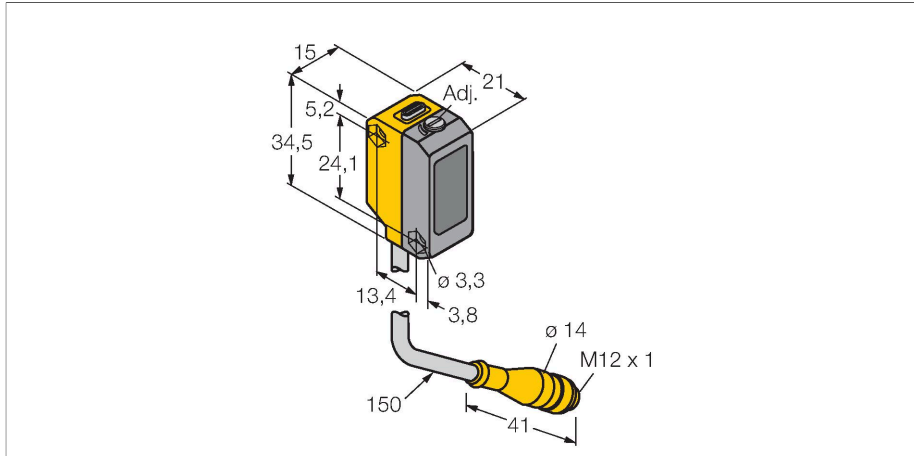


# QS18VP6LAFQPMA

## Photoelectric Sensor – Laser Diffuse Mode Sensor with Adjustable Background Suppression



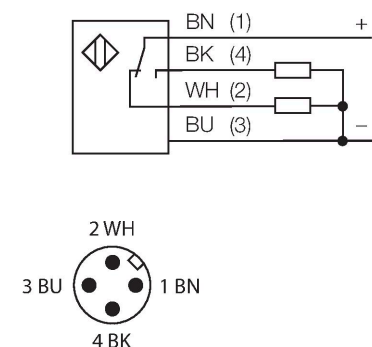
### Technical data

Type	QS18VP6LAFQPMA
ID no.	3073427
<b>Optical data</b>	
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
<b>Electrical data</b>	
Operating voltage	10...30 VDC
Residual ripple	< 10 % U <sub>ss</sub>
DC rated operational current	≤ 100 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO/NC, PNP
Current output	100 mA
Switching frequency	≤ 700 Hz
Readiness delay	≤ 200 ms
Response time typical	< 0.7 ms
Setting option	Mechanical Screw
<b>Mechanical data</b>	
Design	Rectangular, QS18
Dimensions	21.1 x 15 x 34.5 mm
Housing material	Plastic, ABS

### Features

- Cable with male end M12 × 1, 4-pin, PUR, 150 mm
- Protection class IP67
- LED all-round visible
- Cut-off point adjusted via potentiometer
- Operating voltage: 10...30 VDC
- PNP switching output, changeover

### Wiring diagram



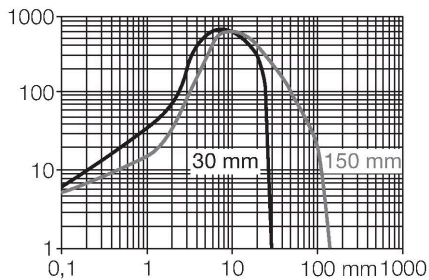
### Functional principle

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.

Technical data

Lens	plastic, Acrylic
Electrical connection	Cable with connector, M12 × 1, 0.15 m, PUR
Number of cores	4
Ambient temperature	-10...+50 °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	
MTTF	268 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus

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



Accessories

SMBQS18A

3069721

Technical drawing of the SMBQS18A mounting bracket. It shows a side view of a U-shaped bracket with two vertical flanges. Dimensions are indicated: total height 41, flange height 21, mounting hole diameter M18 x 1, flange width 24.9, and base width 19.4. The text 'Mounting bracket, stainless steel, for 18 mm thread' is present.

SMBQS18AF

3067467

Technical drawing of the SMBQS18AF mounting bracket. It shows a side view of a bracket with a curved flange. Dimensions are indicated: flange height 27.6, mounting hole diameter 12.7, base hole diameter 3, base width 20.3, total width 31.8, and base hole diameter 4.32. The text 'Mounting bracket, stainless steel, for 18 mm thread' is present.