

The Moisture Monitor™

FIFTY YEARS... WORLDWIDE

INDICATING CONTROLLER
MODEL 7701



FOR CONTINUOUS PROCESS DRYERS

Whether it's paper, textiles, or something else, the MOISTURE MONITOR keeps the moisture in the product on target at delivery.

The new control features fast, step corrections for speed regulation and PID control on dryers.

Use step correction to regulate machine speed to eliminate overdrying and maximize production.

Use PID control output to regulate steam valves to maintain correct moisture levels on constant speed processes.

Enter digital set point and high and low tolerances for automatic control applications. For use as a moisture indicator, high and low alarm LED's and relay outputs alert out-of-tolerance conditions.

Use moisture sensing rolls, one or more, or full-span rolls or bars on webs. Or insulate an existing guide roll for use as moisture sensor.

The 7701 has an analog output for connection to chart recorders or higher level systems. A standard printer report is available via RS-232 output.



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-GENERAL INFORMATION-

It is surprising how much energy is wasted by overdrying. There is also a loss of quality and a big loss in production. Dry is dry. Nothing more can be gained at lower speeds and increased heat.

Thousands of MOISTURE MONITORS all over the world turn these losses into profits while also achieving better product quality.

Sensing rolls, short and full span, conduct minute amounts of electrical energy to accurately monitor the moisture in textiles and paper in both the wet and the dry states.

Moisture controls on many continuous dryers must step surface speeds up and down in increments rather than continuously. This is because of the long length of these dryers and the fact that a change in moisture can only be expected some time after a speed correction has been made.

Simply enter the moisture set-point along with high and low tolerances and the Model 7701 will automatically increase machine speed when the moisture is low and decrease machine speed when the moisture is high. This control can also be used to regulate spray atomizers.

Some processes require the regulation of steam pressure to control drying. The Model 7701 also includes PID control output to automatically adjust steam pressure to achieve constant moisture level.

There are also processes or applications for which automatic control is not desirable. The Model 7701 provides real-time digital display of moisture as well as high and low alarm indication. Relay outputs can also be used for external alarms.

The Model 7701 uses a special Moisture-to-Computer Interface, Type 1035, which provides a full-range, linear measurement signal produced by an electrical resistance moisture sensor. A calibration factor can be entered into the Model 7701 for different materials.

Standard moisture sensing rolls run in contact with web materials. Full-span rolls and bars can be used or existing metal guide rolls can be insulated for use as a moisture sensor.

There are virtually unlimited configurations possible for use as moisture sensors. Sensors include insertion probes for granular materials and finger probes for bulk products. Electrically insulated plates are employed inside ducts and chutes.

The Moisture Monitor Model 7701 is the latest technology resulting from over 50 years of specialization in moisture measurement.

-SPECIFICATIONS-

Power Requirements	115/230 volts a-c
Weights and Dimensions	3.7 lbs (1.7 kg), 10.2" (259mm) high, 6.9" (175mm) wide, 4.4" (112mm) deep, NEMA-4X (IP66)
Sensors	Short to full-span rolls and bars for dry webs, insertion probe for granular material and finger probe for bulk, special sensor design configurations available
Standard Sensors	Moisture Sensing Rolls, Type R6-AL (light-weight), Type R6-AM (medium-weight, optional spiked for carpet), Type R6-AH (heavy-weight), R6-AM-CB (counter-balanced), R6-AHK (heavy-weight, knurled), Full-span Sensor, Type 8903, Finger Sensor, Type T-36-10, Duct Probe, Type 8903
Sensor Accessories	Sensing Roll Lift Bar, Type 4068, Sensing Roll Selector, Type 3357 (3-position)
Principle of Operation	Electrical conductivity through materials, requires Moisture-to-Computer Interface, Type 1035
Control	Set point and tolerances in tenth percent steps, for use with motorized speed control potentiometers and valves, electro-pneumatic controllers including programmable step corrections and PID control
Display	4-digit LED, 2-line LCD
Outputs	0-10 volts and 4-20 mA d-c for recorders, etc., high and low alarm or control relays, RS-232 for printers and other serial devices
Accuracy	Repeatable within 5% of reading ($\pm 0.3\%$ at 6% moisture content or regain)



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