NIR-7000
ONLINE MOISTURE ANALYZER

KPM

Continuous Online Moisture Measurement in Challenging Industrial Process Environments

Hundreds of manufacturing facilities rely on the Industrial NIR-7000 sensor to deliver reliable non-contact moisture measurements directly in process environments for effective monitoring and control of almost any production line. As the next-generation analyzer to the Sensortech NIR-6000, the NIR-7000 features an updated optical platform designed for high-throughput industrial applications where moisture content directly impacts product quality.

Based on proven near infrared reflectance (NIR) technology for precise moisture measurements, the NIR-7000 is accurate to within +/- 0.1% moisture for many applications.

The NIR-7000 is rated IP65 for years of trouble-free operation and low cost of ownership. Hardened electronics are designed for stable operation over a wide ambient temperature range of 0 °C - 55 °C (32 °F to 131 °F). This range can be extended down to -20 °C (-4 °F) with heating and up to 85 °C (185 °F) with air vortex cooling.

EASY IMPLEMENTATION IN INDUSTRIAL ENVIRONMENTS

For many applications, the NIR-7000 can be delivered pre-calibrated based on our extensive database of calibrations for almost turn-key operation. The NIR-7000 can be situated in a variety of ways, such as over a conveyor belt, looking into an auger/screw conveyor, or looking through a sight glass window of a bin or chute.

APPLICATIONS:

- Building and wood products (fiber board, particle board, cement/sand, resin, veneer)
- Minerals and ores (acetate, bauxite, iron ore, granular material)
- Paper and textiles
- Converting (coatings, plastics)
- Chemicals and powders (coke & coal, ceramics, crumb rubber, soap flakes, fertilizer)
- Bio energy products (wood pellets, hog fuel, wood chips & shavings)

NIR-7000 FEATURES

- Entry level moisture analyzer that provides reliable and accurate results
- Improved serviceability, modular architecture, and user-friendly software makes it a significant upgrade to its predecessor, the Sensortech NIR-6000
- Global install base
- Thermal-cooled detector included
- Ready for challenging environments
- Easy integration to factory automation
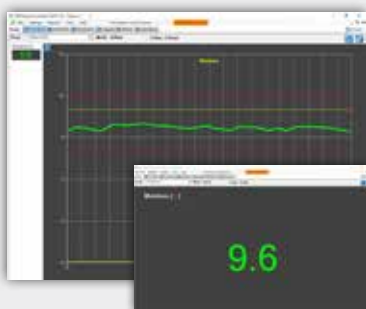
Ready to Optimize Your Production

Direct integration into your plant PLC is easy with up to four (4) 4-20 mA outputs to drive feed forward or backwards control and achieve optimal drying to maximize yield and save energy.

The NIR-7000 uses SensorVu Windows®-based PC software, allowing operators to insert set-up parameters, perform or adjust calibrations, select product codes, examine internal diagnostic values and remotely view moisture and temperature trends. SensorVu can also connect to multiple NIR-7000 analyzers in a single location for multi-system monitoring.
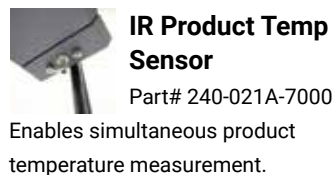
SensorVu™

NIR-7000 MOISTURE ANALYZER

All NIR-7000 analyzers have a two year factory warranty for parts and labor and include the following: Powder-coated sheet metal IP65 housing, advanced digital noise filtering hardware, pre-programmed algorithms and calibrations, specialized NIR filtering to application requirements, management software, power and connection cables.

ORDERING INFORMATION

Model	Description
NIR-7000	Moisture analyzer for industrial applications

ACCESSORIES

IR Product Temp Sensor
Part# 240-021A-7000

Enables simultaneous product temperature measurement.

Air Cooling
Part# 240-010A-7000

Vortex cooler attached to the sensor for high-temp applications.

