



Model MK30LP (Low Profile)

On-line Moisture Meter for Paper and Board Mills and for Other Fiber Products - a Wide Range of Applications

APPLICATIONS IN:

- ▶ Pulp, packaging papers, corrugated and liners, printing papers
- ▶ Various other materials like felts, textiles, pulp
- ▶ Difficult materials, like black papers, are now easy
- ▶ Measure moisture from webs plus various production lines
- ▶ A simple-to use meter for QC
- ▶ A versatile instrument with all features built-in
- ▶ Pilot machines and research

A new meter for measuring deep into matter with radio waves - penetration about 30 mm

Extremely thin, about 15 mm thick, suitable for tight places

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

- A. Good reliability
- B. Simplicity of use
- C. Excellent stability
- D. Suitable interfaces for user and data transfer
- E. Good usability in requiring field conditions
- F. A sufficient penetration depth
- G. A wide moisture range
- H. Versatility in applications
- I. Low profile for fitting to tight places

Look at what Visilab has to offer in our **MK30LP** on-line meter

A. Good reliability - It is built to last. All wearing parts are carefully designed.

B. Ease of use - Mount the sensor to touch lightly the web. Connect the meter to power and start measuring. Could it be simpler? Use either the PC program MK30LP or MK30LP Simple or connect the analog outputs. Measure continuously and save the trends in the PC.

C. Good stability - It is in a unique class in stability due to its highly advanced design. We can guarantee an excellent long-term stability figure

D. Interfaces - It connects to the world with the following:

► RS232 (RS485 optionally) to the PC with a full-featured data acquisition software **MK30LP** or **MK30LP Simple**. These software have a great number of highly useful features for regular quality control, troubleshooting and special research purposes. The programs follow each meter without cost.

E. Usability - Using MK30LP is simple and straightforward. The sturdy flat box is IP67 rated meaning splash water proof. If it gets wet while using, wipe out water from the sensitive area and continue. It has a skid with rounded edges and two rollers at the edges to reduce wear and to allow to slide smoothly over soft materials without leaving any streaks. **Touching is required in all cases.** Calibration tables and configuration data are saved to a nonvolatile memory and all data is saved to the PC.

F. Penetration - MK30LP will penetrate to about **30 mm** in most materials

G. Moisture range - The moisture reading is based on total percent. The range depends on the material's basis weight. For instance, for a 900 g/m² pulp, MK30LP can measure over 20 % total moisture. With thin grades the range approaches 80%. The reading is indicated as total percent. The dry end will start from about 3 % for pulp. Thin papers will start around 3 %.

H. Moisture accuracy - The moisture reading accuracy is dependent on the moisture level and on the low level filtering used. The analysis algorithm's strength parameter is typically at value 30 but can be made smaller down to 5 - 7 to make it much faster but losing accuracy. The calibration performed will strongly affect and so do the measuring conditions. Strong layering of water is not supposed to exist. With moisture 3 - 40 % accuracy is +/-0.3 % or better. At 40 - 70 % accuracy is +/-0.4 % or better. Repeatability numbers are usually much better than these. MK30LP will average the moisture of the material which it is able to "see".

There is more than you expected..

MK30LP has a measuring speed of about 5 Hz which offers a good quality signal. The speed can be increased to over 20 Hz.

Calibration - It is straightforward both in field and laboratory conditions with usual papers. The internal library can contain up to 100 tables which

can be manipulated extensively in software. The linearity is good above 8 %. One will need only two to ten samples with known moistures to do the calibration. Two samples are the minimum and usually sufficient for a limited range of moisture.

