QS18VP6LAFQ1
– Laser Diffuse Mode Sensor with Adjustable Background Suppression

Technical data

Type	QS18VP6LAFQ1
ID no.	3075510
Optical data	
Function	Proximity switch
Operating mode	Background suppression, adjustable
Light type	Red
Wavelength	650 nm
Laser class	⚠ 1
Beam diameter	1 mm
Range	1…150 mm
Operating voltage	10…30 VDC
Switching frequency	≤ 700 Hz
Readiness delay	≤ 200 ms
Response time typical	< 0.7 ms
Setting option	Mechanical Screw
Design	Rectangular
Housing material	Plastic, ABS
Lens	Acrylic
Electrical connection	Cable with connector, M8 × 1, 0.15 m, PVC
Number of cores	4
Ambient temperature	-10…+50 °C
Protection class	IP67
Excess gain indication	LED
Tests/approvals	
MTTF	268 years acc. to SN 29500 (Ed. 99) 40 °C

Features

- LED all-round visible
- Cut-off point adjusted via potentiometer

Functional principle

Diffuse mode sensors with background suppression operate with a single emitter and several receiver elements, one for close range and one for long-range. The target position and the photoelectric structure of the sensor determine which of the receiving elements receives the most light. The optics before the receiver is modified with the adjusting screw until the boundary between close and long-range is shifted. This operation determines whether the reflecting object is within or outside the measuring range.

Excess gain curves relating to the nearest and farthest cut-off point