



You will get more than you expect from
a tiny meter



IRMA-7 Model D

One-Sided On-Line Moisture Meter for Paper and Board Mills

GOOD FOR THESE:

- Piecewise materials, sheet cutters, sheet printers
- Batch processes
- Various fiber materials, felts, textiles
- Moisture and temperature profiles
- Paper machine quality control after press section
- Pilot paper machines, research and paper studies
- Coating control
- Fixed or scanner installations

What would you expect to have in your on-line moisture meter?

- **Good reliability**
- **Ease of use**
- **Good stability**
- **Small size**
- **Suitable interfaces for mill automation**

Look at what Visilab has to offer in our **IRMA-7 model D** on-line meter:

Standard Features:

Good reliability - It is built to last. All wearing parts are carefully designed and rated to gain extra margin. The service interval is 175 000 hours (about 20 years) of continuous use. ✓

Ease of use - Fasten the meter to its final position, connect the cables, install the software and start measuring. Could it be simpler? ✓

Good stability - It is in a unique class in stability due to its

highly advanced design. We can guarantee a superior long-term stability figure. ✓

Small size - It is the **smallest** meter available. Its dimensions are 85x125x180 mm. It includes **all** electronics. No control boxes are required. You can install the meter into quite new positions. ✓

Interfaces - It connects to the world with the following:

> **Two analog outputs**, scalable and selectable as 0...+10V, +/-5V or 0...+5V, signals are moisture and web temperature. ✓

> **Profibus DP** fieldbus with full usability of the meter. The meter can easily be connected to your existing mill automation system if you have this standardized fieldbus in use. ✓

> **Serial port** to PC (RS232 with 9600/38400/115200 bauds) with a full-featured data acquisition software **IRMA7Basic** or **Advanced**. The serial port can be configured also as RS485 (a local area network LAN supporting many meters). The software has a great number of highly useful features for regular quality control, troubleshooting and special research purposes. ✓

These interfaces are all standard in every meter and can be used simultaneously. ✓

There is more than you expected..

Speed of measurement - **IRMA-7-D** has the ultimate measuring speed which no competitor can match. They operate at a dazzling **400 Hz** speed supplying fresh data into all interfaces with the same speed, including the analog output. This is the

fastest moisture meter available and can nicely cover the web. This feature also makes it possible to do measurements of targets you have been only dreaming of. An example would be a high-speed sheet cutter or a packing carton former. High speed means fast response times to moisture changes. ✓

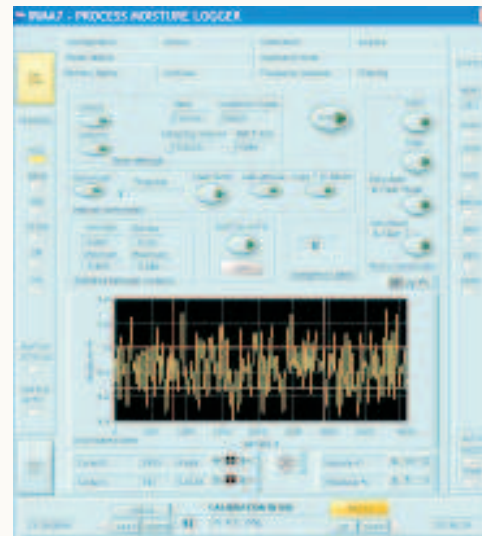
Memory banks - Five memory banks (4 kilosamples + 4 x 1 kilosamples) are built into the meters for saving data with full speed (sample intervals from 2.5 ms to 32000 s). The internal autotimer takes the samples and it can be triggered by software or hardware to start sampling. This feature allows frequency analysis of web moisture signals to diagnose and identify oscillations. This is a very useful tool for preventive maintenance. Regular felt or roller condition follow-up can save you a lot of money. And this does not burden the regular use of the meter. You can realize from the frequency display some new peak and start finding out the cause for the moisture variation by matching the frequencies of rotating parts, like rollers and felts. ✓