What else does it have? Small things like:

MK30LP comes either as SINGLE or DUAL with either one or two sensing heads. They are connected together with a predefined length of cables. An existing SINGLE system can be converted to become a DUAL system

High immunity to ambient conditions

It is of really low profile as its thickness is about 15 mm. It can be fitted to narrow spaces in pilot machines and research instruments

The PC programs have features for acquiring moisture data for archiving, reporting and display

A very low internal noise level in moisture signal even at high moistures

Wide moisture range (2.. > 90 % total) depending on basis weight

A digital filter with three selectable passbands for noise cancellation while measuring a web. One of them is adjustable for very slow responses in special cases

A really competitive price, a quick ROI

A measuring area size of about 26 x 105 mm allowing for narrow profile studies and rather small scale phenomena

All PC software are Windows 10/8/7 compatible and for future versions too, free upgrades from our web site for easy support

MK30LP operates with safe UHF radio waves of low energy



MK30LP views showing the sensitive area and fixing holes with M4 thread

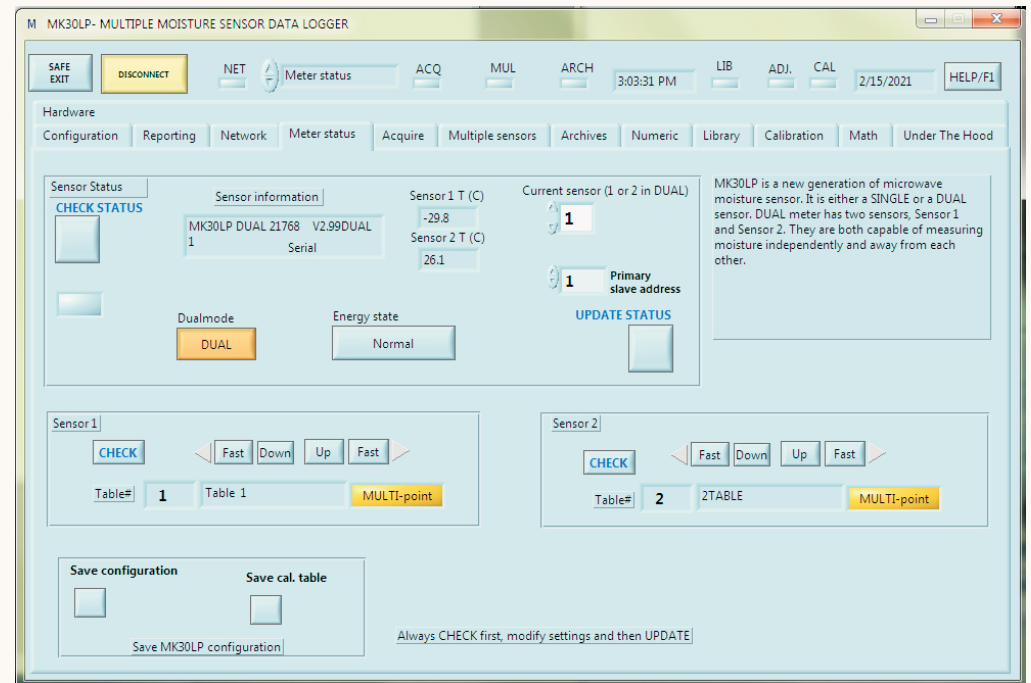


MK30LP has four analog signals sending out the moisture reading and head temperature. In DUAL systems, the signals consist of the corresponding signals of the two heads.

