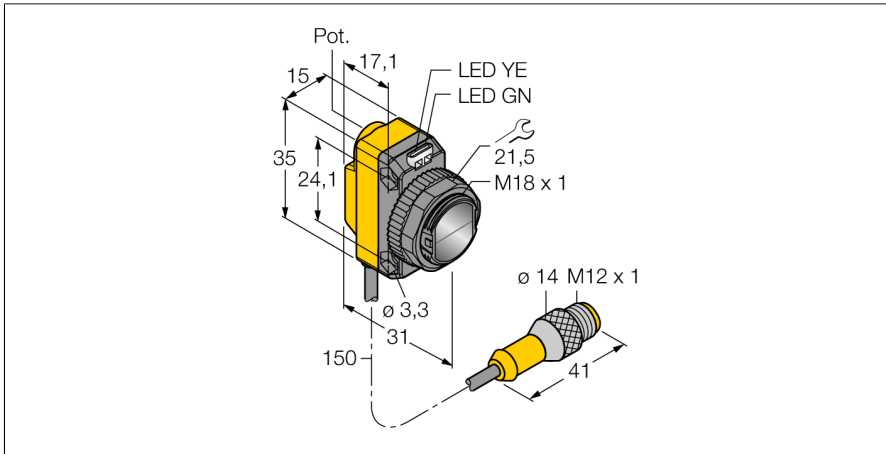


# Photoelectric Sensor Retroreflective Laser Sensor with Polarizing Filter QS18VN6LLPQPMA



Type	QS18VN6LLPQPMA
ID	3073424

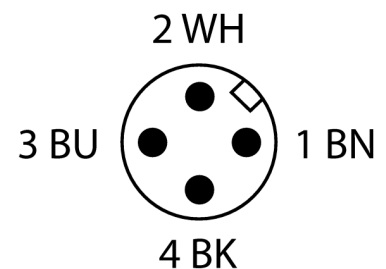
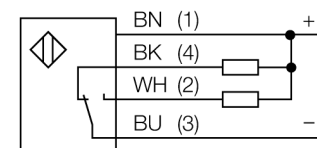
Optical data	
Function	Retroreflective Sensor
Operating mode	Polarized
Reflector included in delivery	yes
Light type	Red polarized
Wavelength	650 nm
Laser class	▲ 1
Beam diameter	4 mm at 10,000 mm
Range	100...10000 mm

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, NPN
Switching frequency	≤ 700 Hz
Readiness delay	≤ 200 ms
Response time typical	< 0.7 ms
Setting option	Potentiometer

Mechanical data	
Design	Rectangular with thread, QS18
Dimensions	Ø 18 x 31 x 15 x 35 mm
Housing material	Plastic, ABS
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

- Cable with male end, M12 × 1, 4-pin, PVC, 150 mm
- Protection class IP67
- LED, all-round visible
- Sensitivity adjusted via potentiometer
- Microprism reflector BRT-51X51BM recommended for ranges up to 10 m and self-adhesive reflector film BRT-TVHG-2X2 for ranges up to 1.5 m; included in scope of delivery
- Operating voltage: 10...30 VDC
- NPN switching output, changeover

### Wiring Diagram



### Functional principle

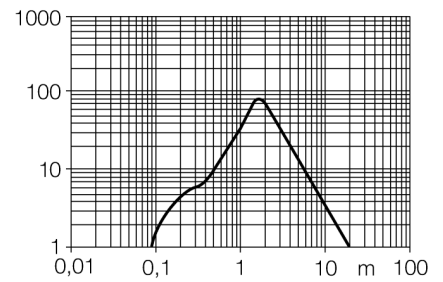
Retro-reflective sensors incorporate emitter and receiver in the same compact housing. The light beam of the emitter is directed to-

Special features	Laser
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED, yellow, flashing
<b>Tests/approvals</b>	
Approvals	CE, cURus

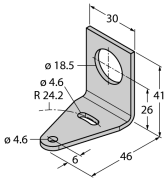
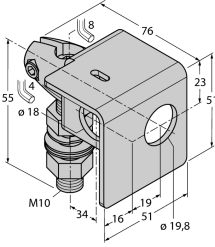
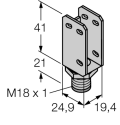
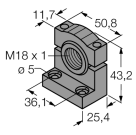
wards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages of opposed mode sensors (good contrast and high excess gain). Further it is merely required to install and wire a single device. A smaller sensing range and susceptibility of devices without polarisation filter can be of disadvantage when shiny objects have to be detected.

### Excess gain curve

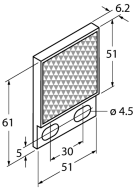
Excess gain in relation to the distance (reflector type BRT-51X51BM)



## Accessories

Type code	Ident no.		Dimension drawing
SMB18A	3033200	Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread	 <p>Technical drawing of a rectangular stainless steel mounting bracket. Dimensions include: top width 30 mm, total width 46 mm, total height 41 mm, mounting hole diameter <math>\phi 18.5</math>, hole offset <math>\phi 4.6</math>, and a radius of R24.2.</p>
SMB18AFAM10	3012558	Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm	 <p>Technical drawing of a mounting bracket for M10 x 1.5 thread. Dimensions include: total width 76 mm, total height 51 mm, mounting hole diameter <math>\phi 18</math>, and a distance of 19 mm from the bottom edge to the center of the hole.</p>
SMBQS18A	3069721	Mounting bracket, stainless steel, for 18 mm thread	 <p>Technical drawing of a mounting bracket for 18 mm thread. Dimensions include: total height 41 mm, mounting hole diameter <math>\phi 18</math>, and a distance of 19.4 mm from the bottom edge to the center of the hole.</p>
SMB18SF	3052519	Mounting bracket, PBT black, for sensors with 18 mm thread, rotatable	 <p>Technical drawing of a rotatable mounting bracket for 18 mm thread. Dimensions include: total width 50.8 mm, total height 43.2 mm, mounting hole diameter <math>\phi 18</math>, and a distance of 25.4 mm from the bottom edge to the center of the hole.</p>

## Function accessories

Type code	Ident no.		Dimension drawing
BRT-51X51BM	3071791	Rectangular reflector, reflection coefficient 2.0, material acrylic, ambient temperature -20 ... +60 °C, microprism geometry	 <p>Technical drawing of a rectangular acrylic reflector with microprism geometry. Dimensions include: total width 51 mm, total height 61 mm, and a thickness of 6.2 mm.</p>

**Function accessories**

Type code	Ident no.		Dimension drawing
BRT-TVHG-2X2	3057260	Rectangular reflective foil, reflection coefficient 0.8, ambient temperature -20 ... +60 °C, 4 sheets	