

ELECTROCORDER

Model: **AL-2VA**

Single Phase Energy 'Appliance Logger'

1Ø

1V

1A

300V

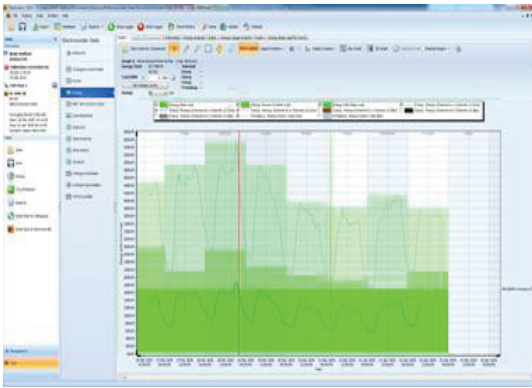
IP43

One voltage channel 300Vac; One current channel 16Aac

Constant Sampling technique, misses very little data

Complete with Electrosoft energy analysis software

Available as IP65/NEMA 12/4



- Allows users to record energy consumption up to 300V, 16A.
- One Voltage input lead, one output lead.
- Internal current sensor.
- Records V_{Avg} , V_{Max} & V_{Min} and I_{Avg} , I_{Max} & I_{Min} .
- Data stored in non-volatile memory.
- Recorded data is uploaded to a PC for analysis with Electrosoft.
- Free software, Electrosoft.
- Kit includes Logger, Carry Case, Electrosoft software, voltage leads & USB lead.
- Memory capacity of 32,000 true RMS voltage values per phase (10 bit), up to 300 days continuous recording.
- Selectable averaging period to suit each situation, accurate to $\pm 2\%$ of range.
- Order code:-
 - AL-2VA-50-UK-KIT (50Hz, UK Plug)
 - AL-2VA-50-EU-KIT (50Hz, Schuko Plug)
 - AL-2VA-50-ANZ-KIT (50Hz, Aus, NZ Plug)
 - AL-2VA-60-NA-KIT (60Hz, Nema Plug)

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The AL-2VA is designed to allow staff to monitor and record over time the single phase voltage and current being supplied to a normal 'household' appliance.

Setting up the ElectroCorder AL-2VA is easy, suitable for semi-technical staff. Using the supplied (free) Windows software, Electrosoft; the appliance's details are input via the software to the logger's memory and stored. Electrosoft will then print documentation allowing users to save the information. All data is also stored in a database within the program of dispatches and returns, which tracks the dates and times of setup and the whereabouts of all loggers.

Why is the ElectroCorder better than other similarly priced competitors? The ElectroCorder range use a constant sampling technique, unlike the single reading of competitors. When the loggers start to record, they sample every channel 16 times per cycle, a cycle is 16ms at 60Hz and 20ms at 50Hz. At the end of each averaging period, 3 quantities are saved for each channel, the True RMS average, the Max, which is the highest cycle value during the period and the Min, lowest cycle value. This means that it will record all the peaks and troughs which are one cycle or longer.

When recording the ElectroCorder will store the average voltage and current over the period chosen (1 sec to 60 min), it will also record the highest (max) & lowest (min) cycle values during that period.

The voltage and current levels are stored with dates and times. With the backup battery, the ElectroCorder can continue to record for months. On the logger, recording is signified by a flashing green light. A red light advises users that the unit has completed recording.

When the logger has finished logging, the stored data is uploaded to a PC via the supplied USB cable. Using Electrosoft, the recorded voltage and current levels, dates & times can be viewed in both tabular and graphical form, exported to a spreadsheet or saved to file.

Graphs can be printed showing the recorded levels and the allowable tolerance bands. Electrosoft also provides an internal database which effectively manages the distribution of multiple loggers.

This model is specifically designed to monitor one voltage channel and one current. Allowing you to monitor the main voltage supply and the load current, therefore enabling staff to determine the energy consumption of various appliances or items of equipment.

There are many models of ElectroCorder, to suit many logging situations and user's requirements.

TECHNICAL SPECIFICATIONS (subject to change without notice)

Measurement range (Vrms)	10Vac to 300Vrms
Maximum channel input voltage	300Vrms.
Voltage Input	One voltage input via 13A plug
Voltage measurement accuracy	±2% of reading (10 bit) within 90Vac - 300Vrms otherwise ±3%. (50/60Hz ±2%)
V_{min} , V_{max} , I_{max} & I_{min} time resolution	Always one cycle (50/60 Hz), independent of selected averaging period.
Current measurement range (Irms)	0.1A - 13A.
Current Input	Internal sensor.
Current measurement accuracy	2% of range, typically
Sampling frequency (all channels)	16 samples per cycle 800Hz @ 50Hz or 960Hz @ 60Hz
Data recorded	Average voltage & current, max & min voltage & current values during the averaging period
Memory capacity	192kB able to record 32,000 Voltage & Current levels per channel.
Memory type	Non-volatile EEPROM
Memory - averaging period & duration	1 sec to 60 mins (1 sec gives 2 hrs logging, 60 min gives 300 days logging)
Real-time clock accuracy	Greater than 0.001%
Lead Lengths	Metric 1 metre; Imperial/English 3' 3" (3 feet, 3 inches)
Battery life (while plugged in)	Unlimited - While unplugged battery life is typically 9,000 hours/1 year.
Battery Type	Unit contains three 9V Alkaline battery (E-Block, PP3, 1604A).
Communications Interface type	USB, baud of 19,200, optically isolated to 5,2kV.
Environmental (temp & sealing)	-10C to +40C or +14°F to +104°F
Dimensions & Weight	Metric 145 x 90 x 45mm & 500g Imperial/English - 5.5" x 3.5" x 3" & 1lb
Standards	Recording - EN50160: 1994 - CAT II, maximum input voltage 300Vac rms.

WARRANTY & CALIBRATION - All Acksen Ltd products carry a minimum of a one year's warranty covering manufacturing defects and component failures. Each unit is individually calibrated during testing.

CONFORMITY - Emissions EN55022:1994B, (EN50081-1:1992). Immunity EN50082-2:1995, following the provisions of EMC directive 89/336/EEC. Recording std EN50160:1994. LVD 72/23/EEC with respect to EN60065. (IEC-61010). All models certified (light industrial, 3V/m).

ORDERING - AL-2VA-**-xx-KIT - inc. software, USB lead, input leads, 13A internal sensor & user guide.

** is 50 or 60 Hz, xx is ANZ, EU, NA or ANZ depending on plug and socket type.

	Description	ENVIRONMENTAL SEALING	ORDER CODE
1	KIT inc. items 2-4, AL-2VA-**-xx-KIT (** 50 or 60 for 50/60Hz)	Protected or indoor only	AL-2VA-**-xx-KIT
2	Replacement - Logger Unit -** (50 or 60 for 50Hz or 60Hz)	Protected or indoor only	AL-2VA-**-xx-LOG
3	Replacement - USB Lead	Protected or indoor only	EC-USBL-01
4	Replacement - Batteries (3 per unit)	Internal to logger	AL-2VA-BAT
	xx = UK, EU, ANZ or NA, for various plug standards.	IP65 / NEMA 12/4	EC-ROG-001

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