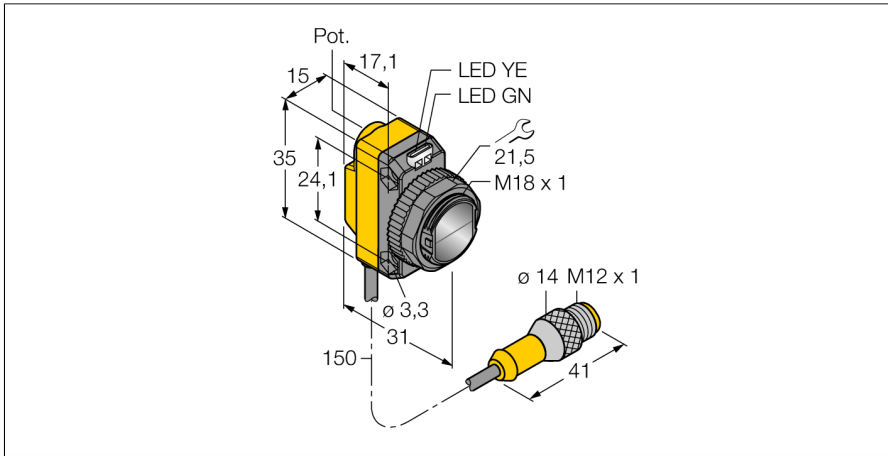


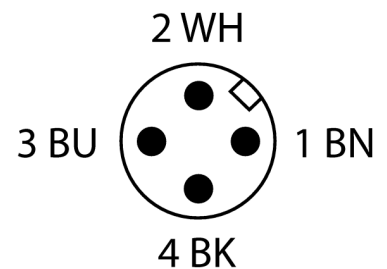
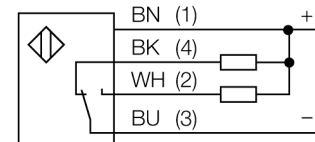
Photoelectric Sensor Diffuse Mode Laser Sensor QS18VN6LDQPMA



Type	QS18VN6LDQPMA
ID	3073422
Optical data	
Function	Proximity switch
Operating mode	Diffuse
Light type	Red
Wavelength	650 nm
Laser class	△ 1
Beam diameter	1 mm at 300 mm
Range	0...300 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
- Operating voltage: 10...30 VDC
- NPN switching output, changeover

Wiring Diagram



Functional principle

Identical to retro-reflective sensors, emitter and receiver circuitry are incorporated in the same housing of the diffuse mode sensors. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the target. A target is detected if it reflects sufficient light back to the receiver. The switching distance of diffuse mode sen-

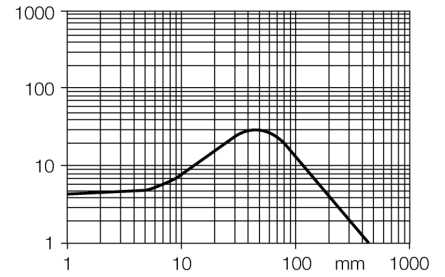
Special features	Laser
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED, yellow, flashing

Tests/approvals	
MTTF	17 years acc. to SN 29500 (Ed. 99) 40 °C
Approvals	CE, cURus

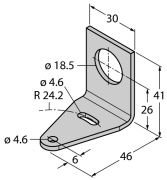
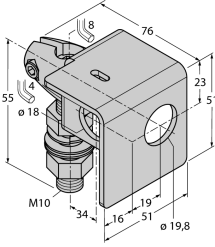
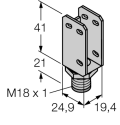
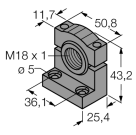
sors thus largely depends on the reflectivity of the target.

Excess gain curve

Excess gain in relation to the distance



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, total height 41, bottom width 46, and a small offset of 6. Holes are specified with diameters $\phi 18.5$ and $\phi 4.6$, and a radius $R24.2$.</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, total height 51, and a mounting hole diameter of $\phi 19.8$. A threaded hole is shown with a diameter of $\phi 18$ and a depth of 19 mm.</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, a hole diameter of $\phi 18$, and a mounting hole diameter of $\phi 19.4$. The bracket has a width of 24.9 mm.</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, total height 43.2, and a mounting hole diameter of $\phi 19.4$. The bracket has a width of 36.1 mm and a hole diameter of $\phi 11.7$.</p>