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Electrocorder Model: LS-1V



Single phase 300Vac (Live/Hot to Neutral)

Complete with Electrosoft energy analysis software

Sealed to IP65/NEMA 12/4 as standard





Records the date and times of loss and regain of mains voltage supply e.g. loss can be user set as voltages below 100Vac

Data stored in non-volatile memory

Memory capacity of 64k can record up to 16,000 interruptions

Selectable averaging period from 1 second to 60 minutes

Accurate to $\pm 1\%$ of reading

Kit includes data logger, voltage lead, USB lead, Electrosoft software and carry case



The advantage of the Electrocorder products over most others is that our Data Loggers <u>constantly sample information</u> (recording the Minimum, Maximum and Average reading) over the set period, many other products only take 'snap shots' of what is going on and can miss 99.9% of the data that is critical to your analysis.

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Powerfully Measured

Version 3.01.02.14

The LS-1V is designed to allow electrical engineers cost effectively monitor their network for the loss and regain of supply (interruptions) to their customers; based on loss of mains voltage.

Setting up the Electrocorder LS-1V is easy, suitable for non-technical staff. Using the supplied (free) Windows software, Electrosoft; input the location details for the logging and choose the logging period. The user must input the threshold voltage, which defines the loss of supply, for example on a 230V system, voltages below 175V may be considered as a loss of supply, this can be input via the software. Electrosoft will print the necessary dispatch/ return documentation including user instructions. All data is included in a database of dispatches and returns, allowing you to track location of multiple 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 LS-1V will store the date, time and duration of losses and regains of mains voltage supply.

With the back-up battery, the LS-1V can continue to record for 8 months without mains supply during power cuts or interruptions. While mains voltage is available the battery life is up to 10 years.

The recorded data is uploaded to a PC via the supplied USB lead. Using Electrosoft, the recorded voltage levels, with dates and times that 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. These results may then be discussed with the customer.

On the logger, recording is signified by a flashing green light. A red light advises users that the unit has completed recording.

The LS-1V has a various plugs options available for use in various countries, contact us for more information.

Technical specifications (subject to change without notice)

Measurement range	30Vac to 300Vac
Measurement accuracy	±1% of reading (within 70 - 260Vac); else ±5%
Measurement of voltage	Always one cycle (50/60 Hz), independent of averaging period set
Sampling frequency	32 samples per cycle (1920Hz (60Hz) / 1600Hz (50Hz)
Data recorded	Time in seconds between interruptions and regain of mains voltage supply
Memory capacity	16,000, sixteen thousand interruptions. Memory size of 64kB
Memory type	Non-volatile SEEPROM
Memory endurance	100,000 - 1,000,000 read/write cycles
Real-time clock accuracy	10 ppm; 25 sec. per month or 2.59 mins per 6-months or 5.25 mins per year
Battery life (while plugged in)	10 years while mains powered & battery backup of 7000 hours, 8 months (while unpowered)
Interface type	USB, optically isolated to 5,2kV
Electrosoft software	Windows (2K, ME, NT, Vista, Windows 7); 1024 x 768 min resolution
Environmental (temp & sealing)	-10°C to +55°C, RH 95% non-condensing. Sealed to IP65, NEMA 12/4
Dimensions & weight	Metric 100 x 85 x 65mm & 300g
Recording standard	EN50160: 1994

Determining product order codes:

To specify your Electrocorder select various codes and enter into the boxes in order to create an acurate product code. For example: LS-1V-5H-UK-IP65-KIT.



Warranty & calibration

Acksen Ltd products carry a *Lifetime back to base warranty covering manufacturing defects and component failures. Each unit is individually calibrated during testing. *Refer to website for full terms and conditions.

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).