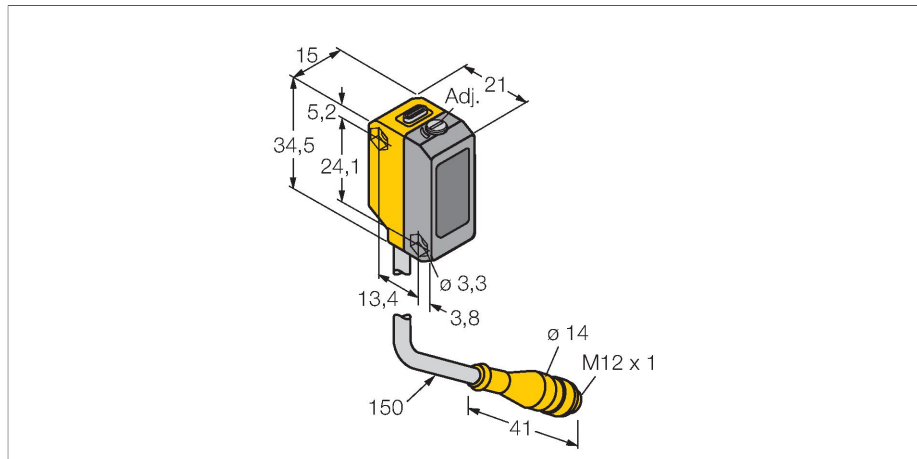


# QS18AB6AFF200Q5

## Photoelectric Sensor – Diffuse Mode Sensor with Adjustable Foreground Suppression



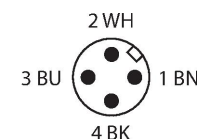
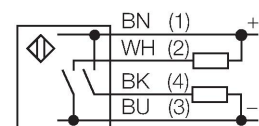
### Technical data

|                              |                                    |
|------------------------------|------------------------------------|
| Type                         | QS18AB6AFF200Q5                    |
| ID                           | 3011479                            |
| <b>Optical data</b>          |                                    |
| Function                     | Proximity switch                   |
| Operating mode               | Foreground suppression, adjustable |
| Light type                   | Red                                |
| Wavelength                   | 630 nm                             |
| Range                        | 30...200 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/NPN                     |
| Current output               | 100 mA                             |
| Switching frequency          | ≤ 700 Hz                           |
| Readiness delay              | ≤ 200 ms                           |
| Response time typical        | < 2.5 ms                           |
| Setting option               | Mechanical Screw                   |
| <b>Mechanical data</b>       |                                    |
| Design                       | Rectangular, QS18                  |
| Dimensions                   | 21.1 x 15 x 34.5 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
- Cut-off point adjusted via potentiometer
- Operating voltage: 10...30 VDC
- Switching output, bipolar, light operation

### Wiring diagram



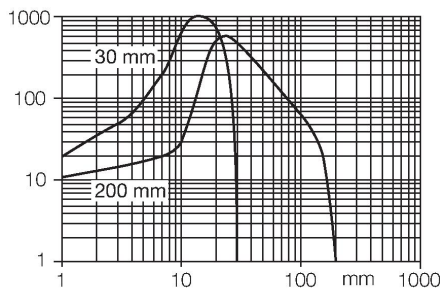
### Functional principle

Diffuse mode sensors with foreground and background suppression operate with a single emitter and two receiver elements, one for close range and one for far range. The target position and the photoelectric structure of the sensor determine which receiver element gets the most light. The optics in front of the receiver is modified with the adjusting screw until the boundary between close and far range is shifted. This operation determines whether the reflecting object is in or outside the measuring range.

Technical data

|                        |                                            |
|------------------------|--------------------------------------------|
| Electrical connection  | Cable with connector, M12 × 1, 0.15 m, PVC |
| Number of cores        | 4                                          |
| Ambient temperature    | -20...+55 °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        |                                            |
| MTTF                   | 268 years acc. to SN 29500 (Ed. 99) 40 °C  |
| Approvals              | CE, cURus                                  |

Excess gain curves relating to the nearest and farthest cut-off point



Accessories

SMBQS18A

3069721

Mounting bracket, stainless steel, for 18 mm thread

41  
21  
M18 x 1  
24,9  
19,4

SMBQS18AF

3067467

Mounting bracket, stainless steel, for 18 mm thread

27,6  
12,7  
ø 3  
20,3  
31,8  
15,2  
ø 4,32

Accessories

| Dimension drawing                                    | Type          | ID      |                                                                                                                                                                                                                  |
|------------------------------------------------------|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>M12 x 1 ø 15 14<br/>11,5<br/>42<br/>L<br/>50</p>  | 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> |
| <p>ø 15<br/>M12 x 1<br/>26,5<br/>32<br/>L<br/>50</p> | 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>   |