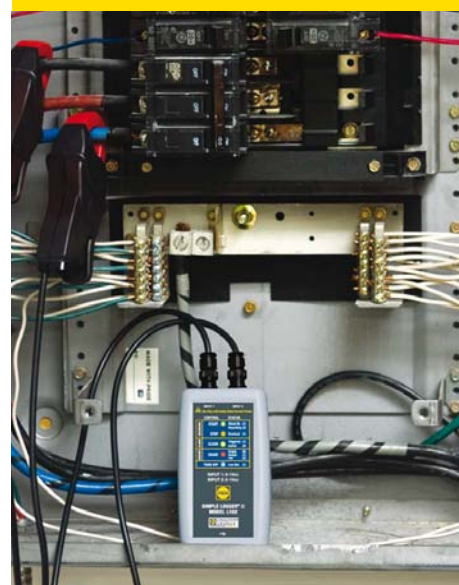


**For effective analysis of your network,  
the Simple Logger<sup>®</sup> II records everything!**



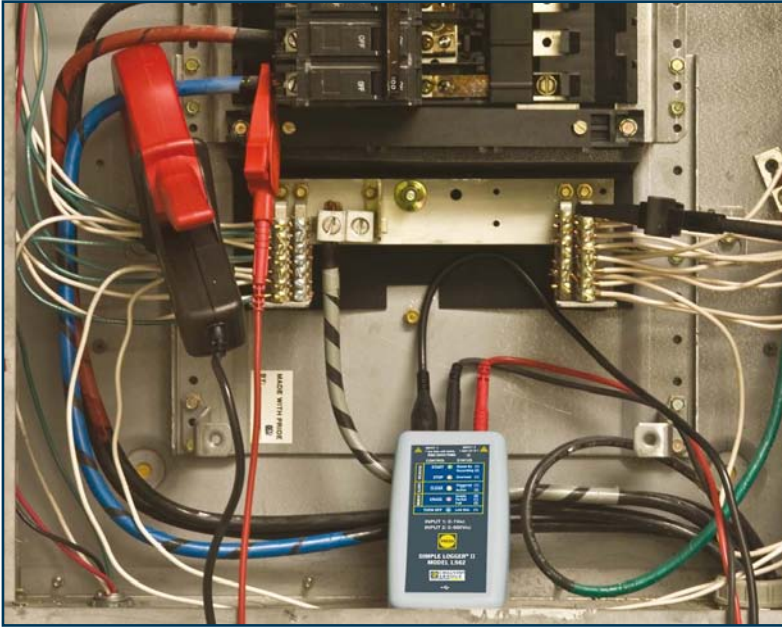
**Data Loggers**  
**AC Current**  
**AC Voltage**  
**DC Current**  
**DC Voltage**  
**Temperature**  
**Relative humidity**



- ▶ Programmable storage modes
- ▶ Programmable storage rates
- ▶ Stores up to 240,000 measurements
- ▶ Runs on alkaline batteries
- ▶ Optically-isolated USB port
- ▶ Includes DataView<sup>®</sup> graphing, analysis and report generation software
- ▶ Display and analyse real-time data on your PC

# DATA LOGGING MADE SIMPLE...

## Simple Logger® II



*L562 monitoring voltage and current in a load centre.*

The Simple Logger® II data logger family is a cost-effective, advanced-design product line incorporating features and functions not found in data loggers costing 2 to 3 times their price.

The choice of data storage modes and storage rates allows the operator to effortlessly configure these loggers to optimise memory usage for the application required.

Extended Recording Mode (XRM™) and delayed start time are just two of the many application-friendly features in these loggers.

An internal memory of 512 kB allows storage of over 240,000 measurements, more than enough for most data collection needs. All AC measurement loggers are True RMS (TRMS) and all DC measurement loggers allow the user to program both scale and engineering units.

A full set of alarm programming tools allows programming of alarm set points and triggering on high, low, inside or outside trigger points.

Their battery operation and compact size allow installation in tight locations without the need for external power. A series of front-panel LEDs provides a quick overview of the logger's state and memory usage.

DataView® application software is included, providing real-time viewing of measurement data even while recording. Instrument configuration, data storage and report generation from predefined templates or operator custom-designed templates are also standard features. In addition, several data loggers can be synchronized to record at the same time intervals using DataView®.

Nine models are available to record various AC, DC or Temperature measurements. The pages that follow provide more specific information on each model, the available accessories and the DataView® software.

## FEATURES

- ▶ True RMS measurements provide an accurate representation of measured signals for AC models
- ▶ Choice of data storage modes to assist in matching the data collection to the application needs
- ▶ Stores over 240,000 measurements, ensuring that no valuable data is missed; (more than 8 hours at 8 samples per second; approximately 1 week at one sample every 2 seconds)
- ▶ Compact size and battery operation
- ▶ Quick and easy to install anywhere, operational in seconds
- ▶ Display and analyse real-time data through your PC

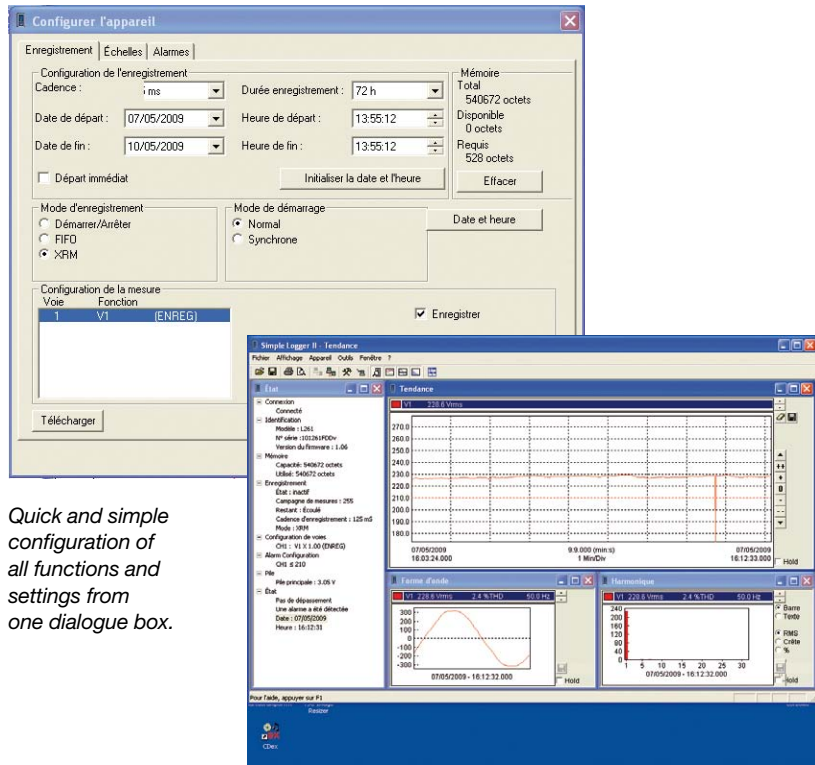
## APPLICATIONS

- ▶ DataView® helps electricians or engineers to detect problems occurring randomly in fault/intermittent current detection
- ▶ Neutral current monitoring to detect unwanted leakage currents
- ▶ Harmonic real-time current monitoring to locate unwanted energy which causes equipment failure
- ▶ Load profiling which sizes loads for proper transformer and meter selection
- ▶ Split-phase load monitoring for residential voltage and current
- ▶ Machine load monitoring detects overload conditions causing premature equipment failure due to overheating
- ▶ Process loop monitoring - finds troubled sensors and controls
- ▶ HVAC and general temperature profiling (refrigeration and air-conditioning systems)

# DataView®

## Simple Logger® II

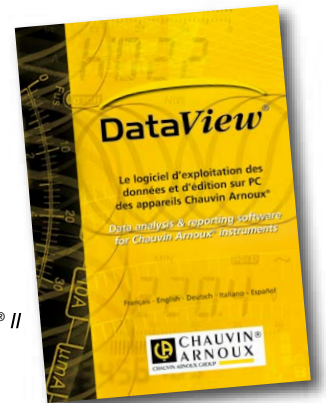
DataView® software provides a convenient way to configure and control power analysis tests from your computer. Through the use of clear and easy-to-use tabbed dialogue boxes, all Simple Logger® II functions can be configured and tests can be initiated. Results can be displayed in real time and stored in your PC or the logger. Reports may be printed along with the operator's comments and analysis.



Quick and simple configuration of all functions and settings from one dialogue box.

Real-time view of trend, waveform and status screens.

DataView® is included with all Simple Logger® II models.



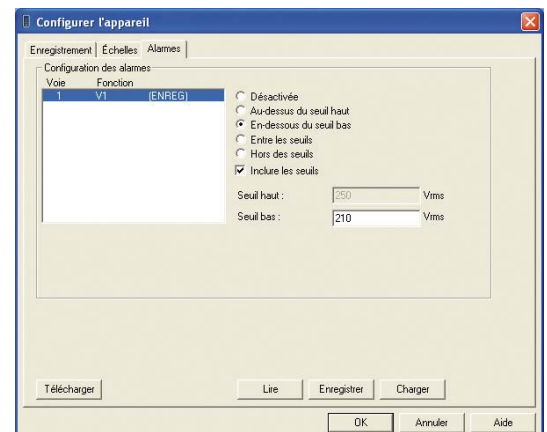
## FEATURES

- ▶ Display and analyse real-time data on your PC
- ▶ Record real-time to your PC
- ▶ Configure all data logger functions and parameters from your PC including sample rate, recording length, channel configuration and more
- ▶ Create and store a library of configurations which can be uploaded to the logger as needed
- ▶ Zoom in and out and pan through sections of the graph to analyse the data
- ▶ Download, display and analyse recorded data
- ▶ Display waveforms, trend graphs, harmonics (AC models) and text summaries in real time
- ▶ Create custom views and reports
- ▶ Print reports using standard or custom templates that you design
- ▶ Free software upgrades

## MINIMUM SYSTEM REQUIREMENTS

- ▶ Windows 2000/XP/Vista® operating system
- ▶ Windows 2000  
Windows XP  
Windows Vista®  
Windows 7 (32 bits)
- ▶ 80 MB of hard disk space (200 MB recommended)
- ▶ CD-ROM drive

Windows a registered trademark of Microsoft Corporation in the United States and/or other countries.



