

Diffuse Mode Sensor with Fixed-Field Background Suppression QS18VN6FF50Q1

Type	QS18VN6FF50Q1
ID	3078087

Optical data	
Function	Proximity switch
Operating mode	Background suppression, non-adjustable
Light type	Red
Wavelength	630 nm
Range	0...50 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
Output function	NO/NC, NPN
Switching frequency	≤ 625 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.85 ms

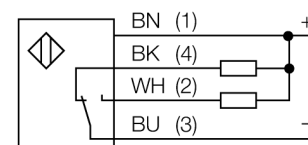
Design	Rectangular with thread
Dimensions	Ø 18 mm
Housing material	Plastic, ABS
Electrical connection	Cable with connector, M8 × 1, 0.15 m, PVC
Number of cores	4
Ambient temperature	-20...+70 °C
Protection class	IP67

Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED, yellow, flashing

Tests/approvals	
MTTF	965 years acc. to SN 29500 (Ed. 99) 40 °C

- LED all-round visible
- Operating voltage: 10...30 VDC
- NPN switching output, changeover

Wiring Diagram



Functional principle

Diffuse mode sensors with background suppression operate with a single emitter and several receiver elements. The target position and the photoelectric structure of the sensor determine which of the receiving elements receives the most light. The sensor electronics determine whether the reflecting object is within or outside the measuring range. These sensors come with a fixed cut-off point.

Excess gain curve

Excess gain in relation to the distance

