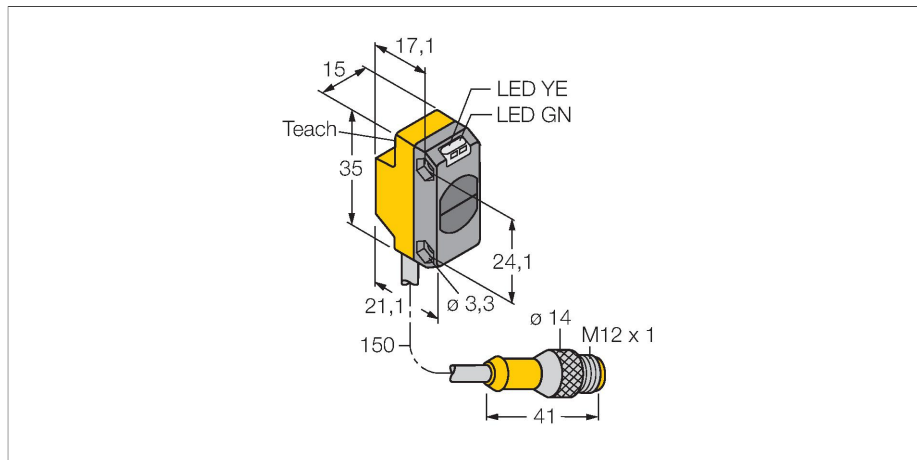


# QS18EP6WQ5

## Photoelectric Sensor – Diffuse Mode Sensor



### Technical data

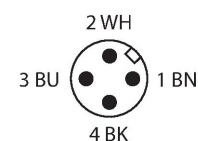
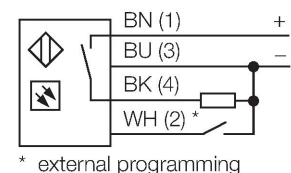
|                              |                                            |
|------------------------------|--------------------------------------------|
| Type                         | QS18EP6WQ5                                 |
| ID                           | 3069219                                    |
| <b>Optical data</b>          |                                            |
| Function                     | Proximity switch                           |
| Operating mode               | Divergent                                  |
| Light type                   | IR                                         |
| Wavelength                   | 940 nm                                     |
| Range                        | 0...300 mm                                 |
| <b>Electrical data</b>       |                                            |
| 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<br>Remote Teach                |
| <b>Mechanical data</b>       |                                            |
| Design                       | Rectangular, QS18                          |
| Dimensions                   | 21.1 x 15 x 35 mm                          |
| Housing material             | Plastic, ABS                               |
| Lens                         | plastic, PMMA                              |
| Electrical connection        | Cable with connector, M12 × 1, 0.15 m, PVC |
| Number of cores              | 4                                          |
| Ambient temperature          | -20...+70 °C                               |



### Features

- Cable with male end, M12 × 1, 4-pin, PVC, 150 mm
- 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



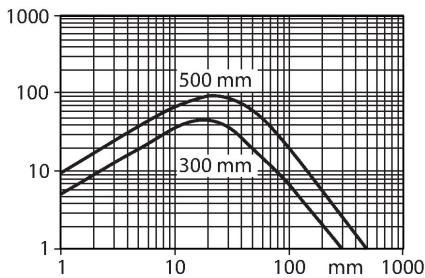
### Functional principle

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. This type of sensor is especially suited for detection of transparent objects (diffuse mode sensor with or without background suppression or convergent mode sensors).

Technical data

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

Excess gain curve  
Excess gain in relation to the distance



Accessories

SMB18A

3033200

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

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      |                                                                                                                                                                                                                  |
|-----------------------------------|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>M12 x 1 15 14 11.5 42 50 5</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> |

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