

Diffuse Mode Laser Sensor

QS18VP6LDQ1

Type	QS18VP6LDQ1
ID	3077117

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

Operating voltage U_s	10...30 VDC
Switching frequency	≤ 700 Hz
Readiness delay	≤ 200 ms
Response time typical	< 0.7 ms
Setting option	Potentiometer

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	-10...+50 °C
Protection class	IP67

Special features	Laser
Excess gain indication	LED

Tests/approvals	
MTTF	17 years acc. to SN 29500 (Ed. 99) 40 °C

- LED all-round visible
- Sensitivity adjusted via potentiometer

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