Configure all alarm functions with straightforward selections.

# APPLICATIONS

## MONITORING THE TEMPERATURE OF A ROTARY FURNACE



To prevent possible damage to the equipment, avoid unscheduled production shutdowns and simultaneously cut costs, it is a good idea to monitor furnace operation.

Such monitoring means implementing a Process system which continuously measures the furnace temperature and automatically detects any changes.

On any 4-20 logger, the 4 mA level corresponds to the furnace's minimum temperature, while the 20 mA level represents the maximum temperature. Sensors equipped with a 4-20 mA output are directly compatible with most control systems.

In the case we have chosen, after unexplained interruptions of the process, the technician sets up a logger to record over several days. The recording reveals power outages on the 4-20 mA transmitters at midday. Thanks to this information, it becomes clear that these outages occur when the crushers on the site, which are connected to the same network, are started up.

**The 4-20 mA logger is ideal for measuring and monitoring electrical signals in a transmitter loop. Any fault occurring on the current loop causes the process control system to malfunction.**

## MAINTENANCE ON HEATING AND AIR-CONDITIONING SYSTEM

In a building entirely given up to offices, the staff on the 2<sup>nd</sup> floor report an air-conditioning malfunction, as the temperature has risen very quickly above the programmed temperature.

The control system then restarts correctly. A logger is set up on the electrical cabinet corresponding to the 2<sup>nd</sup> floor. Monitoring of the system's current consumption reveals that the current suddenly dropped to zero due to unwanted shutdown of an air-conditioning ventilation system.

The graph of the current based on the logger data shows several random outages. An inspection by the technical team confirms that the fault is due to the fan motor. A cut on one of the power supply cables had caused insulation problems at higher temperatures.

**Widely used for monitoring consumption by the loads, this type of logger can reveal untimely interruptions due to power outages or tripping of the main power disconnector or the protective RCD.**



# Simple Logger® II

## TRMS Clamp-on current model CL601



## SPECIFICATIONS

| MODEL                               | CL601                                                                                                                                |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SPECIFICATIONS</b>    |                                                                                                                                      |
| Channels                            | 1                                                                                                                                    |
| Input connection                    | Split CT – AC Current                                                                                                                |
| Range de courant                    | 0 to 600 A <sub>AC</sub>                                                                                                             |
| Resolution                          | 0.1 A                                                                                                                                |
| Accuracy (50/60 Hz)                 | 0 to 5 A: unspecified<br>5 to 50 A: $\pm(1\% R + 1 A)$<br>50 to 400 A: $\pm(1\% R + 0.5 A)$<br>400 to 600 A: $\pm(3\% R + 1 A)$      |
| Sample rate                         | 64 samples/cycle                                                                                                                     |
| Storage rate                        | Programmable from 125 ms to 1 day                                                                                                    |
| Storage modes                       | Start/Stop, FIFO and Extended Recording Mode (XRM™)                                                                                  |
| Recording length                    | 15 minutes to 8 weeks, programmable using DataView®                                                                                  |
| Memory                              | 240,000 measurement (512 kB).<br>The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |
| Communication                       | USB 2.0 optically isolated                                                                                                           |
| Power source                        | 2 x 1.5 V AA-cell alkaline batteries                                                                                                 |
| Battery life                        | 100 hours to > 45 days (depending on storage rate/recording length)                                                                  |
| <b>MECHANICAL SPECIFICATIONS</b>    |                                                                                                                                      |
| Dimensions                          | 235 x 102 x 41 mm (9.25 x 4.0 x 1.63")                                                                                               |
| Max conductor size                  | 1 conductor Ø 42 mm (1.65"),<br>2 conductors Ø 25.4 mm (1.00") each                                                                  |
| Weight (with battery)               | 485 g (17.1 oz)                                                                                                                      |
| Safety rating                       | IEC 61010, 300 V CAT IV / 600 V CAT III                                                                                              |
| Casing                              | UL94-V0                                                                                                                              |
| Vibration                           | IEC 60068-2-6 (1.5 mm, 10 to 55 Hz)                                                                                                  |
| Shock                               | IEC 60068-2-27 (30 G)                                                                                                                |
| Drop                                | IEC 60068-2-32 (1 m)                                                                                                                 |
| <b>ENVIRONMENTAL SPECIFICATIONS</b> |                                                                                                                                      |
| Operating temperature               | -10 to +50 °C (14 to 122 °F)                                                                                                         |
| Storage temperature                 | -20 to +60 °C (-4 to +140 °F)                                                                                                        |

## FEATURES

- ▶ 0 to 600 Arms
- ▶ True RMS AC measurements
- ▶ Self-contained, no exposed connections
- ▶ Overload indication
- ▶ Optically-isolated USB 2.0 output (cable included)
- ▶ One-button operation
- ▶ Alarm function
- ▶ 5 LED indicators display logger status quickly and clearly
- ▶ Includes FREE DataView® software for data storage, real-time display, analysis and report generation
- ▶ USB cable included

## APPLICATIONS

- ▶ Machine load monitoring
- ▶ HVAC troubleshooting
- ▶ Load profiling
- ▶ Electrical troubleshooting
- ▶ Start/Stop time-stamping



Easily log current in power panels.

# Simple Logger® II

## TRMS Current model L101



Model L101



Model L101 includes type A to 5-pin mini-B USB 2 m, DataView® CD, two 1.5 V AA-cell alkaline batteries and user manual. Probes sold separately.

## FEATURES

- ▶ Compatible with standard AC current probes with voltage output and BNC connection (see chart on page 13 for compatible current probes)
- ▶ 64 samples per cycle
- ▶ Programmable storage rates from 8 per second to 1 per day
- ▶ 3 user-selectable storage modes
- ▶ Stores up to 240,000 measurements in non-volatile memory
- ▶ Powered by standard alkaline batteries
- ▶ Lightweight, compact, fits anywhere
- ▶ 5 LED indicators display logger status quickly and clearly
- ▶ Includes FREE DataView® software for data storage, real-time waveform display, analysis and report generation
- ▶ Isolated USB communication
- ▶ USB cable included

## SPECIFICATIONS

| MODEL                               | L101                                                                                                                                 |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SPECIFICATIONS</b>    |                                                                                                                                      |
| Channels                            | 1                                                                                                                                    |
| Input connection                    | BNC                                                                                                                                  |
| Current-probe output-voltage range  | 0 to 1 Vac (depending on probe)                                                                                                      |
| Resolution                          | 0.1 mV                                                                                                                               |
| Accuracy (50/60 Hz)                 | 0 to 10 mV: unspecified<br>10 to 50 mV: $\pm(0.5\% R + 1 \text{ mV})$<br>50 to 1 000 mV: $\pm(0.5\% R + 0.5 \text{ mV})$             |
| Sample rate                         | 64 samples/cycle                                                                                                                     |
| Storage rate                        | Programmable from 125 ms to 1 day                                                                                                    |
| Storage modes                       | Start/Stop, FIFO and Extended Recording Mode (XRM™)                                                                                  |
| Recording length                    | 15 minutes to 8 weeks, programmable using DataView®                                                                                  |
| Memory                              | 240,000 measurement (512 kB).<br>The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |
| Communication                       | USB 2.0 optically isolated                                                                                                           |
| Power source                        | 2 x 1.5 V AA-cell alkaline batteries                                                                                                 |
| Battery life                        | 100 hours to > 45 days (depending on storage rate/recording length)                                                                  |
| <b>MECHANICAL SPECIFICATIONS</b>    |                                                                                                                                      |
| Dimensions                          | 136 x 70 x 32 mm (5.38 x 2.75 x 1.28")                                                                                               |
| Max conductor size                  | Depends on current probe                                                                                                             |
| Weight (with battery)               | 180 g (6.4 oz)                                                                                                                       |
| Safety rating                       | IEC 61010, 50 V CAT III                                                                                                              |
| Casing                              | UL94-V0                                                                                                                              |
| Vibration                           | IEC 60068-2-6 (1.5 mm, 10 to 55 Hz)                                                                                                  |
| Shock                               | IEC 60068-2-27 (30 G)                                                                                                                |
| Drop                                | IEC 60068-2-32 (1 m)                                                                                                                 |
| <b>ENVIRONMENTAL SPECIFICATIONS</b> |                                                                                                                                      |
| Operating temperature               | -10 to +50 °C (14 to 122 °F)                                                                                                         |
| Storage temperature                 | -20 to +60 °C (-4 to +140 °F)                                                                                                        |

## APPLICATIONS

- ▶ Load profiling
- ▶ Fault current detection
- ▶ Intermittent problem detection
- ▶ Demand recording
- ▶ Neutral current monitoring
- ▶ Harmonic current monitoring using DataView® software
- ▶ Metering CT resizing
- ▶ Start/Stop time-stamping



L101 recording branch circuit current.

