2-11

Cathodic Protection Measurements with MiniLog2, the new device for datalogging, GPS switching and pipe survey

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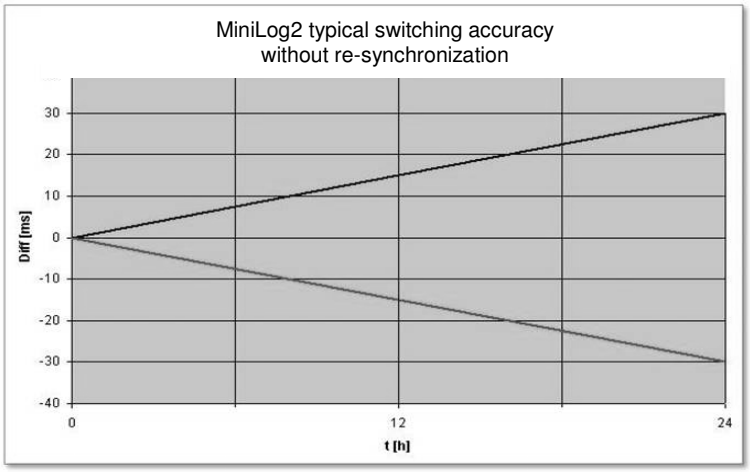
Before the appearance of the MiniLog2 universal measurement device, technicians working for cathodic protection measurement always needed several devices for fulfilling all kind of measurement tasks.
Our aim was to develop and produce a high quality universal CP measurement device for every day usage but with all the features included one can normally find in specialised measurement devices only.

MiniLog2 as switcher

As a basic preparation for cathodic protection measurements, one has to install a switcher at the rectifier station, assuring the on- and off-switching of all feeding rectifier in synchronized mode.
The new MiniLog2 is able to switch 15 amps with its internal mechanical relay (18 amps with the electronically relay option) and up to 100 amps with an external slave relay.
Many commonly used switching cycles are preset, but the user can also manually setup its own switching cycle in 100 ms steps.
By connecting the GPS antenna it is assured, that the MiniLog2 stays synchronized within 10 ms.

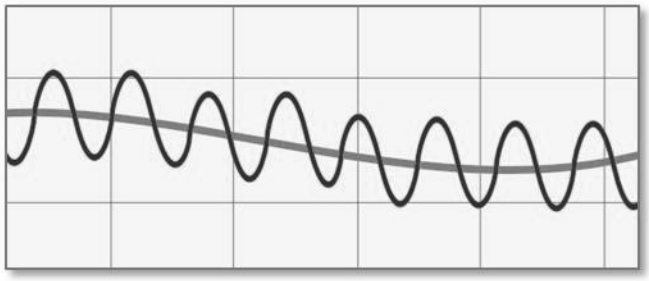
Without any external re-synchronization, the special temperature regulated quartz build-in assures an accuracy of less than +/-50 ms per day.



When MiniLog2 is installed in places without mains, the internal chargeable lithium ion battery allows 30 days of continuously switching. The charging can be done by the included USB mains connector or the included 12V USB car adapter.

MiniLog2 as multimeters / datalogger

Each technician in the field of cathodic protection, got its needs for measurement tasks with DC-, AC-potential and microvolt readings. This demands for a high sophisticated multimeter with high accuracy, build-in low pass filters and a robust housing for every day usage.

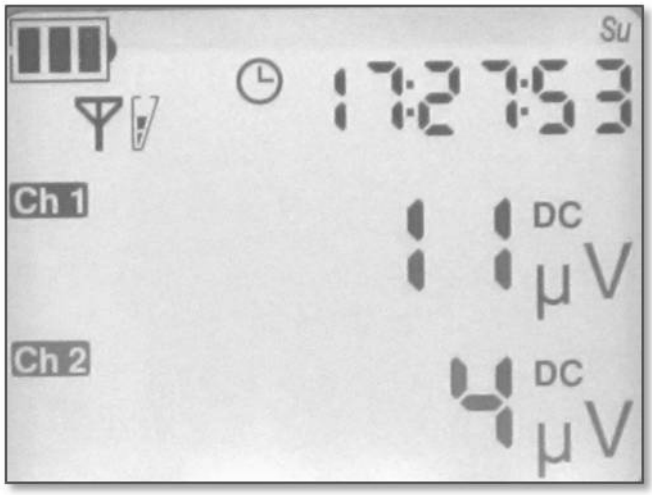


Symbolizing DC measurement with AC influence

Beside this, special measurement tasks require battery operated data logging from hours to even weeks duration with sampling rates up to 1 kHz.

