Model AK30

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

APPLICATIONS:

- ➤ Packing papers and liners
- ➤ A simple-to use meter for laboratory and field work
- ➤ A versatile instrument with integrated features
- ➤ Measure moisture from rolls, sheets and slow webs
- ➤ Pilot machines, research and paper grade studies
- ➤ Special papers, with cotton and other constituents
- ➤ Various fiber materials, felts, textiles, minerals, wood chips, sawdust
- ➤ Small and light, easy to travel, no cables required
- ➤ Recipes for quick switching of measuring positions in regular QC

You will get more than you expect from a small, smart meter

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What would you expect to have in your portable surface moisture meter?

A. Good reliability

B. Simplicity of use

C. Excellent stability

D. Small size, low weight

E. Suitable interfaces for user and data transfer

F. Good usability in requiring field conditions

Look at what Visilab has to offer in our **AK30** portable meter

A. Good reliability - It is built to last. All wearing parts are carefully designed. The service interval is 12 000 hours and after that a regular service will return it back full service

B. Ease of use - Turn the meter on and start measuring. Could it be simpler? Use either the big numeric display or the smaller graphic and numeric indicators. Measure rolls and moving webs, samples at laboratory etc. Select a recipe before measuring and saving data to better remind yourself later where the data came from.

C. 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

D. Small size - It is the smallest infrared moisture meter available. Its dimensions are abt.180x120x100 mm weighing only 500 g

E. Interfaces - It connects to the world with the following:
- Keyboard and display with a set of three colour LCD's to get full control of the meter and to see the moisture reading at the same time
- Wireless Bluetooth and a serial port to PC (RS232 115200 bauds) with a full-featured data acquisition software **AK30, AK30Mini, IRMA7Basic**. These software have a great number of highly useful features for regular quality control, troubleshooting and special research purposes. The Bluetooth is able to operate at up to 100 meters distance from the PC. These interfaces are all standard in every meter and can be used simultaneously. The programs follow each meter without cost (except the optional **Advanced)**

F. Usability - It has keys with a good feel and a tone signal feedback. The three displays are visible in bad conditions with the help of coloured background lighting, a good contrast and with all necessary information visible. Its big numbers can be turned on instead of the multi display. Using AK30 is simple and straightforward. The box is IP67 rated meaning splash water proof. If it gets wet while using, wipe out water from the small optical surface and continue. It has a skid on its bottom to slide smoothly over rolls and webs without leaving streaks or wearing out. Touching is not required and a small gap can be left to the target. All data, calibration tables and configuration data are saved to a nonvolatile memory. An optional Power-User Skid is even more efficient to ensure successful measurements having an air purge too.

There is more than you expected..

AK30 has a raw measuring speed of 75 Hz which offers a good quality signal of 5 Hz, perfect for manual use

Memory banks (820 of them) are for saving data with adjustable sample intervals of 0.2 s and longer. This feature is good for regular sampling either in roll measurements or in field tasks without fear of running to memory limits. Time stamp is added to each measurement automatically. Also a preselected label is attached.

Crude frequency analysis of web moisture signals to diagnose and identify slow oscillations is possible with the IRMA7Basic program (and the optional Advanced and Profiler programs)

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 excellent above 8%. One

will need only two to ten samples with known moistures to do the calibration. Two samples are the minimum and usually also sufficient for a limited range of moisture.

What else does it have? Small things like:

A trend curve in one of the three displays is showing recent history. Its data can be saved by one key press to a memory bank. This feature is quite unique in this class of products.

A numeric display with large digits, quickly switched from trend display

High immunity to external infrared radiation

A Flash calibration utility for an immediate generation of a new calibration for some paper whose basis weight is known

An automatic zeroing of the moisture reading if only the difference from a reference sample is meaningless while measuring at various positions

High immunity to external water vapor

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

An extremely low internal noise level in moisture signal

Wide moisture range (0... > 70% total)

A battery-backed clock for time stamps

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

Automatic conversion of total weight moisture to dry weight moisture when required, while measuring.

