

#### SIMPLE LOGGER' II

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



- 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 Loggers AC Current AC Voltage DC Current DC Voltage Temperature Relative humidity





# DATA LOGGING MADE SIMPLE... Simple Logger' II



L562 monitoring voltage and current in a load centre.

The Simple Logger<sup>®</sup> 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<sup>™</sup>) 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<sup>®</sup> 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<sup>®</sup>.

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

- DataView<sup>®</sup> 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<sup>®</sup> 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.

Enregistrement Échelles Alarmes				
Corriguation de l'enregistrement Cadence : ims Uate de départ : 07/05/2009 Uate de fin : 10/05/2009 U Date de fin : 10/05/2009 U Départ immédiat Mode d'enregistrement C Démarer/Anéter C FIFD C XRM Constitutation de la menure	Durée enregistrement : 72 h Heure de départ : 13.55 Heure de fin : 13.55 Initialiser la date fode de démarrage Normal Synchrone	Mémoire Total 5:12      Sila      Sila	*	
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	Pour Takle, appuyte sur F1 Pour Takle, appuyte sur F1 Resider			

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



FEATURES

DataView<sup>®</sup> is included

models.

- 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<sup>®</sup> 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.

Vole Fonction 1 V1 (ENREG)	Désactivée     Désactivée     Désactivée     Désactivée     Cendessus du seul haut     Cendessus du seul bas     Cendessus     Hos des ceuis     Indus des ceuis     Seuit haut:     250     Vrms

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<sup>•</sup> II TRMS Clamp-on current model CL601



Model CL601

# **SPECIFICATIONS**

MODEL	CL601	
ELECTRICAL SPECIFICATIONS		
Channels	1	
Input connection	Split CT – AC Current	
Range de courant	0 to 600 Aac	
Resolution	0.1 A	
Accuracy (50/60 Hz)	0 to 5 A: unspecified 5 to 50 A: ±(1 % R + 1 A) 50 to 400 A: ±(1 % R + 0.5 A) 400 to 600 A: ±(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). 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 SPECIFICATION	S	
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"), 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)	
ENVIRONMENTAL SPECIFICAT	TIONS	
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<sup>®</sup> software for data storage, real-time display, analysis and report generation
- USB cable included

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



Easily log current in power panels.

# Simple Logger<sup>•</sup> II TRMS Current model L101





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

Model L101

# **SPECIFICATIONS**

MODEL	L101	
ELECTRICAL SPECIFICATION	IS	
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 10 to 50 mV: ±(0.5 % R + 1 mV) 50 to 1 000 mV: ±(0.5 % R + 0.5 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). 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 SPECIFICATIO	NS	
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)	
ENVIRONMENTAL SPECIFIC	ATIONS	
Operating temperature	-10 to +50 °C (14 to 122 °F)	
Storage temperature	-20 to +60 °C (-4 to +140 °F)	

#### 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<sup>®</sup> software for data storage, real-time waveform display, analysis and report generation
- Isolated USB communication
- USB cable included

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



L101 recording branch circuit current.

# **SIMPLE LOGGER' II** TRMS Current model L102





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

Model L102

# **SPECIFICATIONS**

MODEL	L102	
ELECTRICAL SPECIFICATION	S	
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 10 to 50 mV: ±(0.5 % R + 1 mV) 50 to 1000 mV: ±(0.5 % R + 0.5 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). 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 SPECIFICATION	NS	
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)	
ENVIRONMENTAL SPECIFICATIONS		
Operating temperature	-10 to +50 °C (14 to 122 °F)	
Storage temperature	-20 to +60 °C (-4 to +140 °F)	

### 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<sup>®</sup> software for data storage, real-time waveform display, analysis and report generation
- ► Isolated USB communication
- USB cable included

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



L102 recording two phases of primary feed.

