



# MoistTech Corp.

*Moisture Measurement & Control From Lab To Line*

## LABORATORY 858

Laboratory & At-Line NIR Moisture Analyzer

Improve Productivity Alcohol  
MOISTURE  
Plastic Pellets OILS  
Proteins  
Optimize Drying  
COATING  
Paper Wood  
COATWEIGHT  
TOBACCO  
Converting  
BRICK Powder  
PELLETS  
Grains  
Biofuels  
Ceramics Chemical  
POLYMERS  
ENGINEERED WOOD  
TISSUE Grains  
MINERALS  
FATS



MoistTech.com

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

858 SERIES  
WIDE RANGE OF  
APPLICATIONS  
INCLUDE:

## 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.



- ✓ Adhesives
- ✓ Bulk Materials
- ✓ Chemicals
- ✓ Coating
- ✓ Converting
- ✓ Food
- ✓ Forest Products
- ✓ Minerals
- ✓ Paper
- ✓ Pharmaceutical
- ✓ Plastic
- ✓ Powders
- ✓ Renewable Energy
- ✓ Resins
- ✓ Snack Foods
- ✓ Textiles
- ✓ Thickness
- ✓ Tobacco
- ✓ Web

*Measures Up To 3 Constituents*



### OPTIONAL - CONVERTING LID

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 & CoatWeight.

### 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 FOR USERS:

**Reduce Edge Control & Lay Flat**  
Uniform Web Profile

**Process Optimization**  
Maintenance Free

**Fuel Consumption Savings**  
process can be controlled resulting in a reduction in energy consumption

**Non-Nuclear**  
Non-Contact

**High Accuracy Proven**  
Immediate Line Adjustments



## 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.



## SENSOR SPECIFICATIONS

Measured NIR Constituents:	1, 2 or 3
Moisture Ranges:	0-0.1%, 0-100% and PPM Ranges Subject to application
Accuracy (subject to application):	±0.1%
Repeatability:	±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

\*Above specifications are subject to application