Calibration -It is straightforward both in field and laboratory conditions. The internal library can contain up to 100 tables which can be manipulated in the software (PC and Profibus DP). The linearity is excellent above 8%. ✓

A web thermometer - Its data can be retrieved to any interface ✓

What else does it have? Small things like:

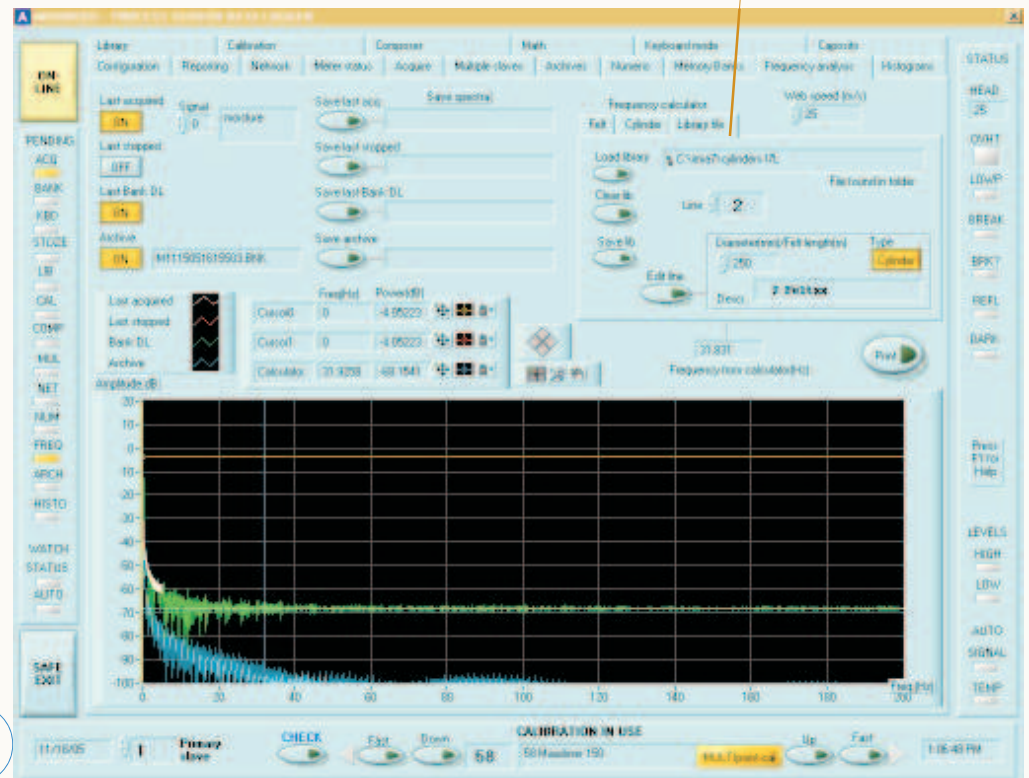
Extremely low noise level. We can deliver even



Memory banks for collecting and archiving fast data

Study periodic moisture variations while doing regular quality control

A simple-to-use frequency calculator for recognizing roller and felt originated frequencies. One can even save information from up to 100 cylinders and felts.



special versions of model D for most requiring applications having still lower noise level. For example dark minerals and charcoal are such applications.



High immunity to external infrared radiation to and other external lights



High immunity to external water vapor



A large moisture range (0...>70% total)



A unique Burst operating mode. It makes it possible to measure only the average moisture of each item in a piecewise production machine without any interference from the gaps