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Battery operation for at least 3.5 hours before recharging is required. Energy saving features are built-in, like Sleep mode, user-adjustable display brightness and hue etc. Using Bluetooth will draw more current. A dual-battery option for up to 7 hours operation is available with only a slight weight increase.

Five recipes which include a label text field descriptor and an associated calibration. The same data is saved with each memory bank data and also downloaded to PC. The original time stamp is also included.

A highly competitive price, a quick ROI

A spot size of 10 mm in diameter allowing for exceptional profile studies and small scale phenomena

The sleep mode allows for automatically turning to Low Power mode after one hour of use. Also a similar DIM mode with a dimmed display instead of LowPower, can be selected. Touching a key will restore normal operation/ display

Marker to signal with a key press indicating start/end of some interesting measurement

Memory banks keep the data with the date and time stamp. Saving is done either with a single key press (present display contents, 64 points) or at regular intervals. The internal autotimer takes the samples (1 to 500 samples per bank) and it can be triggered by a key or a software command at a PC. The data may be kept in the meter for years, each with a time stamp and the label

The display background colour may change after crossing a preset high or low level (adjustable alarm feature)

The display colour changes according to various operating modes (5 of them) to help the user recognize the meter status. The colour and brightness are user adjustable to match requirements in contrast or energy saving

There is a HOLD button to force a selected reading frozen to display

A special feature: Data collected to memory banks can be analyzed statistically in batches. This is highly useful. It gives a simple and immediate support if one wants to average the two sides of a board or other thicker

materials or make a consistent conclusion of a number of measurements made (max 64 banks for averaging)

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

All programs support downloading several memory banks at a time from the meter. The banks have the same numbering both in the meter and in the PC software. The AK30 and AK30Mini programs contain in addition a feature for **automatically** checking for new memory banks. This allows the user to download all acquired data while maintaining the Bluetooth link. When he returns to his PC, all data is already there.

The AK30 specific memory bank downloading tasks use the label of each bank to be downloaded as the main part of the new filename for easy identification. The rest of the name is made by the original date and time stamp of the measurement plus the original bank number.

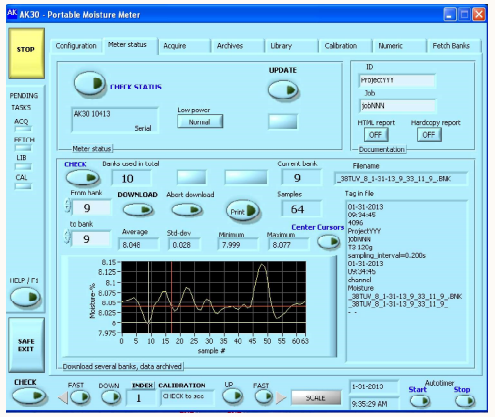
French versions of AK30 and AK30Mini programs are now available with quick users' guides too.

The AK30 program supports continuous checking of new memory banks and automatic downloading of them to the PC.

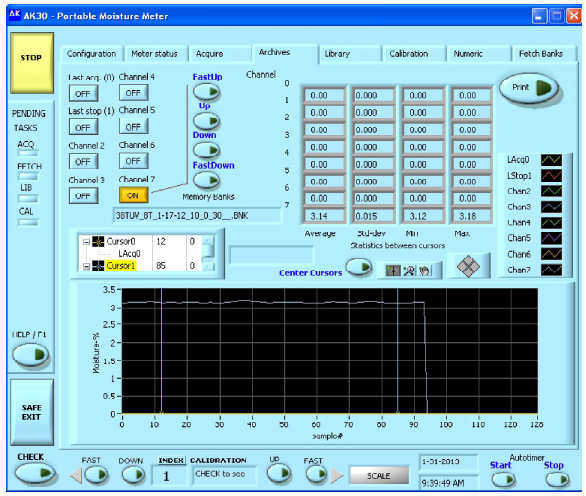
A new PUSWIDE skid (see the following pages) offers better protection to the meter while measuring at the running web. It h as an air purge for keeping away condensation and cooling the skid. It is specially suited for soft materials.