# SIMPLE LOGGER® II

## TRMS Current model L102



Model L102



Model L102 includes type A to 5-pin mini-B USB 2 m, DataView® CD, two 1.5 V AA-cell alkaline batteries and user manual. Probes sold separately.

## FEATURES

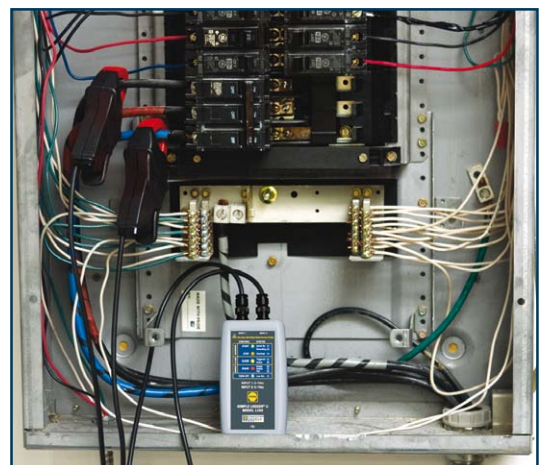
- ▶ Two independent channels
- ▶ Compatible with standard AC current probes with voltage output and BNC connection (see chart on page 19 for compatible current probes)
- ▶ 64 samples per cycle
- ▶ Programmable storage rates from 8 per second to 1 per day
- ▶ 3 user-selectable storage modes
- ▶ Stores up to 240,000 measurements in non-volatile memory
- ▶ Powered by standard alkaline batteries
- ▶ Lightweight, compact, fits anywhere
- ▶ 5 LED indicators display logger status quickly and clearly
- ▶ Includes FREE DataView® software for data storage, real-time waveform display, analysis and report generation
- ▶ Isolated USB communication
- ▶ USB cable included

## SPECIFICATIONS

| MODEL                               | L102                                                                                                                                 |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SPECIFICATIONS</b>    |                                                                                                                                      |
| Channels                            | 2                                                                                                                                    |
| Input connection                    | One BNC connector per channel                                                                                                        |
| Current-probe output-voltage range  | 0 to 1 Vac (depending on probe)                                                                                                      |
| Resolution                          | 0.1 mV                                                                                                                               |
| Accuracy (50/60 Hz)                 | 0 to 10 mV: unspecified<br>10 to 50 mV: $\pm(0.5\% R + 1 \text{ mV})$<br>50 to 1000 mV: $\pm(0.5\% R + 0.5 \text{ mV})$              |
| Sample rate                         | 64 samples/cycle                                                                                                                     |
| Storage rate                        | Programmable from 125 ms to 1 day                                                                                                    |
| Storage modes                       | Start/Stop, FIFO and Extended Recording Mode (XRM™)                                                                                  |
| Recording length                    | 15 minutes to 8 weeks, programmable using DataView®                                                                                  |
| Memory                              | 240,000 measurement (512 kB).<br>The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |
| Communication                       | USB 2.0 optically isolated                                                                                                           |
| Power source                        | 2 x 1.5 V AA-cell alkaline batteries                                                                                                 |
| Battery life                        | 100 hours to > 45 days (depending on storage rate/recording length)                                                                  |
| <b>MECHANICAL SPECIFICATIONS</b>    |                                                                                                                                      |
| Dimensions                          | 136 x 70 x 32 mm (5.38 x 2.75 x 1.28")                                                                                               |
| Max conductor size                  | Depends on current probe                                                                                                             |
| Weight (with battery)               | 180 g (6.4 oz)                                                                                                                       |
| Safety rating                       | IEC 61010, 50 V CAT III                                                                                                              |
| Casing                              | UL94-V0                                                                                                                              |
| Vibration                           | IEC 60068-2-6 (1.5 mm, 10 to 55 Hz)                                                                                                  |
| Shock                               | IEC 60068-2-27 (30 G)                                                                                                                |
| Drop                                | IEC 60068-2-32 (1 m)                                                                                                                 |
| <b>ENVIRONMENTAL SPECIFICATIONS</b> |                                                                                                                                      |
| Operating temperature               | -10 to +50 °C (14 to 122 °F)                                                                                                         |
| Storage temperature                 | -20 to +60 °C (-4 to +140 °F)                                                                                                        |

## APPLICATIONS

- ▶ Split-phase load monitoring
- ▶ Neutral and earth current monitoring
- ▶ Intermittent problem detection
- ▶ Harmonic current monitoring using DataView® software
- ▶ Machine load monitoring
- ▶ Start/Stop time-stamping



L102 recording two phases of primary feed.

# Simple Logger® II

## TRMS Current model L111



Model L111



Model L111 includes type A to 5-pin mini-B USB 2 m, DataView® CD, two 1.5 V AA-cell alkaline batteries and user manual. Probes sold separately.

## FEATURES

- Compatible with standard AC current probes with current output and banana plug connection
- Fused input
- 64 samples per cycle
- Programmable storage rates from 8 per second to 1 per day
- 3 user-selectable storage modes
- Stores up to 240,000 measurements in non-volatile memory
- Powered by standard alkaline batteries
- Lightweight, compact, fits anywhere
- 5 LED indicators quickly and clearly display logger status
- Isolated USB communication
- Includes FREE DataView® software for data storage, real-time waveform display, analysis and report generation
- USB cable included

## SPECIFICATIONS

| MODEL                               | L111                                                                                                                                |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SPECIFICATIONS</b>    |                                                                                                                                     |
| Channels                            | 1                                                                                                                                   |
| Input connection                    | Two recessed banana jacks                                                                                                           |
| Current-probe output-current range  | 0 to 1 Aac (depending on probe)                                                                                                     |
| Resolution                          | 0.1 mA                                                                                                                              |
| Accuracy (50/60 Hz)                 | 0 to 10 mA: unspecified<br>10 to 50 mA: $\pm(0.5\% R + 1 \text{ mA})$<br>50 to 1000 mA: $\pm(0.5\% R + 0.5 \text{ mA})$             |
| Sample rate                         | 64 samples/cycle                                                                                                                    |
| Storage rate                        | Programmable from 125 ms to 1 day                                                                                                   |
| Storage modes                       | Start/Stop, FIFO and Extended Recording Mode (XRM™)                                                                                 |
| Recording length                    | 15 minutes to 8 weeks, programmable using DataView®                                                                                 |
| Memory                              | 240,000 measurement (512 kB)<br>The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |
| Communication                       | USB 2.0 optically isolated                                                                                                          |
| Power source                        | 2 x 1.5 V AA-cell alkaline batteries                                                                                                |
| Battery life                        | 100 hours to > 45 days<br>(depending on storage rate/recording length)                                                              |
| <b>MECHANICAL SPECIFICATIONS</b>    |                                                                                                                                     |
| Dimensions                          | 132 x 70 x 32 mm (5.18 x 2.75 x 1.28")                                                                                              |
| Max conductor size                  | Depends on current probe                                                                                                            |
| Weight (with battery)               | 188 g (6.64 oz)                                                                                                                     |
| Safety rating                       | IEC 61010, 50 V CAT III                                                                                                             |
| Casing                              | UL94-V0                                                                                                                             |
| Vibration                           | IEC 60068-2-6 (1.5 mm, 10 to 55 Hz)                                                                                                 |
| Shock                               | IEC 60068-2-27 (30 G)                                                                                                               |
| Drop                                | IEC 60068-2-32 (1 m)                                                                                                                |
| <b>ENVIRONMENTAL SPECIFICATIONS</b> |                                                                                                                                     |
| Operating temperature               | -10 to +50 °C (14 to 122 °F)                                                                                                        |
| Storage temperature                 | -20 to +60 °C (-4 to +140 °F)                                                                                                       |

## APPLICATIONS

- Load profiling
- Fault current detection
- Intermittent problem detection
- Demand recording
- Neutral current monitoring
- Harmonic current monitoring using DataView® software
- Metering CT resizing
- Start/Stop time-stamping

# Simple Logger® II

## TRMS Current model ML912



Model ML 912

Model ML912 includes type A to 5-pin mini-B USB 2 m, DataView® CD, two 1.5 V AA-cell alkaline batteries and user manual. Probes sold separately.