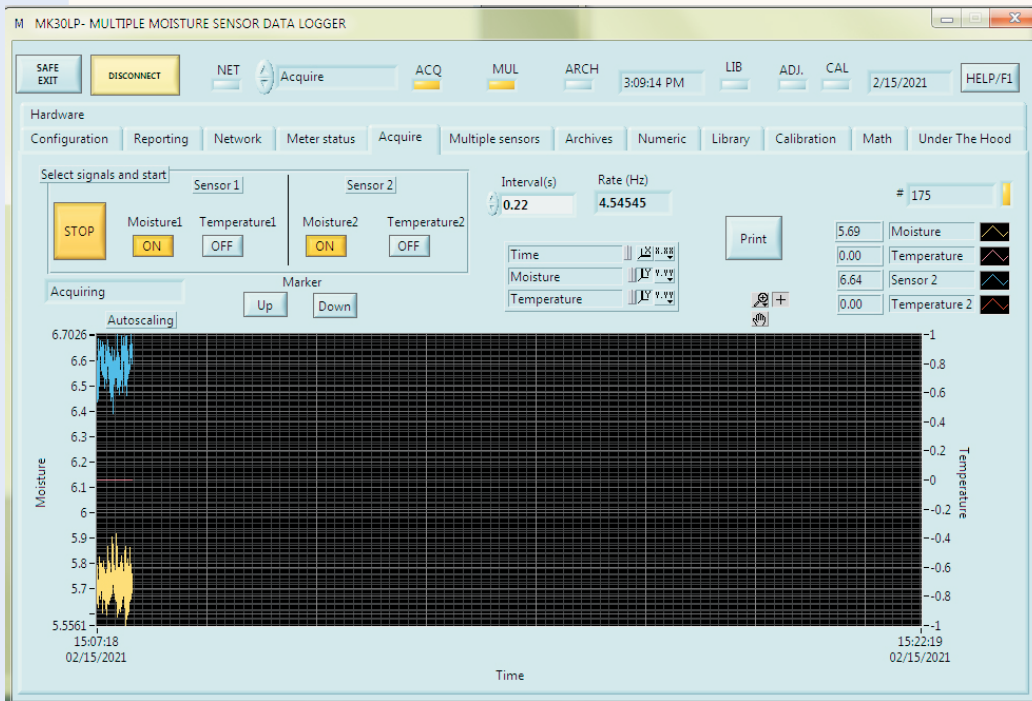
MK30LP is extremely flexible. The system can be connected to many other sensing heads than the normal one. The system can be reconfigured in a few minutes to match new system. The meter can be built in many ways and actually, the **portable meter MK30** has as its core one MK30LP connected to the **Regular** cavity.

Visilab can tailor new systems either by designing specific cavities and/or combining existing ones in many ways. Please refer to the document available on the web site in the MK30LP document section.

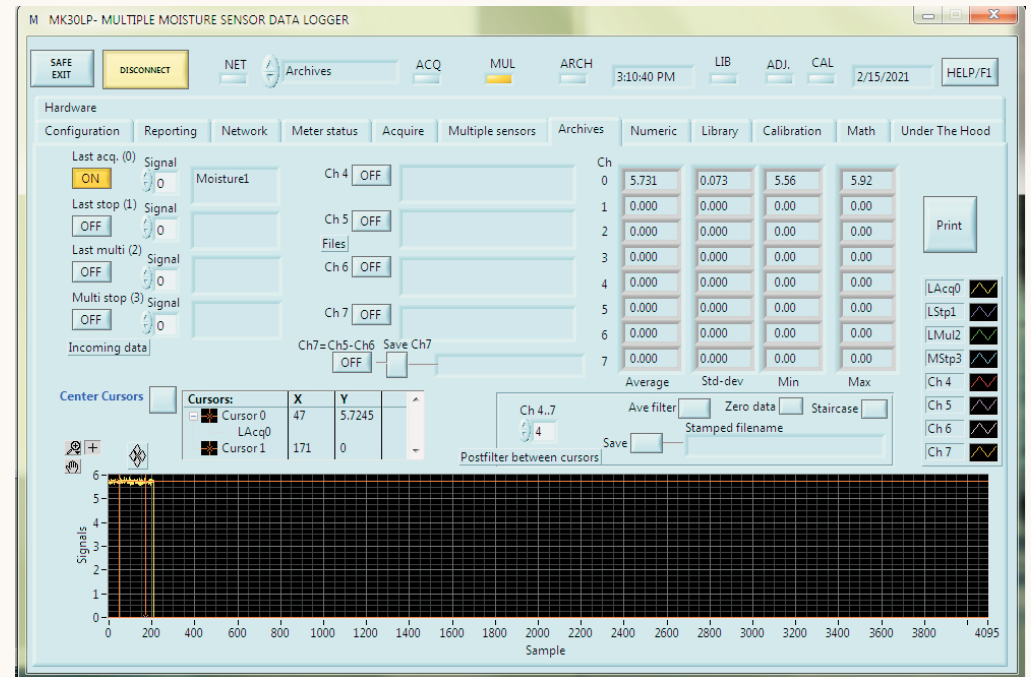
In the following are some images from the MK30LP program



