

# SONO-FLANGE

## Measuring Moisture and Solids Content

### Probe for Pressure-tight Mounting into Flanges and Fittings



Suitable for Installations  
into e.g. the VARINLINE  
Access Units Type F, N or  
G from GEA Tuchen-  
hagen



**HighTech and lightspeed for accurate and reliable moisture and solids content measurement of liquids, emulsions and other materials, with following features:**

- The small measurement window size of only 46mm diameter allows the easy installation into flanges and fittings.
- Precise measurements due to disc-shaped radar scans with a representative measurement field.
- Up to 15 different material calibration curves are directly stored inside the probe.
- Intelligent pre-processing inside the probe with smooth mean value accumulation and adjustable filters.
- No necessity for expensive evaluating devices which many other probes require.
- High reliability up to 100% water content measurement range due to most modern radar technology.

## Technical Data SONO-FLANGE

<b>SENSOR DESIGN</b>	<b>MOUNTING</b>
Probe Head: High Grade Steel 1.4401 with abrasion resistant special ceramic. Casing electronic: High Grade Steel 1.4301	Sensor Head: 46 x 55mm (Diameter x Length) SONO-electronic: 38 x 155mm (Diameter x Length)
<b>MEASUREMENT RANGE MOISTURE</b>	<b>MEASUREMENT RANGE: CONDUCTIVITY/TEMPERATURE/STANDARD-DEVIATION</b>
Measurement ranges up to 100% moisture are possible with a material specific calibration. The moisture value is output to analogue channel 1.	The probe provides on analogue channel 2 optionally: A) Radar-based conductivity (EC-TRIME resp. Radar-based-Conductivity) of 0...10dS/m, B) Material temperature measured at the probe's electronic head. Measurement range: 0°C ...70°C, C) Standard deviation for control purposes.
<b>MEASUREMENT FIELD EXPANSION</b>	<b>MEASUREMENT DATA-PREPROCESSING</b>
Approximately 30 - 40 mm, depending on material and moisture.	Five different measurement modes, with continual or floating average value, Kalman filter algorithms and further powerful control features.
<b>POWER SUPPLY</b>	<b>AMBIENT CONDITIONS</b>
+7V to max. +24V DC 1.5 W max.	0 - 70°C
<b>SIGNAL OUTPUT</b>	<b>CONNECTOR PLUG</b>
2 x Analog outputs 0(4)...20mA Output 1: moisture in % variably adjustable. Output 2: optionally conductivity/temperature/standard deviation.	The sensor is equipped with a robust 10-pole MIL flange connector. Readymade connection cables with MIL connectors are available in cable lengths of 4m, 10m, or 25 meter.
<b>COMMUNICATION</b>	<b>CALIBRATION</b>
A RS485 interface enables network operation of the probe, whereby a data bus protocol for the connection of several SONO probes to the RS485 is implemented by default. The connection of the probe to industrial busses such as Profibus, Ethernet, etc. is possible via optional external modules (available upon request).	The probe is delivered with a suitable calibration curve. A maximum of 15 different calibrations can be stored inside the probe. For special materials, variable calibrations with polynomials up to the 5 <sup>th</sup> order are possible. A zero point correction can be performed easily with the SONO-CONFIG software or the display module SONO-VIEW.
<b>OPTIONALLY AVAILABLE:</b>	
 <p>The image shows a SONO-VIEW display module with a blue screen. The screen displays two rows of data: the top row shows 14.7% and 13.3%, and the bottom row shows 14.2% and 10.8%. There are four navigation buttons (up, down, left, right) and a logo for IMKO.</p>	<b>SONO-VIEW</b> Stand-alone moisture display and configuration for advanced process control with TRIME and SONO probes. Up to 4 probes can be connected via serial interface for displaying the measured values, setting of operation mode, calibration curves and other functions.