

## SPECIFICATIONS

Accuracy:     ±0.05%     0% - 1%    range  
                  ±0.1%     0% - 10% range  
                  ±0.25%    10% - 30% range  
                  ±1.0%     30% - 60% range

Note: Accuracies shown are for guidance only.  
Accuracy is subject to application

Resolution:     ±0.01%

Measurement Modes: Real Dielectric  
Dielectric Loss  
Ratio Mode

Power Requirements: 110/240VAC   50/60Hz  
30W

Communications: All I/O isolated and self-  
powered.  
Dual 4 – 20mA  
RS232/RS485  
TCP/IP Ethernet

Materials: According to sensor style  
316 Stainless Steel  
Electroless nickel plated  
Aluminum  
Teflon or Ceramic Insulators

Operating Temperature: Electronics:  
0°C - 70°C (32°F - 160°F)  
Sensor:  
Up to 260°C

## OPTIONS

Operator Interface: Flat panel PC with 6" LCD  
display and operator touch-screen. Nema-4 rated  
enclosure.

4 – 20mA Remote Display

Explosion-proof Enclosures – consult factory

Optional Interfaces: ProfiBus  
ProfiNet  
DeviceNet  
Ethernet/IP

Sensor Styles: Planar sealed and open-frame  
(12", 24", 36" and custom length)  
Pipeline – sanitary and industrial  
flanges.  
2" diameter standard  
Other diameters – consult factory  
Sampling air-purge sensors  
High Temperature <260°C (500°F)

Calibration standards



## APPLICATIONS

### BOARD MANUFACTURE

Gypsum Board, Hardboard, Particle  
Board, Gypsum/Fiber Board, Cement/  
Fiber Board.

### WOOD MANUFACTURE

Hardwood Veneers, Plywood Veneers,  
Dimensional Lumber.

### FOOD MANUFACTURE

Whole Grains, Nuts, Puffed and Flaked  
Cereals, Confectionery Fillings, Fudge,  
Caramel, Molasses.

### TEXTILE MANUFACTURE

Synthetic and Natural Wovens, Felts,  
Tows, Yarns.

### PAPER MANUFACTURE

Cardboard, Laminates, and Corrugated,  
Pulp Bales and Sheets.

### GENERAL MANUFACTURE

Granulars and Powders, Minerals,  
Fertilizers, Plastics and Resins.

# ST-3300 Series Radio Frequency Moisture Analyzer



- *Stability & Repeatability*
- *Precision Measurement*
- *Fastest Sample Rate*
- *Truly Smart Transmitter*

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# Latest Digital Technology Advances RF Moisture Measurement

*The ST-3300 series of on-line Moisture Transmitters continues the Sensortech tradition of World-leading radio frequency measurement technology. Incorporating Direct Digital Synthesis (DDS) technology into the patented phase lock loop resonant frequency measurement principle achieves significantly improved resolution and stability.*



**Piston Purge Sensor**

Cylindrical sampling sensor. Piston retracts enabling sample chamber to fill and extends to purge sample after measurement. Large bulk average measurement. Various flange arrangements allow attachment to screw conveyors, drag conveyors and inclined chutes



**Pipeline Sampling Sensor**

A small cylindrical sensor is saddle mounted to the underside of a pneumatic conveyor. The sensor intrudes slightly into the main pipeline diverting a stream of product into the sample chamber. An air nozzle purges chamber after measurement.

## ❖ LATEST SENSOR TECHNOLOGY

Sensortech Systems' well-proven phase lock loop dielectric measurement technique has been further enhanced with the incorporation of direct digital synthesis. DDS enables the synthesis of high frequency RF signals with wide dynamic range, low harmonic content and sub-Hertz frequency resolution with the inherent stability of a crystal reference.

- ❖ Internally switched standards for long-term stability.
- ❖ Sensor frequency relates to product dielectric.
- ❖ Resonant signal amplitude relates to dielectric loss.
- ❖ Unaffected by product pH and salinity.
- ❖ Accurately measures moisture levels less than 0.01% to more than 50%.

## ❖ TRULY SMART SENSOR

All processing capabilities are integrated into the transmitter electronics. The dedicated processor/display unit traditionally associated with moisture sensors has been eliminated. The sensor interfaces directly to PC, PLC, HMI or other platforms. Dual, isolated analog outputs drive local displays, recorders etc...

- ❖ Standard I/O capability includes Ethernet (TCP/IP), RS232/RS485, dual isolated 4-20mA outputs.
- ❖ Up to 50 calibrations (product codes) stored on non-volatile flash memory.
- ❖ Sophisticated, yet user-friendly configuration, data logging and diagnostics software included with gauge.
- ❖ Fast sampling rate (100 samples/second)
- ❖ Temperature compensation option
- ❖ Two-term ratio measurement eliminates density influence in many applications.