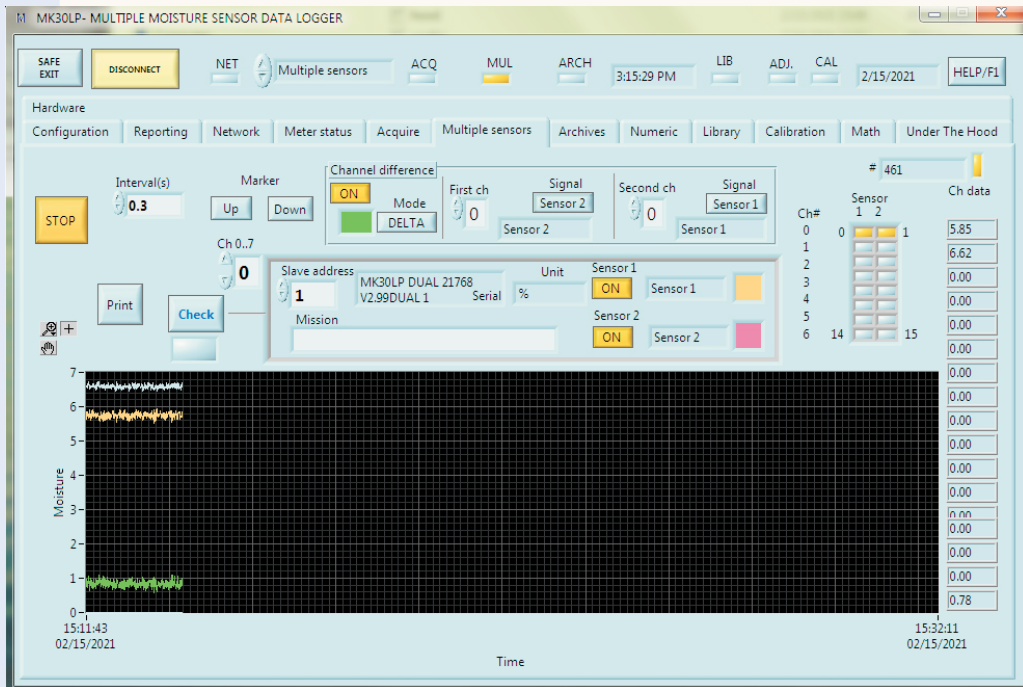
The Meter status page for checking/updating the meter's main features