The new MiniLog2 combines both requirements in a small but waterproof housing.

Two channels, each of them capable of measuring DC and AC simultaneously and the microvolt resolution for DC measurement serve as the replacement for extra multimeters devices needed before the time MiniLog2 was present.



MiniLog2 measuring 2 channel in DC microvolt range

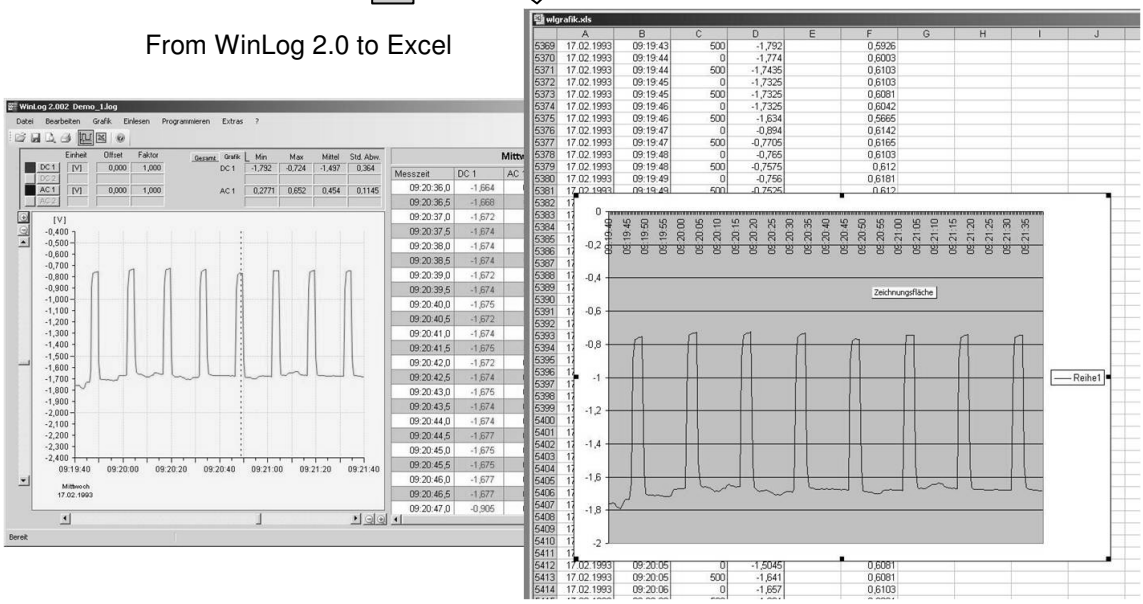
In addition, all 4 channels (2 x DC, 2 x AC) can be logged simultaneously with sampling rates from 10 Hz up to 1 minute, and 1 channel with 1kHz.

The internal memory allows more than 1 million values to sample without loosing any data even when the battery is empty.

On top of that, one can connect the GPS antenna for synchronization when using more than one MiniLog2 for parallel mode data logging.

The logged data can be evaluated with the software WinLog 2.0, or can be simply imported with Excel.