## SPECIFICATIONS

|                                         |                                                                                                                                     |                                                      |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| MODEL                                   | ML912                                                                                                                               |                                                      |
| ELECTRICAL SPECIFICATIONS               |                                                                                                                                     |                                                      |
| Channels                                | 2                                                                                                                                   |                                                      |
| Input connection                        | Integral MiniFLEX™ flexible AC current sensors                                                                                      |                                                      |
| Range                                   | 0.5 to 100 A <sub>AC</sub>                                                                                                          | 5 to 1000 A <sub>AC</sub>                            |
| Accuracy                                | 0 to 1 A: unspecified<br>1 to 100 A: ±(1 % R + 0.5 A)                                                                               | 0 to 5 A: unspecified<br>5 to 1000 A: ±(1 % R + 1 A) |
| Resolution                              | 0.1 A                                                                                                                               |                                                      |
| Sample rate                             | 64 samples/cycle                                                                                                                    |                                                      |
| Storage rate                            | Programmable from 125 ms to 1 day                                                                                                   |                                                      |
| Storage modes                           | Start/Stop, FIFO and Extended Recording Mode (XRM™)                                                                                 |                                                      |
| Recording length                        | 15 minutes to 8 weeks, programmable using DataView®                                                                                 |                                                      |
| Memory                                  | 240,000 measurement (512 kB)<br>The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |                                                      |
| Communication                           | USB 2.0 optically isolated                                                                                                          |                                                      |
| Power source                            | 2 x 1.5 V AA-cell alkaline batteries                                                                                                |                                                      |
| Battery life                            | 100 hours to > 45 days (depending on storage rate/recording length)                                                                 |                                                      |
| MECHANICAL SPECIFICATIONS               |                                                                                                                                     |                                                      |
| Dimensions                              | 136 x 70 x 32 mm (4.94 x 2.75 x 1.28") without sensor                                                                               |                                                      |
| Weight (with battery)                   | 245 g (8.67 oz)                                                                                                                     |                                                      |
| Casing                                  | UL94-V0                                                                                                                             |                                                      |
| Vibration                               | IEC 60068-2-6 (1.5 mm, 10 to 55 Hz)                                                                                                 |                                                      |
| Shock                                   | IEC 60068-2-27 (30 G)                                                                                                               |                                                      |
| Drop                                    | IEC 60068-2-32 (1 m)                                                                                                                |                                                      |
| ENVIRONMENTAL SPECIFICATIONS            |                                                                                                                                     |                                                      |
| Operating temperature                   | -10 to +50 °C (14 to 122 °F)                                                                                                        |                                                      |
| Storage temperature                     | -20 to +60 °C (-4 to +140 °F)                                                                                                       |                                                      |
| Relative humidity                       | Up to 85 % to 35 °C (95 °F) non-condensing                                                                                          |                                                      |
| Altitude                                | 2000 m                                                                                                                              |                                                      |
| SAFETY & ELECTRO-MAGNETIC COMPATIBILITY |                                                                                                                                     |                                                      |
| Safety rating                           | IEC 61010-1 ; 600 V CAT III ; 300 V CAT IV ; Pollution degree 2                                                                     |                                                      |
| Protection degree                       | IP40                                                                                                                                |                                                      |

The Simple Logger® II Model ML912 is a two-channel AC current recording device powered by two alkaline batteries. It incorporates two user-selectable measurement ranges of 0 to 100 AAC and 0 to 1000 AAC.

Line tracking is performed at a rate of 64 samples per line cycle. Frequency tracking is performed over a range of  $\pm 2$  Hz around the nominal line frequency (50 or 60 Hz). Harmonic measurements are calculated from the 64 samples (available in DataView®). The Simple Logger® II stores TRMS values at user-programmable rates of up to eight times per second. TRMS calculations are performed on a single line cycle.

The main advantage of the logger is its ability to perform a variety of recording tasks with easy and intuitive setup from a computer using DataView® software.

Analogue information on the input is sampled and converted to a digital signal. This digital signal is processed and stored along with scale and time information. An optically-isolated USB port allows data to be transferred from the instrument's internal storage to the computer for analysis.

## FEATURES

- ▶ Two integral MiniFlex™ flexible current sensors measure from 0.5 A to 1000 A
- ▶ Dual range 100/1000 AAC
- ▶ Programmable storage rate from 8 per second to 1 per day
- ▶ Choice of 3 recording modes
- ▶ Up to 240,000 measurements can be stored in non-volatile memory
- ▶ Lightweight, compact and ideal for situations where access is difficult
- ▶ 5 LED indicators for quick, easy-to-read display of logger status

## APPLICATIONS

- ▶ Phase load monitoring
- ▶ Intermittent problem detection
- ▶ Harmonic current monitoring
- ▶ Machine load monitoring

# Simple Logger® II

## TRMS 600 V<sub>AC</sub>/DC model L261



Model L261 includes type A to 5-pin mini-B USB 2 m, DataView® CD, two 1.5 V AA-cell alkaline batteries and user manual.

Model L261

## FEATURES

- ▶ TRMS voltage recording up to 600 V<sub>AC</sub>/DC
- ▶ 64 samples per cycle
- ▶ Programmable storage rates from 8 per second to 1 per day
- ▶ 3 user-selectable storage modes
- ▶ Stores up to 240,000 measurements in non-volatile memory
- ▶ Powered by standard alkaline batteries
- ▶ Lightweight, compact, fits anywhere
- ▶ 5 LED indicators display logger status quickly and clearly
- ▶ Includes FREE DataView® software for data storage, real-time waveform display, analysis and report generation
- ▶ Isolated USB communication
- ▶ USB cable included
- ▶ 300 V CAT IV; 600 V CAT III

## APPLICATIONS

- ▶ Surge and Sag recording
- ▶ Long-term supply monitoring
- ▶ Industrial, commercial and residential monitoring
- ▶ Monitor voltage harmonics
- ▶ Find intermittent voltage problems
- ▶ Machine monitoring

| MODEL                               | L261                                                                                                                                |
|-------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SPECIFICATIONS</b>    |                                                                                                                                     |
| Channels                            | 1                                                                                                                                   |
| Input connection                    | 2 recessed safety banana jacks                                                                                                      |
| Voltage range                       | 0 to 600 V <sub>AC</sub> /DC                                                                                                        |
| Resolution                          | 0.1 V                                                                                                                               |
| Accuracy (50/60 Hz)                 | 0 to 5 V: unspecified<br>5 to 50 V: $\pm(0.5\% R + 1 V)$<br>50 to 600 V: $\pm(0.5\% R + 0.5 V)$                                     |
| Sample rate                         | 64 samples/cycle                                                                                                                    |
| Storage rate                        | Programmable from 125 ms to 1 day                                                                                                   |
| Storage modes                       | Start/Stop, FIFO and Extended Recording Mode (XRM™)                                                                                 |
| Recording length                    | 15 minutes to 8 weeks, programmable using DataView®                                                                                 |
| Memory                              | 240,000 measurement (512 kB)<br>The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |
| Communication                       | USB 2.0 optically isolated                                                                                                          |
| Power source                        | 2 x 1.5 V AA-cell alkaline batteries                                                                                                |
| Battery life                        | 100 hours to > 45 days (depending on storage rate/recording length)                                                                 |
| <b>MECHANICAL SPECIFICATIONS</b>    |                                                                                                                                     |
| Dimensions                          | 125 x 70 x 32 mm (4.94 x 2.75 x 1.28")                                                                                              |
| Weight (with battery)               | 180 g (6.4 oz)                                                                                                                      |
| Casing                              | UL94-V0                                                                                                                             |
| Vibration                           | IEC 60068-2-6 (1.5 mm, 10 to 55 Hz)                                                                                                 |
| Shock                               | IEC 60068-2-27 (30 G)                                                                                                               |
| Drop                                | IEC 60068-2-32 (1 m)                                                                                                                |
| <b>ENVIRONMENTAL SPECIFICATIONS</b> |                                                                                                                                     |
| Operating temperature               | -10 °C to +50 °C (14 to 122 °F)                                                                                                     |
| Storage temperature                 | -20 °C to +60 °C (-4 to +140 °F)                                                                                                    |



Model L261 includes set of two colour-coded 1.5 m (5 ft) voltage leads, colour-coded crocodile clips (red/black).

# Simple Logger® II

## Voltage/Current model L562



Model L562 includes type A to 5-pin mini-B USB 2 m, DataView® CD, two 1.5 V AA-cell alkaline batteries and user manual. Probes sold separately.

Model L562

## FEATURES

- ▶ 2 input channels
- ▶ Voltage: 0 to 600 V<sub>AC</sub> TRMS
- ▶ Current: compatible with current probes with voltage outputs (see page 19)
- ▶ 64 samples per cycle
- ▶ 3 user-selectable storage modes
- ▶ Programmable storage rates from 8 per second to 1 per day
- ▶ Stores up to 240,000 measurements in non-volatile memory
- ▶ Powered by standard alkaline batteries
- ▶ Lightweight, compact, fits anywhere
- ▶ 5 LED indicators display logger status quickly and clearly
- ▶ Includes FREE DataView® software for data storage, real-time waveform display, analysis and report generation
- ▶ USB cable included
- ▶ 300 V CAT IV; 600 V CAT III with a safety-rated current probe attached

