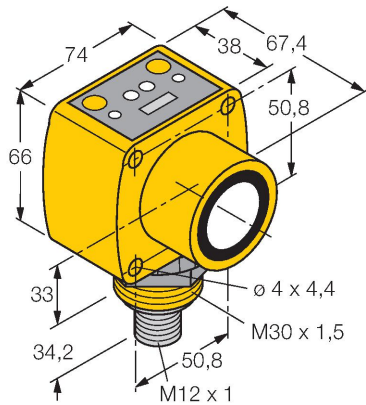


# QT50UDBQ6

## Ultrasonic Sensor – diffuse mode sensor With Switching Outputs



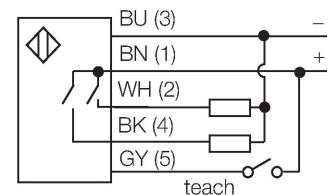
### Technical data

|                                      |                                   |
|--------------------------------------|-----------------------------------|
| Type                                 | QT50UDBQ6                         |
| ID                                   | 3002724                           |
| <b>Ultrasonic data</b>               |                                   |
| Function                             | Proximity switch                  |
| Range                                | 200...8000 mm                     |
| Ultrasound frequency                 | 75 kHz                            |
| Repeatability                        | ≤ ± 1 mm                          |
| Temperature drift                    | ≤ 0.02 % of full scale/K          |
| Edge lengths of the nominal actuator | 500 mm                            |
| <b>Electrical data</b>               |                                   |
| Operating voltage                    | 10...30 VDC                       |
| Response time typical                | < 100 ms                          |
| Readiness delay                      | ≤ 1500 ms                         |
| Output function                      | 2 normally open contact, PNP      |
| Switching frequency                  | ≤ 5 Hz                            |
| Hysteresis                           | ≤ 5 mm                            |
| Short-circuit protection             | yes                               |
| <b>Mechanical data</b>               |                                   |
| Design                               | Rectangular, QT50U                |
| Radiation direction                  | straight                          |
| Dimensions                           | 67.4 x 74 x 100.2 mm              |
| Housing material                     | Plastic, PBT                      |
| Transducer material                  | Plastic, Epoxyd resin and PU foam |
| Electrical connection                | Connector, M12 × 1, PVC           |
| Ambient temperature                  | -20...+70 °C                      |

### Features

- LED indicates signal intensity
- Male connector, 5-pin, M12 × 1
- Temperature compensation selectable via DIP switch
- Two switching ranges, separately adjustable via teach-in
- Pump function adjustable via DIP switch
- Blind zone: 20 cm
- Range: 800 cm

### Wiring diagram



### Functional principle

Ultrasonic sensors detect a multitude of objects contactless and wear-free with ultrasonic waves. Regardless of whether the object is transparent or opaque, metallic or non-metallic, liquid, solid or powdery. Even environmental conditions such as spray, dust or rain hardly affect their function.

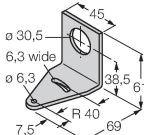
Technical data

|                     |                                           |
|---------------------|-------------------------------------------|
| Storage temperature | -40...+90 °C                              |
| Relative humidity   | 100 %                                     |
| Protection class    | IP67                                      |
| Power-on indication | LED, Green                                |
| Switching state     | LED, Yellow                               |
| Object detected     | LED, Red                                  |
| Tests/approvals     |                                           |
| MTTF                | 131 years acc. to SN 29500 (Ed. 99) 40 °C |
| Approvals           | CE                                        |

Accessories

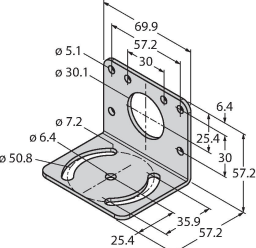
SMB30A3032723

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



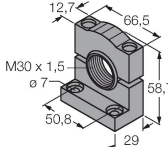
SMB30MM3027162

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

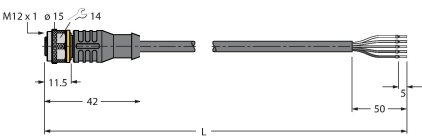


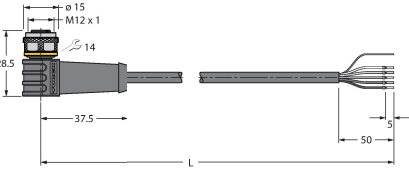
SMB30SC3052521

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



Accessories

| Dimension drawing                                                                   | Type          | ID      |                                                                                                                         |
|-------------------------------------------------------------------------------------|---------------|---------|-------------------------------------------------------------------------------------------------------------------------|
|  | RKC4.5T-2/TEL | 6625016 | Connection cable, M12 female connector, straight, 5-pin, cable length: 2 m, jacket material: PVC, black; cULus approval |

| Dimension drawing                                                                 | Type          | ID      |                                                                                                                                 |
|-----------------------------------------------------------------------------------|---------------|---------|---------------------------------------------------------------------------------------------------------------------------------|
|  | WKC4.5T-2/TEL | 6625028 | Connection cable, M12 female connector, angled, 5-pin, cable length: 2 m, jacket material: PVC, black; cULus approval           |
|  | WKS4.5T-2/TEL | 6626364 | Connection cable, M12 female connector, angled, 5-pin, cable length: 2 m, jacket material: PVC, black; shielded; cULus approval |