Ashley-Edison (UK) has evolved to become one of the world’s leading specialist providers of AC Voltage Stabilizers and associated power line conditioning solutions.

From the blistering heat of the Arabian Desert to the subzero temperatures and remoteness of Caucasian mountains, Ashley-Edison Voltage Stabilisers and Power Line Conditioners can be found safeguarding vital electrical and electronic equipment against damaging voltage irregularities, all too common in today’s incoming utility supply lines.

Our Voltage Control solutions ensure our Customers – from consumers and small businesses to the largest of global organizations – can be certain that their vital systems and manufacturing processes always receive a voltage supply that is stable and clean – free from the vagaries of the mains utility supply.

Unrivalled Experience & Breadth of Offering

The sheer span of capability available from Ashley-Edison tells its own story.

Every power protection solution we offer is backed by the unrivalled experience we have gained in world markets over the last 25 years or so. In that time, our unique design innovations have set new performance levels and the breadth of our offering has broadened to accommodate the needs and ever-demanding requirements of our growing Client base.

Today, where performance is everything, whatever your AC mains supply problem Ashley-Edison have the ability to offer a solution from our extensive range of standard and custom built products.

- AC Voltage Stabilisers
- AC Power Line Conditioners
- AC Constant Voltage Compensators
- AC Voltage Optimisers (AVOs)
- AC Variable Transformers
- AC Variable Voltage & Frequency Converters
Exceptional Quality – a Fusion of UK Design & Far Eastern Manufacturing Prowess

Our UK specialist design team, supported by engineers from our purpose built ISO 9000 certified assembly plants in the Far East, ensures Ashley-Edison is able to deliver QUALITY voltage control solutions, manufactured and supplied at affordable globally competitive prices.

The Quality of our offering and service is the underlying principle that drives us in all aspects of our endeavors. Only by delivering solutions with exceptional long-term performance are we able to consistently grow our business and be able to endorse our product offerings with a truly market leading warranty of up to 3 years.

Customer-Centric Approach

With our corporate headquarters based in the UK, our international network of regional sales and support offices and agents ensures we are able to stay close to our customers and be highly responsive to their changing needs.

We pride ourselves in the efforts we make to fully understand our customers' requirements. We meet these requirements by providing a carefully tailored portfolio of relevant, affordable market-leading products and services. All staff, at all levels of our business, are empowered to make decisions that ensure our business and offerings evolve as our customers' requirements change.

Market Leading Specialist

Our uncompromising quest to ensure the breadth and Quality of our product offering and service, coupled with the unrivalled experience we have gained in identifying and solving the power quality issues and problems our Clients face, differentiates Ashley-Edison as a true market-leading specialist in its field.

That's what we mean when we say . . . .

Mains Voltage Control . . . Without Compromise.

In Research

Electronic instruments play a major role in laboratory work and their measuring accuracy depends totally on the quality of power they receive. An abrupt voltage drop from a factory process starting up nearby perhaps can invalidate the results from a costly research programme.

Today many world research establishments depend on Ashley Edison for ensuring the quality of their power supply whether it be for a single instrument or an entire laboratory.

In Energy Efficiency

With world energy prices soaring and the global quest to reduce carbon emissions by electricity generators, many organisations are turning to Ashley-Edison to optimise their electricity usage.

Our VOLTSTREAM ranges of AC Automatic Voltage Optimisers (AVOs) are consistently delivering energy savings of between 10 to 20% on our customers’ electricity bills.

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SERVO ELECTRONIC DESIGN
AC VOLTAGE STABILISERS & REGULATORS
AC SINGLE & THREE PHASE - 1 TO 1500 kVA
AIR COOLED

H SERIES 220 / 380V to 277 / 480V
L SERIES 110 / 190V to 127 / 220V

The feature rich SES ranges of Servo Electronic AC Voltage Stabilisers are our most popular and cost-efficient offerings.

Suitable for 95% of all applications, SES stabilisers not only guard against voltage fluctuations they also offer protection against all too common harmful high-energy surges, transients and voltage spikes.

Models are available in a wide range of ratings from 1 to 1500 kVA and deliver a step less automated regulation of the incoming utility mains supply.

With independent phase control as standard on all three phase ranges, the voltage on each phase will always remain stable irrespective of load unbalance, even in situations where a 100% load imbalance may exist.

Designed and built to comply with leading international standards they are offered with unparalleled 3 year warranties.

Want to learn more? - Check-out our website or contact us.

Also available in Outdoor IP54 / NEMA 3 Style Enclosures - OSES / OSESL SERIES

SERVO ELECTRONIC ELECTRO-MECHANICAL DESIGN TOPOLOGY

Being able to accommodate an input voltage swing of in excess of 40%, whilst still delivering accuracy on the output of 1% or better, the Servo Electronic design principle comprises a transformer having its secondary winding connected between the mains supply and the load. The primary voltage is automatically controlled through a servo motor driven variable transformer, thereby ensuring a continuous, smooth and very stable output voltage.

