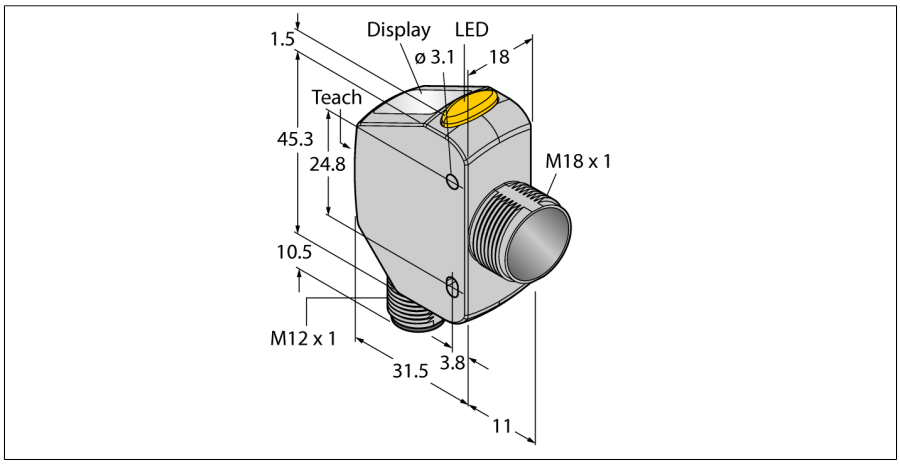
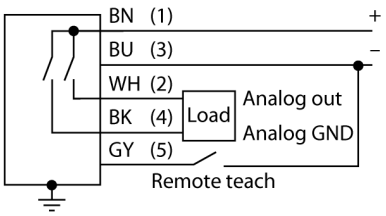
# Photoelectric Sensor
# Laser Distance Sensor (Triangulation)
# Q4XTILAF300-Q8




- **4-digit 7-segment LED display**
- **3 buttons**
- **Output indicator (yellow)**
- **IP67/69K**
- **ECOLAB-certified**
- **Range: 25…300 mm**
- **Laser class 1, red, 655 nm, acc. to IEC 60825-1:2007**
- **Operating voltage: 12…30 VDC**
- **Analog output: 4 … 20 mA**
- **Rectangular model with offset M18 thread**
- **Stainless steel case (1.4404 )**

| | |
|---|---|
| **Type designation** | Q4XTILAF300-Q8 |
| Ident no. | 3094797 |
| **Light type** | Red |
| Wavelength | 655 nm |
| Laser class | ⚠ 1 |
| Optical resolution | 1 mm |
| Repeatability | 0.5 mm |
| Range | 25…300 mm |
| Ambient temperature | -10…+50 °C |
| Relative humidity min. | 35 % |
| Relative humidity max. | 95 % |
| Storage temperature | -25…+75 °C |
| Ambient light immunity | 5000 lux |
| **Operating voltage** | 10…30 VDC |
| DC rated operational current | ≤ 28 mA |
| Short-circuit protection | yes |
| Reverse polarity protection | yes |
| Type of analog output | 4…20 mA |
| Current output | 4…20 mA |
| Load resistance | ≤ 1000 Ω |
| Readiness delay | ≤ 750 ms |
| Readiness delay | ≤ 750 ms |
| Response time typical | < 0.5 ms |
| **Approvals** | CE, cULus, ECOLAB |
| **Design** | Rectangular with thread,Q4X |
| Dimensions | 43.5 mm x 18 mm x 57.5 mm |
| Housing material | Stainless steel, V4A (1.4404) |
| Lens | acrylic, PMMA |
| Electrical connection | Connectors, M12 × 1, PVC |
| Cable cross section | 5 mm² |
| Protection class | IP67 / IP68 / IP69K |
| Vibration resistance | MIL-STD-202G, Method 201A (10 to 60 Hz, 1.52 mm peak to peak amplitude, for 2 hours along the x, y and z-axis), sensor operating |
| Shock test | MIL-STD-202G, Method 213B Condition I (100G 6x along the XYZ-axis, 18 impacts), sensor in operation |
| **Special features** | Resistant to chemicals |
| | Wash down |
| Switching state | LED, Yellow |
| Display | 4-digit 7-segment LED display |

### Wiring Diagram




### Functional principle

The Q4X is a laser-distance sensor working on the principle of laser triangulation. It has a range of 25…300 mm, a resolution of up to 0.3 mm and an analog laser class 1 power output (4…20 mA).

With the dual mode functionality, the Q4X captures not only distances but also the light intensity that is reflected by an object. This unique feature allows lasers to be used for applications that would have been inconceivable before this.

In RUN mode, you can change the switch-point, adjust light and dark-switching and teach the sensor accordingly. In SETUP mode, you can select teach, all standard operating parameters and also return to the factory defaults.

### Excess Gain Curve

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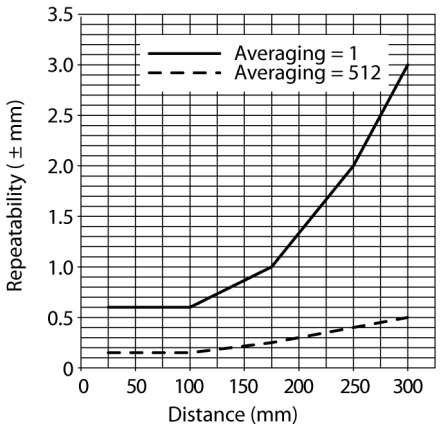


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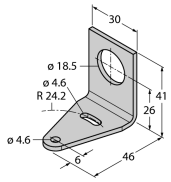
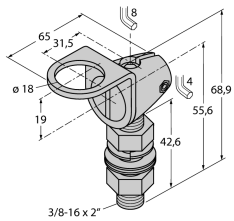
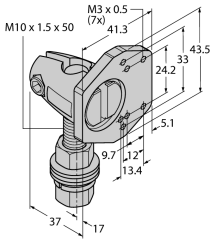
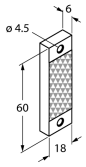
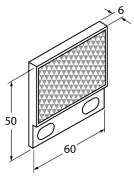
## Accessories

| Type code | Ident no. | Description | |
|---|---|---|---|
| SMB18A | 3033200 | Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread |   |
| SMB18FAM10 | 3011184 | Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm |   |
| SMBQ4XFAM10 | 3091513 | Mounting bracket, rotatable, stainless steel, for sensors of the Q4X/Q3X series, M10 x 1.5 thread |   |

## Function accessories

| Type code | Ident no. | Description | |
|---|---|---|---|
| BRT-Q4X-60X18 | 3095776 | Reflector for Q4X laser sensors for clear object detection or dual-mode applications, rectangular housing: 60 mm x 18 mm |   |
| BRT-Q4X-60X50 | 3095777 | Reflector for Q4X laser sensors, for clear object detection or dual-mode applications, rectangular housing: 60 mm x 50 mm |   |

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