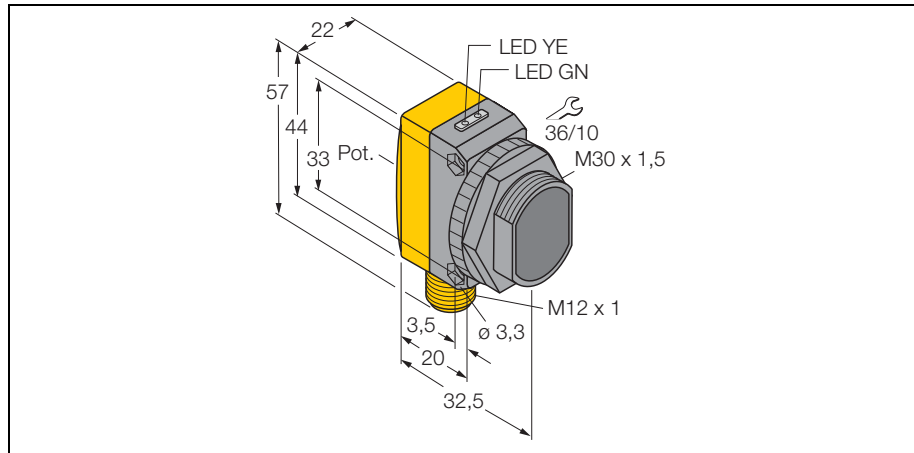


**photoelectric sensor  
diffuse mode sensor  
QS30DQ**

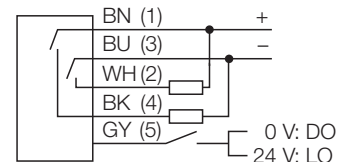
**TURCK**

Industrial  
Automation



- sensitivity adjustable via potentiometer
- indication of insufficient excess gain
- LED visible from all sides
- Male connector, M12x1, 5-pole

**Wiring diagram**

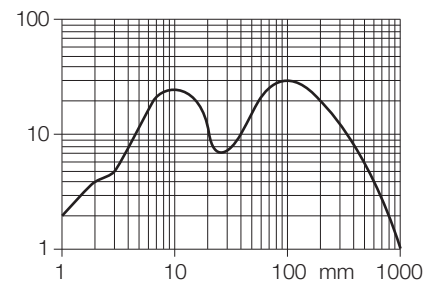


**Functional principle**

Identical to retro-reflective sensors, emitter and receiver circuitry are incorporated in the same housing of the diffuse mode sensors. However, diffuse mode sensors do not detect the interruption of the light beam but the reflection of the target. A target is detected if it reflects sufficient light back to the receiver. The switching distance of diffuse mode sensors thus largely depends on the reflectivity of the target.

**Excess gain curve**

Excess gain in relation to the distance



|                                |                     |
|--------------------------------|---------------------|
| <b>Type</b>                    | QS30DQ              |
| Ident-No.                      | 3073095             |
| <b>Operating mode</b>          | diffuse mode sensor |
| Light type                     | IR                  |
| Wavelength                     | 940 nm              |
| Range                          | 2... 1000 mm        |
| Ambient temperature            | -20...+ 70°C        |
| <b>Operating voltage</b>       | 10... 30 VDC        |
| DC rated operational current   | ≤ 150 mA            |
| No-load current I <sub>0</sub> | ≤ 35 mA             |
| Switching frequency            | ≤ 250Hz             |
| Readiness delay                | ≤ 100 ms            |
| <b>Housing</b>                 | rectangular, QS30   |
| Dimensions                     | 35x 22x 57mm        |
| Housing material               | Plastic, ABS        |
| Lens                           | plastic, acrylic    |
| Electrical connection          | Connectors, M12 x 1 |
| Protection class               | IP67                |
| <b>Operating voltage</b>       | LED green           |
| Switching state                | LED yellow          |
| Error indication               | LED green flashing  |
| Excess gain indication         | LED yellow          |