

# NIR 6700



**High Sensitivity  
NIR Moisture  
Analyzer**



**Mining, Minerals  
&  
Chemicals**

# SENSORTECH'S NIR 6700

Sensortech Systems, Inc. has been the trusted name in moisture measurement and control for more than 30 years. Incorporated in 1983 Sensortech has become the global leader in applied moisture measurement technologies.



## NIR 6700 PERFORMANCE

### Innovative Optical Design

The NIR-6700 optical design provides a foundation of measurement stability and reliability. High precision tolerances of machined parts and alignment of optical components ensure optimal performance.

### Single-Point, Dual-Purpose Detector

The long established Quadrabeam Principle combines the measurement light path and the direct (prime) light path onto a single detector eliminating variations due to aging and operating temperature more effectively than expensive matched dual detector products. The large surface area detector (10mm<sup>2</sup>) minimizes error due to product height variation.

### Collimated Energy Source

Effective use of power dramatically increases optical efficiency enabling the instrument to run significantly cooler. The reduced operating temperature inherently reduces stress on electronics and power supplies, increases the life of the instrument and further reduces costs associated with added temperature conditioning.

### Optimized Electronic Signal Conditioning

Oversampling, 16-bit resolution and multiple-level digital filtering minimize signal noise. Proprietary design and state of the art electronic technology further enhances instrument performance.



**BAUXITE  
CLAY  
COAL  
COKE  
ORE  
SAND  
SALT  
SINTER**

**FERTILIZER  
DETERGENT  
PHOSPHATES**



The NIR-6700 Series of High Sensitivity Moisture Measurement and Control Systems is designed for the continuous monitoring of mineral & chemical applications using Near Infrared (NIR) technology.

**CONTACT SENSORTECH FOR ADDITIONAL APPLICATIONS**

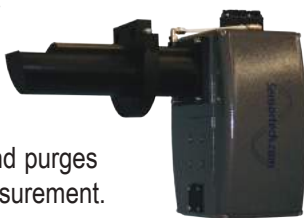
## HIGH SENSITIVITY TECHNOLOGY

Mineral & Chemical Applications

All Environments & Process Locations

### SNORKEL SAMPLER

Intelligent sampling method of measurement provides moisture control of inconsistent product flow. The Snorkel protrudes into the product flow, collects a sample for measurement and purges the sample for the next measurement.

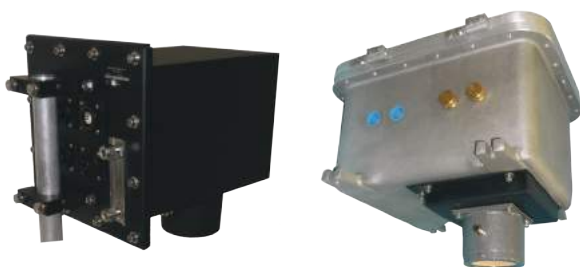


### FLANGE MOUNT

Moisture measurement of closed conveyor equipment providing moisture control of a continuous flow of product. Product maintains contact with the abrasion resistant window ensuring an accurate real-time measurement.



### IP67 & EXPLOSION PROOF



Sensortech specializes in Mining, Mineral and Chemical Applications operating in extreme temperatures and explosive Class I Div I environments.

### Supported Communication Interfaces

Ethernet TCP/IP  
RS-232/485  
3 x 4-20mA  
Digital Input  
Digital Output



PC/Laptop



PLC/Controller

Operator Interface \*  
Digital Display \*

DeviceNet \*  
Ethernet/IP \*  
PROFIBUS \*  
PROFINET \*  
Pyrometer \*

\* Sensortech offers a variety of options

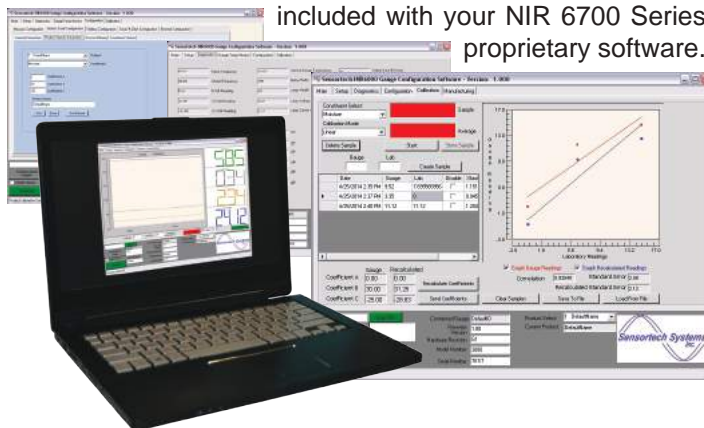
## INDUSTRIAL GRADE

Materials having low optical reflectance properties require an added level of sensitivity. The NIR 6700 Series has been developed specifically for Mineral and Chemical applications with low optical reflectance properties and offer unmatched precision on materials inherently unreceptive to NIR measurements.



