

LB 571

MICROWAVE RESONATOR

Compact sensor for online moisture measurement of bulk materials



 **BERTHOLD**

ONLINE MOISTURE MEASUREMENT ON BULK MATERIALS

The LB 571 microwave resonator for online measurement of moisture content in bulk materials is based on the resonance technology. This technique is determined by electromagnetic waves (microwaves) in a dielectric cylindrical resonator.

The sensor with integrated signal processing unit can be used for a wide range of bulk materials in a moisture range of between 0 and 30 %.

Due to the flexible clamping ring, installation possibilities are manifold.

Common installation situations are e.g.:

- Silo
- Belt conveyor
- Shafts / chutes
- Screw conveyor

The robust design and the use of high-quality and wear-resistant materials ensure a high degree of operational reliability. The parts in contact with the media are made of ceramic or stainless steel and the electronic housing is made of corrosion-resistant aluminium.

The LB 571 is therefore suitable for use in the food industry.

Calibration is carried out directly on site, conveniently and quickly using the supplied PC software. The online determination of the moisture during the active process allows for a reduction in production costs through continuous quality monitoring, for example by reducing energy consumption in drying processes and by reducing the amount of rejects.

The logging of process data, for verification purposes or for offline data analysis, can be done with the integrated data logger. For a flexible and fast product change, up to four calibration curves can be saved and switched over via process control.

Software

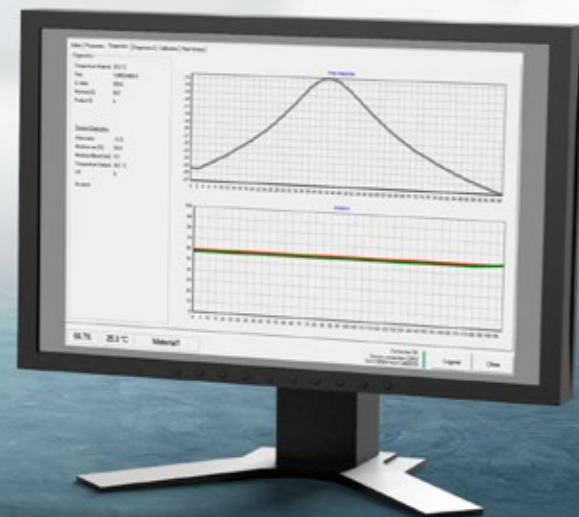
For ease of commissioning and to execute calibration of various products a software package is delivered with the product.

The software is used to completely configure the system and to calibrate various products. Data points for samples can be created via the software, which can be calibrated based on laboratory analysis of those samples.

During normal operation, no computer needs to be connected to the device.

Process, as well as configuration data, can be stored on a SD card for offline analysis or for transfer to other devices.

A separate diagnostics menu allows you to monitor and analyse the signal and measurement quality, online with a computer connected to the device or offline when reviewing data logged on the SD card.



LB 571

Microwave resonator

Possible applications

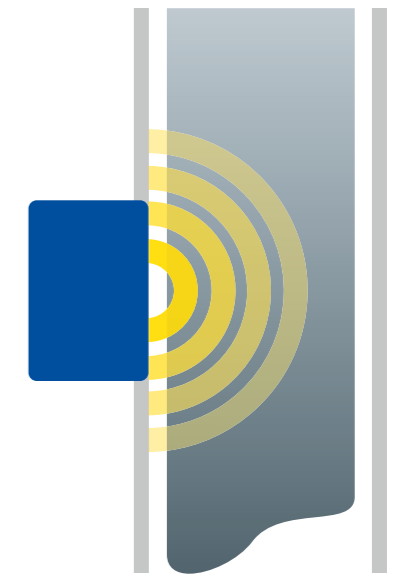
- Bulk Materials
- Non-woven
- Fibreboards
- Foils
- Paper and cardboards

Customer benefits

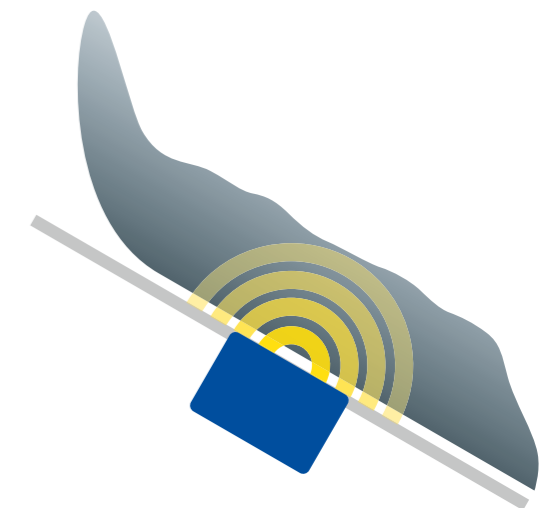
- Installation on silo walls, conveyor belts, shafts / chutes or screw conveyors
- Online moisture measurement
- Integrated signal processing
- Convenient commissioning and calibration via PC software
- High operational reliability through robust probe
- Continuous monitoring and logging
- Energy saving therefore costs reduction in drying processes
- Accurate material moisture determination during the process
- Highest quality and safety in production

Technical features

- Microwave moisture measurement
- Sensor and Electronic are forming an integral unit
- 2 Analog outputs direct from sensor (4...20 mA)
- 3 digital inputs
- Selection of calibration data for 4 different products possible
- Range: 0...30 % Moisture
- Penetration depth up to 20 cm / 7.9 in
- Temperature range: 0...65 °C / 32...149 F



Installation in the shaft or silo



Installation on a slide



Installation in a screw conveyor



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Berthold Technologies stands for excellent know-how, high quality and reliability. The customer is always the focus of our solution. We know our business!

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