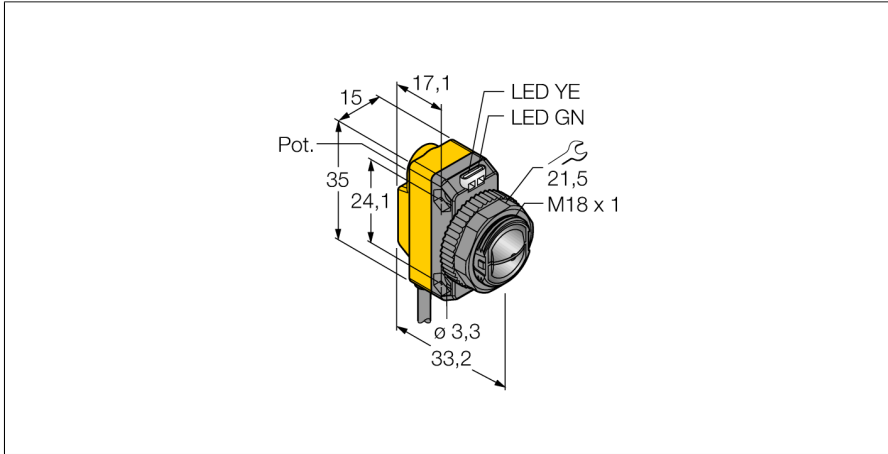


# Photoelectric Sensor Convergent Mode Sensor QS18VP6C45



Type	QS18VP6C45
ID	3071182

Optical data	
Function	Proximity switch
Operating mode	Convergent
Light type	Red
Wavelength	660 nm
Focal distance	43 mm

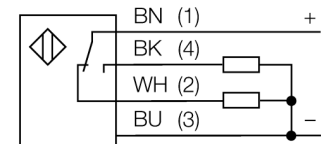
Electrical data	
Operating voltage $U_s$	10...30 VDC
Residual ripple	< 10 % $U_s$
DC rated operating current $I_s$	≤ 100 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO/NC, PNP
Switching frequency	≤ 800 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.6 ms
Setting option	Potentiometer

Mechanical data	
Design	Rectangular with thread, QS18
Dimensions	Ø 18 x 33.2 x 15 x 35 mm
Housing material	Plastic, ABS
Lens	plastic, Acrylic
Electrical connection	Cable, 2 m, PVC
Number of cores	4
Core cross-section	0.35 mm <sup>2</sup>
Ambient temperature	-20...+70 °C
Protection class	IP67

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
- PNP switching output, changeover

### Wiring Diagram



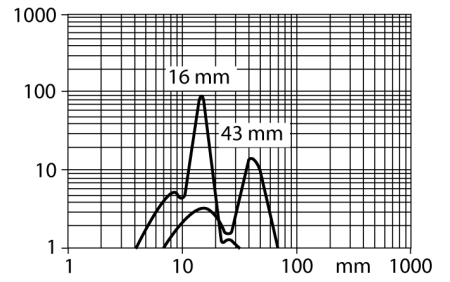
### Functional principle

Convergent mode sensors are equipped with a lens in front of the emitter diode that produces a small and intense focal point at a defined distance from the sensor. Similar to diffuse mode sensors, the light reflected by the target is evaluated. Convergent mode sensors are ideal for detection of small targets or colour marks and edge guiding or positioning control of transparent materials. The targets must always be within the focal depth of the sensors. The focal depth is defined as the area in front of or behind the focal point within which the object can be detected. Based on the intense light concentration in the focal point, convergent mode sensors are capable of detecting targets with a low reflectivity.

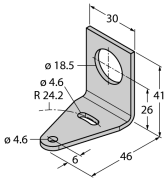
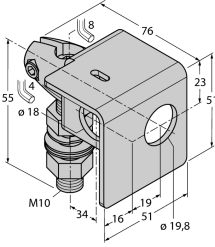
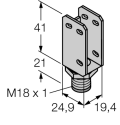
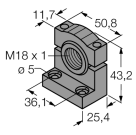
### Excess gain curve

Excess gain in relation to the distance

Tests/approvals	
Approvals	CE, cURus



## 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, mounting hole diameter <math>\phi 18.5</math>, hole offset <math>\phi 4.6</math>, radius <math>R24.2</math>, bottom width 46, and bottom offset 6.</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: top width 76, total height 23, mounting hole diameter <math>\phi 18</math>, side offset 55, bottom width 51, and bottom offset 19.8. A hole with diameter <math>\phi 19.8</math> is located 16 mm from the bottom edge.</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, hole offset 21, and mounting hole diameter <math>M18 \times 1</math>. The hole is positioned 24.9 mm from the bottom edge.</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: top width 50.8, total height 43.2, hole offset 11.7, hole diameter <math>M18 \times 1</math>, and hole diameter <math>\phi 5</math>. The hole is positioned 36.1 mm from the bottom edge.</p>