TELLUS-MS SERIES FOR SOLIDS IN-LINE MOISTURE MEASUREMENT

Moisture is one of the most ubiquitous process parameters in manufacturing processes. The sensor series TELLUS-MS was developed for the most demanding production environments to measure moisture in a variety of different materials, including powders, granulates, pastes and other highly viscous samples.



- Inline moisture measurements in real-time
- NIR spectral sensor integrated within probe shaft
- Automated self-cleaning and recalibration optional
- Robust design for industrial use

- Hazardous area / Hygienic design certified
- Contact measurement (probe in touch with material)
- Flashed light source, guaranteeing an extended lifespan, little maintenance required
- Extremely low cost of operation

INLINE MOISTURE MEASUREMENT INSIDE THE MANUFACTURING PROCESS

MEASUREMENT METHOD: The ability of water to absorb electromagnetic energy in very specific wavelength ranges is used to determine the moisture content of materials. The amount of the electromagnetic energy that is absorbed corresponds to the moisture content in the material.

UNIQUE: MEASUREMENT PROBE WITH INTEGRATED SPECTRAL SENSOR AND AUTOMATED SELF-CLEANING MECHANISM

The TELLUS MS sensor is the first real-time moisture sensor with the spectral sensor directly integrated into the process interface itself, allowing real-time moisture measurements at virtually any location in the manufacturing process. Also, moisture measurements often present the problem of "window fouling", a material build-up on the measurement window of the probe, resulting in false moisture readings. To eliminate this undesired effect, the TELLUS MS sensor system can be equipped with a module for automated self-cleaning and baseline recalibration, allowing the sensor system to be used in continuous manufacturing lines.

SPECIFICATION FOR SENSOR FAMILY TELLUS-MS

Near-Infrared - Reflection measurement

Measurement method Range Accuracy Resolution Integration time Measurement distance to material Dimensions Weight Materials of construction Light source Detector Operating temperature Voltage Industry protocols

Process interface

Additional components Protection class EX-Certificate and/or hygiene certificate 0-80 % moisture content ± 0.1 %, product specific 0.1 % typically < 1 secin contact Length 364 mm, diameter 114 mm, shaft 20 mm 1.5 kg Stainless steel, sapphire Flashed lamp, (life span 10⁹ flashes) InGaAs photodiode 5 °C to 45 °C (without cooling mechanism) 24 VDC, max. 0,2 A 0...10 V; 4...20 mA, ProfiNet, Ethernet-IP, OPC, Field-Bus, Mod-Bus, Profi-Bus, WiFi, RS Minus 485 Tri-Clamp, Milk connector, Ingold, ANSI, DIN-flange options automated self-cleaning and recalibrating mechanism **IP67** available



All BON sensors have a display to show to directly monitor the relevant process parameter in real-time. This eliminates the need for operators to be skilled in spectroscopy and able to quickly see when measurements are in spec or not.



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