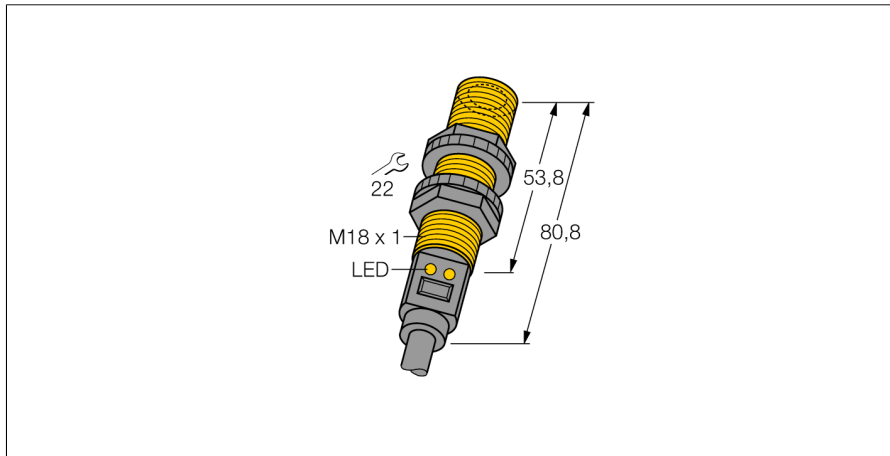
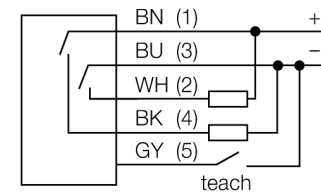


**Ultrasonic sensor  
diffuse mode sensor  
S18UBA**



- Compact design
- Cable, 2 m
- Temperature compensation
- Very small blind zone
- Switching range adjustable via teach-in
- Adjustable to retroreflective mode

**Wiring diagram**



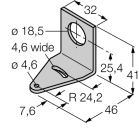
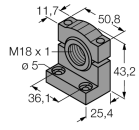
**Functional principle**

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.

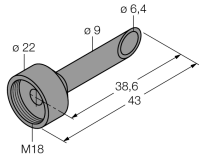
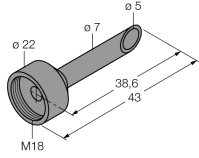
|                                      |                                 |
|--------------------------------------|---------------------------------|
| <b>Type code</b>                     | S18UBA                          |
| Ident no.                            | 3002711                         |
| <b>Design</b>                        | cylindrical/threaded, S18U      |
| Dimensions                           | Ø18 x 80.8 mm                   |
| Housing material                     | plastic, PBT                    |
| Connection                           | cable, 2                        |
| Protection class                     | IP67                            |
| Ambient temperature                  | -20...+60 °C                    |
| MTTF                                 | 53 years                        |
| MTTF note                            | acc. to SN 29500 (Ed. 99) 40 °C |
| <b>Power-on indication</b>           | LED                             |
| Switching state                      | LED                             |
| <b>Operating voltage</b>             | 10...30VDC                      |
| No-load current I <sub>0</sub>       | ≤ 100 mA                        |
| Response time                        | 5 ms                            |
| Output function                      | NO contact, PNP/NPN             |
| Switching frequency                  | 100 Hz                          |
| Hysteresis                           | ≤ 0.7 mm                        |
| Short-circuit protection             | yes                             |
| Reverse polarity protection          | complete                        |
| Wire breakage protection             | yes                             |
| <b>Operating mode</b>                | diffuse mode ultrasonic sensor  |
| Range                                | 3...30 cm                       |
| Ultrasound frequency                 | 300 kHz                         |
| Repeatability                        | ≥ ± 0.25 mm                     |
| Edge lengths of the nominal actuator | 50 mm                           |

**Ultrasonic sensor  
diffuse mode sensor  
S18UBA**

**Accessories**

| Type code | Ident no. | Description   | Dimension drawing   |
|-----------|-----------|---|---|
| SMB18A    | 3033200   | Mounting bracket, stainless steel, for sensors with 18 mm thread  |  |
| SMB18FM   | 3079421   | mounting bracket, black, M22 x1.5 mm, male thread, female thread M18 x 1, for sensors with 18 mm thread |  |
| SMB18SF   | 3052519   | Mounting bracket, PTB black steel, for sensors with 18 mm thread  |   |

**Function accessories**

| Type code | Ident no. | Description   | Dimension drawing   |
|-----------|-----------|---|---|
| UWG18-6.4 | 3076952   | Ultrasonic focussing-adapter for QS18U and S18U, internal diameter 6.4 mm |  |
| UWG18-5.0 | 3077342   | Ultrasonic focussing-adapter for QS18U and S18U, internal diameter 5.0 mm |  |