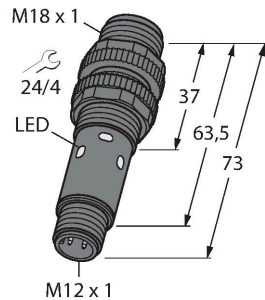


# S18-2VNRL-Q8

## Photoelectric Sensor – Opposed Mode Sensor (Receiver)



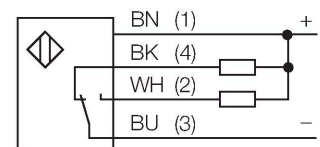
### Technical data

|                             |                                 |
|-----------------------------|---------------------------------|
| Type                        | S18-2VNRL-Q8                    |
| ID                          | 3042182                         |
| <b>Optical data</b>         |                                 |
| Function                    | Opposed mode sensor             |
| Operating mode              | Receiver                        |
| Light type                  | Red                             |
| Wavelength                  | 624 nm                          |
| Range                       | 0...25000 mm                    |
| <b>Electrical data</b>      |                                 |
| Operating voltage           | 10...30 VDC                     |
| Residual ripple             | < 10 % U <sub>ss</sub>          |
| No-load current             | ≤ 8 mA                          |
| Short-circuit protection    | yes / Cyclic                    |
| Reverse polarity protection | yes                             |
| Output function             | Complementary contact, NPN      |
| Readiness delay             | ≤ 100 ms                        |
| Response time typical       | < 1.5 ms                        |
| <b>Mechanical data</b>      |                                 |
| Design                      | Tube, S18                       |
| Dimensions                  | Ø 18 x 73 mm                    |
| Housing material            | Plastic, Thermoplastic material |
| Lens                        | Acrylic                         |
| Electrical connection       | Connector, M12 × 1, PVC         |
| Number of cores             | 4                               |
| Ambient temperature         | -40...+70 °C                    |
| Protection class            | IP67                            |
| Power-on indication         | LED, Green                      |

### Features

- Male M12 × 1, 5-pin
- Protection class IP67
- Ambient temperature: -40...+70 °C
- Visible red LED light
- Operating voltage: 10...30 VDC
- NPN switching output, changeover

### Wiring diagram



### Functional principle

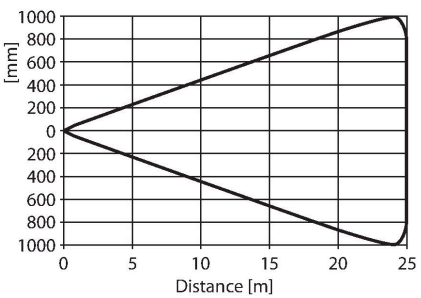
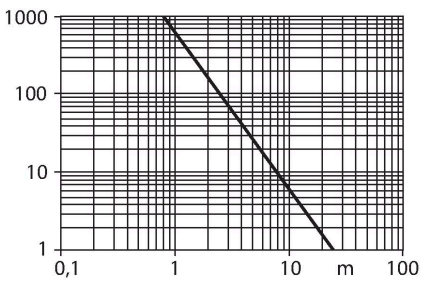
Opposed mode sensors consist of an emitter and a receiver. They are installed opposite to each other whereby the emitted light aims directly at the receiver. When an object interrupts or weakens the light beam, the sensor switches. Opposed mode sensors are the most reliable photoelectric sensors for detection of opaque objects. The excellent light/dark contrast and the very high excess gain are typical for this function mode and enable operation over large distances and under difficult conditions.

Excess gain curve  
Excess gain in relation to distance

Technical data

|                        |                  |
|------------------------|------------------|
| Switching state        | 2 × LEDs, Yellow |
| Error indication       | Flashing         |
| Excess gain indication | LED              |
| Alarm display          | Flashing         |
| Tests/approvals        |                  |
| Approvals              | CE               |

Excess Gain Curve



Accessories

MW-186945004

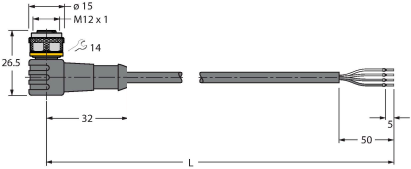
Mounting bracket for threaded barrel sensors; material: Stainless steel A2 1.4301 (AISI 304)

BST-18N6947215

Mounting clamp for threaded barrel sensors, without dead-stop; material: PA6

Accessories

| Dimension drawing | Type          | ID      |                                                                                                                                                                                                                  |
|-------------------|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | RKC4.5T-2/TEL | 6625016 | Connection cable, female M12, straight, 5-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> |
|                   | WKC4.5T-2/TEL | 6625028 | Connection cable, female M12, angled, 5-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      |                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------------|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 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>   |