### MANAGEMENT SOFTWARE

Measurement display, data-logging, calibration utilities and network configurations are among the many features included with your NIR 6700 Series proprietary software.



### OPERATOR INTERFACE

An intelligent interactive display used to interface to your NIR 6700 Moisture Analyzer. Features a range of administrative controls, diagnostic tools and moisture management utilities that provide real-time access to your analyzer's central functions while it is in operation.



A visual indication of your processes moisture control status. Designed to be mounted in a variety of locations giving the flexibility to supervise your process where you need it most.



### DIGITAL DISPLAY



# On-Line Moisture Measurement and Control System

## Analyzer Specifications

|   |                             |
|---|-----------------------------|
| Number of Measured Constituents             | 1, 2 or 3                   |
| Moisture Range & Accuracy                   | 0 - 95% $\pm 0.01\%$ *      |
| * All accuracies are subject to application |                             |
| Measurement Distance                        | 4.0 - 16 in. (100 - 400 mm) |
| Optical Sampling Size                       | 1.50 in. (38 mm)            |
| 6200 Series                                 | 0.40 in. (10 mm)            |
| Number of Stored Calibrations               | 50                          |
| Standard Weight                             | 16 lbs. (7 Kg) *            |

\* Non-Standard enclosures are subject to application.

### Enclosure

|                 |                           |
|-----------------|---------------------------|
| Standard        | Cast Aluminum             |
| IP67            | Stainless Steel           |
| Explosion Proof | Subject to application    |
| Dimensions      | Refer to diagram on right |
| Power           | 80 / 260 VAC (50 / 60 Hz) |
| Option          | 24VDC                     |

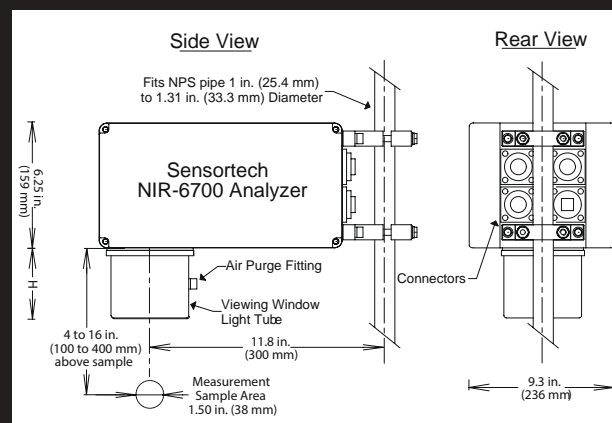
### Temperature Control

|   |                       |
|---|-----------------------|
| Standard Operating Temperature  | 32 - 120°F (0 - 50°C) |
| IP67  | 32 - 185°F (0 - 85°C) |
| • Several options are available spanning and exceeding the minimum and maximum stated specifications. |                       |
| • Contact Sensortech for details.   |                       |

|                           |  |
|---------------------------|--|
| Analyzer Inputs / Outputs | <ul style="list-style-type: none"> <li>• Three self-powered isolated 4-20mA outputs</li> <li>• Ethernet TCP/IP, RS-232, RS-422/485</li> <li>• 1 Digital Input</li> <li>• 1 Digital Output</li> </ul> |
|---------------------------|--|

|                                 |  |
|---------------------------------|--|
| Communication Interface Options | PROFIBUS, PROFINET, DeviceNet, EtherNet/IP, Modbus |
|---------------------------------|--|

|          |  |
|----------|--|
| Warranty | 2 year system guarantee<br>Lamp and Motor (Lifetime) |
|----------|--|



## Standard Features Include:

- 16-bit conversion and 32-bit processing
- Wavelength selection for each application
- Advanced digital filtering for noise free signal
- Surface mount technology
- Windows operating software
- Standard ethernet output
- 3 x 4-20mA outputs
- Optical window contamination monitor
- 2 year parts & labor warranty
- Factory Calibration included with your purchase

## Options:

- Digital Display (DD)
- Touch Operator Interface (OI)
- Cooling Panels (Air or Liquid Cooled)
- Calibration Reference Standards
- Product Temperature Sensor
- PROFIBUS, PROFINET, EtherNet/IP, DeviceNet, Modbus
- KEL-F, Quartz, and Sapphire Viewing Windows
- Extended Warranty

## Sensortech Guarantee

*All products manufactured by Sensortech Systems, Inc. are warranted against defects in material and workmanship for a period of two years from date of shipment. In the event any product manufactured by Sensortech Systems, Inc. proves to be defective during the warranty period, it will be repaired free of charge.*

For Additional Details Please Visit:  
[www.sensortech.com](http://www.sensortech.com)

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