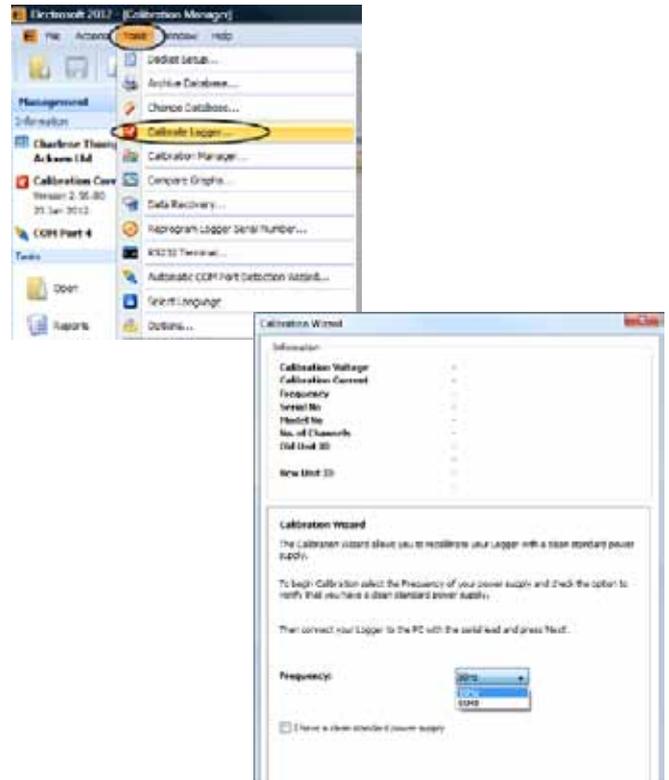


Calibration of an Electrocarder

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If you do not have access to a dedicated current source, you can use a large audio amplifier, with an input from a good 50Hz & 60Hz signal generator, the amp output is connected to a series of coils, typically 100 or 200 turns, this 'multiplies' the current output from the amplifier by a factor of 100 or 200.

The gain of the amp and the signal strength may also be used to vary the output current.

The signal generator can be triggered off the voltage power source and phase locked, but is not essential for most models, to test the phase (power factor) logging of the EC-7VAR you will need to phase lock the voltage and current sources.

- AC voltage source
Single or three phase programmable AC power supply, 0V – 300V (50Hz and 60Hz). The power supply is to be 'clean', that is, to have no more than 1% harmonic distortion of the 50Hz or 60Hz fundamental.
- Calibrated (certified) 300Vac voltmeter
Typically we recommend a bench multimeter capable of accurately measuring up to 300Vac, to accurately measure the above voltage output.
- AC current source
Single or three phase programmable AC power supply, 0A to 1000A (50Hz and 60Hz). The power supply is to be 'clean', that is to have no more than 1% harmonic distortion of the 50Hz or 60Hz fundamental. A single phase current source may be used to calibrate a three phase logger, simply feed the single phase live to each input simultaneously (A1,A2, A3).
- Calibrated (certified) voltmeter
Typically we recommend a bench multimeter capable of accurately measuring 0V to 3Vac. To measure the current transducer output.
- Current measurement coil/transducer
Typically we recommend a Rogowski current transducer with a 0Vac to 3Vac output, for input ranges of 0-30Aac, 0-300Aac and 0-3000Aac. To measure the current injected into the Electrocarder.

The phase measurement output LEDs and graph should be checked, vary the phase of the current from 0.9 leading to 0.9 lagging and ensure the LED switch correctly and this change is also shown in the recorded graph. Accurate phase measurement needs 300Vac L1 to N and a current of about 25% of current scale on input A1.

To calibrate the Electrocarder you must first ensure you have the latest version of Electrosoft, then follow the steps given by Electrosoft.