Good immunity to target angle



A digital filter with various passbands for frequency analysis

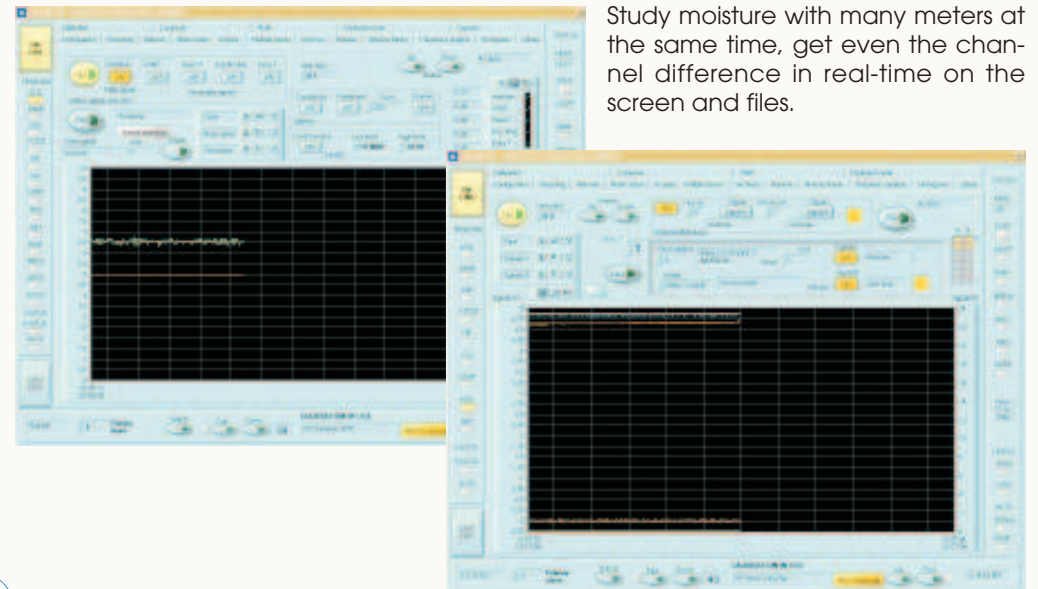
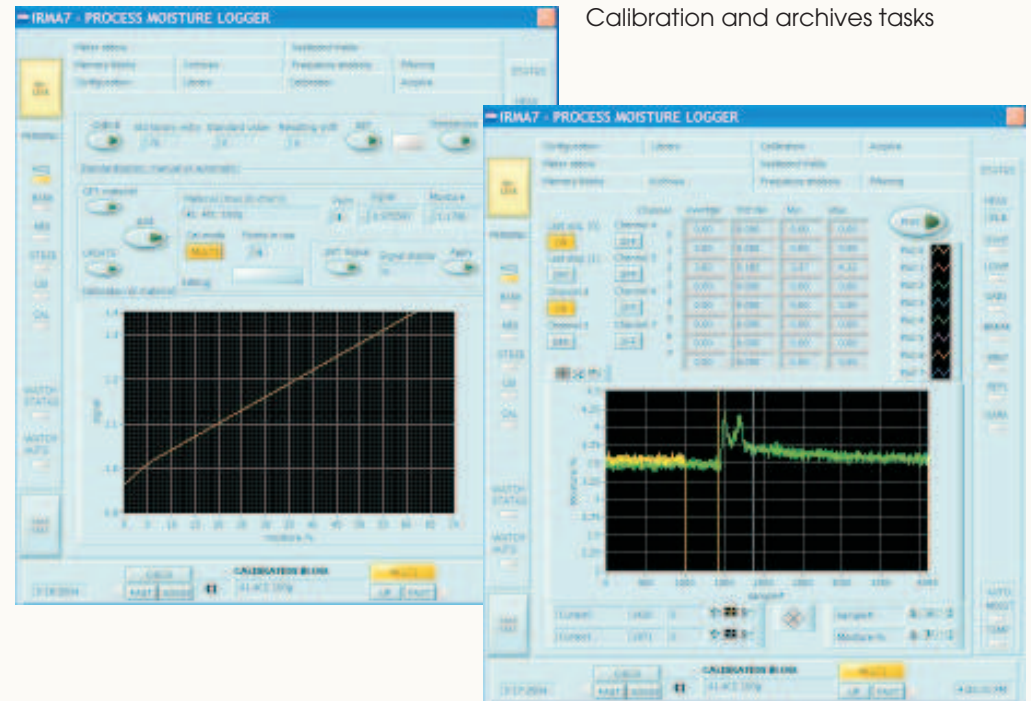