Some keys are dedicated for controlling how and when the data is acquired to memory banks (see right). One can also push the Save key or saving the view on the graphics trend curve.

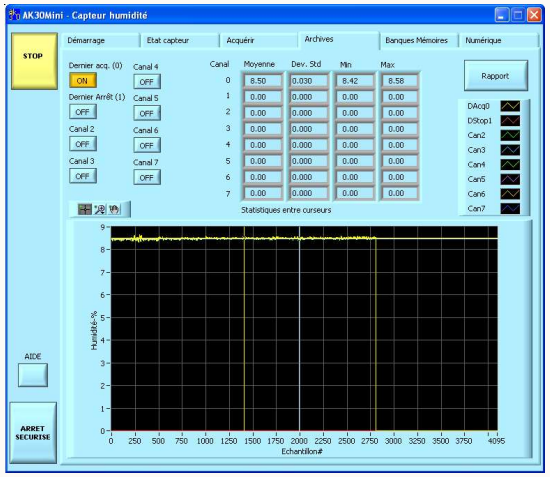
A new separate button on the side of the meter for starting the Autotimer for saved data acquisition. The response speed is fast.

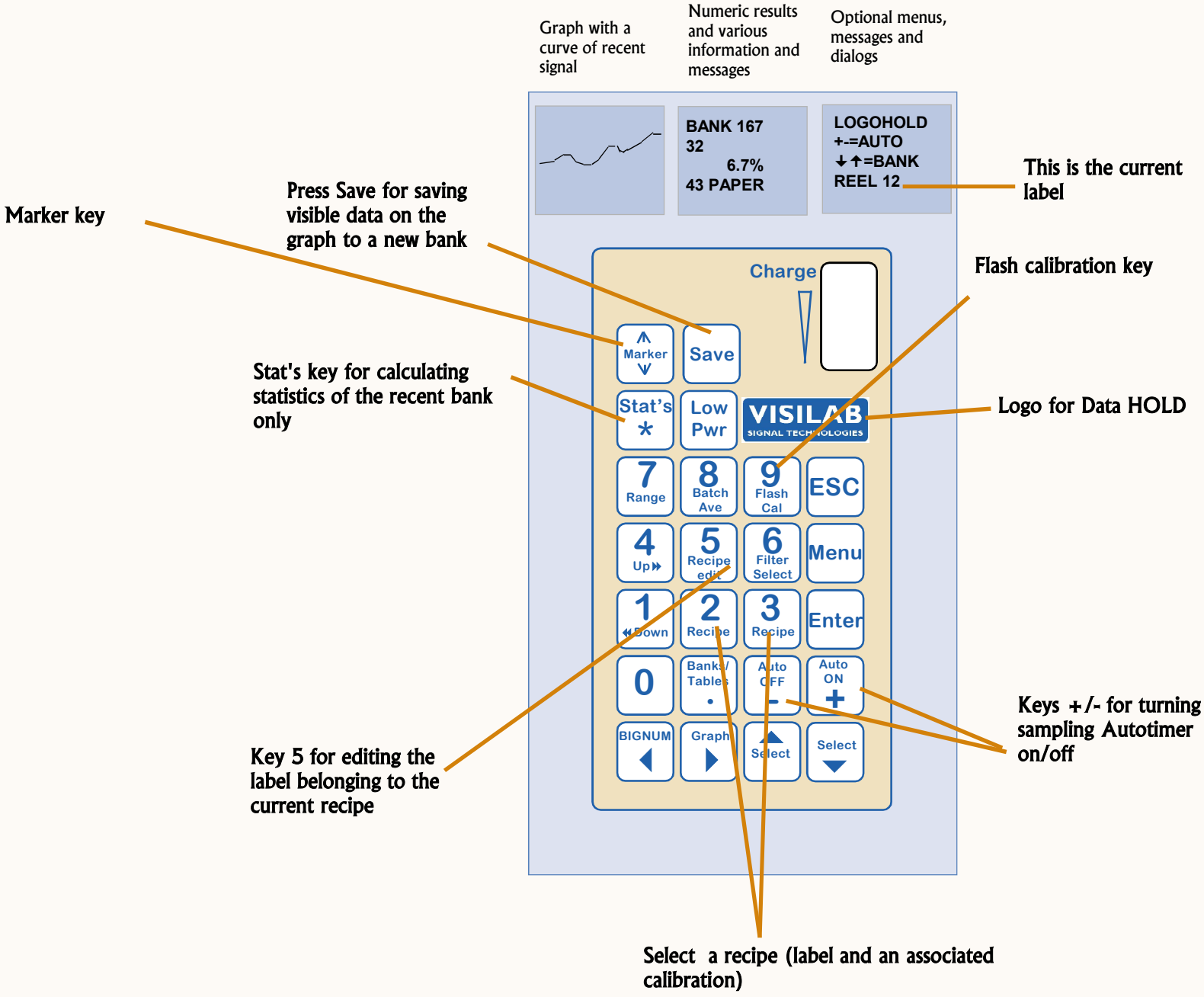


Memory banks for collecting and archiving data can be downloaded to AK30 and AK30Mini



Archives tasks in AK30 and AK30Mini





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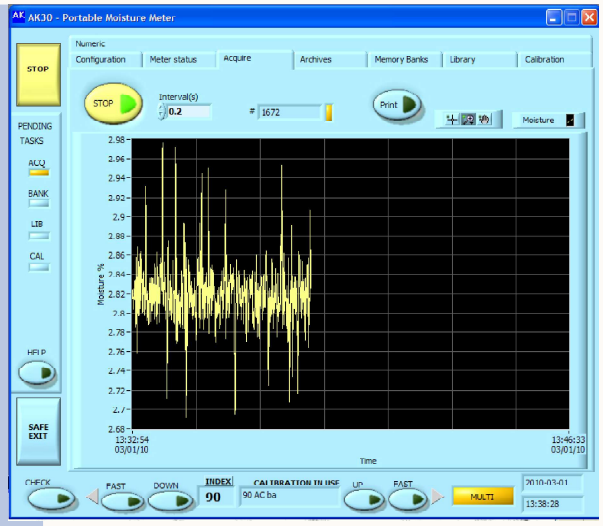
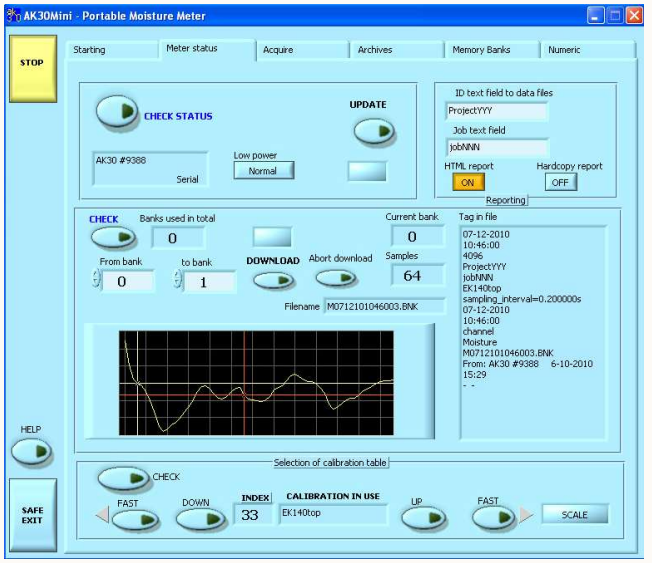
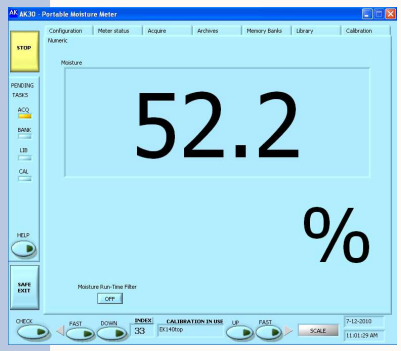


