QS18EP6CV45Q8
Photoelectric Sensor –   Convergent Mode Sensor
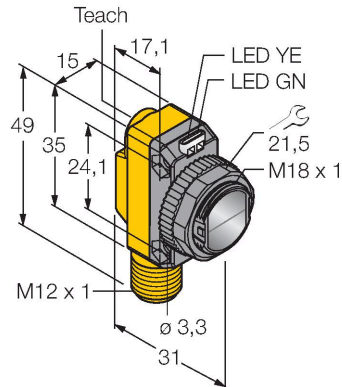

Technical data

Type	QS18EP6CV45Q8
ID no.	3071989
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
DC rated operational current	≤ 100 mA
No-load current	≤ 35 mA
Reverse polarity protection	yes
Output function	NO contact, PNP
Switching frequency	≤ 833 Hz
Readiness delay	≤ 100 ms
Response time typical	< 0.6 ms
Setting option	Push Button Remote Teach
Mechanical data	
Design	Rectangular with thread, QS18
Dimensions	Ø 18 x 31 x 15 x 35 mm
Housing material	Plastic, ABS
Lens	plastic, PMMA
Electrical connection	Connectors, M12 × 1, PVC
Number of cores	4

Features

- Male M12 × 1; 4-pin
- Protection class IP67
- LED all-round visible
- Sensitivity adjusted via teach button
- Operating voltage: 10…30 VDC
- PNP switching output
- Light or dark operation
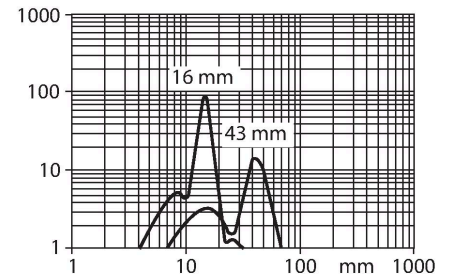
Wiring diagram

* external programming
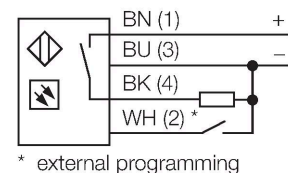
Functional principle

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.
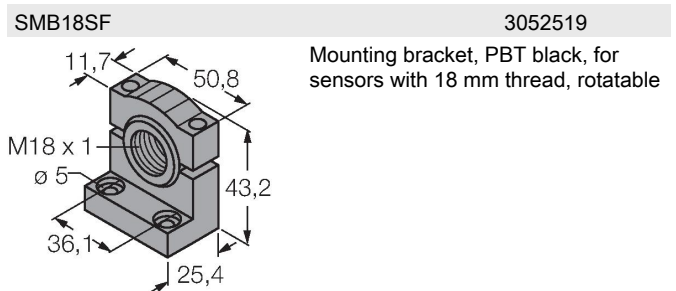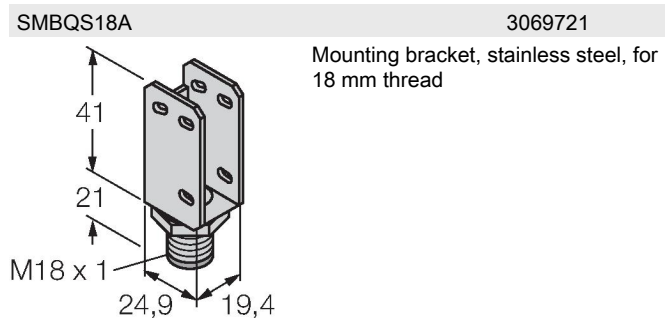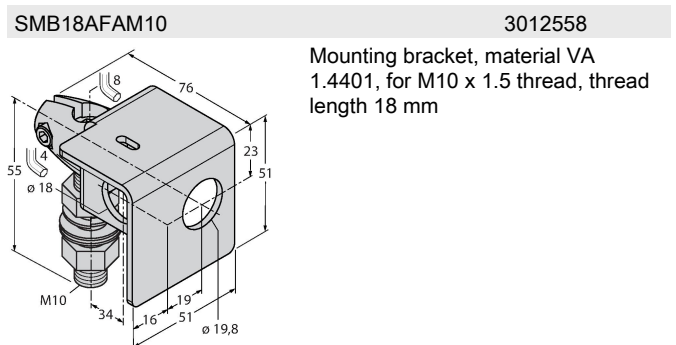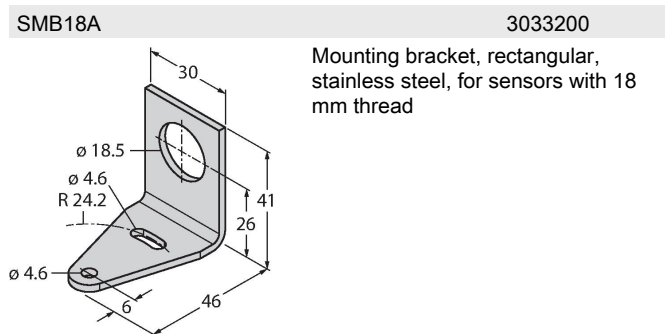
Excess gain curve
Excess gain in relation to the distance

Technical data

Ambient temperature	-20…+70 °C
Protection class	IP67
Special features	keep/defer
Power-on indication	LED, Green
Switching state	LED, Yellow
Error indication	LED, green, Flashing
Excess gain indication	LED
Alarm display	LED yellow Flashing
Tests/approvals	
Approvals	CE, cURus

Accessories

SMB18A   3033200

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

SMB18AFAM10   3012558

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

SMBQS18A   3069721

Mounting bracket, stainless steel, for 18 mm thread

SMB18SF   3052519

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

Accessories

Dimension drawing	Type	ID no.	
	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
	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