



Industrial Automation

INDUCTIVE SENSOR

FOR METAL DISTINCTION

Reliable distinction of metals – distance-independent –

In many areas of industrial application a quick and distance-independent detection of different metals is necessary.

Even within the ferromagnetic and nonferromagnetic categories metals have to be distinguished reliably.

Typical applications are recycling machines for sorting beverage cans and production systems of seamless pipes, whereby the different metals and diameters of the pipes have to be detected.

Further areas of application are coin detection and quality control for the distinction of hardened and non-hardened material.

TURCK has developed an analog inductive sensor which is capable of processing the amplitude signal and the phase signal via voltage outputs between 0...10 V. In order to detect the type of metal both signals are processed mathematically.

Easy signal processing with TURCK I/O systems BL20 and BL67

Signal processing is a cinch with the programmable modular I/O systems BL20 and BL67 made by TURCK. A simple signal transmitted via 24 V switching outputs indicates the type of metal.

A specially developed freeware for BL20 and BL67 can be downloaded on www.tuck.com.

- Distinction of all metals
- Simultaneous measurement of pipe diameter and material
- Easy signal processing with BL20 and BL67 freeware



Sense it! Connect it! Bus it! Solve it!

Analog inductive sensor for distance independent detecting of metals



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Dimensions	Ident-No.	Type/Description
26 13 0 5.5 0 6.5	1533008	Bi1,5-EH6,5-0,2-Q20-2LU/S391-S950 Sensor with separate head in a 6.5 mm smooth barrel and projecting amplifier for distinction of very small parts.
68 40	1534613	Bi8-Q20-2LU-H1141/S950
10,5 M12 x 28 13 05,5	0	Sensor for distinction of non-ferromagnetic materials like brass and copper.
10,5 68 20 42 42 42 42 42 42 42 42 42 42 42 42 42	1534611	Sensor with large sensing range for distinction of non-ferromagnetic and ferromagnetic materials.
0 50 140 127,2 120 120	1534609	Bi50R-Q80-2LU-H1141/S950 Ring sensor with 50 mm internal diameter for simultaneous distinction of pipe diameters and materials.
Pot. 80 100 100 100 100 100 100 100 100 100	1534610	Ni100R-S32XL-2LU-H1141/S950 Ring sensor with 100 mm diameter for simultaneous distinction of pipe diameters and materials.

- 1 x analog output with phase evaluation
- 1 x analog output with amplitude evaluation
- · Sensors with degree of protection IP67 according to IEC 60529
- Compact version available as ring or rectangular sensor
- Further versions available on request
- Protection degree of the processing units according to IEC 60529
 - BL20 in IP20
 - BL67 in IP67
- · Freeware for download on www.turck.com

Required BL20 components

Quantity	Ident-No.	Туре	Description
1	6827249	BL20-PG-EN	Gateway
2	6827019	BL20-1AI-U(-10/0+10VDC)	Analog input module (1 input)
2	6827046	BL20-S4T-SBBS	Base module
1	6827023	BL20-4DO-24VDC-0,5A-P	Digital output module (4 outputs)
1	6827064	BL20-S6T-SBCSBC	Base module
1	6827012	BL20-4DI-24VDC-P	Digitale input module (4 inputs)
1	6827052	BL20-S6T-SBBSBB	Base module

Required BL67 components

Quantity	Ident-No.	Туре	Description
1	6827241	BL67-PG-EN	Gateway
1	6827176	BL <mark>67-2A</mark> I-V	Analog input module (2 inputs)
1	6827186	BL67-B-2M12	Base module
1	6827203	BL67-4DI4DO-PD	Digital output module (4 inputs and 4 outputs)
1	6827187	BL67-B-4M12	Base module



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