From WinLog 2.0 to Excel



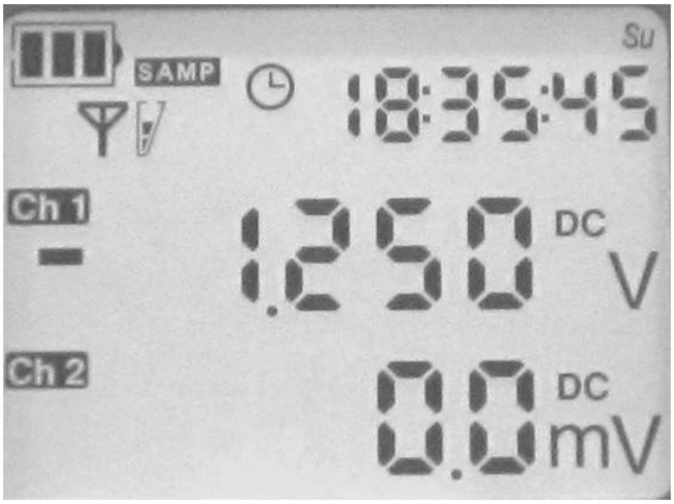
During the data logging, the MiniLog2 is able to switch simultaneously, given the technician the opportunity to measure and switch without the need of installing an additional switcher.

MiniLog2 for pipe survey

With its small and waterproof (IP68) housing, the MiniLog2 and its 4 channel inputs (2 x DC, 2 x AC) is ideally suited for doing pipe surveys.

The MiniLog2 can be used as a high sophisticated pipe survey device with automatic and simultaneously measuring the on-/off-potential and the on-/off-gradient.

A simple push of a keyboard button stores the measurement.

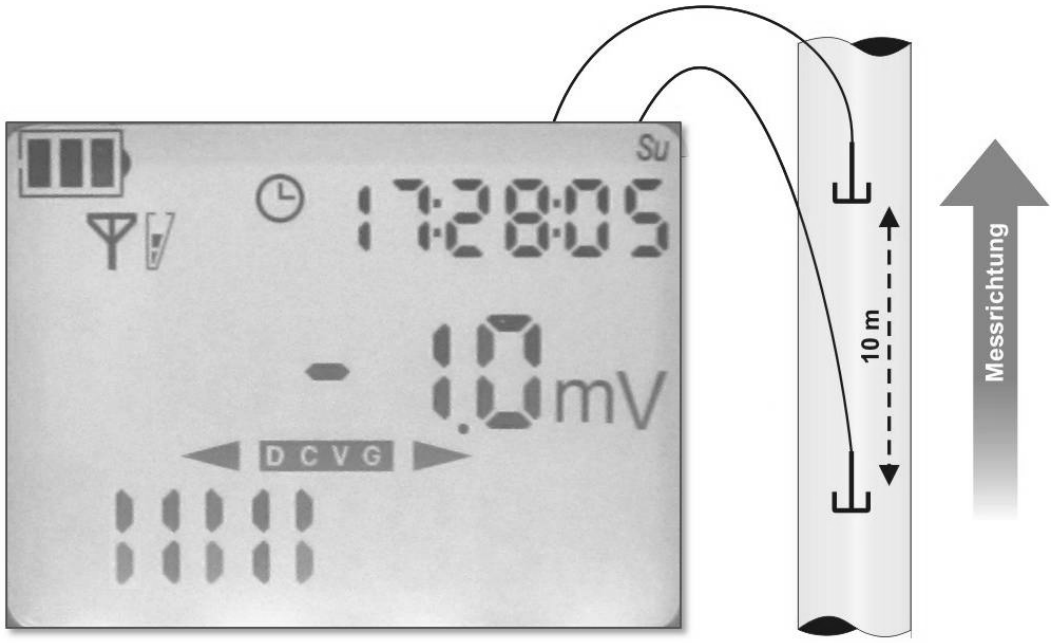


Pipe survey with potential and gradient measurement

If the GPS antenna is connected, the GPS coordinates are stored for each measurement.

MiniLog2 for DCVG

For even faster surveys, the DCVG mode allows the digital reading of the on-/off-voltage difference in combination with an analogue bar graph readout for easy finding defects just by watching the tendency of the difference between the measured on- and off-values.



DCVG measurement with analogue bar graph showing on-off difference

The logged data can be evaluated with the software IntMess 3.0, or can be simply imported with Excel.

Demonstrating MiniLog2 housing size