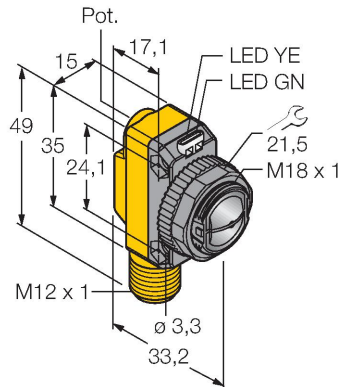


# QS18VP6CV45Q8

## Photoelectric Sensor – Convergent Mode Sensor



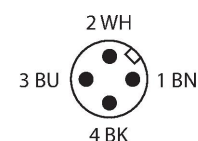
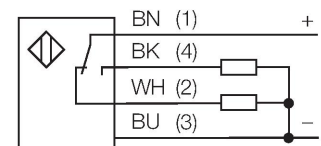
### Technical data

|                              |                               |
|------------------------------|-------------------------------|
| Type                         | QS18VP6CV45Q8                 |
| ID no.                       | 3066458                       |
| <b>Optical data</b>          |                               |
| Function                     | Proximity switch              |
| Operating mode               | Convergent                    |
| Light type                   | Red                           |
| Wavelength                   | 630 nm                        |
| Focal distance               | 43 mm                         |
| Range                        | 43 mm                         |
| <b>Electrical data</b>       |                               |
| Operating voltage            | 10...30 VDC                   |
| Residual ripple              | < 10 % U <sub>ss</sub>        |
| 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                 |
| <b>Mechanical data</b>       |                               |
| 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        | Connectors, M12 × 1, PVC      |

### Features

- Male M12 × 1, 4-pin
- Protection class IP67
- LED all-round visible
- Sensitivity adjusted via potentiometer
- Operating voltage: 10...30 VDC
- PNP switching output, changeover

### Wiring diagram



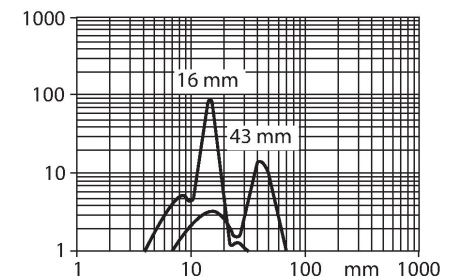
### Functional principle

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

|                        |                       |
|------------------------|-----------------------|
| 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 |
| <b>Tests/approvals</b> |                       |
| Approvals              | CE, cURus             |

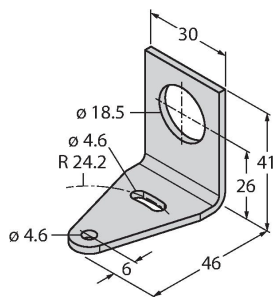
Excess gain curve  
Excess gain in relation to the distance



## Accessories

SMB18A

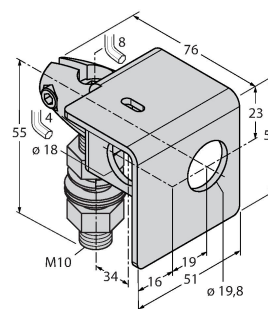
3033200



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

SMB18AFAM10

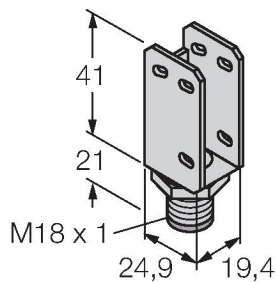
3012558



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

SMBQS18A

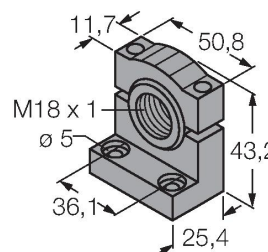
3069721



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 <a href="http://www.turck.com">www.turck.com</a> |
|  | 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 <a href="http://www.turck.com">www.turck.com</a>   |