Moisture acquisition in AK30 program

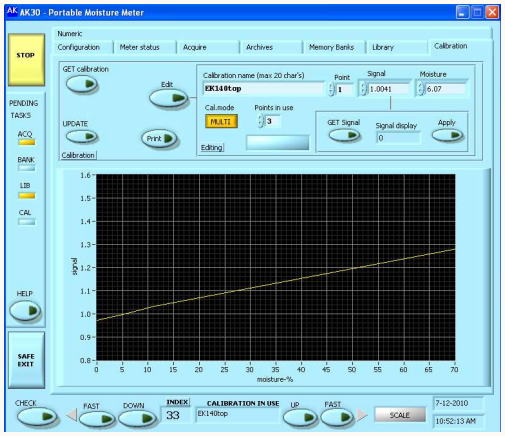
Meter Status page in AK30Mini where one can download a great number of memory banks from the meter after selecting them. This feature is in all other software too. All programs have a big numeric display too.



A numeric display, typical for all software



Calibration task in AK30



The default skid -PUSWIDE for all webs and materials

The Power-user skid -PUS for hard reels

The regular skid

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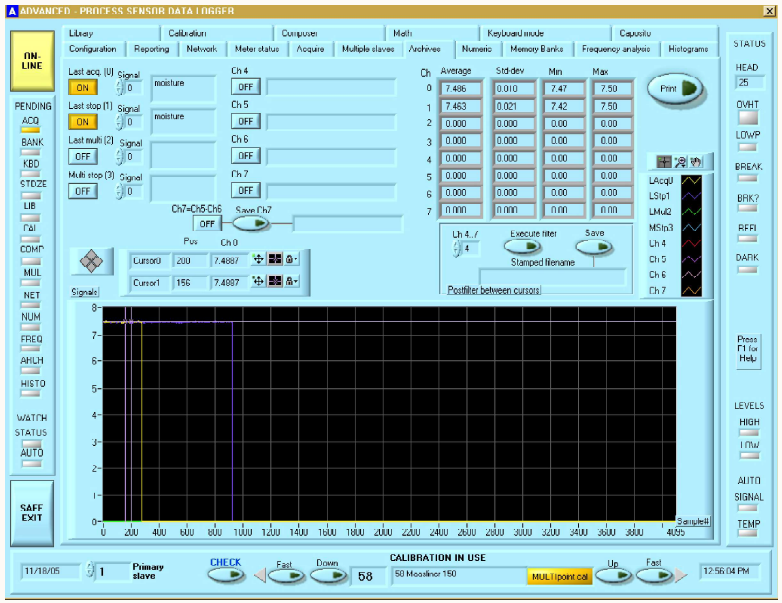
Are these specifications sufficient for you?

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



Archives task in **Advanced** program. It has file retrieval, incoming signals, piecewise filtering of data, statistics, channel difference calculation etc., all on the same page at the touch of your mouse. This program is for a more advanced user who wants to analyze more data and handle calibrations with ease etc.

AK30 is the best portable moisture meter there is:

- ➤ Simplest to use, practical features
- ➤ Lowest cost
- ➤ Smallest and most compact, very small spot
- ➤ 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
- ➤ Wireless communication with a PC
- ➤ A problem-free traveling companion when crossing borders

Portable 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.

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

www.visilab.fi

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