

# EnergyAce ST

# EnergyAce®

EnergyAce is a universal energy saver for commercial and industrial applications designed to deliver savings of up to 20% on electricity consumption.

The main benefits of the EnergyAce power optimiser are:

- ✓ Installs on the main electrical supply to correct the whole load or individual loads
- ✓ Dynamically controls and stabilizes the voltage to ensure maximum savings
- ✓ Automatic seamless bypass to ensure correct voltage levels at all times
- ✓ Improves power quality
- ✓ Reduces maintenance costs
- ✓ Remote programming & control
- ✓ Sizes available from 80A to 2800A

## Energy Savings

Voltage levels in the UK fluctuate between 207v to 253v the level at which all electrical equipment in the UK is designed to operate although typically, the actual line voltage sits at a level above 236v, EnergyAce deals with these voltage variations to deliver an optimized pure sinusoidal voltage of around 220v, the optimum level at which electrical equipment will function efficiently.

Higher voltages are commonly the cause of higher energy costs through inefficient operation of electrical devices leading to increased losses and energy waste, EnergyAce controls and stabilizes the voltage at the optimum level of efficiency to return energy savings of up to 20%

EnergyAce will also improve power-factor, reduce harmonic distortion, lower kw/h losses, decrease reactive energy and generate a quick return on your investment.

## Voltage Stabilisation and Optimisation

EnergyAce technology incorporates Voltage Stabilisation in all units up to 350A and Automatic seamless bypass across the range up to 1400A to ensure safe optimised voltage levels at all times.

The main incoming voltage to a facility can typically fluctuate  $\pm 10\%$  due to a number of factors beyond the users control, mainly due to local demand.

Less dynamic types of voltage and power optimisers use a number of fixed "tap offs" that cannot respond to these voltage fluctuations and offer poor voltage control which when optimised may at times expose the supply to the risk of low voltage and possible failure.

EnergyAce power optimisers incorporate Automatic seamless bypass, which once programmed will maintain the optimum voltage level irrespective of line voltage fluctuation.

Voltage fluctuations especially overvoltage can negatively affect electric plant, lighting equipment and electronic devices.

This unique next generation technology ensures real financial savings of up to 20% with the guarantee of an uninterrupted supply



## Next Generation Technology and Design

EnergyAce is a proven next generation power optimiser from Power Efficient Systems Ltd.

The EnergyAce system is built around a patented technology that enables precise dynamic control of the supply voltage, the core methodology is based on a proprietary topology of power transformers controlled by a microprocessor to ensure a stable reliable supply.

The automatic seamless bypass system enables EnergyAce's output to be set for optimum performance and savings while ensuring low volts do not occur during input voltage fluctuations, overcoming the weak point in most standard optimisation products.

This technology not only controls the output voltage while maintaining a pure sinusoidal waveform but allows for installation in the tightest of switchrooms due to its small footprint which is ideal for some applications and even wall mountable in sizes up to 160A

## High Reliability

Unlike similar systems based on solid state components, EnergyAce does not require special thermal management, its durable design guarantees the highest degree of robustness in the most challenging of environments although in the unlikely event of failure or malfunction, EnergyAce will simply shutdown and return the system to its original Pre-optimised state without energy savings and can be removed completely from circuit through an integral changeover switch.

## Easy and Quick Installation

EnergyAce can be matched to either the size of supply or the maximum demand and can be installed before (assuming adequate protection is installed) or after the main incoming circuit breaker of a main incoming supply.

Sizes are available up to 2800A enabling next generation energy saving solutions to most commercial and industrial organisations

<b>RS 232</b>	MODBUS protocol for connectivity with EMS/BMS and SCADA systems
<b>Input</b>	Volt free contacts to control EnergyAce mode (Save or Bypass)
<b>Output</b>	Volt free contacts - over temperature / overload / Bypass status / Activation of lights according to the astronomic-clock

Product Name	Catalog Number	A	KVA	Dimensions (mm)	Weight (kg)
EnergyAce 80A	ST 80 3	3x080	55	610 x 255 x 400	56
EnergyAce 125A	ST 125 3	3x125	87	645 x 320 x 540	74
EnergyAce 160A	ST 160 3	3x160	110	780 x 305 x 590	127
EnergyAce 250A	ST 250 3	3x250	173	1700 x 455 x 800	235
EnergyAce 350A	ST 350 3	3x350	242	1700 x 455 x 800	265

## Technical Specifications

<b>Input Voltage</b>	3x230V VAC $\pm$ 10%	<b>IP Class</b>	IP 42 min (higher on request)
<b>Output Voltage</b>	Voltage Reduction of up to 20V	<b>Ambient Temperature</b>	- 20°C : +45°C
<b>Frequency</b>	50Hz	<b>Humidity</b>	Up to 90%
<b>Efficiency</b>	99%	<b>THD</b>	0%



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