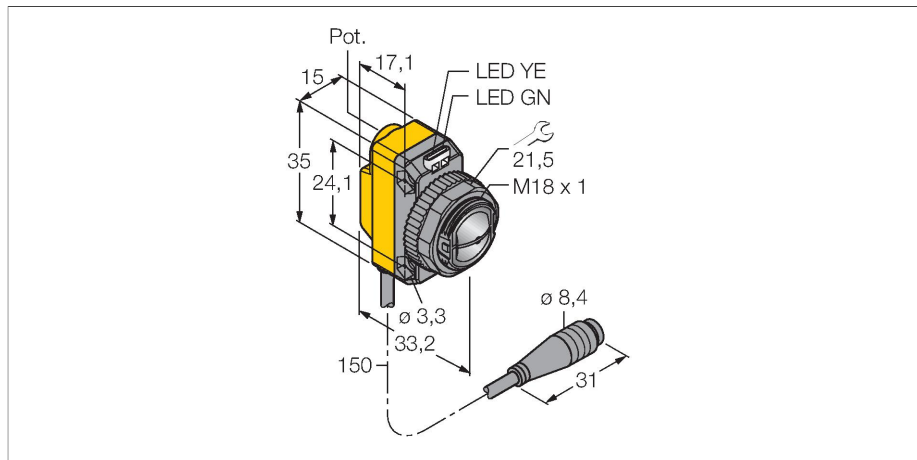


QS18VP6CV15Q

Photoelectric Sensor – Convergent Mode Sensor



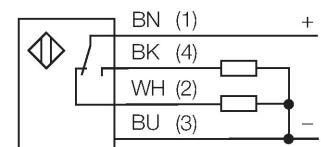
Technical data

Type	QS18VP6CV15Q
ID	3061643
Optical data	
Function	Proximity switch
Operating mode	Convergent
Light type	Red
Wavelength	630 nm
Focal distance	16 mm
Range	16 mm
Electrical data	
Operating voltage	10...30 VDC
Residual ripple	< 10 % U _{ss}
DC rated operational current	≤ 100 mA
Short-circuit protection	yes
Reverse polarity protection	yes
Output function	NO/NC, PNP
Current output	100 mA
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

Features

- Cable with male end, 4-pin, PVC, 150 mm, 8 mm
- Protection class IP67
- LED all-round visible
- Sensitivity adjusted via potentiometer
- Operating voltage: 10...30 VDC
- PNP switching output, changeover

Wiring diagram



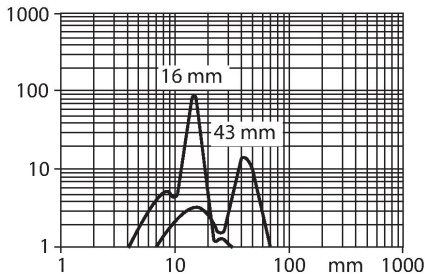
Functional principle

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.

Technical data

Electrical connection	Cable with connector, M8 × 1, 0.15 m, PVC
Number of cores	4
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
Tests/approvals	
Approvals	CE, cURus

Excess gain curve
Excess gain in relation to the distance



Accessories

SMB18A3033200

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

Technical drawing of the SMB18A mounting bracket. It is a rectangular stainless steel bracket for sensors with an 18 mm thread. Dimensions include a width of 30 mm, a height of 41 mm, a base width of 46 mm, and a base height of 26 mm. It features a central hole with a diameter of 18.5 mm and two side holes with a diameter of 4.6 mm. A radius of R 24.2 is indicated for the base.

SMB18AFAM103012558

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

Technical drawing of the SMB18AFAM10 mounting bracket. It is a rectangular bracket made of material VA 1.4401 for M10 x 1.5 thread with a thread length of 18 mm. Dimensions include a width of 76 mm, a height of 51 mm, and a base width of 51 mm. It features a central hole with a diameter of 18 mm and a base hole with a diameter of 19.8 mm. The base has a width of 34 mm and a height of 16 mm.

SMBQS18A3069721

Mounting bracket, stainless steel, for 18 mm thread

Technical drawing of the SMBQS18A mounting bracket. It is a stainless steel bracket for 18 mm thread. Dimensions include a height of 41 mm, a base height of 21 mm, and a base width of 24.9 mm. It features a central hole with a diameter of 18 mm and a base hole with a diameter of 19.4 mm. The base has a width of 19.4 mm and a height of 19.4 mm.

SMB18SF3052519

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

Technical drawing of the SMB18SF mounting bracket. It is a PBT black bracket for sensors with an 18 mm thread, designed to be rotatable. Dimensions include a width of 50.8 mm, a height of 43.2 mm, and a base width of 36.1 mm. It features a central hole with a diameter of 18 mm and a base hole with a diameter of 5 mm. The base has a width of 25.4 mm and a height of 11.7 mm.

Accessories

Dimension drawing	Type	ID	
Technical drawing of the PKG4M-2/TEL connection cable. It shows a cable with an M8 x 1 connector and a length of 33.5 mm. The cable has a diameter of 9.6 mm and a length of 50 mm.	PKG4M-2/TEL	6625061	Connection cable, female M8, straight, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com

Dimension drawing	Type	ID	
	PKW4M-2/TEL	6625067	Connection cable, female M8, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com

