QS18VN6DBQ
Photoelectric Sensor – Diffuse Mode Sensor
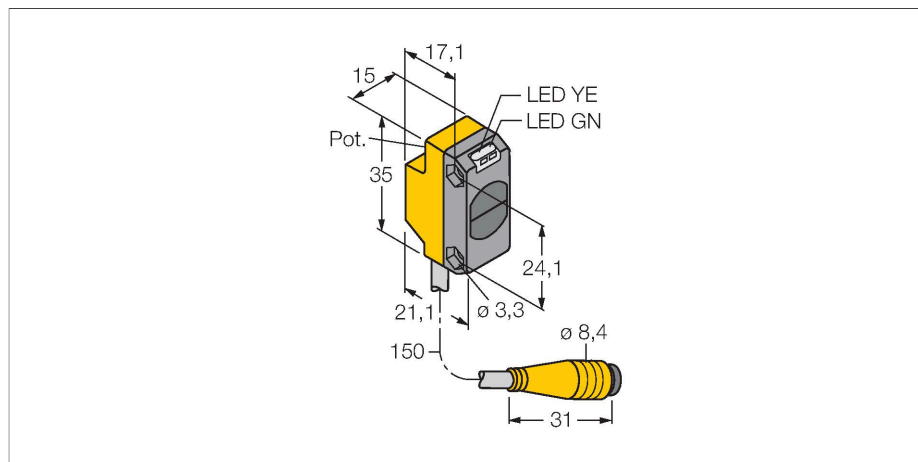
## Technical data

Type	QS18VN6DBQ
ID no.	3061664
Optical data	
Function	Proximity switch
Operating mode	Diffuse
Light type	IR
Wavelength	940 nm
Range	0…450 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	≤ 800 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.6 ms
Setting option	Potentiometer
Mechanical data	
Design	Rectangular, QS18
Dimensions	21.1 x 15 x 35 mm
Housing material	Plastic, ABS
Lens	plastic, Acrylic
Electrical connection	Cable with connector, M8 × 1, 0.15 m, PVC

Features

- Cable with male end, 4-pin, PVC, 150 mm, 8 mm
- Protection class IP67
- LED all-round visible
- Sensitivity adjusted via potentiometer
- Operating voltage: 10…30 VDC
- NPN switching output, changeover

Wiring diagram
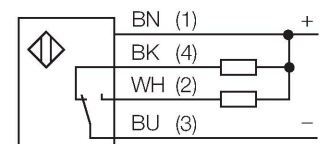
Functional principle

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

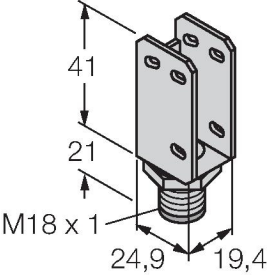|	
Number of cores	4
Ambient temperature	-20…+70 °C
Protection class	IP67
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED, yellow, flashing
Tests/approvals	
Approvals	CE, cURus
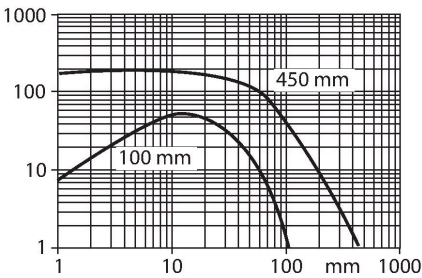
Accessories
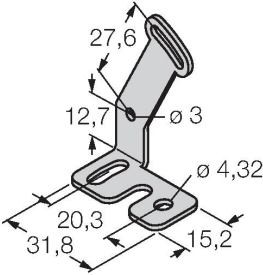
SMBQS18A	3069721

Mounting bracket, stainless steel, for 18 mm thread
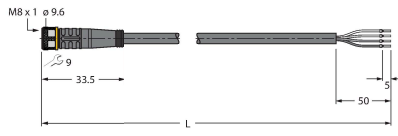
SMBQS18AF	3067467

Mounting bracket, stainless steel, for 18 mm thread

Accessories

Dimension drawing	Type	ID no.	
	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
	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