## SPECIFICATIONS

| MODEL                        | L562                                                                                                                                |                                                                                        |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| ELECTRICAL SPECIFICATIONS    |                                                                                                                                     |                                                                                        |
| Channels                     | 2                                                                                                                                   |                                                                                        |
| Connection                   | Current channel                                                                                                                     | Voltage channel                                                                        |
| Input connection             | BNC                                                                                                                                 | 2 recessed banana jacks                                                                |
| Voltage range                | 0 to 1 V <sub>AC</sub> *                                                                                                            | 0 to 600 V <sub>AC</sub>                                                               |
| Resolution                   | 0.1 mA                                                                                                                              | 0.1 V                                                                                  |
| Accuracy (50/60 Hz)          | 0 to 10 mV: unspecified<br>10 to 50 mV: ±(0.5 % R + 1 mV)<br>50 to 1000 mV: ±(0.5 % R + 0.5 mV)                                     | 0 to 5V: unspecified<br>5 to 50 V: ±(0.5 % R + 1 V)<br>50 to 600 V: ±(0.5 % R + 0.5 V) |
| Sample rate                  | 64 samples/cycle                                                                                                                    |                                                                                        |
| Storage rate                 | Programmable from 125 ms to 1 day                                                                                                   |                                                                                        |
| Storage modes                | Stop when full, FIFO and Extended Recording Mode (XRM™)                                                                             |                                                                                        |
| Recording length             | 15 minutes to 8 weeks, programmable using DataView®                                                                                 |                                                                                        |
| Memory                       | 240,000 measurement (512 kB)<br>The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |                                                                                        |
| Communication                | USB 2.0 optically isolated                                                                                                          |                                                                                        |
| Power source                 | 2 x 1.5 V AA-cell alkaline batteries                                                                                                |                                                                                        |
| Battery life                 | 100 hours to > 45 days (depending on storage rate/recording length)                                                                 |                                                                                        |
| MECHANICAL SPECIFICATIONS    |                                                                                                                                     |                                                                                        |
| Dimensions                   | 136 x 70 x 32 mm (5.38 x 2.75 x 1.28")                                                                                              |                                                                                        |
| Max conductor size           | Depends on current probe                                                                                                            |                                                                                        |
| Weight (with battery)        | 181 g (6.4 oz)                                                                                                                      |                                                                                        |
| Casing                       | UL94-V0                                                                                                                             |                                                                                        |
| Vibration                    | IEC 60068-2-6 (1.5 mm, 10 to 55 Hz)                                                                                                 |                                                                                        |
| Shock                        | IEC 60068-2-27 (30 G)                                                                                                               |                                                                                        |
| Drop                         | IEC 60068-2-32 (1 m)                                                                                                                |                                                                                        |
| ENVIRONMENTAL SPECIFICATIONS |                                                                                                                                     |                                                                                        |
| Operating temperature        | -10 °C to +50 °C (14 to 122 °F)                                                                                                     |                                                                                        |
| Storage temperature          | -20 °C to +60 °C (-4 to +140 °F)                                                                                                    |                                                                                        |

## APPLICATIONS

- ▶ Single-phase power monitoring
- ▶ Residential, commercial and industrial troubleshooting
- ▶ Find sags and surges
- ▶ Track energy usage
- ▶ Start/Stop time-stamping



Model L562 includes set of two colour-coded 1.5 m (5 ft) voltage leads, colour-coded crocodile clips (red/black).

\*For current probes with voltage output.

# Simple Logger® II

## 4 to 20 mA<sub>DC</sub> Current model L322



Model L322 includes type A to 5-pin mini-B USB 2 m, DataView® CD, two 1.5 V AA-cell alkaline batteries and user manual.

Model L322

## FEATURES

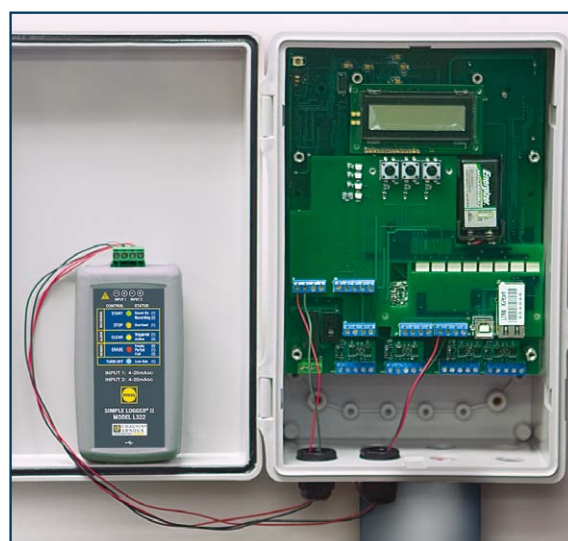
- ▶ 2 independent input channels
- ▶ -20 to +20 mA<sub>DC</sub>
- ▶ Programmable storage rates from 8 per second to 1 per day
- ▶ 3 user-selectable storage modes
- ▶ Stores up to 240,000 measurements in non-volatile memory
- ▶ Scaling and engineering units entered via software prior to saving
- ▶ Powered by standard alkaline batteries
- ▶ Lightweight, compact, fits anywhere
- ▶ 5 LED indicators display logger status quickly and clearly
- ▶ Includes FREE DataView® software for data storage, real-time display, analysis and report generation
- ▶ USB cable included
- ▶ 50 V CAT III

## SPECIFICATIONS

| MODEL                               | L322                                                                                                                                 |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SPECIFICATIONS</b>    |                                                                                                                                      |
| Channels                            | 2                                                                                                                                    |
| Input connection                    | One 4 position removable screw-type terminal block                                                                                   |
| Measurement range                   | -20 mA <sub>DC</sub> to +20 mA <sub>DC</sub>                                                                                         |
| Resolution                          | 0.01 mA                                                                                                                              |
| Accuracy                            | 0.25 % R + 0.05 mA                                                                                                                   |
| Sample rate                         | Maximum of 8 samples taken at storage interval                                                                                       |
| Storage rate                        | Programmable from 125 ms to 1 day                                                                                                    |
| Storage modes                       | Start/Stop, FIFO and Extended Recording Mode (XRM™)                                                                                  |
| Recording length                    | 15 minutes to 8 weeks, programmable using DataView®                                                                                  |
| Memory                              | 240,000 measurement (512 kB).<br>The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |
| Communication                       | USB 2.0 optically isolated                                                                                                           |
| Power source                        | 2 x 1.5 V AA-cell alkaline batteries                                                                                                 |
| Battery life                        | 100 hours to > 45 days<br>(dependent on storage rate/recording length)                                                               |
| <b>MECHANICAL SPECIFICATIONS</b>    |                                                                                                                                      |
| Dimensions                          | 136 x 70 x 32 mm (5.45 x 2.75 x 1.28")                                                                                               |
| Weight (with battery)               | 181 g (6.4 oz)                                                                                                                       |
| Casing                              | UL94-V0                                                                                                                              |
| Vibration                           | IEC 60068-2-6 (1.5 mm, 10 to 55 Hz)                                                                                                  |
| Shock                               | IEC 60068-2-27 (30 G)                                                                                                                |
| Drop                                | IEC 60068-2-32 (1 m)                                                                                                                 |
| <b>ENVIRONMENTAL SPECIFICATIONS</b> |                                                                                                                                      |
| Operating temperature               | -10 to +50 °C (14 to 122 °F)                                                                                                         |
| Storage temperature                 | -20 to +60 °C (-4 to +140 °F)                                                                                                        |

## APPLICATIONS

- ▶ Process control monitoring and troubleshooting
- ▶ Profile temperature, pressure, flow and other parameters directly
- ▶ General-purpose DC current monitoring
- ▶ And many more.



L322 recording loop current in a flow control panel.

# Simple Logger® II

## DC Voltage model L432



Model L432



Model L432 includes type A to 5-pin mini-B USB 2 m, DataView® CD, two 1.5 V AA-cell alkaline batteries and user manual.

## FEATURES

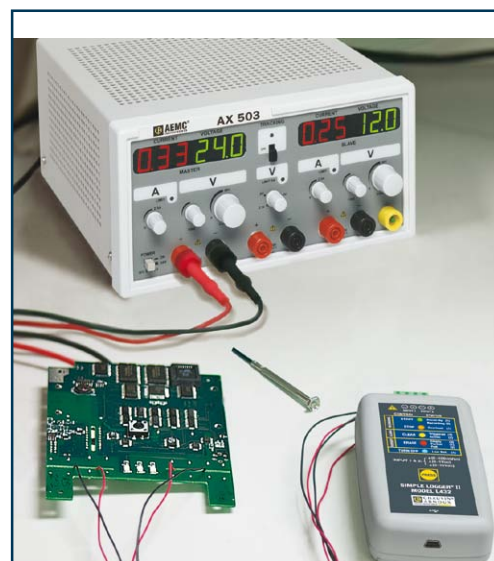
- ▶ 2 independent input channels
- ▶ User-selectable ranges of  $\pm 100$  mV;  $\pm 1$  V and  $\pm 10$  Vdc per channel
- ▶ Programmable storage rates from 8 per second to 1 per day
- ▶ 3 user-selectable storage modes
- ▶ Stores up to 240,000 measurements in non-volatile memory
- ▶ Powered by standard alkaline batteries
- ▶ Lightweight, compact, fits anywhere
- ▶ 5 LED indicators display logger status quickly and clearly
- ▶ Includes FREE DataView® software for data storage, real-time display, analysis and report generation
- ▶ USB cable included
- ▶ 50 V CAT III

## SPECIFICATIONS

| MODEL                                | L432                                                                                                                                 |
|--------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SPECIFICATIONS</b>     |                                                                                                                                      |
| Channels                             | 2                                                                                                                                    |
| Input connection                     | One 4-position removable screw-type terminal block                                                                                   |
| Measurement level (3 ranges/channel) | Range n° 1: -100 mV to +100 mVdc<br>Range n° 2: -1 V to +1 Vdc<br>Range n° 3: -10 V to +10 Vdc                                       |
| Resolution                           | Range n° 1: 0.1 mV<br>Range n° 2: 1 mV<br>Range n° 3: 10 mV                                                                          |
| Accuracy (50/60 Hz)                  | Range n° 1: $\pm(0.5\% R + 1 \text{ mV})$<br>Range n° 2: $\pm(0.5\% R + 1 \text{ mV})$<br>Range n° 3: $\pm(0.5\% R + 10 \text{ mV})$ |
| Sample rate                          | Maximum of 8 samples taken at storage interval                                                                                       |
| Storage rate                         | Programmable from 125 ms to 1 day                                                                                                    |
| Storage modes                        | Start/Stop, FIFO and Extended Recording Mode (XRM™)                                                                                  |
| Recording length                     | 15 minutes to 8 weeks, programmable using DataView®                                                                                  |
| Memory                               | 240,000 measurement (512 kB).<br>The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |
| Communication                        | USB 2.0 optically isolated                                                                                                           |
| Power source                         | 2 x 1.5 V AA-cell alkaline batteries                                                                                                 |
| Battery life                         | 100 hours to > 45 days (depending on storage rate/recording length)                                                                  |
| <b>MECHANICAL SPECIFICATIONS</b>     |                                                                                                                                      |
| Dimensions                           | 136 x 70 x 32 mm (5.45 x 2.75 x 1.28")                                                                                               |
| Weight (with battery)                | 181 g (6.4 oz)                                                                                                                       |
| Casing                               | UL94-V0                                                                                                                              |
| Vibration                            | IEC 60068-2-6 (1.5 mm, 10 to 55 Hz)                                                                                                  |
| Shock                                | IEC 60068-2-27 (30 G)                                                                                                                |
| Drop                                 | IEC 60068-2-32 (1 m)                                                                                                                 |
| <b>ENVIRONMENTAL SPECIFICATIONS</b>  |                                                                                                                                      |
| Operating temperature                | -10 to +50 °C (14 to 122 °F)                                                                                                         |
| Storage temperature                  | -20 to +60 °C (-4 to +140 °F)                                                                                                        |

## APPLICATIONS

- ▶ Circuit design troubleshooting
- ▶ Sensor monitoring
- ▶ Battery testing
- ▶ Power supply profiling



L432 recording two DC voltage supplies.

