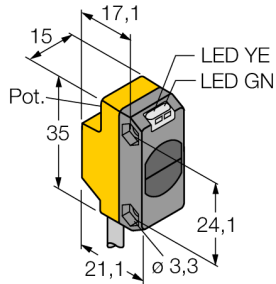


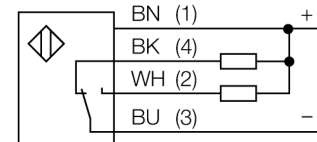
# Photoelectric Sensor Diffuse Mode Sensor QS18VN6DB W/30



Type	QS18VN6DB W/30
ID	3061665
<b>Optical data</b>	
Function	Proximity switch
Operating mode	Diffuse
Light type	IR
Wavelength	940 nm
Range	0...450 mm
<b>Electrical data</b>	
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	≤ 800 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.6 ms
Setting option	Potentiometer
<b>Mechanical data</b>	
Design	Rectangular, QS18
Housing material	Plastic, ABS
Lens	plastic, Acrylic
Electrical connection	Cable, 9 m, PVC
Number of cores	4
Core cross-section	0.35 mm <sup>2</sup>
Ambient temperature	-20...+70 °C
Protection class	IP67
<b>Power-on indication</b>	
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
- 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 sensors thus largely depends on the reflectivity of the target.

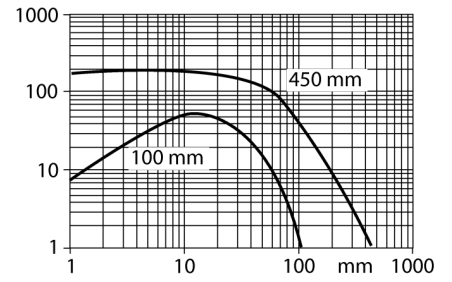
### Excess gain curve

Excess gain in relation to the distance

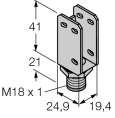
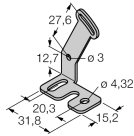
Tests/approvals

Approvals

CE, cURus



## Accessories

Type code	Ident no.		Dimension drawing
SMBQS18A	3069721	Mounting bracket, stainless steel, for 18 mm thread	 <p>Technical drawing of a vertical mounting bracket. Dimensions: total height 41, distance from top to mounting hole 21, mounting hole diameter M18 x 1, distance from mounting hole to bottom edge 24.9, and width 19.4.</p>
SMBQS18AF	3067467	Mounting bracket, stainless steel, for 18 mm thread	 <p>Technical drawing of a horizontal mounting bracket. Dimensions: total height 27.6, distance from top to mounting hole 12.7, mounting hole diameter <math>\varnothing 3</math>, distance from mounting hole to bottom edge 4.32, distance from mounting hole to right edge 20.3, total width 31.8, and distance from mounting hole to left edge 15.2.</p>