



specialist in Automatic Voltage Regulators and Stabilisers

Claude Lyons

ESS-A-1 Energy Saving Regulator

POWERSAVE
Energy Saving Systems



Electrical equipment is designed to accept a wide range of input voltages about its nominal design centre. However, if the actual supply is higher than necessary the equipment will consume more power than needed and in many cases, equipment life is reduced, effectively increasing the cost of ownership. A 230V linear appliance operated at 240V will consume approximately 9% more energy than necessary.

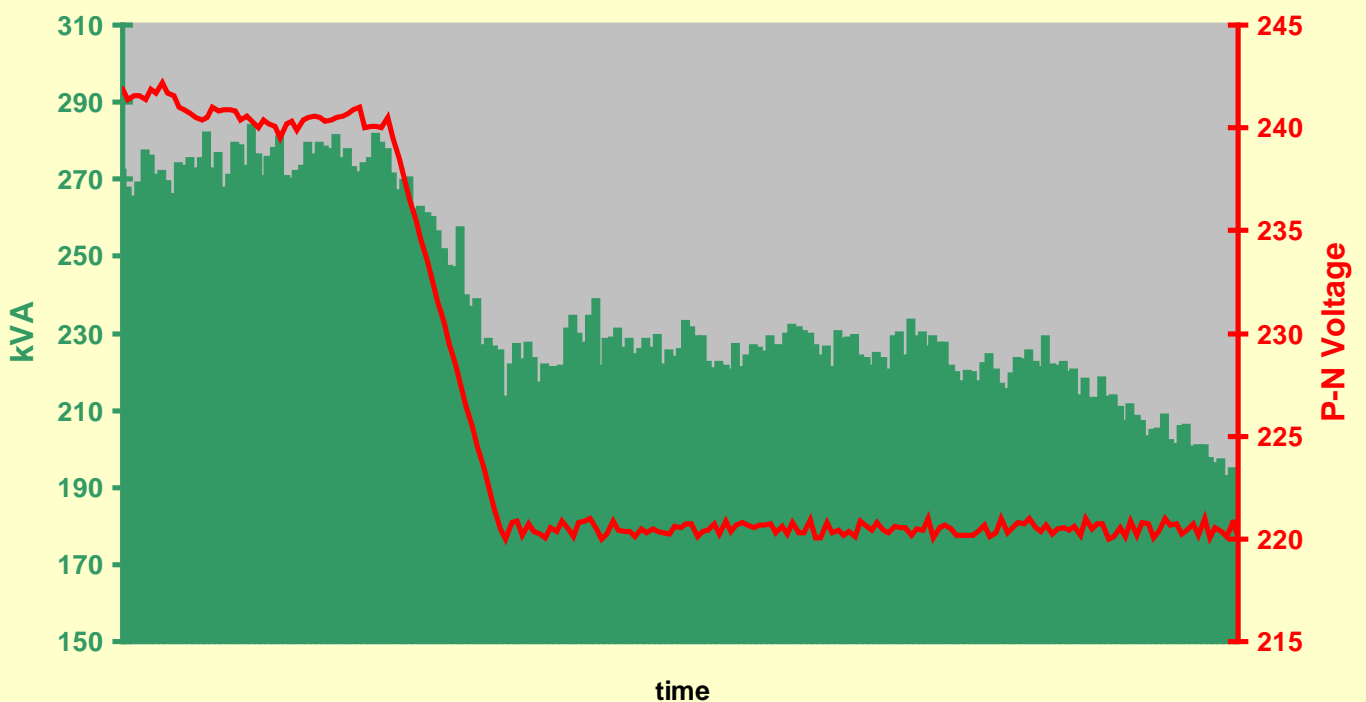
A voltage reduction within statutory limits can produce up to 25% (subject to loads) reduction in energy consumption and in addition will extend the life of many types of electrical apparatus.

The reduction of the supply voltage to a controlled (site adjustable) level, allowing equipment to operate at optimum efficiency thus lowering power consumption, overall running and ownership costs.

The **PowerSave™** has obvious advantages over fixed ratio transformers, by providing additional energy savings through greater voltage reduction and more importantly, a regulated output voltage.

Increasing demand and the deterioration of the utilities infrastructure, a stable supply voltage cannot be guaranteed. Utilities price increases are forecasted for the foreseeable future, both factors have instigated increasing demand for **PowerSave™** - a solution that accommodates future deterioration by ensuring a safe and regulated supply voltage, achieving exceptional savings and reduced carbon emissions (each kWh of electrical energy saved is equivalent to 0.43kg CO₂).

Energy Saving by voltage reduction



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Specification for single phase ESS-A-1

Correction range	0 to +12.5% of output setting			
Output Voltage	Site adjustable 200-240V (Factory set at 220V unless specified)			
Output Accuracy	± 1%			
Output setting	Linear (on-line)			
Maximum Input Voltage	254V (others upon request)			
Power Rating (kVA)	See below. *Ratings are given at 240V (before energy saving)			
Supply Frequency	47-65Hz			
Waveform distortion	None			
Efficiency	>99% at full load			
Effect on PF	Reducing the voltage levels can in some case improve PF			
Surge Rating	1000% for 2 seconds, 300% for 2 minutes			
Transient suppression	Standard 800V peak (other options upon request)			
Operational Temperature	-5°C to + 45°C			
Operational Humidity	95% non-condensing			
Enclosure	**Wall mounting and floor standing IP21 enclosures			
Warranty	3 Years			
PowerSave™ models	Maximum Output Current	*kVA	Approx Weight	Approx Dimensions H x W x D (mm)
ESS-A-1-32	32 Amps	7.7kVA	35kg	600 x 380 x 210**
ESS-A-1-63	63 Amps	15kVA	65kg	500 x 500 x 300**
ESS-A-1-100	100 Amps	24kVA	67kg	500 x 500 x 300**
ESS-A-1-200	200 Amps	48kVA	98kg	370 x 370 x 660
ESS-A-1-400	400 Amps	96kVA	160kg	925 x 444 x 870
ESS-A-1-600	600 Amps	144kVA	215kg	925 x 444 x 870
ESS-A-1-800	800 Amps	192kVA	310kg	1300 x 500 x 1050
ESS-A-1-1000	1000 Amps	240kVA	470kg	1665 x 500 x 1050
ESS-A-1-1200	1200 Amps	288kVA	515kg	1850 x 500 x 1050
ESS-A-1-1400	1400 Amps	336kVA	600kg	2160 x 500 x 1050
ESS-A-1-1600	1600 Amps	384kVA	675kg	2160 x 500 x 1050
ESS-A-1-1800	1800 Amps	432kVA	850kg	2400 x 500 x 1050
ESS-A-1-2000	2000 Amps	480kVA	925kg	2600 x 500 x 1050

Additional Energy Saving Products :

PowerSave™ : three-phase units also with ratings up to 2000 Amps per phase. EST range of Energy Saving Transformers ratings up to 3000 Amps per phase.

Harmonic reduction transformers (HRT) : Removal of harmful 3rd harmonics from the neutral cable resulting in an overall energy saving.

E&OE issue ESS-A-1/2008/a Due to continuous improvements Claude Lyons reserve the right to change specifications without notice

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