# Simple Logger<sup>•</sup> II TRMS Current 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.

Model L111

# **SPECIFICATIONS**

MODEL	L111	
ELECTRICAL SPECIFICATIONS		
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 10 to 50 mA: ±(0.5 % R + 1 mA) 50 to 1000 mA: ±(0.5 % R + 0.5 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 <sup>™</sup> )	
Recording length	15 minutes to 8 weeks, programmable using DataView®	
Memory	240,000 measurement (512 kB) 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	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)	
ENVIRONMENTAL SPECIFICATIONS		
Operating temperature	-10 to +50 °C (14 to 122 °F)	
Storage temperature	-20 to +60 °C (-4 to +140 °F)	

#### **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<sup>®</sup> software for data storage, real-time waveform display, analysis and report generation
- USB cable included

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

# Simple Logger<sup>•</sup> II TRMS Current model ML912



# **SPECIFICATIONS**

MODEL	ML912	
ELECTRICAL SPECIFICATION	IS	
Channels	2	
Input connection	Integral Mini <i>FLEX</i> ™ fle	xible AC current sensors
Range	0.5 to 100 Aac	5 to 1000 Aac
Accuracy	0 to 1 A: unspecified 1 to 100 A: ±(1 % R + 0.5 A)	0 to 5 A: unspecified 5 to 1000 A: ±(1 % R + 1 A)
Resolution	0.	1A
Sample rate	64 samp	oles/cycle
Storage rate	Programmable fro	m 125 ms to 1 day
Storage modes	Start/Stop, FIFO and Extend	ed Recording Mode (XRM™)
Recording length	15 minutes to 8 weeks, pro	grammable using DataView®
Memory	240,000 measurement (512 kB) 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 SPECIFIC	ATIONS	
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-MAGNE	TIC COMPATIBILITY	
Safety rating	IEC 61010-1 ; 600 V CAT III ; 3	00 V CAT IV ; Pollution degree 2
Protection degree	IP40	

The Simple Logger<sup>®</sup> II Model ML912 is a twochannel 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<sup>®</sup>). The Simple Logger<sup>®</sup> 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<sup>™</sup> 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

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

# Simple Logger<sup>•</sup> II TRMS 600 Vac/dc model L261





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

#### Model L261

MODEL	L261	
ELECTRICAL SPECIFICATION	vs	
Channels	1	
Input connection	2 recessed safety banana jacks	
Voltage range	0 to 600 Vac/bc	
Resolution	0.1 V	
Accuracy (50/60 Hz)	0 to 5 V: unspecified 5 to 50 V: ±(0.5 % R + 1 V) 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	Start/Stop, FIFO and Extended Recording Mode (XRM <sup>™</sup> )	
Recording length	15 minutes to 8 weeks, programmable using DataView®	
Memory	240,000 measurement (512 kB) 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 SPECIFICATIO	INS	
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)	
ENVIRONMENTAL SPECIFICATIONS		
Operating temperature	-10 °C to +50 °C (14 to 122 °F)	
Storage temperature	-20 °C to +60 °C (-4 to +140 °F)	

#### FEATURES

- TRMS voltage recording up to 600 V AC/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 nonvolatile memory
- Powered by standard alkaline batteries
- Lightweight, compact, fits anywhere
- 5 LED indicators display logger status quickly and clearly
- Includes FREE DataView<sup>®</sup> 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 includes set of two colour-coded 1.5 m (5 ft) voltage leads, colour-coded crocodile clips (red/black).

