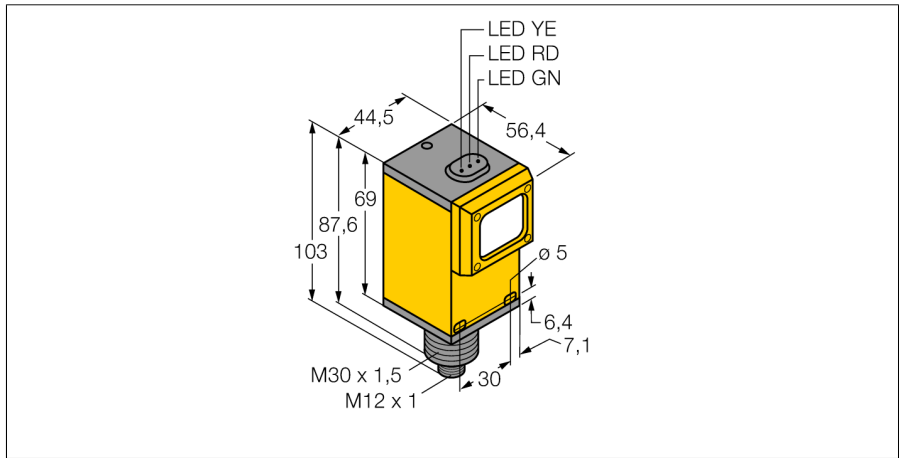
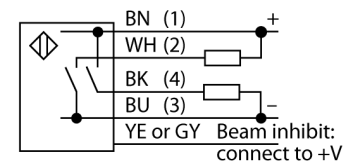


**Photoelectric sensor
retroreflective sensor with polarizing filter
Q45BB6LLPQ6**

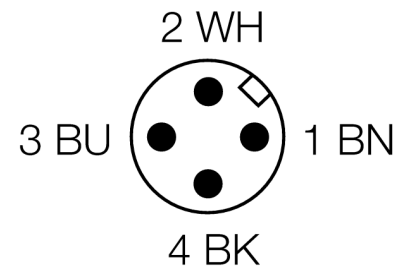


- Retroreflective laser sensor with polarizing filter
- Laser class 2
- Reflector BRT-2X2 included in delivery
- Sensitivity adjusted via potentiometer
- Operating voltage: 10...30 VDC
- Switching output, bipolar
- Light or dark operation, adjusted via switch

Wiring diagram



| | |
|--------------------------------|---|
| Type code | Q45BB6LLPQ6 |
| Ident no. | 3041033 |
| Operating mode | Retroreflective laser sensor (triangulation) with polarizing filter |
| Light type | red |
| Wavelength | 655 nm |
| Laser class | △ 2 |
| Beam diameter | (elliptic) 2.5 mm |
| Range | 600...40000 mm |
| Ambient temperature | -10...+40 °C |
| Operating voltage | 10...30VDC |
| Residual ripple | < 10 % U _{ss} |
| DC rated operational current | ≤ 250 mA |
| No-load current I ₀ | ≤ 50 mA |
| Short-circuit protection | yes/ cyclic |
| Reverse polarity protection | yes |
| Output function | NO contact, PNP/NPN |
| Switching frequency | ≤ 250 Hz |
| Readiness delay | ≤ 100 ms |
| Overcurrent release | > 220 mA |
| Design | rectangular, Q45 |
| Dimensions | 56.4 x 44.5 x 102.6 mm |
| Housing material | plastic, PBT |
| Lens | acrylic, acrylic |
| Connection | male, M12 x 1 |
| Protection class | IP67 |
| MTTF | 20 years acc. to SN 29500 (Ed. 99) 40 °C |
| Power-on indication | LED green |
| Switching state | LED yellow |
| Error indication | LED green flashing |
| Excess gain indication | LED red |

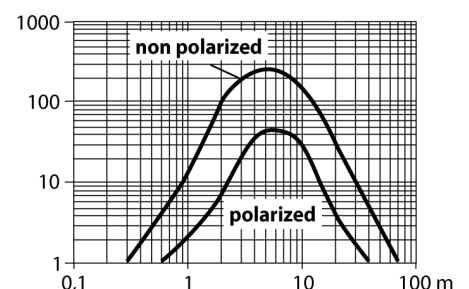


Functional principle

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.

Excess gain curve

Excess gain in relation to the distance



**Photoelectric sensor
retroreflective sensor with polarizing filter
Q45BB6LLPQ6**

Accessories

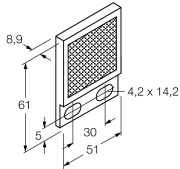
| Type code | Ident no. | Description | Dimension drawing |
|------------|-----------|--|-------------------|
| SMB30A | 3032723 | Mounting bracket, stainless steel, for sensors with 30 mm thread | |
| SMB30FAM10 | 3011185 | Mounting bracket, stainless steel, for M10 x 1.5 thread, thread length 30 mm | |
| SMB30SC | 3052521 | Mounting bracket, PBT black; for 30 mm thread; with 4 screws M5 x 0.8 | |

Wiring accessories

| Type code | Ident no. | Description | Dimension drawing |
|---------------|-----------|--|-------------------|
| 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 www.turck.com | |
| 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 www.turck.com | |

**Photoelectric sensor
retroreflective sensor with polarizing filter
Q45BB6LLPQ6**

Function accessories

| Type code | Ident no. | Description | Dimension drawing |
|-----------|-----------|---|---|
| BRT-2X2 | 3040071 | Rectangular reflector, reflection coefficient 1.8, material acrylic, ambient temperature max. 50 °C |  |