A solid state Servo-Amplifier continuously monitors the output voltage of the stabiliser. Should, due to an incoming voltage or load current change, the output voltage deviate from the required value, the Amplifier sensor instructs the servo motor to rotate the brush-gear on the variable transformer to correct the output for the deviation. The speed of detection and actions of the servo system are exceptionally fast, with controlled motor deceleration to minimise any possibility of overshoot.
DIGITAL HYBRID BUCK BOOST SCR DESIGN TOPOLOGY

Based on the extremely well proven Buck Boost design topology which underlines our SES & SESL AC Voltage Stabilisers, ESR Static Voltage Regulators utiliseSCRs (Silicon Controlled Rectifiers) to select transformer taps to deliver a highly stable output voltage with an extremely fast correction time.

Unlike traditional Electronic SCR based solutions, the underlying Buck Boost topology ensures that the SCRs are not required to handle the full load current, but merely a fraction of the load current. By suitably sizing the ratings of the SCRs, ESR Stabilisers are able to deliver impressive overload capabilities and considerable enhanced reliability.

The utilisation of the latest in microprocessor control & the inclusion as standard on all models of an input circuit breaker, ensures that the SCRs are fully protected against over-current conditions & other malfunctions, which historically have been viewed as the primary weakness of Electronic based SCR solutions.

STATIC DIGITAL VOLTAGE REGULATION
highly efficient with exceptionally ultra fast speed of response – ideal for highly sensitive / mission critical loads and applications.

ESR Series Static Electronic AC Voltage Stabilisers are micro-processor controlled tap switching regulators based on a non-full power semiconductor design.

ESR Stabilisers work automatically to regulate and protect the load from the vagaries of the utility mains supply. The standard LCD display provides information on the status and operation of the stabiliser, indicating any alarm conditions that may be present.

Compatible with all load types and offering independent phase control, they deliver ultra-fast response times in correcting under / over voltages, sags and surges - making them ideal for highly sensitive / mission critical loads and applications.

With a high inbuilt fault clearing capability, the inclusion as standard of an automatic electronic bypass facility ensures that in the event of a problem, power to the load equipment is always maintained.

Want to learn more? - Check-out our website or contact us.

Also available in Outdoor IPS4 / NEMA 3 Style Enclosures
MAGNETIC INDUCTION DESIGN
AC VOLTAGE STABILISERS & REGULATORS
AC THREE PHASE - 200 TO 3000 kVA
AIR COOLED (MVSI) & OIL IMMERSED (IVSI)

Designed for maximum reliability, making them ideal for the toughest of applications, MVSI Air Cooled and IVSI Oil Immersed Brushless AC Automatic Voltage Stabilisers and Regulators enhance power quality, providing industrial-grade voltage regulation and power protection.

With ratings from 200 kVA to over 3,000 kVA and offering permissible input voltage windows of up to ±30%, these Stabilisers deliver independent phase control and utilise the latest in magnetic induction brushless technology.

Complimented and supported by the MSB range of Switchboards with integrated system bypass, MVSI and IVSI Stabilisers are highly compact and virtually maintenance free solutions making them perfectly suited for industrial and commercial buildings and their associated applications & processes.

Want to learn more? - Check-out our website or contact us.

Also available in Outdoor Enclosures

BRUSHLESS MAGNETIC INDUCTION DESIGN TOPOLOGY

As a Magnetic Induction based solution, MVSI & IVSI Stabilisers utilise a simple, yet highly reliable, rotor and stator design principle to increase or reduce the magnitude of the voltage in a series transformer winding, thereby delivering and maintaining a constant output voltage.

The arrangement is similar to a motor, except that the rotor does not rotate continuously. Its maximum rotation is only 130 degrees. The magnetic coupling between the rotor (the shunt winding) and stator (series winding) will cause the magnitude of the voltage in the series winding to increase or decrease, depending on the angle or position of the rotor to the stator. For example, when the input voltage drops, the rotor will rotate clockwise to such an angle to make up for the drop in voltage, rotating anti-clockwise to correct for a high voltage.
STATIC ELECTRONIC DESIGN TOPOLOGY

Mini VR Series AC Voltage Stabilisers / Conditioners are intended as low cost solutions, being designed around an auto transformer with a single input and multiple outputs. The outputs are arranged in steps / taps delivering a higher or lower voltage.

Under normally running conditions the stabiliser / conditioner will continuously monitor the rise and fall of the incoming utility mains supply. On detection of change in the supply it will energize the most appropriate electro– magnetic switch for selecting the most suitable output winding tap to correct and stabilise the voltage. As a result the load equipment connected to the stabiliser / conditioner will receive a safe, tolerable voltage and be able to operate reliably - irrespective of the fluctuating and irregularities of the incoming voltage supply.

