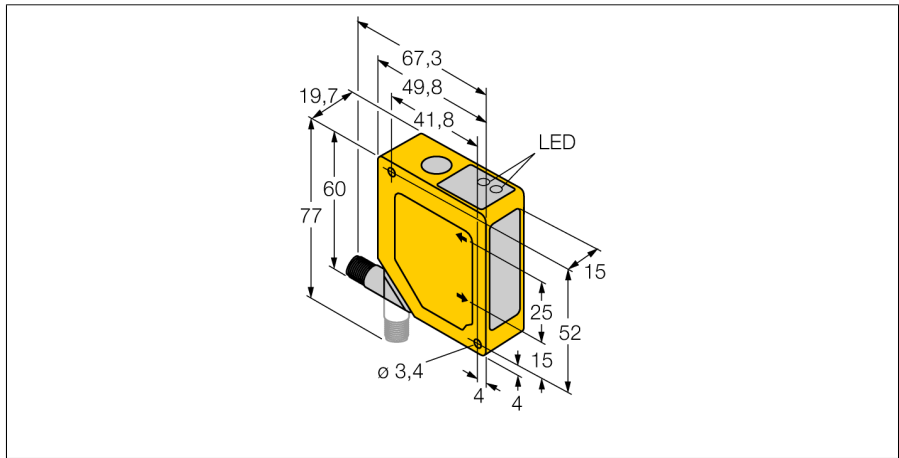
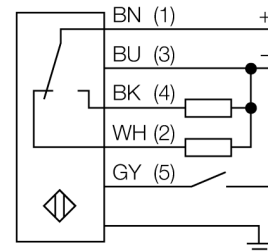


**Photoelectric sensor
triangulation sensor with switching output
Q50AVPYQ**



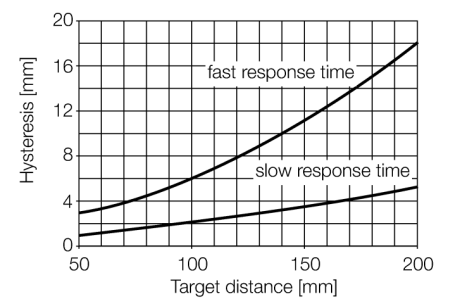
- **Foreground and background suppression**
- **Operating range 50...150 mm**
- **M12 x 1 connector rotatable by 90 °**
- **Operating voltage 12...30 VDC**
- **PNP switching output**
- **Response time of output 4 ms**

Wiring diagram



Functional principle

The function principle of the Q50 is based on optical triangulation. The emitter and the optics create a light source that is directed towards a target. The target reflects the light back to the receiver lens of the sensor, from where it then is directed to the position sensitive device (PSD) as the receiver element. The target's distance from the receiver determines the angle at which the light meets the receiver element. This angle in turn determines where the reflected light falls onto the PSD. The microprocessor analyses and compares the target position to the programmed position values and creates a corresponding output signal.



| | |
|--------------------------------|---|
| Type code | Q50AVPYQ |
| Ident no. | 3063890 |
| Operating mode | Diffuse mode sensor with adjustable foreground and background suppression |
| Light type | red |
| Wavelength | 685 nm |
| Range | 50...150 mm |
| Ambient temperature | -10...+55 °C |
| Operating voltage | 12...30VDC |
| No-load current I ₀ | ≤ 70 mA |
| Output function | NO/NC , PNP |
| Switching frequency | ≤ 112 Hz |
| Readiness delay | ≤ 2 s |
| Design | rectangular, Q50 |
| Dimensions | 49.8 x 19.7 x 60 mm |
| Housing material | plastic, ABS |
| Lens | plastic, acrylic |
| Connection | male |
| Protection class | IP67 |
| Switching state | LED yellow |