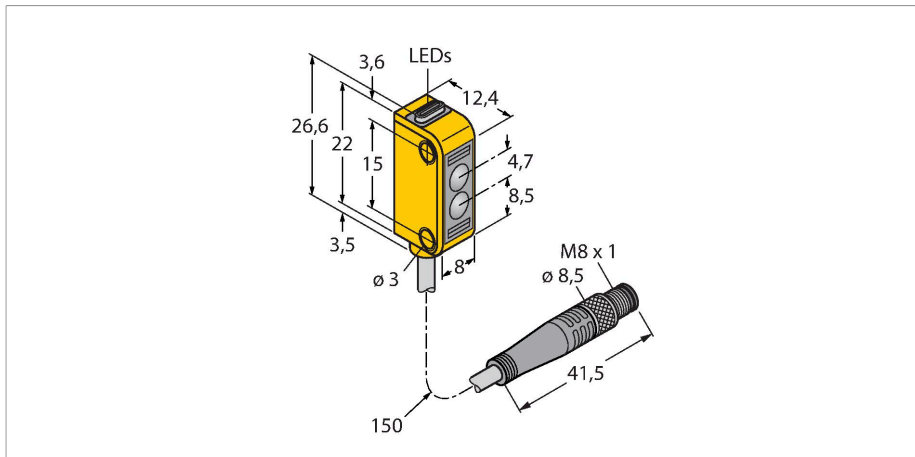


Q12RN6LPQ3

Photoelectric Sensor – Retroreflective Sensor with Polarizing Filter

Miniature Sensor



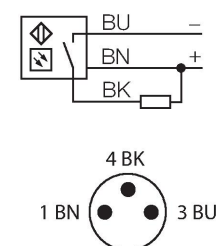
Technical data

| | |
|--------------------------------|---|
| Type | Q12RN6LPQ3 |
| ID no. | 3077112 |
| Optical data | |
| Function | Retroreflective Sensor |
| Operating mode | Polarized |
| Reflector included in delivery | no |
| Light type | Red polarized |
| Wavelength | 640 nm |
| Range | 100...1000 mm |
| Electrical data | |
| Operating voltage | 10...30 VDC |
| Residual ripple | < 10 % U _{ss} |
| DC rated operational current | ≤ 50 mA |
| No-load current | ≤ 20 mA |
| Short-circuit protection | yes |
| Reverse polarity protection | yes |
| Output function | NO contact, NPN |
| Switching frequency | ≤ 700 Hz |
| Readiness delay | ≤ 120 ms |
| Response time typical | < 0.7 ms |
| Mechanical data | |
| Design | Rectangular, Q12 |
| Dimensions | 12.4 x 8 x 26.6 mm |
| Housing material | Plastic, Thermoplastic material, Yellow |

Features

- Cable, PVC, 150 mm, with M8 × 1 male end, 3-pin
- Protection class IP67
- LED all-round visible
- Indication of insufficient excess gain
- Glass lens
- Operating voltage: 10...30 VDC
- NPN switching output, dark operation

Wiring diagram



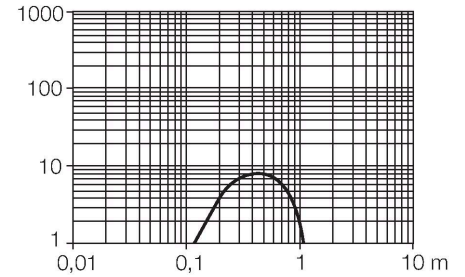
Functional principle

Retro-reflective sensors incorporate emitter and receiver in a single compact housing. The light beam of the emitter is directed towards a reflector which returns the light back to the receiver. An object is detected when it interrupts this beam. Retro-reflective sensors incorporate some of the advantages of opposed mode sensors (good contrast and high excess gain). Further it is merely required to install and wire a single device. A smaller sensing range and susceptibility of devices without polarisation filter can be of disadvantage when shiny objects have to be detected.

Technical data

| | |
|------------------------|---|
| Lens | glass, Glass |
| Electrical connection | Cable with connector, M8 × 1, 0.15 m, PVC |
| Number of cores | 3 |
| Core cross-section | 0.34 mm ² |
| Ambient temperature | -20...+55 °C |
| Protection class | IP67 |
| Power-on indication | LED, Green |
| Switching state | LED, Yellow |
| Error indication | LED, green |
| Excess gain indication | LED, yellow, flashing |
| Tests/approvals | |
| MTTF | 135 years acc. to SN 29500 (Ed. 99) 40 °C |
| Approvals | CE, cURus |

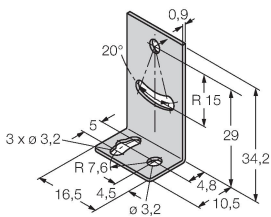
Excess gain curve
Excess gain in relation to the distance



Accessories

SMBQ12A

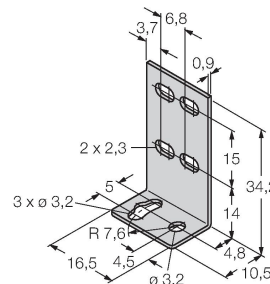
3074341



Mounting bracket; material VA 1.4401, for photoelectric sensor, Q12 series

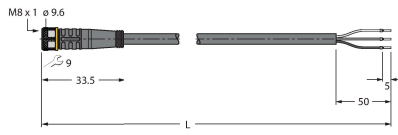

SMBQ12T

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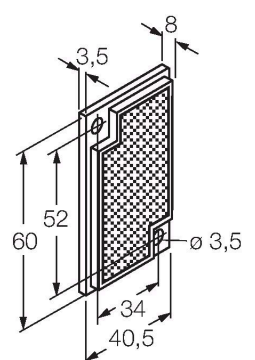


Mounting bracket; material VA 1.4401, for photoelectric sensor, Q12 series

Accessories

| Dimension drawing | Type | ID no. | |
|---|-------------|---------|---|
|  | PKG3M-2/TEL | 6625058 | Connection cable, female M8, straight, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |
|  | PKW3M-2/TEL | 6625064 | Connection cable, female M8, angled, 3-pin, cable length: 2 m, sheath material: PVC, black; cULus approval; other cable lengths and qualities available, see www.turck.com |

Accessories

| Dimension drawing | Type | ID no. | |
|---|------------|---------|---|
|  | BRT-60X40C | 3044997 | Rectangular reflector, reflection coefficient 1.48, material: acrylic, ambient temperature -20...+60 °C |