



FL-DIGI-SMART-BASIC

Digital evaluation unit for microwave moisture metering
in bulk materials



Moisture measuring systems are an important link in the chain to better quality and optimization in the process sequence. Factors like optimizing raw materials utilization and increase of efficiency in the production plants are gaining more and more significance. Suitable evaluation units with differentiated performance characteristics such as FL-DIGI-SMART-BASIC are essential for precise operation for today's online moisture measuring systems.



Our FL-Digi Smart Basic has been developed especially for applications in the processed and raw materials industry. In combination with the corresponding microwave moisture measuring probe a system is now available, which is achieving exact and real-time measuring results by difficult installations in which it is meeting the high demands of industrial processing. Present-day electronic components allow a very fast recording of the probe's measuring signals.

By its high resolution and the following processing of the measuring signals with capable software filters inaccuracies what resulted in aggregate flow are detected and their influence on the measured value collection is corrected and evaluated. Compared to systems in the past, a significant increase of the measuring accuracy is ensured even under difficult operating conditions.

The device can be integrated into all current processing controls through the integrated ETHERNET module or the serial/USB interface, which serves all common interface formats. The wide range of functions, which include also analog output of measured values, permits an easy supplementary in present or future control systems without a moisture measuring system.

As the system parameters are stored into the evaluation unit, the device has not need to be recalibrated even if the probe or the head of the probe are exchanged. WINDOWS based user interface enables easy operation. Graphic displaying of the measured value and an extensive data logging of all measured values guarantee a real-time overview of the dynamic humidity in the process.



Illustration and parametering software of FL-DIGI-SMART-BASIC

Application

- Moisture Measurement of bulk materials, e.g. in silos, on dosing/conveyor belts, material discharge locations and others.
- Application fields: several concrete based industries, foundry, ceramic, chemical, pharmaceutical, food and agriculture industries and many more.

Characteristical Features

- Direct connection to the processing control via serial interface (RS 485 / RS 232 or USB/B)
- Small dimensions through separate installation of evaluation unit and microwave moisture probe
- Easy parametering and calibration via internal WINDOWS-compatible software
- Re-parametering of FL-DIGI-SMART-BASIC unnecessary after probe exchange
- Optimal adaption of measuring behavior through individual selection of evaluation logarithms
- Fast measured value grasping (50 meas./sec.) and high calculation speed guarantee optimal filtering of measured values
- Easy monitoring of the percent moisture value and the probe's input through integrated display
- Connection ability up to 26 measure places by BUS-System (RS 485)
- Advanced Ethernet Technology offers the possibility of remote servicing

Technical Data:

Type of enclosure	Polyester IP 66 (120mm x 122mm x 90mm) with fixing clamp for 35mm DIN EN 50 022 mounting rail
Power Supply	+ 24V DC (+/- 10%)
Power Consumption	7 Watt
Temperature range	0...+50°C
Process Connection (serial)	RS 485 / RS 232 or USB/B (galvanically separated) ETHERNET (option)
Input	1 Microwave Moisture Probe / 1 start contact
Output	1 analog output: 0-20mA (or 0-10V), 4-20mA
Calculation Capacity	5 mips / millionen introductions per second
Accuracy	depending on measure range and material (approx. +/-0,3%)
Display (option)	LCD / 2-rows / 16-digits / number height: 5 mm
System requirements for evaluation software	WINDOWS 'XP, 'VISTA, '7