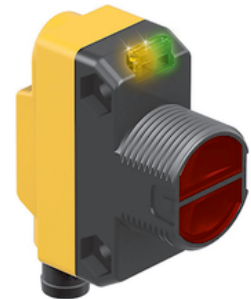
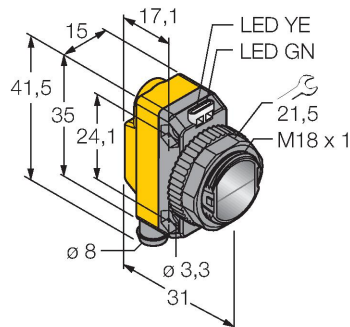


QS18VN6LDQ7

Photoelectric Sensor – Diffuse Mode Laser Sensor



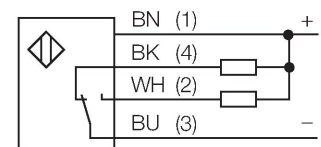
Technical data

Type	QS18VN6LDQ7
ID	3073038
Optical data	
Function	Proximity switch
Operating mode	Diffuse
Light type	Red
Wavelength	650 nm
Laser class	▲ 1
Beam diameter	1 mm at 300 mm
Range	0...300 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	≤ 700 Hz
Readiness delay	≤ 200 ms
Response time typical	< 0.7 ms
Setting option	Potentiometer
Mechanical data	
Design	Rectangular with thread, QS18
Dimensions	Ø 18 x 31 x 15 x 35 mm
Housing material	Plastic, ABS
Lens	plastic, Acrylic

Features

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

Wiring diagram



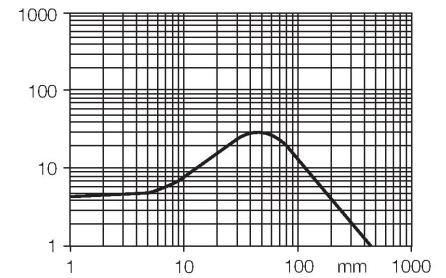
Functional principle

Identical to retro-reflective sensors, emitter and receiver circuitry are incorporated in the same housing of the diffuse mode sensors. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the target. A target is detected if it reflects sufficient light back to the receiver. The switching distance of diffuse mode sensors thus largely depends on the reflectivity of the target.

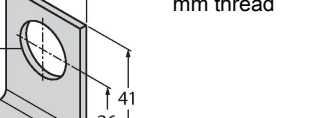
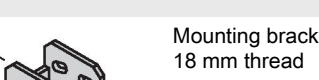
Excess gain curve
Excess gain in relation to the distance

Technical data

Electrical connection	Connector, M8 × 1, PVC
Number of cores	4
Ambient temperature	-10...+50 °C
Protection class	IP67
Special features	Laser
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED, yellow, flashing
Tests/approvals	
MTTF	17 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus



Accessories

SMB18A  Technical drawing of the SMB18A mounting bracket. It is an L-shaped bracket made of stainless steel. The vertical leg has a height of 41 mm and a width of 30 mm. The horizontal leg has a length of 46 mm and a height of 26 mm. There is a circular hole with a diameter of 18.5 mm in the vertical leg and a slot with a width of 6 mm in the horizontal leg. The corner has a radius of 24.2 mm. There are two small holes with a diameter of 4.6 mm, one in each leg.	3033200 Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread
SMB18AFAM10  Technical drawing of the SMB18AFAM10 mounting bracket. It is a rectangular block made of material VA 1.4401. The overall dimensions are 76 mm in width, 51 mm in height, and 23 mm in depth. It features a circular hole with a diameter of 19.8 mm on the front face. There is a threaded hole with an M10 thread on the side. The bracket is designed for sensors with an 18 mm thread and a thread length of 18 mm.	3012558 Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm
SMBQS18A  Technical drawing of the SMBQS18A mounting bracket. It is a rectangular bracket made of stainless steel. The overall dimensions are 41 mm in height and 21 mm in width. It has a threaded hole with an M18 x 1 thread. The bracket is designed for sensors with an 18 mm thread.	3069721 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. The overall dimensions are 50.8 mm in width, 43.2 mm in height, and 25.4 mm in depth. It has a threaded hole with an M18 x 1 thread. The bracket is designed for sensors with an 18 mm thread and is rotatable.	3052519 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

Dimension drawing	Type	ID	
	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

