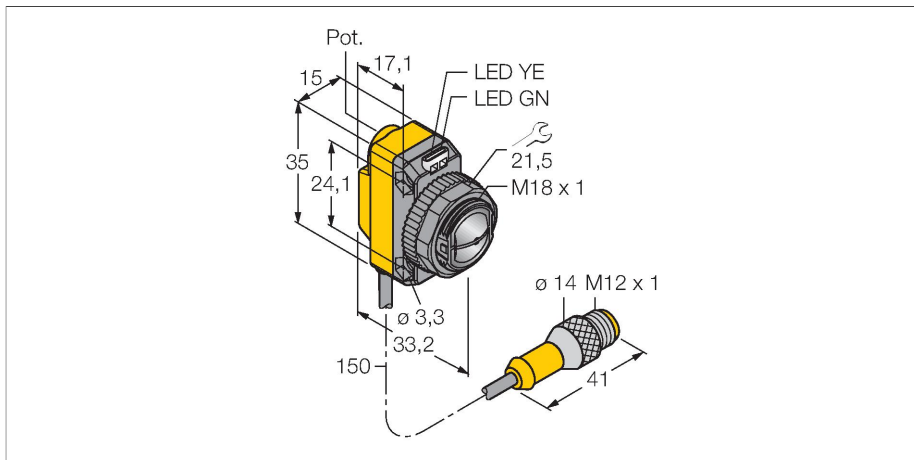


QS18VP6CV45Q5
Photoelectric Sensor – Convergent Mode Sensor



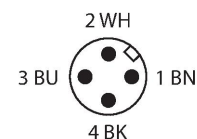
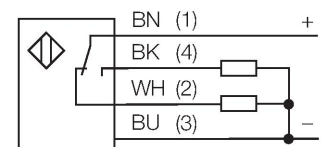
Technical data

Type	QS18VP6CV45Q5
ID	3064483
Optical data	
Function	Proximity switch
Operating mode	Convergent
Light type	Red
Wavelength	630 nm
Focal distance	43 mm
Range	43 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, M12 × 1, 4-pin, PVC, 150 mm
- Protection class IP67
- LED all-round visible
- Sensitivity adjusted via potentiometer
- Operating voltage: 10...30 VDC
- PNP switching output, changeover

Wiring diagram



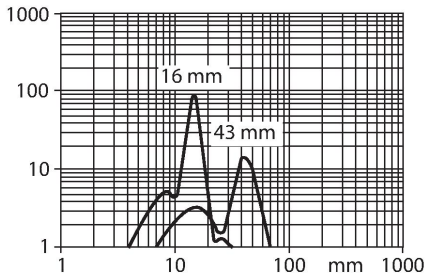
Functional principle

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, M12 × 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 SMB18A mounting bracket. Dimensions: 30 mm width, 41 mm height, 26 mm base, 46 mm total length, 6 mm base width, 18.5 mm hole diameter, 4.6 mm hole diameter, R 24.2 radius.

SMB18AFAM103012558

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

Technical drawing of SMB18AFAM10 mounting bracket. Dimensions: 76 mm width, 51 mm height, 23 mm base, 19 mm total length, 16 mm base width, 19.8 mm hole diameter, 18 mm thread length, M10 x 1.5 thread.

SMBQS18A3069721

Mounting bracket, stainless steel, for 18 mm thread

Technical drawing of SMBQS18A mounting bracket. Dimensions: 41 mm height, 21 mm base, 19.4 mm total length, 24.9 mm base width, M18 x 1 thread.

SMB18SF3052519

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

Technical drawing of SMB18SF mounting bracket. Dimensions: 11.7 mm width, 50.8 mm height, 43.2 mm base, 25.4 mm total length, 36.1 mm base width, 5 mm hole diameter, M18 x 1 thread.

Accessories

Dimension drawing	Type	ID	
Technical drawing of RKC4.4T-2/TEL connection cable. Dimensions: 11.5 mm width, 42 mm length, 50 mm total length, 14 mm hole diameter, 15 mm hole diameter, M12 x 1 thread.	RKC4.4T-2/TEL	6625013	Connection cable, female M12, 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	
	WKC4.4T-2/TEL	6625025	Connection cable, female M12, angled, 4-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com