# Simple Logger® II

## 850 Vdc model L481



Model L481 is delivered with a set of 2 voltage leads 152.4 cm (5 ft) long, with colour coding and a set of crocodile clips (red/black).

Model L481

## FEATURES

- ▶ Bipolar DC voltage measurement up to  $\pm 850$  Vdc
- ▶ Programmable storage rate from 8 per second to 1 per day
- ▶ Choice of 3 recording modes
- ▶ Up to 240,000 measurements can be stored in non-volatile memory
- ▶ Powered by standard alkaline batteries
- ▶ Lightweight, compact and ideal for situations where access is difficult
- ▶ 5 LED indicators for quick, easy-to-read display of logger status
- ▶ Delivered with the FREE DataView® software for data storage, real-time display of waveforms, analysis and report generation
- ▶ Delivered with USB cable and batteries
- ▶ IEC 61010-1 / 300 V CAT IV / 600 V CAT III

## SPECIFICATIONS

| MODEL                                              | L481                                                                                                |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SPECIFICATIONS</b>                   |                                                                                                     |
| Channels                                           | 1                                                                                                   |
| Input connection                                   | Two recessed 4 mm safety banana jacks                                                               |
| Input level                                        | -850 Vdc TO +850 Vdc                                                                                |
| Resolution                                         | 0.1 V                                                                                               |
| Accuracy (50/60 Hz)                                | 0 to 5 V: unspecified<br>5 to 50 V: $\pm(0.5\% R + 1 V)$ – 50 to 850 V: $\pm(0.5\% R + 0.5 V)$      |
| Maximum input voltage                              | $\pm 1020$ Vdc                                                                                      |
| Input impedance                                    | $> 150$ k $\Omega$                                                                                  |
| Sample rate                                        | Maximum of 8 per second                                                                             |
| Storage rate                                       | Programmable from 125 ms to 1 day                                                                   |
| Storage modes                                      | Start/Stop, FIFO and Extended Recording Mode (XRM™)                                                 |
| Recording length                                   | 15 minutes to 8 weeks, programmable using DataView®<br>240,000 measurement (512 kB).                |
| Memory                                             | The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |
| Communication                                      | USB 2.0 optically isolated                                                                          |
| Power source                                       | 2 x 1.5 V AA-cell Alkaline batteries                                                                |
| <b>MECHANICAL SPECIFICATIONS</b>                   |                                                                                                     |
| Dimensions                                         | 125 x 70 x 32 mm (4.94 x 2.75 x 1.28")                                                              |
| Weight (with battery)                              | 180 g (6.4 oz)                                                                                      |
| Casing                                             | UL94-V0                                                                                             |
| Vibration                                          | IEC 60068-2-6 (1.5 mm, 10 to 55 Hz)                                                                 |
| Shock                                              | IEC 60068-2-27 (30 G)                                                                               |
| Drop                                               | IEC 60068-2-32 (1 m)                                                                                |
| <b>ENVIRONMENTAL SPECIFICATIONS</b>                |                                                                                                     |
| Operating temperature                              | -10 to +50 °C (14 to 122 °F)                                                                        |
| Storage temperature                                | -20 to +60 °C (-4 to +140 °F)                                                                       |
| Relative humidity                                  | Up to 85 % to 35 °C (95 °F) non-condensing                                                          |
| Altitude                                           | 2000 m                                                                                              |
| <b>SAFETY &amp; ELECTRO-MAGNETIC COMPATIBILITY</b> |                                                                                                     |
| Safety rating                                      | IEC 61010-1 ; 600 V CAT III ; 300 V CAT IV ; Pollution degree 2                                     |
| Protection degree                                  | IP40                                                                                                |

## APPLICATIONS

- ▶ Railway "third rail" monitoring
- ▶ Long-term supply monitoring
- ▶ Detection of intermittent problems
- ▶ Machine monitoring
- ▶ Wind generation monitoring
- ▶ Electric cars



Model L481 includes set of two colour-coded 1.5 m (5 ft) voltage leads, colour-coded crocodile clips (red/black).

# Simple Logger® II

## Thermocouple model L642



Model L642



Model L642 includes type A to 5-pin mini-B USB 2 m, DataView® CD, two 1.5 AA-cell Alkaline batteries and user manual.  
Thermocouples sold separately.

## FEATURES

- ▶ 2 independent input channels
- ▶ User selectable thermocouple types J, K, T, N, E, R, S
- ▶ Programmable storage rates from 1 per 5 seconds to 1 per day
- ▶ 3 user selectable storage modes
- ▶ Stores up to 240,000 measurements in non-volatile memory
- ▶ Powered by standard Alkaline batteries
- ▶ Lightweight, compact, fits anywhere
- ▶ 5 LED indicators quickly and clearly display logger status
- ▶ Includes FREE DataView® software for data storage, real-time display, analysis and report generation
- ▶ USB cable included
- ▶ 50 V CAT III

## SPECIFICATIONS

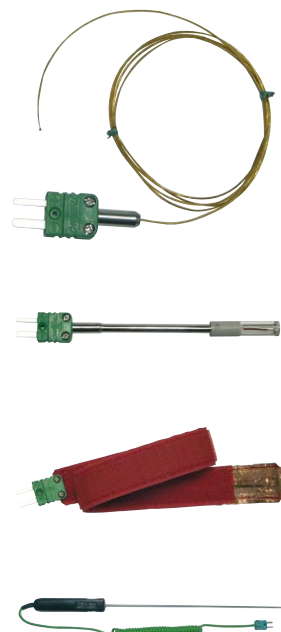
| MODEL                               | L642                                                                                                                                  |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL SPECIFICATIONS</b>    |                                                                                                                                       |
| Channels                            | 2                                                                                                                                     |
| Input connection                    | 2 miniature thermocouple connectors                                                                                                   |
| Measurement level                   | °C (°F)                                                                                                                               |
| J                                   | -210 to +1200 (-346 to +2192)                                                                                                         |
| K                                   | -200 to +1372 (-328 to +2501)                                                                                                         |
| T                                   | -250 to +400 (-418 to +752)                                                                                                           |
| N                                   | -200 to +1300 (-328 to +2372)                                                                                                         |
| E                                   | -150 to +950 (-238 to +1742)                                                                                                          |
| R                                   | 0 to 1767 (32 to 3212)                                                                                                                |
| S                                   | 0 to 1767 (32 to 3212)                                                                                                                |
| Resolution                          | 0.1 °C/F < 1000 °C/F; 1 ° ≥ 1000 °C/F                                                                                                 |
| Accuracy (50/60 Hz)                 | 0.1 % to 0.2 % + 0.6° to 1° depending on the range and T/C type                                                                       |
| Sample rate                         | 8 samples taken at storage interval                                                                                                   |
| Storage rate                        | Programmable from 5 sec to 1 day                                                                                                      |
| Storage modes                       | Start/Stop, FIFO and Extended Recording Mode (XRM™)                                                                                   |
| Recording length                    | 15 minutes to 8 weeks, programmable using DataView®                                                                                   |
| Memory                              | 240,000 measurements (512 ko).<br>The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |
| Communication                       | USB 2.0 optically isolated                                                                                                            |
| Power source                        | 2 x 1.5 V AA-cell Alkaline batteries                                                                                                  |
| Battery life                        | 100 hours to > 45 days (dependent on storage rate/recording length)                                                                   |
| <b>MECHANICAL SPECIFICATIONS</b>    |                                                                                                                                       |
| Dimensions                          | 125 x 70 x 32 mm (4.94 x 2.75 x 1.28")                                                                                                |
| Weight (with battery)               | 200 g (7 oz)                                                                                                                          |
| Casing                              | UL94-V0                                                                                                                               |
| Vibration                           | IEC 60068-2-6 (1.5 mm, 10 to 55 Hz)                                                                                                   |
| Shock                               | IEC 60068-2-27 (30 G)                                                                                                                 |
| Drop                                | IEC 60068-2-32 (1 m)                                                                                                                  |
| <b>ENVIRONMENTAL SPECIFICATIONS</b> |                                                                                                                                       |
| Operating temperature               | -10 to +50 °C (14 to 122 °F)                                                                                                          |
| Storage temperature                 | -20 to +60 °C (-4 to +140 °F)                                                                                                         |

## APPLICATIONS

- ▶ Monitoring of heating and air-conditioning systems
- ▶ Process monitoring
- ▶ Monitoring of cold chain
- ▶ And many more

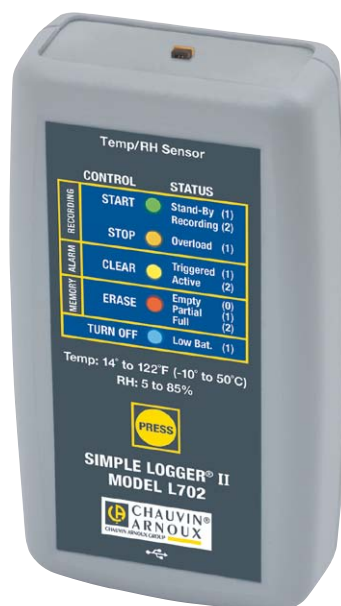
### Wide choice of thermocouple sensors (optional)

Please contact us for recommendations on thermocouples



# SIMPLE LOGGER® II

## Built-in temperature/humidity sensor model L702



Model L702 includes type A to 5-pin mini-B USB 2 m, DataView® CD, two 1.5 AA-cell Alkaline batteries and user manual.

