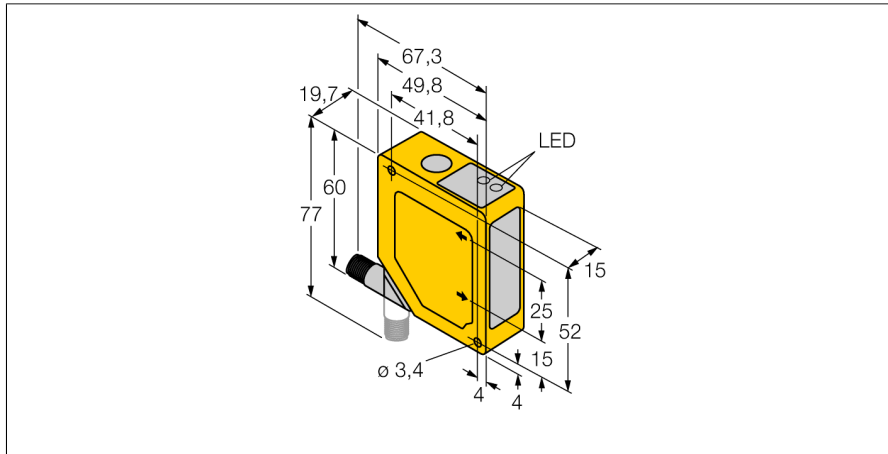


Photoelectric Sensor

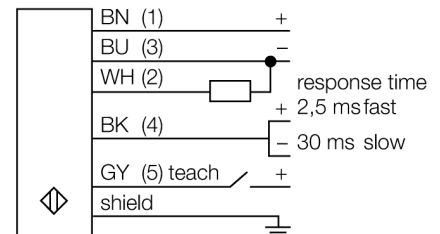
Triangulation Sensor with Analog Output

Q50BUQ



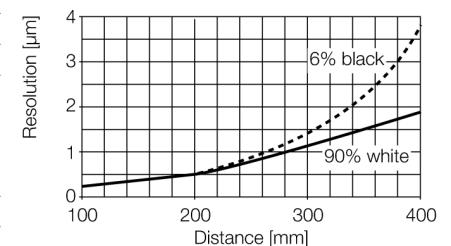
- Foreground and background suppression
- Operating range 100...400 mm
- M12 × 1 connector rotatable by 90°
- Operating voltage 15...30 VDC
- analog voltage output 0...10 V
- Selectable output response of 4 ms (fast) and 64 ms (slow)

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 falls onto the position sensitive device (PSD). The target's distance from the receiver determines the angle at which the light meets the receiver element. The integrated microprocessor uses this angle to analyse the target position and to create a corresponding output signal.



Type	Q50BUQ
ID	3063872

Optical data	
Function	Proximity switch
Operating mode	Triangulation
Light type	IR
Wavelength	880 nm
Repeatability	1 mm
Range	100...400 mm
Ambient light immunity	10,000 lux

Electrical data	
Operating voltage U_o	15...30 VDC
No-load current I_o	≤ 70 mA
Type of analog output	0...10 V
Voltage output	0...10 V
Readiness delay	≤ 2 s
Readiness delay	≤ 2000 ms
Response time typical	< 4 ms

Mechanical data	
Design	Rectangular, Q50
Housing material	Plastic, ABS/Polycarbonate
Lens	plastic, Acrylic
Electrical connection	Connector, M12 × 1, PVC
Number of cores	5
Ambient temperature	-10...+55 °C
Protection class	IP67

Tests/approvals	
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