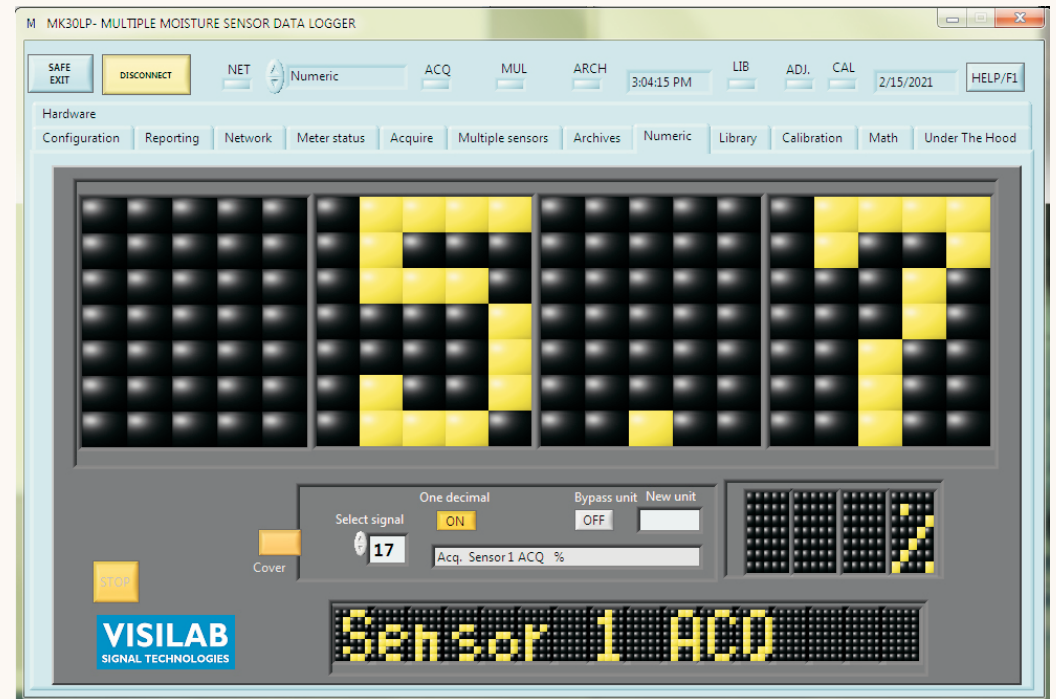
The Acquire page, data retrieved from the primary slave



The Archives page



The Multiple sensors page with a sample signal from one meter. Change the signal curve colour by pressing the coloured square near the signal name.



The Numeric Display page for showing the selected data channel

There are plenty of features more in the MK30LP program. The MK30LP Simple contains just a fraction of them to make it easy to get only the trend data from the sensors.



Are these specifications sufficient for you?

Now, what is keeping you from asking for more data and an offer?



The MK30LP is here tailored to a special box and connected to an MK30 Regular cavity for measuring a running wet felt.

Note: MK30LP is **not** able to measure materials which contain significant amounts of **soothe, metal particles or Titanium oxide**. The readings may become erroneous.

VISILAB
SIGNAL TECHNOLOGIES

FrontColour™ is a registered trademark and **IRMA-7™** and **Visilab™** are trademarks of Visilab. All rights reserved. Copyright © by Visilab Signal Technologies Oy.

7

2021-01

MK30LP is the best low-profile on-line moisture meter for thick materials there is:

- Goes really deep into matter
- Simplest to use, practical features
- Absolutely lowest cost, small and most compact
- Contains a large number of useful features for practical work in QC and research
- Easy-to use support software
- A large number of field applications
- Versatility in applications
- Tailoring is available to match customer's needs

Moisture meters made by Visilab Signal Technologies have been sold to a large variety of applications since 1994: From paper and machine research to troubleshooting and regular quality control and rough field use. The applications range from SC, board and newspaper to nonwoven, fabrics, note papers, special papers, sawdust and wood chips and printing. They have been used frequently in research studies made by universities and research institutions in addition. Also on-line coat weight applications have been completed. We also offer a colour meter for continuous operation **FrontColour 10**.

Find latest news and other up-to date material on our web pages:

www.visilab.fi

MANUFACTURER:

Visilab Signal Technologies Oy

Sepäntie 4, FI-07230, Monninkylä, Finland

Tel. + 358-45-6354885

www.visilab.fi

sales@visilab.fi

Contact nearest representative for prices and availability. If unknown, contact Visilab directly. You can find the nearest representative on our web site.

Copyright (C)1994 - 2021 by Visilab Signal Technologies Oy. All rights reserved. Prices, model designs and their specifications may change without prior notice. Copying is prohibited in any form whatsoever.