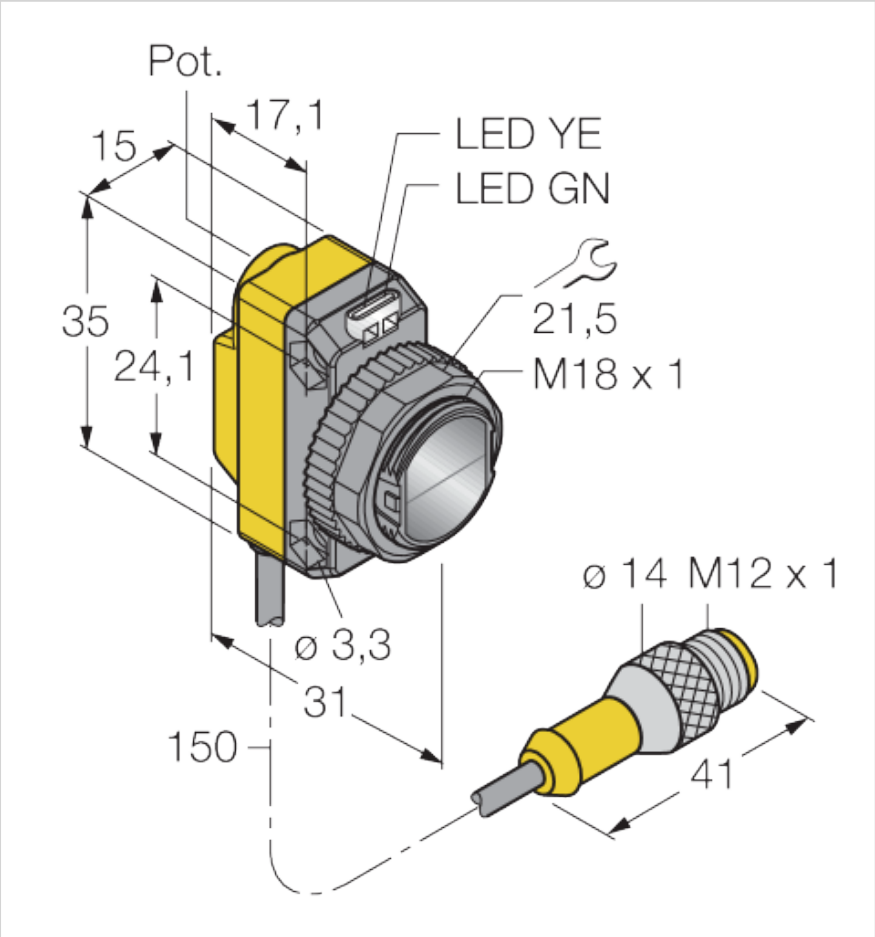
QS18VP6LPQ5

Photoelectric sensor
Retroreflective Sensor with Polarizing Filter



Type designation	QS18VP6LPQ5
Ident-No.	3063188

Technical data

General data	
Operating mode	Polarized
Detection area/measuring range	
Range	50...3500 mm
Optical data	
Light type	Red polarized
Wavelength	630 nm
Power supply	

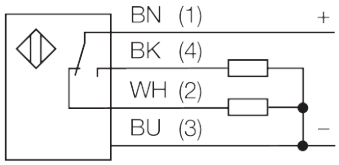
Features

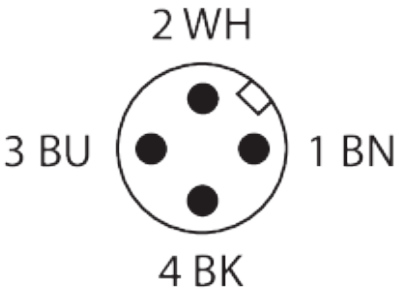
- Cable with male end, M12 x 1, 4-pin, PVC, 150 mm
- Protection class IP67
- LED, all-round visible
- Sensitivity adjusted via potentiometer
- Operating voltage: 10…30 VDC
- PNP switching output, complementary contact