Model L702

## FEATURES

- Monitors and records temperature and humidity
- From -10 °C to +50 °C (14 to 122 °F), from 5 to 85 % RH
- Choice of 3 recording modes
- Stores up to 240,000 measurements in non-volatile memory
- Powered by standard alkaline batteries giving a battery life of 45 days or more
- Lightweight, compact and ideal for situations where access is difficult
- 5 LED indicators for quick, easy-to-read display of logger status
- Delivered with the FREE DataView® software for data storage, real-time display of waveforms, analysis and report generation
- Delivered with USB cable and batteries
- IEC 61010-1; 50 V CAT III

## SPECIFICATIONS

|                                         |                                                                                                                                      |                  |
|-----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|------------------|
| MODEL                                   | L702                                                                                                                                 |                  |
| ELECTRICAL SPECIFICATIONS               |                                                                                                                                      |                  |
| Channels                                | 2                                                                                                                                    |                  |
| Input                                   | Temperature sensor                                                                                                                   | Humidity sensor  |
| Range                                   | -10 to +50 ° C (14 to 122 °F)                                                                                                        | 5 to 85 % RH     |
| Accuracy                                | ±(1 % R + 1 °C/F)                                                                                                                    | ±(3 % R + 2 cts) |
| Resolution                              | 0.1 °C / F                                                                                                                           | 0.1 % HR         |
| Sample rate                             | Maximum of 1 every 5 seconds                                                                                                         |                  |
| Storage rate                            | Programmable from once every 5 s to 1 per day                                                                                        |                  |
| Storage modes                           | Start/Stop, FIFO and Extended Recording Mode (XRM™)                                                                                  |                  |
| Recording length                        | 15 minutes to 8 weeks, programmable using DataView®                                                                                  |                  |
| Memory                                  | 240,000 measurement (512 kB).<br>The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |                  |
| Communication                           | USB 2.0 optically isolated                                                                                                           |                  |
| Power source                            | 2 x 1.5 V AA-cell Alkaline batteries                                                                                                 |                  |
| Battery life                            | 100 hours to > 45 days (dependent on storage rate/recording length)                                                                  |                  |
| MECHANICAL SPECIFICATIONS               |                                                                                                                                      |                  |
| Dimensions                              | 136 x 70 x 32 mm (5.45 x 2.75 x 1.28") without sensor                                                                                |                  |
| Weight (with battery)                   | 180 g (6.4 oz)                                                                                                                       |                  |
| Casing                                  | Polycarbonate, UL94-V0                                                                                                               |                  |
| Vibration                               | IEC 60068-2-6 (1.5 mm, 10 to 55 Hz)                                                                                                  |                  |
| Shock                                   | IEC 60068-2-27 (30 G)                                                                                                                |                  |
| Drop                                    | IEC 60068-2-32 (1 m)                                                                                                                 |                  |
| ENVIRONMENTAL SPECIFICATIONS            |                                                                                                                                      |                  |
| Operating temperature                   | -10 to +50 °C (14 to 122 °F)                                                                                                         |                  |
| Storage temperature                     | -20 to +60 °C (-4 to +140 °F)                                                                                                        |                  |
| Relative humidity                       | Up to 85 % to 35 °C (95 °F) non-condensing                                                                                           |                  |
| Altitude                                | 2000 m                                                                                                                               |                  |
| SAFETY & ELECTRO-MAGNETIC COMPATIBILITY |                                                                                                                                      |                  |
| Safety rating                           | IEC 61010-1 ; 50 V CAT III ; Pollution degree 2                                                                                      |                  |
| Protection degree                       | IP40                                                                                                                                 |                  |
| Electro-magnetic compatibility          | EN 61326-1 ; 07/1997 (+A1 10/1998, +A2 09/2001, +A3 05/2004)                                                                         |                  |

## APPLICATIONS

- Clean rooms
- Blood banks
- Humidors
- Wine cellars
- Greenhouses
- Paper mills

# SIMPLE LOGGER® II

## 4-channel event model L404



Model L404



Model L404 includes type A to 5-pin mini-B USB 2 m, DataView® CD, two 1.5 AA-cell Alkaline batteries and user manual.

## FEATURES

- ▶ Four input channels
- ▶ Works with dry contact closure or 0-3 and 0-5 V<sub>DC</sub> logic levels
- ▶ Programmable storage rate from 8 per second to 1 per day
- ▶ Powered by standard alkaline batteries
- ▶ Lightweight, compact and ideal for situations where access is difficult
- ▶ 5 LED indicators for quick, easy-to-read display of logger status
- ▶ Delivered with the FREE DataView® software for data storage, real-time display of waveforms, analysis and report generation
- ▶ Delivered with USB cable and batteries
- ▶ IEC 61010-1; 50 V CAT III

## SPECIFICATIONS

| MODEL                                              | L404                                                                                                                                 |
|----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>ELECTRICAL</b>                                  |                                                                                                                                      |
| Channels                                           | 4                                                                                                                                    |
| Input connection                                   | One 8-position removable screw-type terminal block                                                                                   |
| Input level                                        | Contact closure, 0 to 5 V <sub>DC</sub>                                                                                              |
| Input impedance                                    | > 150 kΩ                                                                                                                             |
| Sample rate                                        | Maximum of 8 per second                                                                                                              |
| Storage rate                                       | Maximum once every two sample periods (event dependent)                                                                              |
| Storage modes                                      | Event recording                                                                                                                      |
| Recording length                                   | 15 minutes to 8 weeks, programmable using DataView®                                                                                  |
| Memory                                             | 50,000 measurements (512 ko).<br>The recorded data is stored in non-volatile memory & retained even if the battery is low or removed |
| Communication                                      | USB 2.0 optically isolated                                                                                                           |
| Power source                                       | 2 x 1.5 V AA-cell Alkaline batteries                                                                                                 |
| Battery life                                       | 100 hours to > 45 days (dependent on storage rate/recording length)                                                                  |
| <b>MECHANICAL SPECIFICATIONS</b>                   |                                                                                                                                      |
| Dimensions                                         | 136 x 70 x 32 mm (5,45 x 2,75 x 1,28")                                                                                               |
| Weight (with battery)                              | 181 g (6,4 oz)                                                                                                                       |
| Casing                                             | Polycarbonate, UL94-V0                                                                                                               |
| Vibration                                          | IEC 60068-2-6 (1,5 mm, 10 to 55 Hz)                                                                                                  |
| Shock                                              | IEC 60068-2-27 (30 G)                                                                                                                |
| Drop                                               | IEC 60068-2-32 (1 m)                                                                                                                 |
| <b>ENVIRONMENTAL SPECIFICATIONS</b>                |                                                                                                                                      |
| Operating temperature                              | -10 to +50 °C (14 to 122 °F)                                                                                                         |
| Storage temperature                                | -20 to +60 °C (-4 to +140 °F)                                                                                                        |
| Relative humidity                                  | Up to 85 % to 35 °C (95 °F) non-condensing                                                                                           |
| Altitude                                           | 2000 m                                                                                                                               |
| <b>SAFETY &amp; ELECTRO-MAGNETIC COMPATIBILITY</b> |                                                                                                                                      |
| Safety rating                                      | IEC 61010-1 ; 50 V CAT III ; Pollution degree 2                                                                                      |
| Protection degree                                  | IP40                                                                                                                                 |

## APPLICATIONS

- ▶ Determine machinery run/down times
- ▶ Determine event sequencing
- ▶ Count events and record
- ▶ Record event duration

# INPUTS & RECORDING

## INPUT CONNECTIONS



Simple Logger® II L101  
Isolated BNC connector  
accepts current probes with  
male BNC plugs



Simple Logger® II L102  
Dual isolated BNC connectors  
accepts current probes  
with male BNC plugs



Simple Logger® II L111  
Recessed 4 mm banana jacks  
& fused input



Simple Logger® II L261  
Recessed safety 4 mm banana jacks



Simple Logger® II L322 & L432  
4-pin removable terminal strip



Simple Logger® II L562  
Isolated BNC for current probe.  
Recessed 4 mm banana jacks  
for voltage accepts current probes  
with male BNC plugs.



Simple Logger® II L642  
Double miniature thermocouple  
connectors



All Simple Logger® II models  
Mini USB 5-pin connector



Simple Logger® II L404  
One 8-position removable  
screw-type terminal block

## RECORDING MODES

The Simple Logger® II data logger family offers a choice of three modes for recording data.