# Simple Logger<sup>•</sup> 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

# **SPECIFICATIONS**

MODEL	L562		
ELECTRICAL SPECIFICATIONS			
Channels	2		
Connection	Current channel	Voltage channel	
Input connection	BNC	2 recessed banana jacks	
Voltage range	0 to 1 Vac*	0 to 600 Vac	
Resolution	0.1 mA	0.1 V	
Accuracy (50/60 Hz)	0 to 10 mV: unspecified 10 to 50 mV: ±(0.5 % R + 1 mV) 50 to 1000 mV: ±(0.5 % R + 0.5 mV)	0 to 5 V: unspecified 5 to 50 V: ±(0.5 % R + 1 V) 50 to 600 V: ±(0.5 % R + 0.5 V)	
Sample rate	64 samples	/cycle	
Storage rate	Programmable from <sup>-</sup>	125 ms to 1 day	
Storage modes	Stop when full, FIFO and Extende	d Recording Mode (XRM™)	
Recording length	15 minutes to 8 weeks, programmable using DataView®		
Memory	240,000 measurement (512 kB) 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)		

# **FEATURES**

- 2 input channels
- ► Voltage: 0 to 600 VAC 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<sup>®</sup> 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 safetyrated current probe attached

#### **APPLICATIONS**

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



\*For current probes with voltage output.

# Simple Logger<sup>•</sup> II 4 to 20 mApc Current model L322





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

Model L322

# **SPECIFICATIONS**

MODEL	L322	
ELECTRICAL SPECIFICATION	IS	
Channels	2	
Input connection	One 4 position removable screw-type terminal block	
Measurement range	-20 mApc to +20 mApc	
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 <sup>™</sup> )	
Recording length	15 minutes to 8 weeks, programmable using DataView®	
Memory	240,000 measurement (512 kB). 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 SPECIFICATIO	NS	
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)	
ENVIRONMENTAL SPECIFICATIONS		
Operating temperature	-10 to +50 °C (14 to 122 °F)	
Storage temperature	-20 to +60 °C (-4 to +140 °F)	

#### **FEATURES**

- > 2 independent input channels
- ▶ -20 to +20 mADC
- 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<sup>®</sup> software for data storage, real-time display, analysis and report generation
- USB cable included
- ► 50 V CAT III

- 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<sup>•</sup> II DC Voltage model L432





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

### **SPECIFICATIONS**

MODEL	L432	
ELECTRICAL SPECIFICATIONS		
Channels	2	
Input connection	One 4-position removable screw-type terminal block	
Measurement level (3 ranges/channel)	Range n° 1: -100 mV to +100 mVbc Range n° 2: -1 V to +1 Vbc Range n° 3: -10 V to +10 Vbc	
Resolution	Range n° 1: 0.1 mV Range n° 2: 1 mV Range n° 3: 10 mV	
Accuracy (50/60 Hz)	Range n° 1: ±(0.5 % R + 1 mV) Range n° 2: ±(0.5 % R + 1 mV) Range n° 3: ±(0.5 % R + 10 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). 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 (5.45 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)	
ENVIRONMENTAL SPECIFICATIO	DNS	
Operating temperature	-10 to +50 °C (14 to 122 °F)	
Storage temperature	-20 to +60 °C (-4 to +140 °F)	

### FEATURES

- 2 independent input channels
- User-selectable ranges of ± 100 mV;
   ± 1 V and ± 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<sup>®</sup> software for data storage, real-time display, analysis and report generation
- ► USB cable included
- ► 50 V CAT III

#### **APPLICATIONS**

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



L432 recording two DC voltage supplies.

# Simple Logger<sup>•</sup> II 850 Vpc 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).

#### FEATURES

- ▶ Bipolar DC voltage measurement up to ±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<sup>®</sup> 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

Model L481

# **SPECIFICATIONS**

MODEL	L481	
ELECTRICAL SPECIFICATIONS		
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 5 to 50 V: ±(0.5 % R +1 V) – 50 to 850 V: ±(0.5 % R +0.5 V)	
Maximum input voltage	±1020 Vpc	
Input impedance	> 150 kΩ	
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®	
Memory	240,000 measurement (512 kB). 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	
MECHANICAL SPECIFICATIONS	3	
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)	
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-MAGNETI	C COMPATIBILITY	
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<sup>•</sup> II Thermocouple 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.