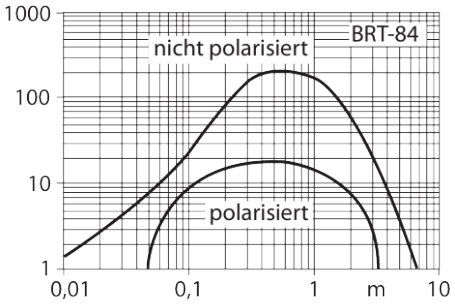
Technical data

Operating voltage U_B	10...30 VDC
Electrical data	
Output function	4-wire, NO/NC, PNP
Short-circuit protection	yes
Wire break/reverse polarity protection	yes
DC rated operational current	≤ 100 mA
Readiness delay	≤100 ms
Residual ripple	≤ 10 % U_{SS}
Residual ripple	<10 % u_{SS}
Response time typical	<0,6 ms
Switching frequency	≤ 800 Hz
Accuracy/deviation	
Repeatability	150 µs
Mechanical data	
Design	Rectangular with thread
Construction type designation	QS18
	⌀ 18 mm
Dimensions	31 mm x 15 mm x 35 mm
Housing material	Plastic, ABS
Electrical connection	Cable with connector, M12 x 1
Thread diameter	18 mm
Lens	plastic, Acrylic
Cable	
Cable length	0,15 m
Core cross-section	4
Cable Jacket Material	PVC
Ambient conditions	
Ambient temperature	-20...+70 °C
Protection class	IP67
Tests/approvals	
Approvals	CE, cURus
Displays/controls	
Error indication	LED, green
Excess gain indication	LED, yellow, flashing
Power-on indication	LED, Green
Switching state	LED, Yellow
	Flashing

Wiring Diagram







Functional principle

Retroreflective sensors have an emitter and a receiver incorporated in the same housing. The light beam of the emitter is directed at a reflector which returns the light back to the receiver. An object is detected when it interrupts this light beam. Retroreflective sensors feature some of the advantages of opposed mode sensors, such as good contrast and high excess gain. Furthermore, only one device has to be installed and wired. However, the range is smaller and devices without a polarizing filter are more susceptible to disturbances caused by shiny objects.

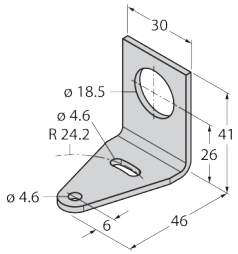
Range curve

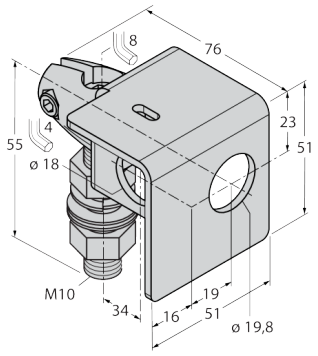
Excess gain in relation to the distance (polarized)

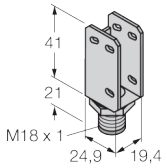
Technical data

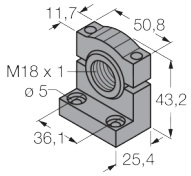
Setting option	Potentiometer
Comments	
Reflector included in delivery	no

Mounting accessories

SMB18A	3033200
	Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread

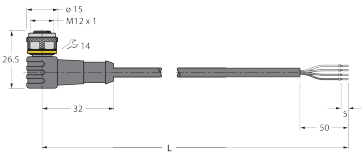
SMB18AFAM10	3012558
	Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm

SMBQS18A	3069721
	Mounting bracket, stainless steel, for 18 mm thread

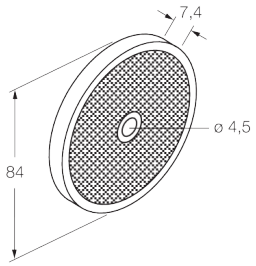
SMB18SF	3052519
	Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable

Connection accessories

RKC4.4T-2/TEL	6625013
	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval

WKC4.4T-2/TEL	6625025
	Connection cable, M12 female connector, angled, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval

Functional accessories

BRT-84	3058979
	Round reflector, reflection coefficient 1.4, material acrylic, ambient temperature -20…+60 °C