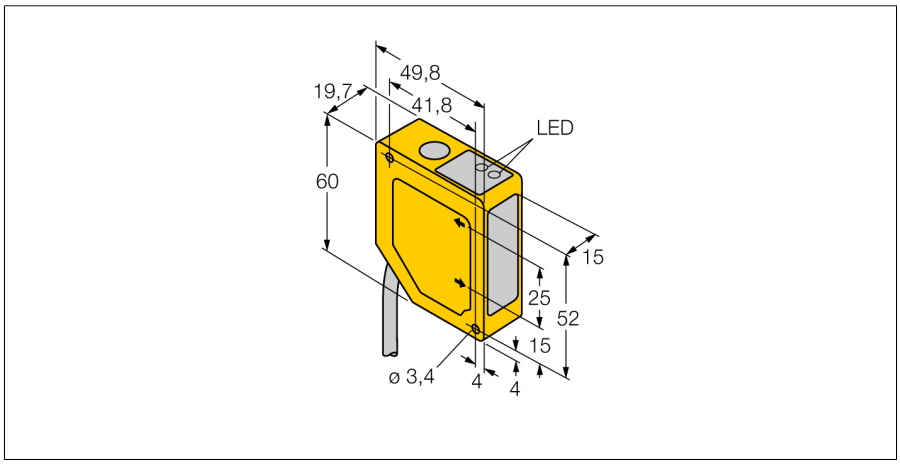
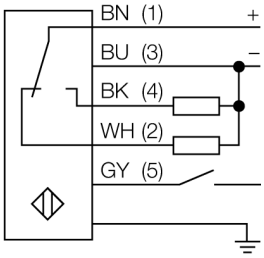
Photoelectric sensor
triangulation sensor with switching output
Q50AVPY



- **Foreground and background suppression**
- **Operating range 50…150 mm**
- **2 m cable, 5-pole**
- **Operating voltage 12…30 VDC**
- **PNP switching output**
- **Response time of output 4 ms**

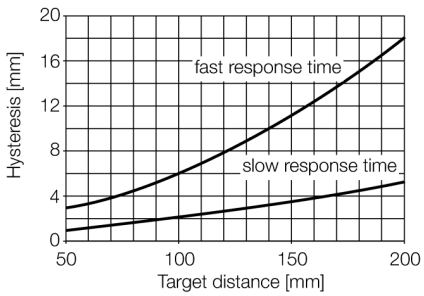
Type code	Q50AVPY
Ident no.	3063889
Operating mode	Diffuse mode sensor with adjustable foreground and background suppression
Light type	red
Wavelength	685 nm
Range	50…150 mm
Ambient temperature	-10…+55 °C
Operating voltage	12…30VDC
No-load current I_0	≤ 70 mA
Output function	NO/NC , PNP
Switching frequency	≤ 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	cable
Cable length	2 m
Cable cross section	5 x 0.5 mm²
Protection class	IP67
Switching state	LED yellow

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.



Edition • 2014-04-12T01:57:10+02:00

Hans Turck GmbH & Co.KG ● D-45472 Mülheim an der Ruhr ● Witzlebenstraße 7 ● Tel. 0208 4952-0 ● Fax 0208 4952-264 ● more@turck.com ● www.turck.com