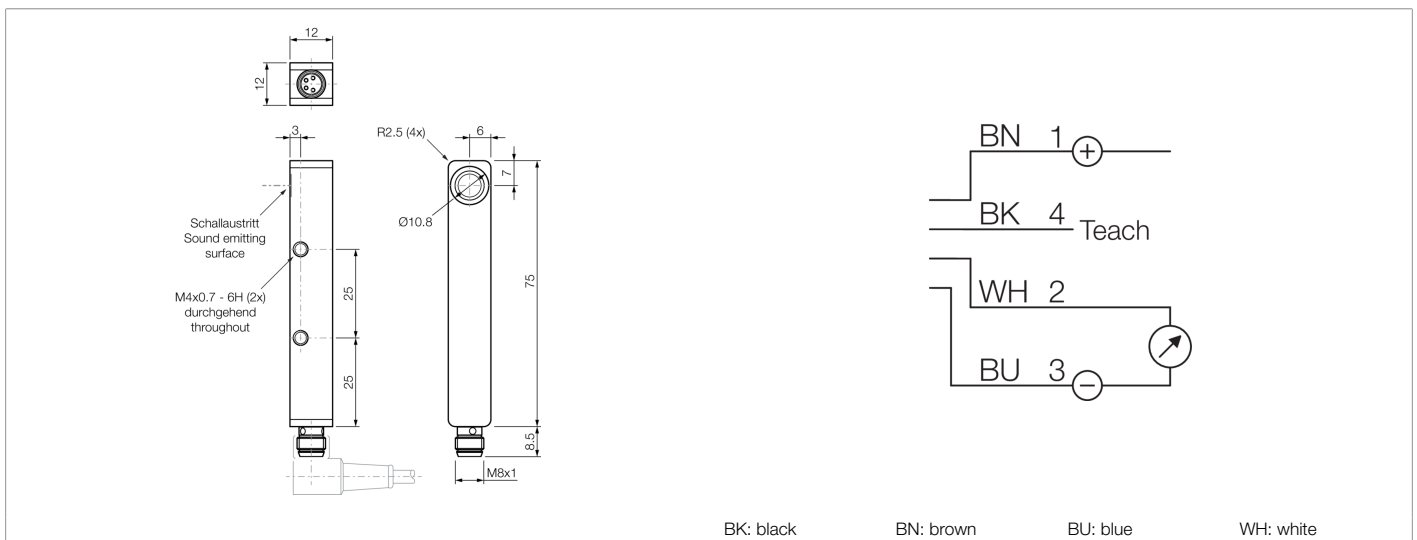




**210968**  
**US Q12 M 400 IU-T4**  
**Ultrasonic sensor**

- IO-Link
- Can be configured as an ultrasonic sensor, barrier or for analog distance measurement
- 3 different teach modes
- Low installation depth
- Analog output 4 to 20 mA / 0 to 10 V, depending on load
- Very narrow detection beam / small blind zone
- Resistant to dirt
- Small design
- Robust metal housing
- Protection class IP 67



BK: black      BN: brown      BU: blue      WH: white

**Function**



| Technical data (typ.)                | +20°C, 24 V DC                           |
|--------------------------------------|--|
| Service voltage                      | 18 ... 30 V DC                           |
| No-load current (max.)               | 40 mA (24 V DC)                          |
| Inverse polarity protection          | yes, except for the analog output PIN2   |
| Short-circuit protection             | Yes                                      |
| Insulation voltage endurance         | 500 V                                    |
| Housing dimensions                   | 12 x 12 x 75 mm                          |
| Housing length                       | 75 mm                                    |
| Housing height                       | 12 mm                                    |
| Housing width                        | 12 mm                                    |
| Transmission exit                    | radial                                   |
| Assembly distance (sensor to sensor) | 250 mm                                   |
| Housing material                     | Aluminum (Black, Anodized)               |
| Material                             | Epoxy resin, PUR (Transducer surface)    |
| Weight                               | 30 g                                     |
| Protection class                     | III, operation on protective low voltage |
| Approvals                            | UL                                       |
| Operating principle                  | Ultrasonic sensor, Ultrasonic barrier    |
| Evaluation                           | digital, analog                          |
| Design                               | Cuboid design                            |
| Characteristics                      | IO-Link                                  |



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| Technical data (typ.)                 | +20°C, 24 V DC   |
|---------------------------------------|--|
| Parallel operation possible           | Yes  |
| Operation modes                       | STANDARD, Master / slave function (synchronization or multiplex operation)                               |
| Functions                             | Analog 0...10V / 4...20mA / 0... 20mA (Pin 2), Teach, Out 1, IO-Link, multiplex, synchronization (PIN 4) |
| Switching output                      | Push-pull, 150 mA, NO/NC, switchable   |
| Max. switch current                   | 150 mA   |
| Voltage drop (max.)                   | 2 V  |
| Analog output                         | 0 ... 10 V, 4 ... 20 mA (0 ... 20 mA IO-Link)  |
| Analog output linearity               | < 0.8 %  |
| Interface                             | IO-Link (V1.1, COM2 38.4 kBd, Smart Sensor Profile)  |
| Load resistance                       | > 10 KΩ (0 ... 10 V) / < 400 Ω (4 ... 20 mA / 0 ... 20 mA)   |
| Nominal switching distance (Sn)       | 400 mm   |
| Range                                 | 40 ... 400 mm  |
| Adjustment range                      | 40 ... 400 mm (Teach in)   |
| Resolution                            | 1.0 mm (Adjusted measuring range/4095 (analog output))   |
| Standardized measuring plate          | 100 x 100 mm   |
| Switching hysteresis (max.)           | 2 ... 20 mm (Adjustable by IO-Link)  |
| Reproducibility                       | < 0.5 mm   |
| Linearity error                       | < 0.8 %  |
| Sensitivity adjustment                | Remote teach   |
| Display                               | LED Green - Status, 1x yellow - Switching output   |
| Measuring frequency                   | 250 Hz   |
| Ultrasonic frequency                  | 300 kHz  |
| Switching frequency                   | < 10 Hz  |
| Readiness delay (max.)                | 300 ms   |
| Shock/vibration load                  | 30 g, 11 ms / 10 ... 55 Hz, 1.0 mm   |
| Ambient temperature during operation  | -25 ... +70 °C   |
| Temperature drift                     | 0.2 %/K (uncompensated)  |
| Temperature drift                     | < 1 %/Sn (compensated)   |
| Protection type                       | IP 67  |
| Connection                            | Connector, M8, 4-pin   |
| Connection cable                      | TK ... /4  |
| <b>More information / accessories</b> | <b><a href="https://www.di-soric.com/210968">https://www.di-soric.com/210968</a></b>                     |