectangular with thread, QS18DimensionsØ 18 x 31 x 15 x 35 mmHousing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature-10+50 °CProtection classIP67Special featuresLaser	Reverse polarity protection	yes		
DesignRectangular with thread, QS18DimensionsØ 18 x 31 x 15 x 35 mmHousing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature-10+50 °CProtection classIP67Special featuresLaser	Readiness delay	≤ 10 ms		
DimensionsØ 18 x 31 x 15 x 35 mmHousing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature-10+50 °CProtection classIP67Special featuresLaser	Mechanical data			
Housing materialPlastic, ABSLensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature-10+50 °CProtection classIP67Special featuresLaser	Design	Rectangular with thread, QS18		
Lensplastic, PMMAElectrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature-10+50 °CProtection classIP67Special featuresLaser	Dimensions	Ø 18 x 31 x 15 x 35 mm		
Electrical connectionConnectors, M12 × 1, PVCNumber of cores4Ambient temperature-10+50 °CProtection classIP67Special featuresLaser	Housing material	Plastic, ABS		
Number of cores4Ambient temperature-10+50 °CProtection classIP67Special featuresLaser	Lens	plastic, PMMA		
Ambient temperature-10+50 °CProtection classIP67Special featuresLaser	Electrical connection	Connectors, M12 × 1, PVC		
Protection class IP67 Special features Laser	Number of cores	4		
Special features Laser	Ambient temperature	-10+50 °C		
	Protection class	IP67		
Power-on indication I FD Green	Special features	Laser		
	Power-on indication	LED, Green		



Features

Male M12 × 1, 4-pin
Protection class IP67
Light shaping: vertical bar
Operating voltage: 10...30 VDC

Wiring diagram



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Functional principle

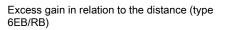
Opposed mode sensors consist of an emitter and a receiver. They are installed opposite to each other whereby the emitted light aims directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for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

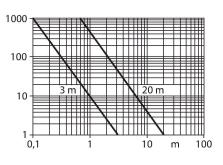
By connecting the control input (PIN 2 WH) to ground (-) the laser beam is turned on. The laser beam is turned off again by feeding 10 ... 30 VDC to the control input or by nonconnecting the wire. Excess gain curve



Technical data

cc. to SN 29500 (Ed. 99) 40





Accessories

SMB18A	3033200	SMB18AFAM10	3012558
Ø 18.5 Ø 4.6 R 24.2 Ø 4.6 Ø 4.	Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread	M10 34 16 51 019,8	Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm
SMBQS18A	3069721	SMB18SF	3052519
41 21 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Mounting bracket, stainless steel, for 18 mm thread	11,7 50,8 M18 x 1 0 5 36,1 25,4	Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable
Accessories			
Dimension drawing	Туре	ID no.	
M12x 1 0 15 20 14	RKC4.4T-2/TEL	6625013	Connection cable, female M12, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com
26.5 26.5 26.5 26.5 26.5 26.5 26.5 26.5	WKC4.4T-2/TEL	6625025	Connection cable, female M12, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com