Snorkel Sampler
Part# 250-000A-7000 (Available in 110 VAC, 240 VAC, and 24 VDC)

Designed to measure free falling powders/ granules in chutes.

Cal Check Standard
Part# 230-000A-S

Used to verify sensor stability over time and transfer calibrations between sensors.

ADDITIONAL ACCESSORIES

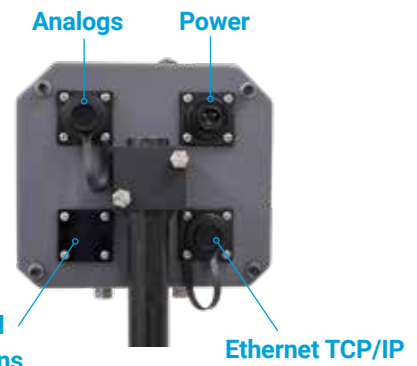| Part Number	Description
240-060-1A-7000	Internal heating panel assembly (110 VAC)
240-060-2A-7000	Internal heating panel assembly (240 VAC)
240-060-3A-7000	Internal heating panel assembly (24 VDC)
240-807A-7000	External product loss
250-050A-G	Insertion probe accessory
300-052-2	One (1) analog output
210-700PA-7000	145 mm (5.7 in) local display

Analogs Power

Optional Digital Communications

Ethernet TCP/IP

NIR-7000 offers several connection methods to meet your application and facility's unique needs.

Front View

447.0 mm (17.6 in.)
388.6 mm (15.3 in.)
203.2 mm (8.0 in.)
287.4 mm (11.3 in.)
Sensor Optics
320.0 mm (12.6 in.)

Bottom View

33.0 mm (1.3 in.) Diameter for mounting post
222.3 mm (8.8 in.)
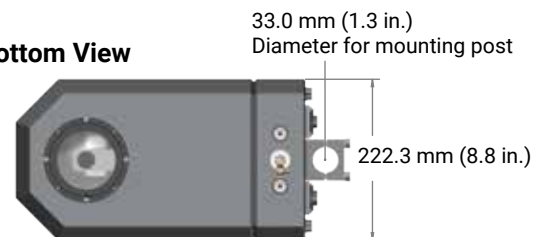
All power and interface connections on rear panel

SPECIFICATIONS

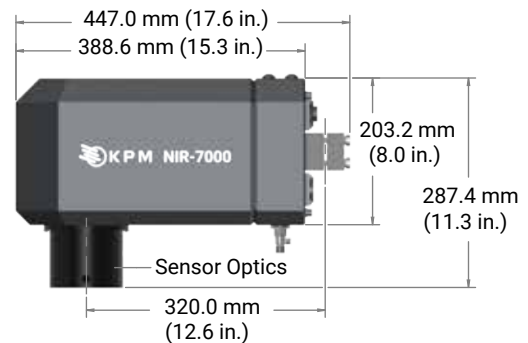| Name	Specification
Moisture accuracy	± 0.10% (subject to application)
Moisture range	0 to 95%
Recommended measurement distance	200-450 mm (8-18 in)
Calibration codes	100
Ambient temperature	0 °C to 55 °C (32 °F to 131°F). Down to -20 °C with heating option, up to 85 °C with cooling option
Standard mount	Top or rear mount for positioning over conveyor belts, augers/screw conveyors, or looking through a sight glass window.
Dimensions W x D x H	215.9 mm x 447.0 mm x 281.9 mm (8.5 in x 17.6 in x 11.1 in)
Sensor weight	9.5 kg (21 lbs)
IP rating	IP65
Input Power	Voltage: 100-240 VAC - 50/60Hz — Power: 42 Watts; 24VDC upon request
Interfaces	**Standard:** Ethernet TCP/IP; Isolated 4-20mA outputs. **Optional:** Ethernet IP, EtherCAT, ProfiNet, ProfiBus, Modbus TCP, DeviceNet, OPC-DDE Server
Warranty	Two years parts/labor; Three years lamp replacement

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