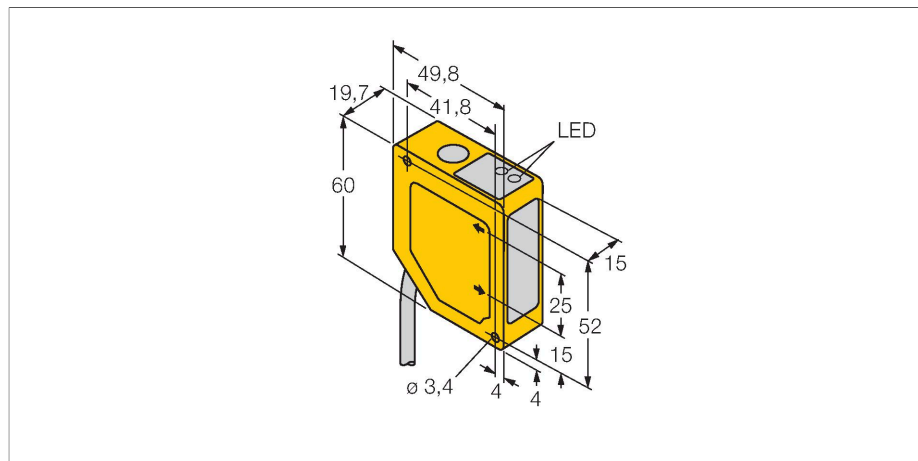


# Q50BI

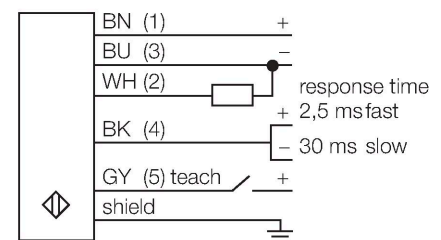
## Photoelectric Sensor – Triangulation Sensor with Analog Output



### Features

- Foreground and background suppression
- Operating range 100...400 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

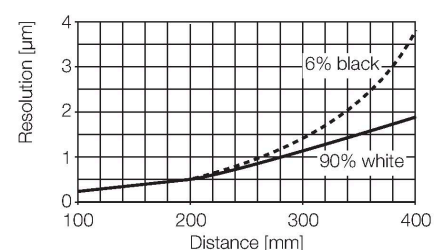


### Technical data

Type	Q50BI
ID no.	3063865
<b>Optical data</b>	
Function	Proximity switch
Operating mode	Triangulation
Light type	IR
Wavelength	880 nm
Repeatability	1 mm
Range	100...400 mm
Ambient light immunity	10000 lux
<b>Electrical data</b>	
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
<b>Mechanical data</b>	
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

### 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

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