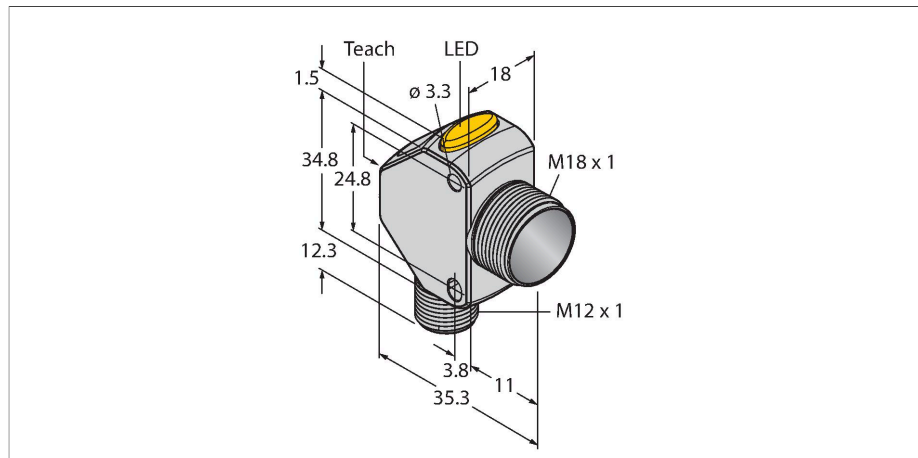


# Q3XTBLD50-Q8

## Photoelectric Sensor – Laser Sensor



### Technical data

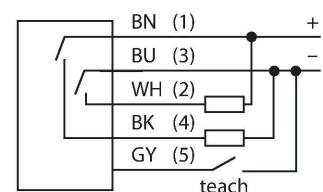
|                              |                                  |
|------------------------------|----------------------------------|
| Type                         | Q3XTBLD50-Q8                     |
| ID no.                       | 3091629                          |
| <b>Optical data</b>          |                                  |
| Function                     | Proximity switch                 |
| Operating mode               | Diffuse/Background suppression   |
| Light type                   | Red                              |
| Wavelength                   | 655 nm                           |
| Laser class                  | ▲ 2                              |
| Range                        | 0...50 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, PNP/NPN                   |
| Current output               | 100 mA                           |
| Readiness delay              | ≤ 1000 ms                        |
| Response time typical        | < 0.25 ms                        |
| Setting option               | Push Button<br>Remote Teach      |
| <b>Mechanical data</b>       |                                  |
| Design                       | Rectangular with thread, Q3X     |
| Dimensions                   | Ø 18 x 35.3 x 18 x 48.6 mm       |
| Housing material             | Metal, Nickel-plated, Galvanized |
| Lens                         | acrylic, Acrylic                 |
| Electrical connection        | Connectors, M12 × 1, PVC         |



### Features

- 3-digit 7-segment LED display
- 2 buttons
- Output indicator (yellow)
- IP67/69K
- Range: 0...50 mm
- Fixed background suppression at 60 mm
- Laser class 2, red, 655 nm, acc. to IEC 60825-1:2007
- Operating voltage: 10...30 VDC
- 1 × PNP, 1 × NPN switching output
- Rectangular model with offset M18 thread
- Die-cast zinc housing

### Wiring diagram



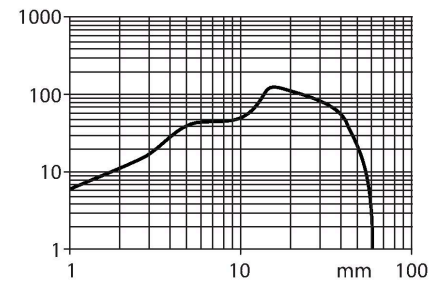
### Functional principle

The Q3XTBLD50-Q8 sensor combines the functionality of a contrast scanner with a fixed background suppression. This methodology is unique in the market. The range of the laser-class-2 sensor is 0... 50mm at a fixed background suppression of 60mm. The Q3X has two switching outputs (1 PNP and 1 NPN). In RUN mode you can change the switchpoint and teach the sensor. In SETUP mode, you can select teach, all standard operating parameters and also return to the factory defaults.

## Technical data

|                        |                                                                                                                                  |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| Number of cores        | 5                                                                                                                                |
| Ambient temperature    | -10...+50 °C                                                                                                                     |
| Storage temperature    | -25...+75 °C                                                                                                                     |
| Relative humidity      | 35...95 %                                                                                                                        |
| Protection class       | IP67<br>IP68<br>IP69                                                                                                             |
| Special features       | keep/defer<br>Wash down                                                                                                          |
| Switching state        | LED, Yellow                                                                                                                      |
| Display                | 3-digit 7-segment LED display                                                                                                    |
| Excess gain indication | LED                                                                                                                              |
| <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 6 x along the XYZ-axis, 18 impacts), sensor in operation                             |
| Approvals              | CE, cULus                                                                                                                        |

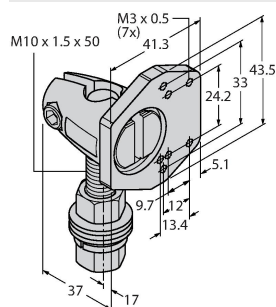
## Excess Gain Curve



## Accessories

### SMBQ4XFAM10

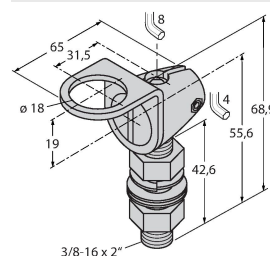
3091513



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

### SMB18FAM10

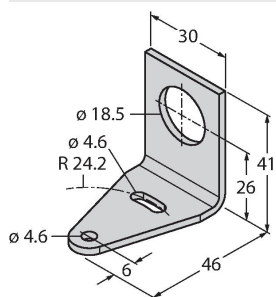
3011184



Mounting bracket, material VA 1.4401, for M10 x 1.5 thread, thread length 18 mm

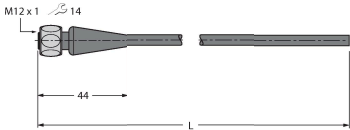
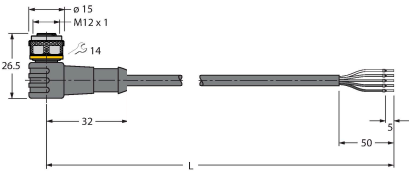
### SMB18A

3033200



Mounting bracket, rectangular, stainless steel, for sensors with 18 mm thread

Accessories

| Dimension drawing                                                                  | Type          | ID no.  |                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------------------------|---------------|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | 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>                                             |
|   | 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> |
|  | 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>                                               |