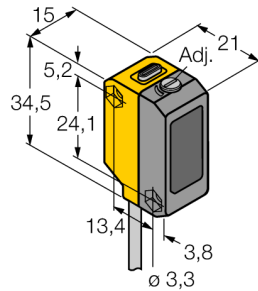


Photoelectric Sensor

Diffuse Mode Sensor with Adjustable Foreground Suppression

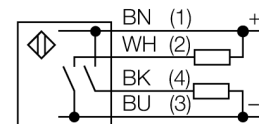
QS18AB6AFF40



Type	QS18AB6AFF40
ID	3012188
Optical data	
Function	Proximity switch
Operating mode	Foreground suppression, adjustable
Light type	Red
Wavelength	630 nm
Range	15...40 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, PNP/NPN
Switching frequency	≤ 700 Hz
Readiness delay	≤ 200 ms
Response time typical	< 2.5 ms
Setting option	Mechanical Screw
Mechanical data	
Design	Rectangular, QS18
Housing material	Plastic, ABS
Lens	plastic, Acrylic
Electrical connection	Cable, 2 m, PVC
Number of cores	4
Core cross-section	0.35 mm ²
Ambient temperature	-20...+55 °C
Protection class	IP67
Power-on indication	
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED, yellow, flashing

- Cable, PVC, 2 m
- Protection class IP67
- LED all-round visible
- Cut-off point adjusted via potentiometer
- Operating voltage: 10...30 VDC
- Switching output, bipolar, light operation

Wiring Diagram



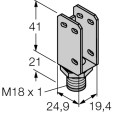
Functional principle

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.

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

Tests/approvals	
MTTF	268 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus

Accessories

Type code	Ident no.		Dimension drawing
SMBQS18A	3069721	Mounting bracket, stainless steel, for 18 mm thread	
SMBQS18AF	3067467	Mounting bracket, stainless steel, for 18 mm thread	