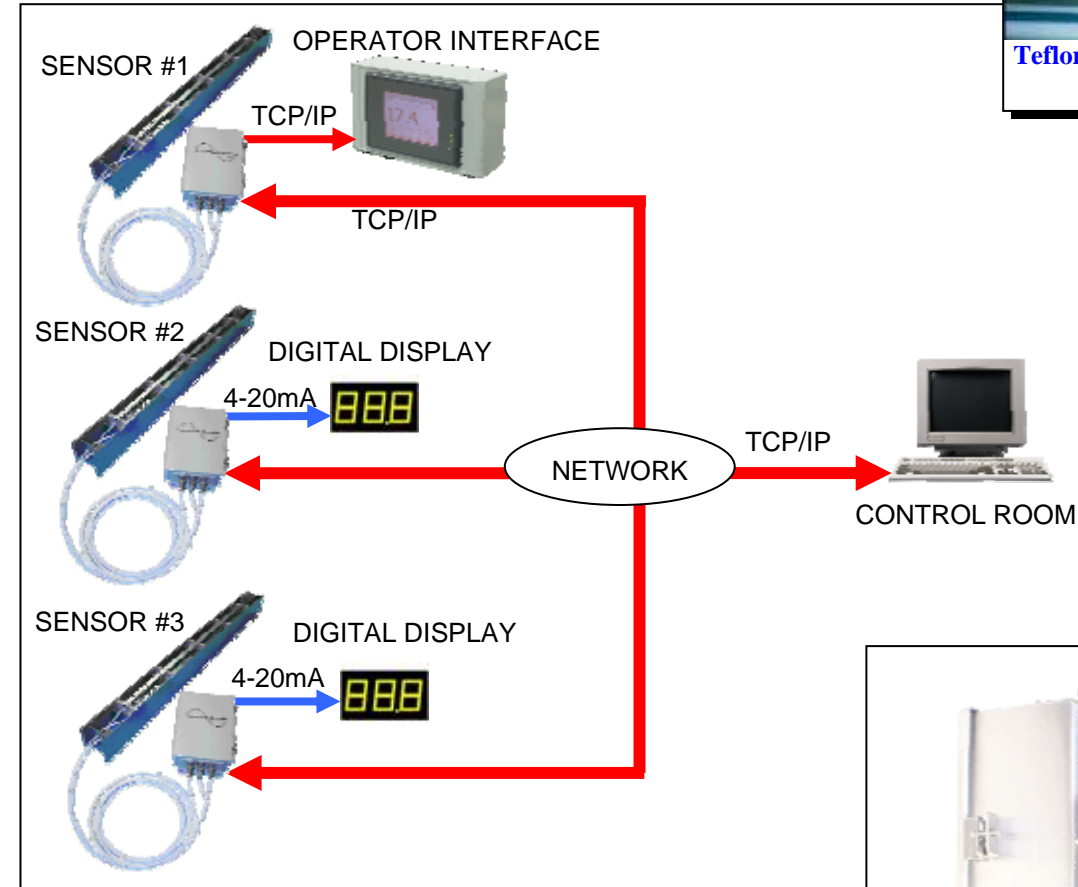
**Sled Sensor Measuring Belt Conveyed Aggregate**

**Open Frame Planar Sensor**

Used extensively in board line measurement, the open frame prevents debris build-up on sensor. This style of sensor features attached electronics for normal temperature applications and remote electronics for high temperature or high vibration locations.

## ❖ Network Capable

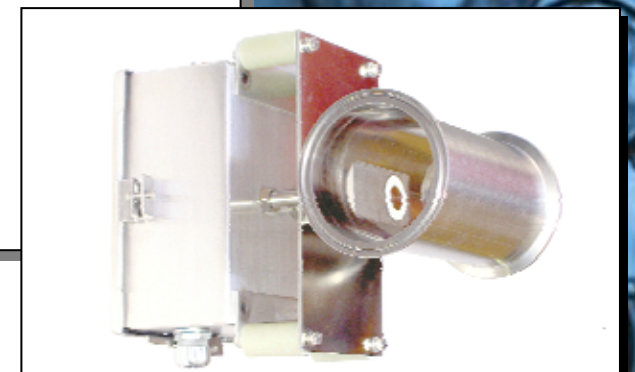
Multiple sensors may be connected throughout plant. The 3300 series transmitters support all major proprietary networks



3300 series sensors are provided with extensive support software to facilitate configuration and calibration. Once configured, the gauge is stand-alone without the need for obligatory processor units or displays.



**Teflon faced sensor measures hardwood veneer exiting dryer**



**Pipeline Sensors are used for pastes, slurries and liquids. Applications include Confectionery and Chemicals**

Sensortech manufactures a wide range of sensor styles to suit many applications. Our factory engineers will assist you in choosing the best configuration to suit your application.