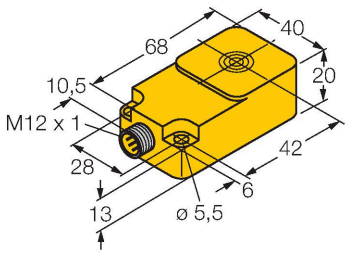
BI15-Q20-2LU-H1141/S950
Inductive Sensor – For Differentiation Between Metals



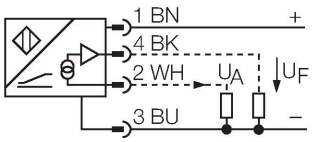
Technical data

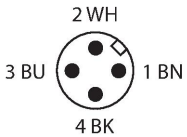
Type	BI15-Q20-2LU-H1141/S950
ID	1534611
Special version	S950 Corresponds to:1× analog amplitude output, 1× analog phase output
General data	
Mounting conditions	Flush
Secured operating distance	≤ (0.81 × Sn) mm
	0.5 %, after warm-up 0.5 h
Reproducibility	≤ 70 µm
	≤ 35 µm, after a warm-up time of 0.5 h
Temperature drift	≤ ± 0.06 %/K
Electrical data	
Operating voltage U_B	15…30 VDC
Ripple U_{ss}	≤ 10 % U_{Bmax}
No-load current	≤ 8 mA
Isolation test voltage	0.5 kV
Short-circuit protection	yes
Wire break/reverse polarity protection	no/Complete
Output function	4-wire, Analog output
Voltage output	0…10 V
Voltage output (phase)	≥ 1…≤ 10 VDC
Load resistance voltage output	≥ 4.7 kΩ
Measuring sequence frequency	110 Hz

Features

- Rectangular, height 20 mm
- Active face on top
- 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.

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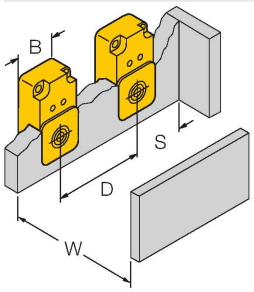
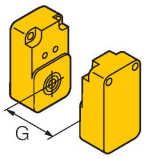
Technical data

Mechanical data	
Design	Rectangular, Q20
Dimensions	68 x 40 x 20 mm
Housing material	Plastic, PBT-GF30-V0
Active area material	PBT-GF30-V0
Electrical connection	Connector, M12 × 1
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

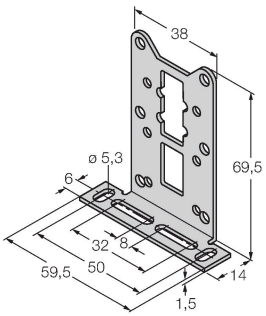




Distance D	60 mm
Distance W	33 mm
Distance S	40 mm
Distance G	66 mm
Width active area B	40 mm

Accessories

MW-Q14/Q20	6945006



Mounting bracket for rectangular Q14 or Q20; material VA 1.4301

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Wiring 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

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