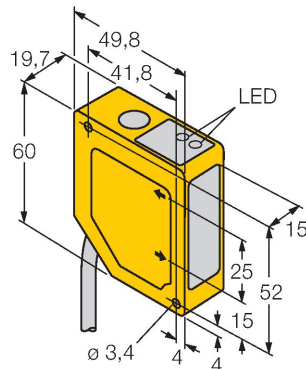


Q50AI

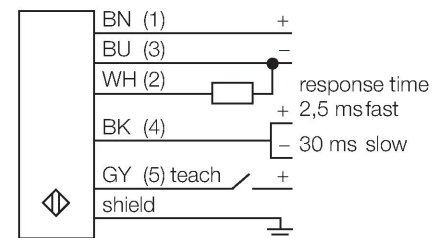
Photoelectric Sensor – Triangulation Sensor with Analog Output



Features

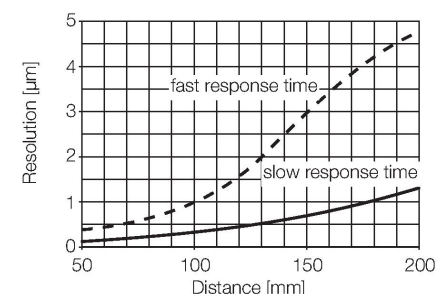
- Foreground and background suppression
- Operating range 50...200 mm
- 2 m cable, 5-pole
- Operating voltage 15...30 VDC
- Analog current output 4...20 mA
- Selectable output response of 4 ms (fast) and 64 ms (slow)

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.



Technical data

Type	Q50AI
ID no.	3067603
Optical data	
Function	Proximity switch
Operating mode	Triangulation
Light type	IR
Wavelength	880 nm
Repeatability	0.5 mm
Range	50...200 mm
Ambient light immunity	10000 lux
Electrical data	
Operating voltage	15...30 VDC
No-load current	≤ 70 mA
Output function	Analog output
Type of analog output	4...20 mA
Current output	4...20 mA
Readiness delay	≤ 2 s
Readiness delay	≤ 2000 ms
Response time typical	< 4 ms
Mechanical data	
Design	Rectangular, Q50
Dimensions	49.8 x 19.7 x 60 mm
Housing material	Plastic, ABS/Polycarbonate
Lens	plastic, Acrylic
Electrical connection	Cable, 2 m, PVC
Number of cores	5

Technical data

Core cross-section	0.5 mm ²
Ambient temperature	-10...+55 °C
Relative humidity	90 %
Protection class	IP67
Tests/approvals	