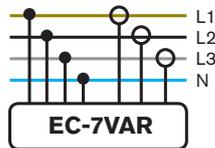


## Electrocorder Model: EC-7VAR



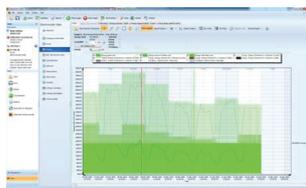
**Three voltage channels  
500Vac**

**Three current channels  
400A, 1kA, 2kA or 3kAac**

**One Power Factor (Cos  
 $\Phi$ ) channel; phase angle  
between L1 and A1**

**Complete with Electrosoft  
energy analysis software**

**Sealed to IP43 as  
standard, available as  
IP65/NEMA 12/4**



Records voltage, current, power factor, power and energy

Records voltage up to 500Vac & loads up to 3kAac,  
model dependent

Data stored in non-volatile memory

Memory capacity of 32,000 (True RMS) values per channel  
(10bit), up to 300 days continuous recording

Selectable averaging period from 2 seconds to 60 minutes

Accuracy:-

Voltage  $\pm 1\%$  of reading

Current to  $\pm 2\%$  of range, typically

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

The advantage of the Electrocorder products over most others is that our Data Loggers constantly sample information (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.

## acksen > Electrorecorder Model: EC-7VAR

The Electrorecorder range is designed to allow electrical engineers cost effectively monitor single and three phase loads. This product will allow voltage, load and reactive power problems to be highlighted quickly for further investigation.

Setting up the Electrorecorder EC-7VAR 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. 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 the location of multiple loggers.

Why is the Electrorecorder better than other similarly priced competitors? The Electrorecorder 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.

The voltage and current levels are stored with dates and times. With the back-up battery, the Electrorecorder can continue to record for months.

The recorded data is uploaded to a PC via the supplied USB cable. Using Electrosoft, the recorded current 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 EC-7VAR is specifically designed to monitor one, two or three current channels, as well as one, two or three voltage channels plus Power Factor. Power Factor recorded is the phase angle between L1 and A1.

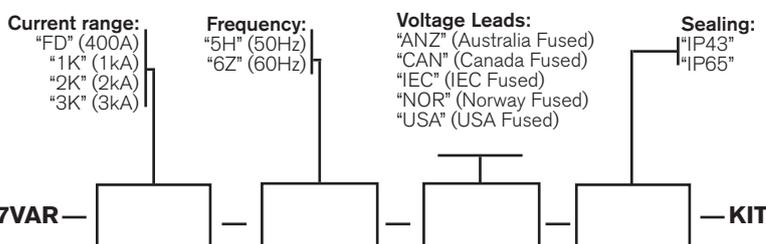
Four models are available. The EC-7VAR-FD has a range of 4 to 400A, EC-7VAR-1K has a range of 10 to 1kA, EC-7VAR-2K has a range of 15 to 2kA, EC-7VAR-3K has a range of 20 to 3kA.

### Technical specifications (subject to change without notice)

Recorded values	$V_{avg}$ , $V_{max}$ and $V_{min}$ on 3 channels and $I_{avg}$ , $I_{max}$ & $I_{min}$ on 3 channels
Voltage measurement range (Vrms)	0Vac to 500Vrms (Ph – Ph) or 0V to 300Vrms (Ph – N)
Measurement accuracy	±1% of reading, ±1 Volt. (10 bit) within 100Vac-450Vrms (ph-ph); else ±3%. (50/60Hz ±2%)
Maximum channel input voltage	500Vrms (Ph – Ph), 350Vrms (Ph – N) or 850Vpeak
Inputs (non-isolated inputs)	Three phase inputs (L1, L2 & L3) & Neutral (N), non-isolated input channels
Input socket types	4mm shrouded 'banana' plugs & sockets, each with insulated crocodile clip
Vmax, Vmin, Imax & Imin time resolution	Always one cycle (50/60 Hz), independent of selected averaging period
Current measurement range (Irms)	FD is 4A – 400A , 1K is 10A – 1kA, 2K is 15A – 2kA, 3K is 20A – 3kA
Current measurement accuracy	±2% of reading, typically (within 10% - 90% of full scale), otherwise 3% of full scale
Current Input socket types (all channels)	Hard-wired through cable glands
Sampling frequency (all channels)	16 samples per cycle 800Hz @ 50Hz or 960Hz @ 60Hz
Data recorded	Average, max & min voltage & current values and Power Factor during the averaging period
Power Factor range and accuracy (measured on L1 and A1)	Accurate to ~3% between lead 0.5 and 0.5 lag; ~6% between 0.5 and 0.3 lead or lag
Memory capacity & type	384kB able to record 32,000 values per channel/phase . Non-volatile SEEPROM
Memory - averaging period & duration	2 sec to 60 mins (2 sec gives 4 hrs logging, 60 min gives up to 300 days logging)
Real-time clock accuracy	Greater than 0.001%
Current sensor dimensions	Lead length 2m/6'6" , sensor length 450mm/18" (Open), sensor diameter 145mm/6" (Closed)
Input voltage lead length	Metric 2 metres Imperial/English 6' 6" (6 feet, 6 inches)
Battery life while logging	Unlimited when connected to voltage
Battery type	Unit contains four 9V Alkaline batteries (E-Block, PP3, 1604A)
Communications interface type	USB, optically isolated to 5,2kV
Environmental (temp & sealing)	-10C to +40C or +14°F to +104°F. Sealed to IP43 (Optional IP65, NEMA 12/4)
Dimensions & weight	Metric 260 x 180 x 190mm & 2kg Imperial/English - 10" x 7" x 8" & 4lb
Standards	Recording - EN50160: 1994 - 1000 CAT III, 600V CAT IV

#### Determining product order codes:

To specify your Electrorecorder select various codes and enter into the boxes in order to create an accurate product code. For example: EC-7VAR-FD-5H-IEC-IP43-KIT.



#### Warranty & calibration

All Acksen Ltd products carry a minimum of a one year's back to base 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).