

DMS3010

PAPER MACHINE PRODUCTS

- ▶ **Blades**
- ▶ **Doctoring**
- ▶ **Accessory Equipment**
- ▶ **Cleaning & Conditioning**
- ▶ **Filtration**
- ▶ **Forming**



Forming Section Moisture Sensor

Features and Benefits

- **Safe, Non-Nuclear Measurement** - new patented measurement technology eliminates any radiation hazards and nuclear regulations.
- **Highly Accurate** - excellent for closed-loop control.
- **Long Sensor Life** - ceramic wear-resistant surface yields extended sensor life.
- **Easily Installed** - installs to any paper machine application.
- **Rapid Start-ups** - factory calibrated for fast, accurate start-ups.
- **Direct Measurement of Stock Height** - can be calibrated to output consistency.
- **Sensor Design**—self contained environmentally sealed unit - operates in harsh, under forming fabric, conditions.
- **"Operator Friendly"** - easy to set-up & operate through the remote mounted operator panel, or no operator interaction required with connection of bone dry weight inputs from DCS.

Contact your local Kadant specialist for our specific recommendation for your application

To find your local contact, refer to:

www.kadant.com

DMS3010 Dielectric Moisture Sensor

Description

The DMS3010 Forming Section Moisture Sensor is an on-line, nondestructive, non-nuclear sensor designed to accurately and reliably measure the moisture content of the sheet on the forming fabric.

The sensor utilizes a proprietary and patented measurement technology which is nondestructive and highly reliable.

A contacting, wear resistant ceramic surface mounts under the forming fabric for on-line, realtime measurement.

The sensor is factory calibrated and can be easily installed in any paper machine configuration.

A standard 4-20 mA output is scaleable for any operating range, and can represent either consistency, or stock height, and can be used for closed-loop vacuum control.

The remotely mounted operating panel, allows the operator to have easy access to grade setup inputs, alarm conditions, forming fabric requirements, and trend displays.

This DMS3010 is an excellent choice for papermakers that need the ability to control consistency of the sheet at critical positions on the fourdrinier such as closed-loop vacuum control, dandy roll applications, top formers, and multiply sheets.

Sensor Operation

The DMS3010 Forming Section Moisture Sensor operates by sensing the dielectric value of the material in contact with the sensor's surface. Since the dielectric value of water is substantially higher than most other materials, the presence of water will result in a substantial increase in the dielectric measurement. A proprietary measurement technology is employed to prevent dielectric measurement errors that are introduced by water conductivity or salt content. The dielectric measurement is then compensated for temperature and calibrated for the specific material and application. A RS422 serial communication output to the operator control panel continuously reports calibrated readings with a full scale measurement accuracy of $\pm 2\%$. An external 4-20 mA output is available for applications requiring a current loop interface (ie., closed-loop control).

Specifications

Measurement:	Directly measures water (or stock) height via proprietary dielectric measurement technology.
Accuracy:	$\pm 2\%$ of water height reading
Moisture Content:	0 - 100%
Output:	standard 4 - 20 mA output
Communication:	RS-422 serial communication to remote mounted control panel
Temperature Range:	0 - 60 °C (32 to 140 °F)



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