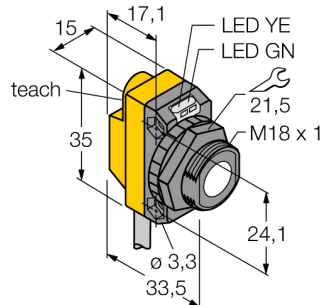


# Ultrasonic sensor diffuse mode sensor QS18UPA

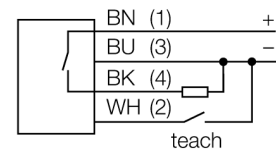
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- Operating voltage 12...30 VDC
- Compact design
- Cable, 2 m
- Switching range adjustable via teach-in
- Adjustable to retroreflective mode

## 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.

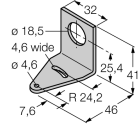
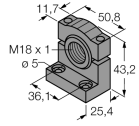
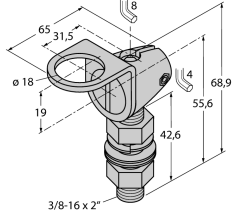
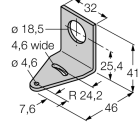
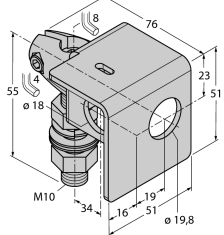
|                                      |                                   |
|--------------------------------------|-----------------------------------|
| <b>Type code</b>                     | QS18UPA                           |
| Ident no.                            | 3073155                           |
| <b>Design</b>                        | rectangular, QS18U                |
| Housing material                     | plastic, ABS                      |
| Sonic converter material             | plastic, Epoxyd resin and PU foam |
| Connection                           | cable, 2                          |
| Protection class                     | IP67                              |
| Ambient temperature                  | -20...+60 °C                      |
| MTTF                                 | 165 years                         |
| MTTF note                            | acc. to SN 29500 (Ed.99) 40 °C    |
| <b>Power-on indication</b>           | LED                               |
| Switching state                      | LED                               |
| <b>Operating voltage</b>             | 12...30VDC                        |
| No-load current I <sub>0</sub>       | ≤ 25 mA                           |
| Output function                      | NO contact, PNP                   |
| Switching frequency                  | 33 Hz                             |
| Hysteresis                           | ≤ 1.4 mm                          |
| Short-circuit protection             | yes                               |
| Reverse polarity protection          | complete                          |
| Wire breakage protection             | yes                               |
| <b>Operating mode</b>                | diffuse mode ultrasonic sensor    |
| Range                                | 5...50 cm                         |
| Ultrasound frequency                 | 300 kHz                           |
| Repeatability                        | ≥ ± 0.7 mm                        |
| Edge lengths of the nominal actuator | 50 mm                             |

**Ultrasonic sensor  
diffuse mode sensor  
QS18UPA**

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**Accessories**

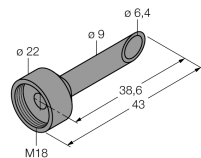
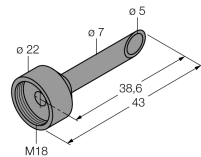
| Type code   | Ident no. | Description                                                                                                       | Dimension drawing                                                                     |
|-------------|-----------|-------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| SMB18A      | 3470200   | Mounting bracket, stainless steel, for sensors with 18 mm thread                                                  |    |
| SMB18SF     | 3052519   | Mounting bracket, PTB black steel, for sensors with 18 mm thread                                                  |    |
| SMB18FA     | 3074004   | Mounting bracket; material VA 1.4401, for 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           |                                                                                       |
| SMB18UR     | 3052517   | Mounting bracket, for wall mounting, stainless steel 300, 2-piece, rotatable, 18 mm bore hole, screw set included |                                                                                       |
| SMB18A      | 3033200   | Mounting bracket, stainless steel, for sensors with 18 mm thread                                                  |  |
| SMB18AFAM10 | 3012558   | Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm                                   |  |

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**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 |    |
| VB2-SP2   | 6999083   | Teach adapter for ultrasonic sensors, types RUN and RUR                   |  |