The first, and most common in the industry, is called Start/Stop. In this mode the operator selects a storage rate from the 21 predefined values from as fast as 8 per second (1 every 125 ms) to 1 every day. Then a start and stop time is selected. Data is recorded at this rate until the memory is filled or the end recording time/date is reached. The logger then stops recording and goes into a standby mode retaining the recorded data to be downloaded.

The second mode is a variant of Start/Stop called First In First Out (FIFO). Here the operator makes the data storage selection and recording length selection as described above but if the memory fills before the end date and time occurs, the logger will discard the oldest stored data point and add a new one. This process will continue until the end recording date and time is reached.

The third storage mode is called Extended Time Recording (XRM™). This unique recording mechanism provides for continuous recording over a longer period of time without the need for operator selection or adjustments to the set-up. In this mode the operator selects a starting storage rate from the 21 predefined values from as fast as 8 per second (1 every 125 ms) to 1 every day. Recording length is also programmed. The logger will store data at the rate selected until the memory is filled. When the memory is full, the logger will discard every other stored sample beyond the first one, freeing up half the memory for continuous recording. New samples will be stored at half the previous storage rate so that they match the interval for the remaining stored data. This process will be repeated each time the memory fills until the operator stops the recording manually, the end recording date/time is reached or the battery runs down.

## Current probes compatible with the Simple Logger® II series II

### • Current probes with VOLTAGE output



Model E3N



Model MN60



Model PAC12



Model PAC22



Model C160



Model D38N

### • Current probes with CURRENT output



Model MN 11



Model C103

|                | Model  | Measurement range                          | Output signal                       | Phase Shift* | Maximum conductor size                               |                                                                                                                                                                        | Output connection                                                                                                       | Compatibility        |
|----------------|--------|--------------------------------------------|-------------------------------------|--------------|------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------|
|                |        | AC                                         | Voltage                             |              | Ø Cable                                              | Busbar                                                                                                                                                                 |                                                                                                                         |                      |
| VOLTAGE OUTPUT | E3N    | 100 mA to 10 A<br>1 to 100 A               | 100 mV/AAC<br>10 mV/AAC             | < 1.5°       | 11.8 mm (0.46")                                      | —                                                                                                                                                                      | Lead w/BNC                                                                                                              | L101<br>L102<br>L562 |
|                | MN 60  | 0.1 to 24 A<br>0.5 to 240 A                | 100 mV/AAC<br>10 mV/AAC             | < 2.5°       | 19.8 mm (0.78")                                      | —                                                                                                                                                                      | Lead w/BNC                                                                                                              |                      |
|                | PAC 12 | 0.2 to 40 A<br>0.5 to 400 A                | 10 mV/AAC<br>1 mV/AAC               | < 1.5°       | One cable: 30 mm (1.18")<br>Two cable: 24 mm (0.95") | One: 50 x 10 mm (1.96 x 0.4")<br>Two: 31.5 x 10 mm (1.2 x 0.4")<br>Three: 25 x 8 mm (0.98 x 0.31")<br>Four: 25 x 5 mm (0.98 x 0.19")                                   | Lead w/BNC                                                                                                              |                      |
|                | PAC 22 | 0.2 to 100 A<br>0.5 to 1000 A              | 10 mV/AAC<br>1 mV/AAC               | < 1.5°       | One cable: 39 mm (1.5")<br>Two cable: 25 mm (0.98")  | One: 50 x 12.5 mm (1.96 x 0.49")<br>Two: 50 x 5 mm (1.96 x 0.19")<br>or 31.5 x 10 mm (1.2 x 0.4")<br>Three: 25 x 8 mm (0.98 x 0.31")<br>Four: 25 x 5 mm (0.98 x 0.19") | Lead w/BNC                                                                                                              |                      |
|                | C160   | 0.1 to 10 A<br>0.1 to 100 A<br>1 to 1000 A | 100 mV/AAC<br>10 mV/AAC<br>1 mV/AAC | < 1°         | 52 mm (2.05")                                        | One: 50 x 5 mm (1.96 x 0.19")<br>Four: 30 x 5 mm (1.18 x 0.19")                                                                                                        | Lead w/BNC                                                                                                              |                      |
|                | D38N   | 1 to 30 A<br>1 to 300 A<br>1 to 3000 A     | 10 mV/AAC<br>1 mV/AAC<br>0.1 mV/AAC | < 1°         | 64 mm (2.52")                                        | Five: 5 x 125 mm (0.19 x 4.92")<br>Three: 10 x 100 mm (0.4 x 4")                                                                                                       | Lead w/BNC                                                                                                              |                      |
| CURRENT OUTPUT | MN11   | 0.5 to 240 A                               | 1 mA/AAC                            | < 2.5°       | 19.8 mm (0.78")                                      | —                                                                                                                                                                      | Wire cable with reinforced or double insulation, length 1.5 m, terminated by 2 elbowed male banana safety plugs, Ø 4 mm | L111                 |
|                | C103   | 0.1 to 1200 A                              | 1 mA/AAC                            | < 0.5°       | 52 mm (2.05")                                        | One: 50 x 5 mm (1.96 x 0.19")<br>Four: 30 x 5 mm (1.18 x 0.19")                                                                                                        | Wire cable with reinforced or double insulation, length 1.5 m, terminated by 2 elbowed male banana safety plugs, Ø 4 mm |                      |

\*Phase shift indicated at maximum rating

# REFERENCES



## LOGGERS

| DESIGNATION                                                                             | REF. TO ORDER |
|-----------------------------------------------------------------------------------------|---------------|
| Simple Logger® II model CL601 (single channel, TRMS clamp, 600 Aac)                     | P01157010     |
| Simple Logger® II model L101 (single channel, TRMS, 0 to 1 V <sub>AC</sub> )            | P01157020     |
| Simple Logger® II model L102 (2 channels, TRMS, 0 to 1 V <sub>AC</sub> )                | P01157030     |
| Simple Logger® II model L111 (single channel, TRMS, 0 to 1 A <sub>AC</sub> )            | P01157080     |
| Simple Logger® II model ML912 (2 channels, TRMS, 0.5 to 1000 A <sub>AC</sub> )          | P01157130     |
| Simple Logger® II model L261 (single channel, TRMS, 600 V <sub>AC/DC</sub> )            | P01157040     |
| Simple Logger® II model L562 (TRMS voltage and current)                                 | P01157060     |
| Simple Logger® II model L322 (current from 4 to 20 mA <sub>DC</sub> )                   | P01157090     |
| Simple Logger® II model L432 (2 channels, DC voltages ± 100 mV/1 V/10 V <sub>DC</sub> ) | P01157070     |
| Simple Logger® II model L481 (voltage ±850 V <sub>DC</sub> )                            | P01157110     |
| Simple Logger® II model L642 (2 channels - temperature)                                 | P01157050     |
| Simple Logger® II Model L702 (temperature, relative humidity)                           | P01157130     |
| Simple Logger® II model L404 (4 channels, up to 50,000 measurements)                    | P01157100     |

## CURRENT PROBES

| DESIGNATION                                                                                                                                                                     | REF. TO ORDER |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| AC/DC current probe model E3N (10 A – 100 mV/A, 100 A – 10 mV/A, BNC)                                                                                                           | P01120043A    |
| AC current probe model MN 60 (24 A – 100 mV/A, 240 A – 10 mV/A, BNC)                                                                                                            | P01120409     |
| AC current probe model PAC12 (60 A – 10 mV/A, 600 A – 1 mV/A, BNC)                                                                                                              | P01120072     |
| AC current probe model PAC22 (150 A – 10 mV/A, 1,500 A – 1 mV/A, BNC)                                                                                                           | P01120073     |
| AC current probe model C160 (10 A – 100 mV <sub>AC</sub> /A <sub>AC</sub> , 100 A – 10 mV <sub>AC</sub> /A <sub>AC</sub> , 1,000 A – 1 mV <sub>AC</sub> /A <sub>AC</sub> , BNC) | P01120308     |
| AC Current probe model D38N (30 A – 10 mV <sub>AC</sub> /A <sub>AC</sub> , 300 A – 1 mV <sub>AC</sub> /A <sub>AC</sub> , 3,000 A – 0.1 mV <sub>AC</sub> /A <sub>AC</sub> , BNC) | P01120057A    |
| AC Current probe model MN11 (240 A - 1 mA <sub>AC</sub> /A <sub>AC</sub> )                                                                                                      | P01120404     |
| AC Current probe model C103 (1000 A - 1 mA <sub>AC</sub> /A <sub>AC</sub> )                                                                                                     | P01120303     |

## ACCESSORIES

| DESIGNATION                                                                       | REF. TO ORDER |
|-----------------------------------------------------------------------------------|---------------|
| Standard PVC leads - straight male 4 mm connectors - 15 A / 1.5 m - 1 red/1 black | P01295288Z    |
| 15 A crocodile clips - 1 red/1 black                                              | P01295457Z    |
| Shoulder bag with strap                                                           | P06239502     |
| USB lead, 2 m, type A to mini-B, 5 pins                                           | contact us    |
| Mains adapter for E3N clamp                                                       | P01101965     |
| Banana/female BNC adapter                                                         | P01101846     |
| SK6 flexible K thermocouple sensor                                                | P03652906     |



Shoulder bag  
with strap



Standard PVC leads  
600 V CAT IV / 1.000 V CAT III.



Crocodile clips  
1000 V CAT IV



Banana (female)  
- BNC (male) adapter

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