



specialist in Automatic Voltage Regulators and Stabilisers

Claude Lyons

ESS-A-3 Energy Saving Regulator

POWERSAVE
Energy Saving Systems



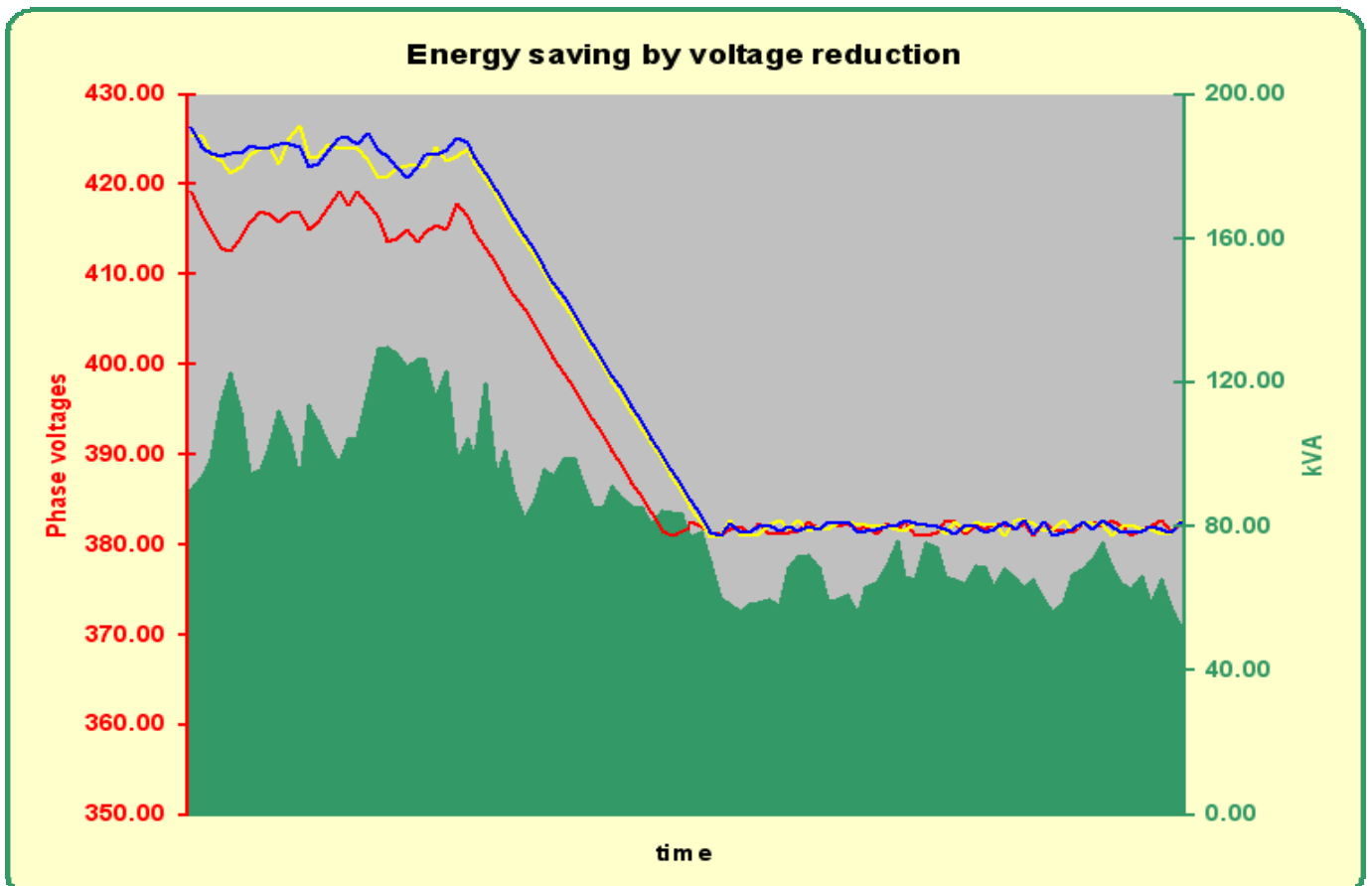
Electrical equipment is designed to accept a wide range of input voltages about its nominal design centre. However, if the actual supply is higher than necessary the equipment will consume more power than needed and in many cases, equipment life is reduced, effectively increasing the cost of ownership. 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, phase voltage balance and regulated output voltages.

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).



ESS-A-3 Energy Saving Regulator



Specification for three phase ESS-A-3

Correction range	0 to +12.5% of output setting			
Output Voltage	Site adjustable 346-415V (Factory set at 380V unless specified)			
Output Accuracy	± 1%			
Output setting	Linear with independent phase control (on-line)			
Maximum Input Voltage	440V (others upon request)			
Power Rating (kVA)	See below. *Ratings are given at 415V (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 cases 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	IP21 floor standing enclosure (others upon request)			
Warranty	3 Years			
PowerSave™ models	Maximum Output Phase Current	*kVA	Approx Weight	Approx Dimensions H x W x D (mm)
ESS-A-3-32	32 Amps	23kVA	85kg	725 x 370 x 280
ESS-A-3-63	63 Amps	45kVA	157kg	1040 x 310 x 550
ESS-A-3-100	100 Amps	72kVA	165kg	1040 x 310 x 550
ESS-A-3-200	200 Amps	144kVA	300kg	1500 x 390 x 700
ESS-A-3-400	400 Amps	288kVA	562kg	925 x 1245 x 840
ESS-A-3-600	600 Amps	431kVA	686kg	925 x 1245 x 840
ESS-A-3-800	800 Amps	576kVA	1010kg	1300 x 1390 x 1050
ESS-A-3-1000	1000 Amps	720kVA	1350kg	1600 x 1390 x 1050
ESS-A-3-1200	1200 Amps	863kVA	1650kg	1800 x 1390 x 1050
ESS-A-3-1400	1400 Amps	1006kVA	1800kg	2000 x 1390 x 1050
ESS-A-3-1600	1600 Amps	1152kVA	2100kg	2200 x 1390 x 1050
ESS-A-3-1800	1800 Amps	1296kVA	2350kg	2400 x 1390 x 1050
ESS-A-3-2000	2000 Amps	1440kVA	2600kg	2600 x 1390 x 1050

Additional Energy Saving Products :

PowerSave™ : Single-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-3/2008/a Due to continuous improvements Claude Lyons reserve the right to change specifications without notice

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