



BTS-5000

Moisture Meter

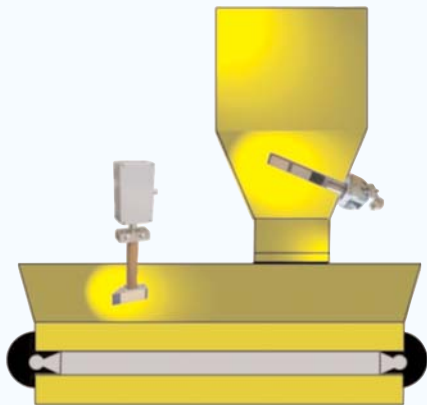
For Continuous Moisture Measurement
In Sand and Aggregates



Nowadays, the concrete quality is of vital importance for the industrial production process. In order to meet the increasing quality demands, it is essential to control and regulate the moisture content. The **moisture meter BTS-5000** determines the moisture content in sand and aggregates fast and exactly. It forms thus the foundation for a correct dosing of the aggregates.

BTS-5000

Moisture Meter



Microwave Pipe Sensor



Microwave Belt Sensor



Displaying and Analysing Device

Improvement of the Concrete Quality

The main advantage of a moisture measurement is the substantial improvement of the concrete quality. By measuring continuously during the complete batching procedure, the moisture values are detected and the whole production process is permanently controlled. This ensures an exact sand / water correction.

Application

The BTS-5000 measures all types of sand and aggregates with grain sizes up to 8 mm.

Technical Data

Operating Temperature

The BTS-5000 can be operated in a temperature range of +1 to +50 °C.

Signal Output

0-10 V DC, 0(4)-20 mA, RS232, RS485

Function

The BTS-5000 receives and processes the signals of the sensor and converts them into moisture values. The moisture is measured directly in the flow of bulk material, which ensures the cleaning of the sensor through the flowing material.

Modular Structure

Thanks to the modular structure, it is possible to enlarge the moisture measurement without any problems, as up to 4 sensors can be connected. The BTS-5000 can be integrated into any PLC or control system without additional software.

Installation Measures

Rack WHD 160 x 120 x 50 mm

Front frame WHD 170 x 130 x 4 mm

Power Supply

230 V AC / 50/60 Hz, 115V AC / 60 Hz

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User-friendly Handling

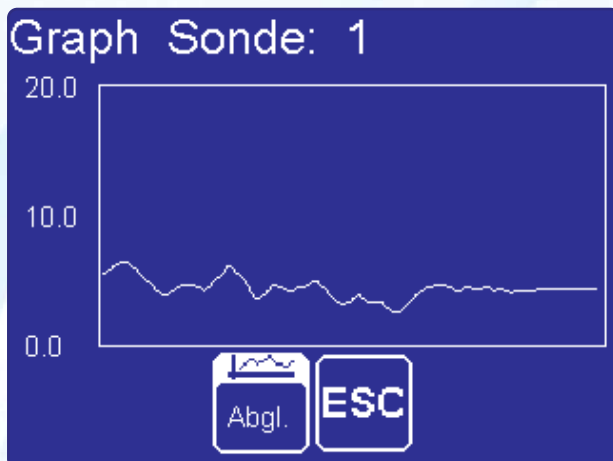
The BTS-5000 has been constructed particularly user-friendly. The menu-driven handling is effected through a clear touch display.

Averaging

The controlled averaging starts as soon as a signal is available on the digital input and it lasts over the whole duration of the signal. The continuous averaging can be activated for an adjustable time of 1-30 seconds. The average is then shown on the display and continuously output.

Graphical Display of the Moisture Course

The moisture course is graphically displayed for every connected sensor. The sample rate 0.1-240 sec can be individually adjusted by the client and changed at any time. The moisture course can be displayed graphically up to 13 hours.

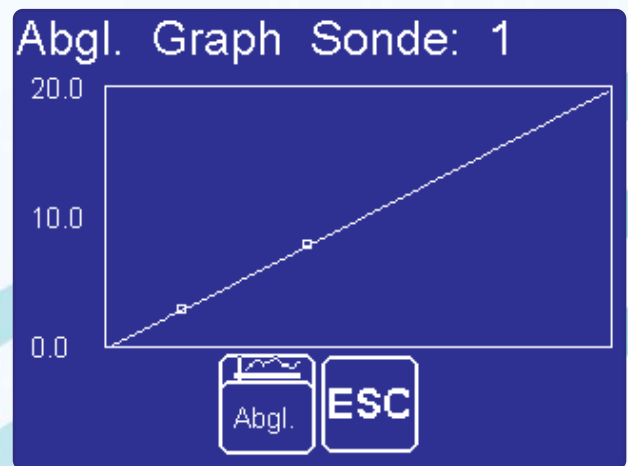


Manual Output

By pressing the manual button the moisture value can be adjusted with the touch display. This value is also displayed on the signal outputs.

Calibration

The calibration of the BTS-5000 is very simple. An efficient function is guaranteed with only two alignments, one with drier material 2-5 % and one with wetter material 6-9%. Both values are displayed graphically and can be modified later. The device uses these values for subsequent measurements.



Display Range

The display range of the BTS-5000 can be flexibly adjusted within 0-30 %. For production with mainly drier materials, the display range should be adjusted between 0 and 10 % in order to obtain a better readability of the graphical moisture display.

Measurement

The BTS-5000 reads and processes the measured data 100 times per second to detect the exact moisture content. The measurement is executed in real-time which means that the measured value is available without delay. That way, moisture fluctuations can also be recognized with fast flowing material.

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Microwave Sensors

MS 150 / MS 150 K **Microwave Pipe Sensor** **Moisture Measurement in the Silo**

Output: 0-20 mA
Power Supply: 15- 24 V DC
Range of Moisture: 0 - 18 % (depending on the material)
Measuring Accuracy: +/- 0,3 % (depending on the material)

Dimensions Sensor

MS 150: Diameter 55 mm, length 670 mm
MS 150 K: Diameter 55 mm, length 400 mm

Dimensions Mounting Attachment

WHD 130 x 120 x 140 mm



MB 110 / MB 110 K **Microwave Belt Sensor** **Moisture Measurement on a Conveyor Belt**

Output: 0-20 mA, 0-10 V DV
Power Supply: 1 5-24 V DC
Range of Moisture: 0 - 20 % (depending on the material)
Measuring Accuracy: +/- 0,3 % (depending on the material)

Dimensions Sensor

MB 110: Length 360 mm
MB 110 K: Length 260 mm

Height of material on the belt: at least 60 mm

For particularly abrasive materials, the microwave sensor MB 100 / MB 110 K is available as carbide-tipped version. Furthermore, it is possible to integrate a temperature measurement into the sensor.

