

SONO-ES MIX MINI LD HT

Compact rectangular high temperature probe for the measurement of the moisture content of heterogeneous bulk goods that feature a low density within an approximate range of 0.3kg/dm³ to 1.0kg/dm³.




➔ **Capable of measuring within a temperature range of up to 120°C on a permanent basis, and up to 150°C on a short-term basis.**

Measuring the moisture content of materials with low density at a high temperature with state-of-the-art technology and at the speed of light. Our SONO probe stands out with the following performance features:

- Precise measurement values through a representative measurement field and a disc-shaped radar scan.
- Robust probe body made of high grade steel V2A and special ceramic.
- Up to 15 different material calibration curves are stored directly in the probe.
- Ideally suited for bulk goods with low density, such as granulates, powders, grains, and oilseeds, etc.
- Integrated signal processing and evaluation with intelligent filter algorithms directly in the probe.
- No further evaluation equipment is required.
- Ideal for the integration into containers, material hoppers, conveying lines and screw conveyors, as well as fluid bed dryers.
- Highest level of reliability due to radar technology.

SONO-probes are not based on micro-wave technology! They stand out with novel and innovative performance features: <http://imko.de/de/support/publications> „Comparison SONO-Micro-Wave“

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Probe Version	Assembly
- SONO-ES Measuring Transformer - SONO-MIX MINI LD High Temperature Probe Head, Casing, High Grade Steel V2A	Probe Dimensions: 135 x 60 x 40 (Length x Width x Height) Measure Window Size: 90 x 36mm (Length x Width)
Humidity Measurement Range	Measurement Range: Conductivity/Temperature/Standard deviation
The probe measures from 0% right up to material saturation. Adjustable moisture measurement ranges up to 100 % are possible with special calibrations. The moisture value is issued at the Analog Output 1.	Depending on the selection, the probe delivers the following values at the Analog Output 2: A) Radar-based conductivity value (EC-TRIME) of 0...10dS/m, B) Material temperature measured at the probe surface. Measuring range material temperature: 0°C ...120°C, C) Standard deviation for regulation purposes.
Measuring Field Extension	Measuring Values Preprocessing
Approximately 50 - 80 mm, depending on the material and the moisture content.	Five different operating modes with standard- or floating point mean value formation. Kalman filter algorithms with dynamization and further performance features.
Power Supply	Ambient Conditions
+7V to maximum +24V DC 3 W maximum	120°C on a permanent basis, 150°C on short-term basis.
Signal Output	Probe Connection
2x Analog outputs 0(4) 20mA Output 1: Humidity, variably adjustable in %. Output 2: depending on selection, conductivity, (EC-TRIME, resp. RbC), temperature or standard deviation.	The SONO-MIX MINI LD is equipped with a robust 10-pole MIL flange plug. The connection to the SONO-MIX MINI LD is performed without plug using a cable and a PG screw connection. The connection cable is available in lengths of 4, 10 or 25 meters.
Communication	Calibration
A serial RS485 interface or the IMP bus enables networked operation of the probe, whereby a data bus log for the connection of several SONO probes at the interface is installed by default.	The delivery scope of the probe includes a suited calibration curve. A maximum of 15 different calibration curves can be stored. For special materials, variable calibrations with polynomial functions up to the 5 th degree are possible and can be uploaded into the probe with the software SONO-CONFIG. A zero-point correction can be performed via the software SONO-CONFIG or the display module SONO-VIEW.
Optional:	
	SONO-VIEW Stand-alone display and configuration for reliable process control with SONO- or TRIME humidity probes. Up to four SONO probes can be connected online via a serial interface. It serves for the display of the measurement data, setting of operating mode, selection of the calibration curve, as well as other functions.