Model L642

## **SPECIFICATIONS**

MODEL	L642		
ELECTRICAL SPECIFICATIONS			
Channels	2		
Input connection	2 miniature thermocouple connectors		
Measurement level	°C (°F)		
J	-210 to +1200 (-346 to +2192)		
К	-200 to +1372 (-328 to +2501)		
т	-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. 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 $0.2 \% + 0.6^{\circ}$ to $1^{\circ}$ 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). 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	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)		
ENVIRONMENTAL SPECIFICATIONS			
Operating temperature	-10 to +50 °C (14 to 122 °F)		
Storage temperature	-20 to +60 °C (-4 to +140 °F)		

# **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 nonvolatile memory
- Powered by standard Alkaline batteries
- Lightweight, compact, fits anywhere
- 5 LED indicators quickly and clearly display logger status
- Includes FREE DataView<sup>®</sup> software for data storage, real-time display, analysis and report generation
- USB cable included
- ▶ 50 V CAT III

#### **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<sup>•</sup> 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.

#### 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<sup>®</sup> 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

Model L702

# **SPECIFICATIONS**

MODEL	L702			
ELECTRICAL SPECIFICATIO	NS			
Channels	2			
Input	Temperature sensor Humidity sens			
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). 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 SPECIFIC	ATIONS			
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-MAGN	ETIC 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)			

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

# SIMPLE LOGGER<sup>•</sup> II 4-channel event 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 VDC 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<sup>®</sup> 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

#### Model L404

# **SPECIFICATIONS**

	1404			
MODEL	L404			
ELECTRICAL				
Channels	4			
Input connection	One 8-position removable screw-type terminal block			
Input level	Contact closure, 0 to 5 VDc			
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). 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 SPECIFICATI	ONS			
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)			
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-MAGN	IETIC COMPATIBILITY			
Safety rating	IEC 61010-1 ; 50 V CAT III ; Pollution degree 2			
Protection degree	IP40			

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

# **INPUTS & RECORDING**

# **INPUT CONNECTIONS**



Simple Logger<sup>®</sup> II L101 Isolated BNC connector accepts current probes with male BNC plugs



Simple Logger<sup>®</sup> II L261 Recessed safety 4 mm banana jacks



Simple Logger<sup>®</sup> II L642 Double miniature thermocouple connectors

## **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 date 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<sup>™</sup>). 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.



Simple Logger<sup>®</sup> II L102 Dual isolated BNC connectors accepts current probes with male BNC plugs



Simple Logger<sup>®</sup> II L322 & L432 4-pin removable terminal strip



All Simple Logger<sup>®</sup> II models Mini USB 5-pin connector



Simple Logger<sup>®</sup> II L111 Recessed 4 mm banana jacks & fused input



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



Simple Logger<sup>®</sup> II L404 One 8-position removable screw-type terminal block

