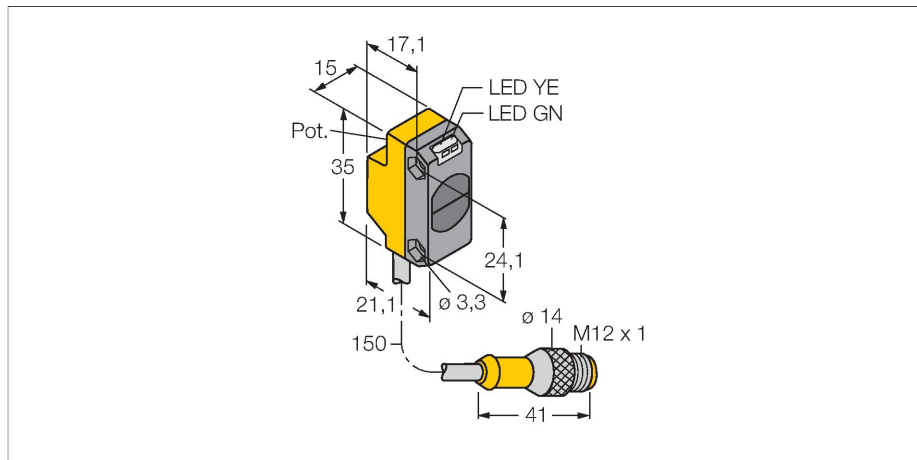


# QS18VN6WQ5

## Photoelectric Sensor – Diffuse Mode Sensor



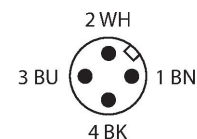
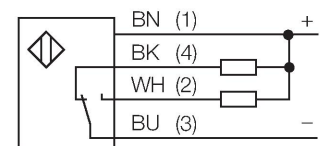
### Technical data

|                              |                                            |
|------------------------------|--------------------------------------------|
| Type                         | QS18VN6WQ5                                 |
| ID                           | 3064592                                    |
| <b>Optical data</b>          |                                            |
| Function                     | Proximity switch                           |
| Operating mode               | Divergent                                  |
| Light type                   | IR                                         |
| Wavelength                   | 940 nm                                     |
| Range                        | 0...100 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, NPN                                 |
| Current output               | 100 mA                                     |
| Switching frequency          | ≤ 800 Hz                                   |
| Readiness delay              | ≤ 100 ms                                   |
| Response time typical        | < 0.6 ms                                   |
| <b>Mechanical data</b>       |                                            |
| Design                       | Rectangular, QS18                          |
| Dimensions                   | 21.1 x 15 x 35 mm                          |
| Housing material             | Plastic, ABS                               |
| Lens                         | plastic, Acrylic                           |
| Electrical connection        | Cable with connector, M12 × 1, 0.15 m, PVC |
| Number of cores              | 4                                          |

### 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
- NPN switching output, changeover

### Wiring diagram



### Functional principle

Identical to retro-reflective sensors, emitter and receiver circuitry are incorporated in the same housing of the diffuse mode sensors. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the target. A target is detected if it reflects sufficient light back to the receiver. The switching distance of diffuse mode sensors thus largely depends on the reflectivity of the target.

Excess gain curve  
Excess gain in relation to the distance

Technical data

|                        |                       |
|------------------------|-----------------------|
| 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             |



Accessories

SMBQS18A

3069721

Mounting bracket, stainless steel, for 18 mm thread

SMBQS18AF

3067467

Mounting bracket, stainless steel, for 18 mm thread

Accessories

| Dimension drawing | Type          | ID      |                                                                                                                                                                                                                  |
|-------------------|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | 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>   |