An IP67 classified structure (excluding the vents) ✓

A very low power consumption of 12W - no need for water cooling, air purge is quite sufficient for all conditions



A very competitive price



An excellent power supply unit with all interface connectors needed, most simple to use, see picture below ✓



COMPOSER - a small built-in expert system for creating new calibration tables without actual calibration work. It is embedded into each meter and is always ready to serve you. The program **Advanced** also carries this feature in a yet more comfortable form. ✓

PC program IRMA7Basic - a free program with lots of features including graphics, data saving, various data acquisition modes, full control of the meter, frequency analysis and other features for data and calibration library manipulation. Data files are spreadsheet compatible. You can get good quality reports printed out. Also HTML report files can be generated with excellent graphics. The program is very easy to use. The extended program **Advanced** supports the simultaneous use of eight meters and has lots of features not in the Basic version. It also supports all other sensors made by Visilab, even in the same network. It also has immediate support for slow scanners. All software are Windows 7/Vista/XP compatible. There is also an **IRMA7Mini** program with a minimal set of features. ✓

Overheating alarm & automatic shutdown ✓

Optional accessories:

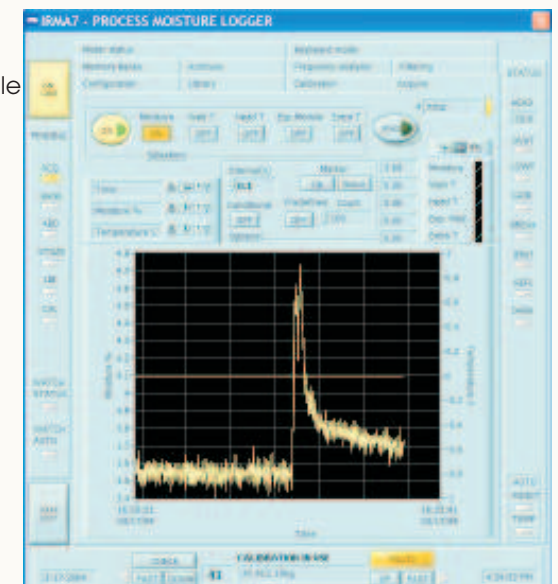
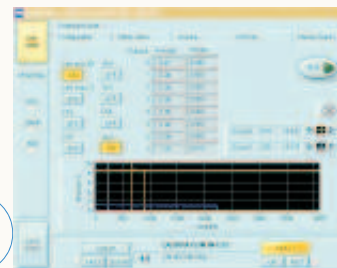
An operator interface - A keyboard and a display unit **TEAK-30** for configuring and acquiring data in field conditions without a PC. ✓

LAN232 - for connecting two or more meters to create a simple LAN from RS232 ports, for data acquisition. ✓

External standardization to prevent effects of dirty glasses - we can offer external moisture standards for tracking regularly the meter's possible dirt accumulation. Usually the buyer himself prepares some sort of mounting for this simple device made of glass. ✓

Study moisture transients while doing regular quality control

Use IRMA7Mini in small portable PC's or learn with it how to use the other software



Wireless - a Bluetooth module for up to 100 m links



An IP67 classified ABS box. It is used for very requiring positions with water and dirt. Air purge is used for keeping it clean and cool. We can deliver also a special case with a stainless steel nose box for extremely requiring conditions



IRMA-7 moisture meters have been sold to a large variety of applications: From paper and machine research to troubleshooting and regular on-line use, fixed and scanners. The applications range from SC, board and newspaper to nonwoven, fabrics and printing. Visilab is cooperating with other companies to deliver complete systems.

Are these specifications sufficient for you?

Now, what is keeping you from asking for more data and our price list?

VISILAB
SIGNAL TECHNOLOGIES

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IRMA-7-D is the best moisture meter available:

- **Fastest**
- **Lowest cost**
- **Smallest and most compact**
- **Contains the largest number of useful features**
- **Easy to use support software with several useful tools**
- **Superior capability of measuring piecewise and batch production machines**

Find latest news and other up-to date material on our web pages:
www.visilab.fi

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