# ACCESSORIES

#### 

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

• Current probes with VOLTAGE output





• Current probes with CURRENT output



		Measurement range	Output signal	I Phase Shift* -	Maximum conductor size		Output	Compatibility
	Model	AC	Voltage		Ø Cable	Busbar	connection	
	E3N	100 mA to 10 A 1 to 100 A	100 mV/Aac 10 mV/Aac	< 1.5°	11.8 mm (0.46")	-	Lead w/BNC	
	MN 60	0.1 to 24 A 0.5 to 240 A	100 mV/Aac 10 mV/Aac	< 2.5°	19.8 mm (0.78")	-	Lead w/BNC	
υT	PAC 12	0.2 to 40 A 0.5 to 400 A	10 mV/Aac 1 mV/Aac	< 1.5 °	One cable: 30 mm (1.18") Two cable: 24 mm (0.95")	One: 50 x 10 mm (1.96 x 0.4") Two: 31.5 x 10 mm (1.2 x 0.4") Three: 25 x 8 mm (0.98 x 0.31") Four: 25 x 5 mm (0.98 x 0.19")	Lead w/BNC	
VOLTAGE OUTP	PAC 22	0.2 to 100 A 0.5 to 1000 A	10 mV/Aac 1 mV/Aac	< 1.5 °	One cable: 39 mm (1.5") Two cable: 25 mm (0.98")	One: 50 x 12.5 mm (1.96 x 49.2") Two: 50 x 5 mm (1.96 x 0.19") or 31.5 x 10 mm (1.2 x 0.4") Three: 25 x 8 mm (0.98 x 0.31") Four: 25 x 5 mm (0.98 x 0.19")	Lead w/BNC	L101 L102 L562
	C160	0.1 to 10A 0.1 to 100A 1 to 1000A	100 mV/Aac 10 mV/Aac 1 mV/Aac	< 1°	52 mm (2.05")	One: 50 x 5 mm (1.96 x 0.19") Four: 30 x 5 mm (1.18 x 0.19")	Lead w/BNC	
	D38N	1 to 30 A 1 to 300 A 1 to 3000 A	10 mV/Aac 1 mV/Aac 0.1 mV/Aac	< 1°	64 mm (2.52")	Five: 5 x 125 mm (0.19 x 4.92") 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	
	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") 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	L111

\*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 Vac)	P01157020
Simple Logger <sup>®</sup> II model L102 (2 channels, TRMS, 0 to 1 Vac)	P01157030
Simple Logger <sup>®</sup> II model L111 (single channel, TRMS, 0 to 1 AAc)	P01157080
Simple Logger <sup>®</sup> II model ML912 (2 channels, TRMS, 0.5 to 1000 Aac)	P01157130
Simple Logger® II model L261 (single channel, TRMS, 600 Vac/bc)	P01157040
Simple Logger® II model L562 (TRMS voltage and current)	P01157060
Simple Logger® II model L322 (current from 4 to 20 mApc)	P01157090
Simple Logger® II model L432 (2 channels, DC voltages ± 100 mV/1 V/10 Vpc)	P01157070
Simple Logger® II model L481 (voltage ±850 Vpc)	P01157110
Simple Logger II model L642 (2 channels - temperature)	P01157050
Simple Logger® II Model L702 (temperature, relative humidity)	P01157130
Simple Logger <sup>®</sup> 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 mVac/Aac, 100 A - 10 mVac/Aac, 1.000 A - 1 mVac/Aac, BNC)	P01120308
AC Current probe model D38N (30 A - 10 mVac/Aac, 300 A - 1 mVac/Aac, 3000 A - 0.1 mVac/Aac, BNC)	P01120057A
AC Current probe model MN11 (240 A - 1 mAac/Aac)	P01120404
AC Current probe model C103 (1000 A - 1 mAac/Aac)	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 CONTROL STATU	contact us
Mains adapter for E3N clamp	P01101965
Banana/female BNC adapter	P01101846
SK6 flexible K thermocouple sensor	P03652906



Crocodile clips 1000 V CAT IV

SUISSE

Chauvin Arnoux AG

Moosacherstrasse 15

Tél: +41 4 4 727 75 55

Fax: +41 44 727 75 56

info@chauvin-arnoux.ch

www.chauvin-arnoux.ch

8804 AU / ZH

Shoulder bag

with strap

Standard PVC leads

600 V CAT IV / 1.000 V CAT III.

Banana (female) BNC (male) adapter Your distributor

MOYEN-ORIENT **Chauvin Arnoux Middle East** 

P.O. BOX 60-154 1241 2020 JAL EL DIB (Beyrouth) - LIBAN Tél: +961 1 890 425 Fax: +961 1 890 424 camie@chauvin-arnoux.com www.chauvin-arnoux.com



FRANCE

Chauvin Arnoux 190, rue Championnet 75876 PARIS Cedex 18 Tél: +33 1 44 85 44 85 Fax: +33 1 46 27 95 59 info@chauvin-arnoux.fr www.chauvin-arnoux.fr