

Moisture Measurement & Control From Lab To Line

## **LABORATORY 858**

Laboratory & At-Line NIR Moisture Analyzer



MONITOR

Moisture Content

Directly on the

**Production Line** 

ADJUST
Crucial Moisture Levels
Immediately

MAINTAIN
Product Integrity
Throughout the Process

# Produce More & Waste Less

Improve Manufacturing Production with Moisture Control

**REDUCE** 

**Waste & Human Error** 

IMPROVE
Plant Efficiency &

**Product Quality** 

Try MoistTech's NIR Technology today!

www.moisttech.com - info@moisttech.com

# MoistTech's Laboratory & At-Line NIR Moisture Sensor

858 SERIES WIDE RANGE OF APPLICATIONS INCLUDE:

- **✓** Adhesives
- ✓ Bulk Materials
- **✓** Chemicals
- ✓ Coating
- ✓ Converting

✓ Minerals

✓ Forest Products

**✓** Food

**√** Paper

✓ Plastic

✓ Powders

- ✓ Renewable Energy ✓ Thickness
  - ▼ ITIICRII
  - ✓ Tobacco✓ Web
- ✓ Snack Foods
- ✓ Textiles

Measures Up To 3 Constituents

✓ Pharmaceutical ✓ Resins

#### SEE THE WAYS MOISTURE CONTROL CAN BENEFIT YOUR FACTORY'S OVERALL PRODUCTION!

## PRODUCT INFORMATION

The 858 NIR (Near Infrared) Moisture Sensor is MoistTech's at-line moisture sensor for small sealed sample sizes. The sample design also allows for the use of a simple petri dish. The 858 design measures the bottom of the sample using a glass window to eliminate loss of moisture during tests. Precision filters and algorithms have been incorporated into the sensor to optimize performance under the demanding conditions in the manufacturing industry.

The 858 Sensor incorporates MoistTech's well-proven IR3000 optics and electronics providing superb accuracy, and resolution of any similar technology gauge. Unsurpassed in performance, stability, reliability, maintainability and cost of ownership, the 858 Sensor is the answer to controlling important values in your product. Ideal for laboratories or near processing lines MoistTech's 858 Sensor features removable sealed sample cups that are designed to prevent a loss in moisture during tests. The 858 has a greater accuracy of any other laboratory NIR sensor on the market within.01% and as fast as 3 seconds.

With the 858 Sensor, you will dramatically improve product quality, providing both energy savings and potential increased productivity with lower material losses. Additionally, it has a one-time calibration, maintenance free, drift free optical design that allows operating personnel to confidently make immediate process adjustments based on real-time measurements.



An optional light shield can be installed in place of our sample cup. This lid allows for fast, accurate and repeatable testing of sheet samples used in the Converting & Paper industry. Products measured are Moisture, Thickness & CoatWeiight.

#### **OP-14 OPERATOR PANEL**

OP-14 Operator Panel is PLC based mounted unit communicates with the MoistTech sensors through RS-232C Cable. Large numerical display and full screen trend display. Online control, calibration and measurement display for all 3000 series sensors. Rated IP-67 dust & water tight.

#### **KEY BENEFITS**

- Insensitive to Material Variations particle size, material height and color do not affect the sensor
- One-time Calibration & Zero Drift Over Time
- Maintenance Free
- Product Quality Monitoring allows immediate production line adjustments to improve product quality and consistency
- Process Optimization allows 100% monitoring of your production process to reduce product that is "out of specification"
- Fuel Consumption Savings reduce your energy usage as the drying/cooking process can be controlled resulting in a reduction in energy consumption
- Water Savings reduce your water usage by continuously monitoring moisture content
- Dust Prevention help reduce the risk of explosion due to dust







#### STANDARD FEATURES INCLUDE

- Resolution for unsurpassed accuracy and response
- Built in large Touch-Panel PLC OP Full Color
- Pre-programmed measurement algorithms and calibrations
- Customized NIR filter selections for your application
- Flash data storage removable
- Sealed sampling Cup or Glass Petri Dish
- Parts and labor warranty

#### 858 TECHNICAL INFORMATION

- Non-Contact
- Advanced digital filtering for noise free signal
- Very low energy use
- Surface Mount Technology
- · Simple calibration procedure
- No routine recalibration needed
- No routine maintenance needed
- 50 products codes available

### **NEAR INFRARED (NIR) TECHNOLOGY**

All molecular bonds absorb specific wavelengths of light. Hydrogen bonds including O-H (water); C-H (hydrocarbon) and N-H (ammonia) all absorb strongly in the NIR spectral region. The amount of NIR energy reflected at a given wavelength is inversely proportional to the quantity of absorbing molecules in a product.

The NIR technique is a non-destructive, non-contacting measurement. MoistTech's sensor utilizes multiple wavelengths of NIR light, projected onto the product at a very high repetition rate. The reflected light is then measured using a digitally enhanced detection system and thousands of data points are sampled every second.



Measured NIR Constituents: 1, 2 or 3

Moisture Ranges: O-0.1%, O-100% and PPM Ranges Subject to application

Accuracy (subject to application):  $\pm 0.5\%$ Repeatability:  $\pm 0.01\%$ 

Color Display: 6-inch. LCD with touch-screen input

Calibration Codes: 50 Standard, Stored in non-volatile Flash memory

Measurement Response Time: Default to 3 seconds

Weight: 24 lbs

Enclosure: Durable Steel with beige powder coat paint

 Dimensions:
 381cm D x 305cm W x 203cm H

 Power:
 115-230VAC 50/60Hz 30W

Sample Holders: 75mm Diameter 25mm Deep. Also available Sealed

Sample Cups or Glass Petri Dish

Networking: 2-Ethernet TCP/IP Ports
Operating System: Internal PLC/HMI

Outputs: Data Transfer to PC Based Excel Worksheet Calibration: Factory Pre-Calibrated (Routine re-calibration

is not required)

Reliability: System Warranty including Lamp and Motor







<sup>\*</sup>Above specifications are subject to application