

# DS Moisture Sensor

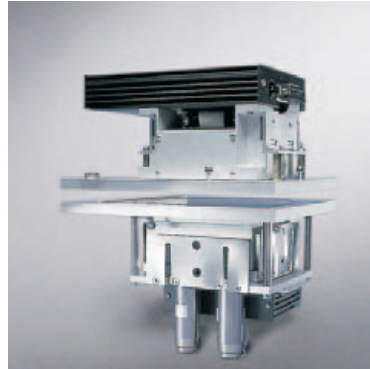
## Moisture Sensors

**DS are the only sensors on the market that can measure moisture content through all the layers of finished corrugated board. Non-contacting measurements are an advantage when measuring the moisture content of multi-ply products such as boxboard and corrugated cardboard, and when measuring coated paper grades.**

DS Moisture Sensors are based on microwave technology. Measurement results are neither affected by ink residues in recycled paper or by the colour of a sheet; nor are the results influenced by caliper, surface structure, moisture stratification, or by the varying pH or salt content in the process water. Even common fillers such as china clay or whiteners, e.g. titanium dioxide, have virtually no affect on the moisture reading.

**Minimum of calibration** Moisture Sensors are sturdy and thus very reliable. No cooling system is needed and no lamps need to be changed. With a minimum of calibration and a minimum of maintenance, they simply do their job, regardless of the conditions. Just install it and it will take care of itself. What this implies to your maintenance budget goes without saying.

DS sensors are primarily intended for continuous measurement in on-line installations. They can be fitted on O frames or C frames in order to measure cross-direction profiles or machine-

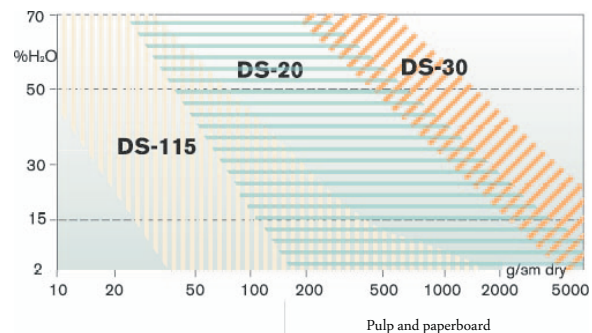


The compact design of Moisture Sensor DS-115, means that several sensors can be used, at the same time as traversing speed is increased.



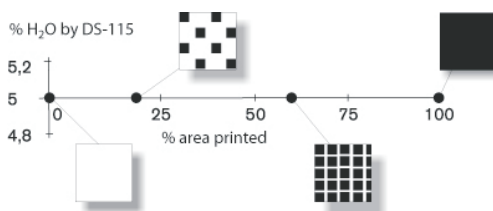
Double-sided measuring head for moisture measurements of paper. The measuring head which measures without contacting the sheet, is especially suited for multi-layer products.

### MEASURES EVERYTHING FROM NEWSPRINT TO HEAVY BOARD



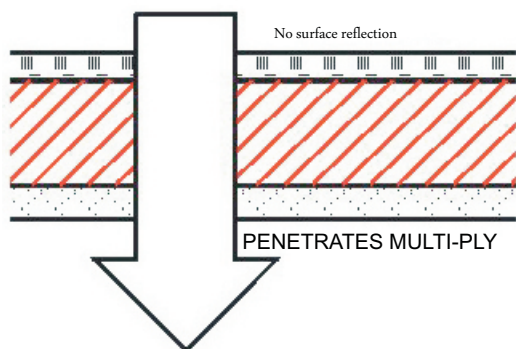
Moisture Sensor DS-115 covers all paper grades from fine paper to paperboard. For pulp or very heavy paperboard, we provide the well proven moisture sensors; DS-20 and DS-30.

### THE MEASUREMENTS ARE UNAFFECTED BY INK RESIDUES

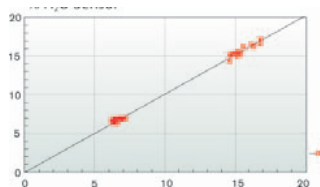


# DS Moisture Sensor

Very large moisture content and grammage range. True average values for multi-layer sheets as well as thick and wet webs.



NON-SENSITIVE TO THE COLOUR OF THE PAPER



## Small and light

Sensor DS-115 is a moisture sensor with an increased measurement range that covers all types of newsprint, including that manufactured from recycled fibre and containing printing ink residue. It is also perfect for measuring multi-ply material such as boxboard, liner, and coated paper.

To achieve maximum resolution in the control of the cross profile, the measurement area should be as small as possible, therefore, the measurement area of the Moisture Sensor DS-115 is only 40 mm in the cross direction and 60 mm in the machine direction.

## 80 measurements per second

Moisture Sensor DS-115 has a sampling frequency of 80 measurements per second, which makes it possible to move very quickly across the web. The resolution in the machine direction is excellent, even at high machine speeds.

The algorithms for calibrating Moisture Sensor DS-115 are the same as those for earlier models. Use of the microwave resonance method is a guarantee of minimum calibration compared to other measurement methods.

## BENEFITS

- Less sensitive to grade differences including recycled furnishes than other methods, leads to less calibration time
- High accuracy leads to improved process control, energy savings and improved product quality.

### Specification

**Moisture Sensor SA-150 Code 824**

#### Instrument (output)

Frequency	110 kHz
Output for moisture and temp.	010 V and 0/420 mA
Analogue signal connector	15 pin. D-sub female
Digital signal connector	25 pin. D-sub female
Digital output	Open collector

#### Installation requirements

Measuring head connection	Burndy UTG 01412SH
Ambient temp.	max 60°C

Dimensions	160 × 260 × 90 mm 6 × 10 × 3.5 in
Net weight	2.9 kg 6.4 lb

### Specification

**Moisture Sensor DS Code 842/843**

	DS-20* code 842	DS-30 code 842	DS-115 code 843
<b>Measurement</b>			
Measuring range			
H2O	max 600g/m <sup>2</sup> 2-70%	600-1500 g/ m <sup>2</sup> 2-70%	max 70 g/m <sup>2</sup> 2-70%
<b>Instrument</b>			
Measuring gap	13 mm	13 mm	711 mm ± 1.5 mm dynamical
Measuring area	100 mm diameter	100 mm diameter	Oval 40 × 60 mm
Readout rate	80 mean values/s	80 mean values/s	80 mean values/s
<b>Installation requirements</b>			
Supply voltage	28V DC	28V DC	24V DC
Air flow requirements	0.3 MPa 5 l/min	0.3 MPa 5 l/min	
Temperature	70/110 °C	70/110 °C	max 70 °C

### Measuring head

	DS-20	DS-30	DS-115
Dimensions	235 × 235 × 295 mm 9 × 9 × 11.6 in	230 × 235 × 290 mm 9 × 9 × 11.6 in	119 × 132 × 213 mm 4.7 × 5 × 8 in
Net weight	6 kg 13 lb	6 kg 13 lb	3.6 kg 7.9 lb