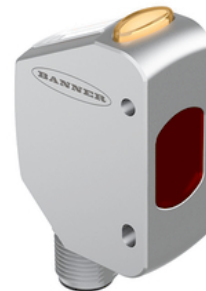
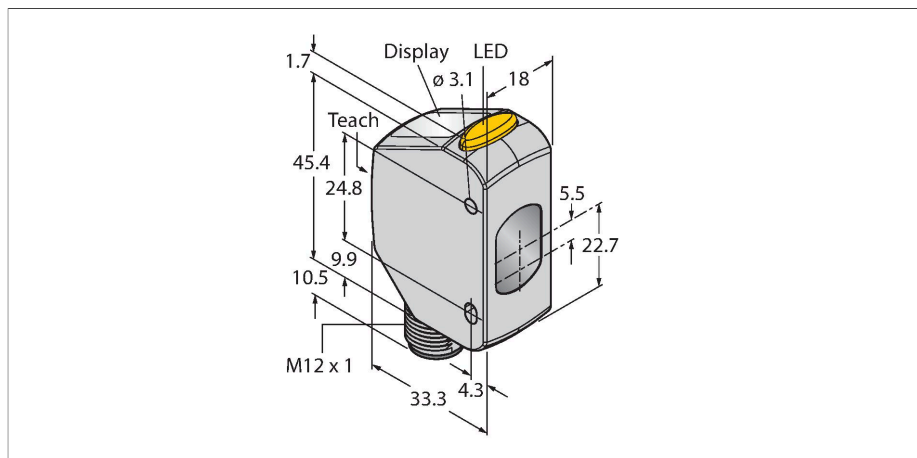


# Q4XFNCOD310-Q8

## Photoelectric Sensor – For Clear Object Detection



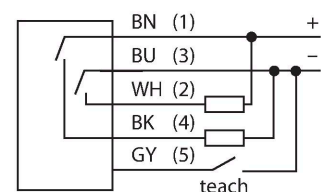
### Technical data

|                              |                                   |
|------------------------------|-----------------------------------|
| Type                         | Q4XFNCOD310-Q8                    |
| ID                           | 3097633                           |
| <b>Optical data</b>          |                                   |
| Function                     | Proximity switch                  |
| Operating mode               | Background/foreground suppression |
| Light type                   | Red                               |
| Wavelength                   | 655 nm                            |
| Laser class                  | ▲ 1                               |
| Optical resolution           | 1 mm                              |
| Repeatability                | 0.5 mm                            |
| Range                        | 35...310 mm                       |
| Ambient light immunity       | 5000 lux                          |
| <b>Electrical data</b>       |                                   |
| Operating voltage            | 10...30 VDC                       |
| DC rated operational current | ≤ 28 mA                           |
| Short-circuit protection     | yes                               |
| Reverse polarity protection  | yes                               |
| Output function              | NO/NC, NPN                        |
| Readiness delay              | ≤ 750 ms                          |
| Response time typical        | < 1.5 ms                          |
| <b>Mechanical data</b>       |                                   |
| Design                       | Rectangular, Q4X                  |
| Dimensions                   | 33.5 x 18 x 57.5 mm               |
| Housing material             | Metal, Stainless steel            |
| Lens                         | acrylic, PMMA                     |
| Electrical connection        | Connector, M12 × 1, PVC           |
| Number of cores              | 4                                 |

### Features

- 4-digit 7-segment LED display
- 3 buttons
- Output indicator (yellow)
- IP67/69K
- ECOLAB-certified
- Range: 35...310 mm
- Laser class 1, red, 655 nm, acc. to IEC 60825-1:2007
- Operating voltage: 12...30 VDC
- 1 × NPN switching output
- Rectangular design
- Stainless steel housing (1.4404)
- Laser sensor for clear object detection

### Wiring diagram



### Functional principle

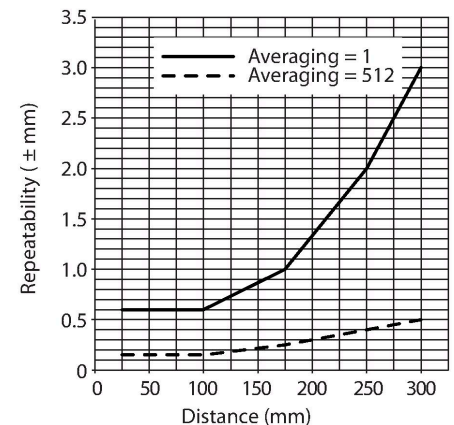
The Q4XFNCOD310-Q8 is a laser sensor specially designed to detect transparent objects, with 310 mm range and an NPN laser class 1 switching output. In this sensor, clear object detection (COD) is preconfigured to allow transparent objects to be detected using a simple device configuration. With the dual 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.

## Technical data

|                        |  |
|------------------------|--|
| Ambient temperature    | -10...+50 °C   |
| Storage temperature    | -25...+75 °C   |
| Relative humidity      | 35...95 %  |
| Protection class       | IP67<br>IP68<br>IP69   |
| Special features       | Chemical-resistant<br>Clear object detection<br>keep/defer<br>Wash down<br>Resistant to chemicals                                |
| Switching state        | LED, Yellow  |
| Display                | 4-digit 7-segment LED display  |
| <b>Tests/approvals</b> |  |
| 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                              |
| Approvals              | CE, cULus, ECOLAB  |

In RUN mode, you can change the switchpoint, 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.

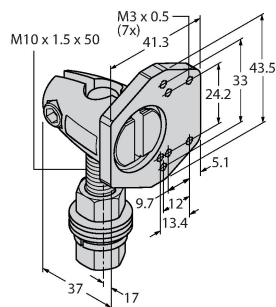
## Excess Gain Curve



## Accessories

SMBQ4XFAM10

3091513



Mounting bracket, rotatable, stainless steel, for sensors of the Q4X/Q3X series, M10 x 1.5 thread

## Accessories

| Dimension drawing | Type          | ID      |  |
|-------------------|---------------|---------|--|
|                   | RKC4.5T-2/TEL | 6625016 | Connection cable, female M12, straight, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a> |

| Dimension drawing | Type          | ID      |  |
|-------------------|---------------|---------|--|
|                   | RKH4.5-2/TFG  | 6933455 | Connection cable, M12 female, straight, 5-pin, stainless steel coupling nut, cable length: 2 m, jacket material: TPE, gray, temperature range -40...+105 °C; other cable lengths and designs available, see <a href="http://www.turck.com">www.turck.com</a> |
|                   | RKS4.5T-2/TEL | 6626361 | Connection cable, M12 female connector, straight, 5-pin, cable length: 2 m, sheath material: PVC, black; shielded; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>                         |
|                   | WKS4.5T-2/TEL | 6626364 | Connection cable, M12 female connector, angled, 5-pin, cable length: 2 m, sheath material: PVC, black; shielded; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>                           |
|                   | WKC4.5T-2/TEL | 6625028 | Connection cable, female M12, angled, 5-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see <a href="http://www.turck.com">www.turck.com</a>   |

## Accessories

| Dimension drawing | Type          | ID      |  |
|-------------------|---------------|---------|--|
|                   | BRT-Q4X-60X18 | 3095776 | Reflector for Q4X laser sensors for clear object detection or dual-mode applications, rectangular housing: 60 mm x 18 mm |

| Dimension drawing | Type          | ID      |   |
|-------------------|---------------|---------|---|
|                   | BRT-Q4X-60X50 | 3095777 | Reflector for Q4X laser sensors, for clear object detection or dual-mode applications, rectangular housing: 60 mm x 50 mm |

