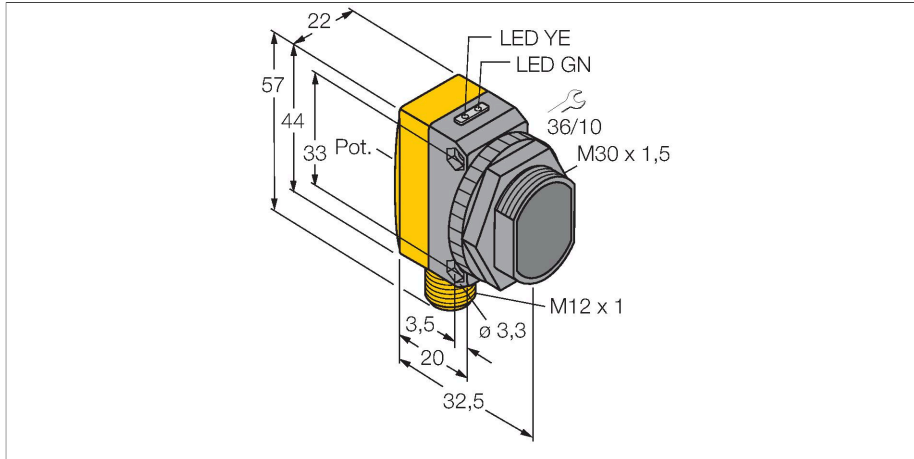


# QS30LVQ

## Photoelectric Sensor – Retroreflective Sensor



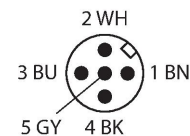
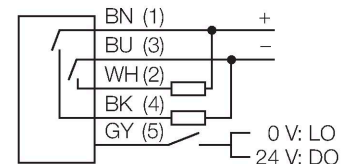
### Technical data

|                              |                                         |
|------------------------------|-----------------------------------------|
| Type                         | QS30LVQ                                 |
| ID                           | 3073094                                 |
| <b>Optical data</b>          |                                         |
| Function                     | Retroreflective Sensor                  |
| Operating mode               | Unpolarized                             |
| Light type                   | Red                                     |
| Wavelength                   | 630 nm                                  |
| Range                        | 10...12000 mm                           |
| <b>Electrical data</b>       |                                         |
| Operating voltage            | 10...30 VDC                             |
| Residual ripple              | < 10 % U <sub>ss</sub>                  |
| DC rated operational current | ≤ 150 mA                                |
| No-load current              | ≤ 35 mA                                 |
| Short-circuit protection     | yes                                     |
| Reverse polarity protection  | yes                                     |
| Output function              | NO contact, PNP/NPN                     |
| Switching frequency          | ≤ 250 Hz                                |
| Readiness delay              | ≤ 100 ms                                |
| Response time typical        | < 2 ms                                  |
| Setting option               | Potentiometer                           |
| <b>Mechanical data</b>       |                                         |
| Design                       | Rectangular with thread, QS30           |
| Dimensions                   | Ø 30 x 35 x 22 x 57 mm                  |
| Housing material             | Plastic, Thermoplastic material, Yellow |
| Lens                         | plastic, Acrylic                        |
| Electrical connection        | Connector, M12 × 1, PVC                 |
| Number of cores              | 5                                       |

### Features

- Male M12 × 1, 5-pin
- Protection class IP67
- LED all-round visible
- Sensitivity adjusted via potentiometer
- Operating voltage: 10...30 VDC
- Switching output, bipolar
- Light or dark operation

### Wiring diagram



### Functional principle

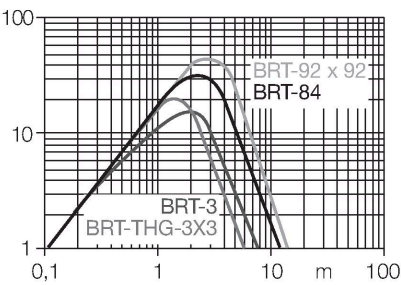
Retro-reflective sensors incorporate emitter and receiver in the same compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages of opposed mode sensors (good contrast and high excess gain). Further it is merely required to install and wire a single device. A smaller sensing range and susceptibility of devices without polarisation filter can be of disadvantage when shiny objects have to be detected.

Excess gain curve

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          |
| Tests/approvals        |                      |
| Approvals              | CE                   |

Excess gain in relation to the distance



Accessories

SMB30A3032723

Mounting bracket, rectangular, stainless steel, for sensors with 30mm thread

SMBQS30L3002809

Mounting bracket, stainless steel, for QS30 series

SMB30MM3027162

Mounting bracket, rectangular, stainless steel, for sensors with 30 mm thread, wide holes for accurate alignment

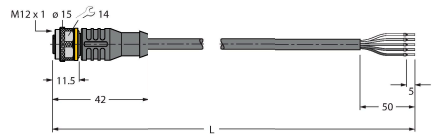
SMB30SC3052521

Mounting bracket, PBT black, for sensors with 30 mm thread, rotatable

Accessories

| Dimension drawing                                                                                                                                                       | Type          | ID      |                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Technical drawing of the WKC4.5T-2/TEL connection cable showing dimensions: 15mm diameter, 14mm length, 26.5mm length, 32mm length, 50mm length, and 5mm length.</p> | 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      |                                                                                                                                                                                                                  |
|-------------------|---------------|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | RKC4.5T-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> |



Accessories

| Dimension drawing | Type   | ID      |                                                                                                   |
|-------------------|--------|---------|---------------------------------------------------------------------------------------------------|
|                   | BRT-84 | 3058979 | Round reflector, reflection coefficient 1.4, material acrylic, ambient temperature -20 ... +60 °C |

