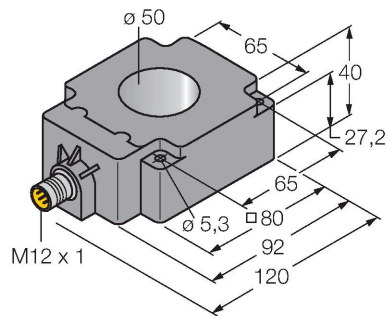


BI50R-Q80-2LU-H1141/S950

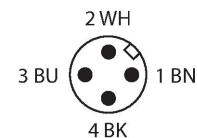
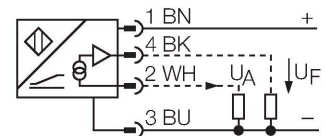
Inductive Sensor – For Material Recognition



Features

- Rectangular, height 40 mm
- Plastic, PBT-GF30-V0
- Analog
- 1 x analog output for amplitude evaluation
- 1 x analog output for phase evaluation
- M12 x 1 male connector

Wiring diagram



Functional principle

Many applications require a fast detection of material qualities. For example, the sorting of beverage cans made of aluminium or tin, or the differentiation of pipes made of different metals. Turck has developed an analog inductive sensor for this purpose that not only processes the amplitude signal but also the phase signal. Both signals are output as analog values and processed mathematically with a control unit. Different metals are thus detected independent of the distance.

Technical data

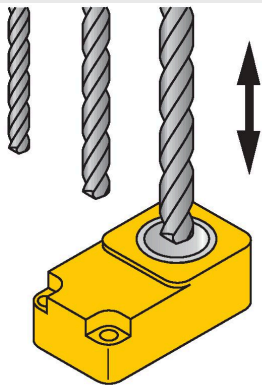
Type	BI50R-Q80-2LU-H1141/S950
ID	1534609
Special version	S950 corresponds to: 1x analog amplitude output, 1x analog phase output
General data	
Inside ring diameter D	50 mm
Measuring range [A...B]	depending on the length of the cone
Secured operating distance	$\leq (0.81 \times S_n)$ mm
Temperature drift	0.5 %, after warm-up 0.5 h
Temperature drift	$\leq \pm 0.06$ %/K
Electrical data	
Operating voltage	15...30 VDC
Residual ripple	≤ 10 % U_{ss}
No-load current	8 mA
Isolation test voltage	≤ 0.5 kV
Short-circuit protection	yes
Wire breakage/Reverse polarity protection	no / Complete
Output function	4-wire, Analog output
Voltage output	0...10 V
Voltage output (phase)	$\geq 1... \leq 10$ VDC
Load resistance voltage output	≥ 4.7 k Ω
Measuring sequence frequency	80 Hz
Mechanical data	
Design	Ring sensor, Q80
Dimensions	92 x 80 x 40 mm
Housing material	Plastic, PBT-GF30-V0

Technical data

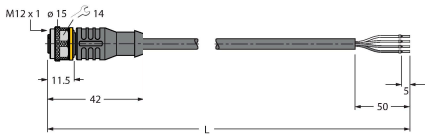
Electrical connection	Connector, M12 × 1
Coil body	plastic, POM
Environmental conditions	
Ambient temperature	-25...+70 °C
Vibration resistance	55 Hz (1 mm)
Shock resistance	30 g (11 ms)
Protection class	IP67
MTTF	751 years acc. to SN 29500 (Ed. 99) 40 °C

Mounting instructions

Mounting instructions/Description



Accessories

Dimension drawing	Type	ID	
	RKC4.4T-2/TEL	6625013	Connection cable, M12 female connector, straight, 4-pin, cable length: 2 m, jacket material: PVC, black; cULus approval