By boosting low voltages and stepping down high voltages, VR Series AC Voltage Stabilisers and Power Line Conditioners ensure a stable output voltage. In addition, they safeguard against all too common everyday transient voltages and spikes - typically introduced into the mains supply by nearby disturbances resulting from peak power demands or stop / start operation of electrical machinery.

Capable of supporting all electrical and electronic modern office and general household appliances (including air conditioners, computers, fridges, TV, satellite and any other electrical loads, models are available for situations where the incoming mains utility supply is between 140V to 270V (F Models) or, for more challenging power environments, 80V to 270V (G Models).

Models are also available for dual 110V & 220V input (FX Models) and also Low Volt 110/120/127V applications (L Models).

Want to learn more? - Check-out our website or contact us.

LOW COST PRIECOTION FOR TODAY’S MODERN POWER NEEDS - delivering protection against voltage fluctuations and line disturbances - ensuring a CLEAN supply.
SUPER ISOLATED FERRO-RESONANT DESIGN

AC POWER LINE CONDITIONERS

AC SINGLE PHASE - 0.5 TO 5 kVA

AIR COOLED

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Based around a highly reliable and endurable Constant Voltage Transformer (CVT), super isolation design based PCV Single Phase AC Power Conditioners are able to tolerate very wide input fluctuations - even when the input voltage drops as low as - 45% the output voltage will be maintained at nominal voltage ±5%.

With no moving parts and no electronic control circuitry there is no need for maintenance and is virtually an install and forget solution. The design can withstand high instantaneous overloads and is able to suppress lightning induced spikes and surges.

Compact in size, this design has the inherent ability to withstand a ride-through even when there is a very short power failure, maintaining voltage for up to 3 milli-seconds. This feature is exceptionally useful for sensitive electronic equipment when there are frequent short breaks or severe voltage dips.

Want to learn more? - Check-out our website or contact us.

ENDURABLE FERRO-RESONANT DESIGN TOPOLOGY

As a Ferro-Resonant / Constant Voltage Transformer (CVT) based solution, PCV AC Power Line Conditioners utilise a tank circuit composed of a high-voltage resonant winding and a capacitor to produce a constant output voltage whilst supporting a varying load current - even in situations where the input voltage varies widely.

The circuit has a primary on one side of a magnet shunt and tuned circuit coil and a secondary on the other side. Voltage regulation is achieved through the magnetic saturation in the section around the secondary.

As the design offers excellent isolation, PCV AC Power Line Conditioners characteristically offer exceptional transient voltage surge suppression and short-circuit protection.
SERVO ELECTRONIC DESIGN

AC POWER LINE CONDITIONERS

AC SINGLE & THREE PHASE - 1 TO 500 kVA

H SERIES 220 / 380V to 277 / 480V
L SERIES 110 / 190V to 127 / 220V

POWER CONDITIONING PROTECTION
against voltage fluctuations and line disturbances - ensuring a CLEAN supply.

Based on the same Servo Electronic design principle that underlies our highly popular SES Voltage Stabilisers and Regulators, PCS AC Power Line Conditioners take protection against the vagaries of the incoming utility mains supply to the next level - delivering a truly CLEAN supply.

With ratings from 1 kVA to over 500 kVA and offering permissible input voltage windows of up to ±40%, PCS Power Line Conditioners are the ideal solution for more challenging power environments where electrical noise is an issue and an enhanced level of protection is required against voltage transients and spikes.

Compatible with all load types and offering independent phase control as standard on all three phase ranges, PCS Power Conditioners deliver an impressive output voltage accuracy of ±1%.

Designed and built to comply with leading international standards they are offered with unparalleled 3 year warranties.

Do I need a Voltage Stabiliser or a Power Line Conditioner?

In most cases a Power Line Conditioner is simply a Voltage Stabiliser with the inclusion of an isolation transformer. In essence both protect against voltage transients, spikes, sags and brownouts, but a Power Line Conditioner also offers additional protection against electrical noise and a higher level of defence against voltage transients and spikes typically introduced into the distribution lines by switching of equipment (especially heavy inductive loads) or atmospheric electrical disturbances (lightning strikes).

When a good earth cannot be provided Common Mode Noise (E to L and E to N) can be a problem. With the inclusion of a shielded isolation transformer in a Power Conditioner, this interference can be suppressed to harmless levels.

As you would expect a Power Line Conditioner is normally more expensive than a Voltage Stabiliser. So if electrical noise or severe transients and spikes are not an issue on site the most cost efficient solution is normally a Voltage Stabiliser.
Voltage Optimisation: A UK and Global Phenomenon

The interest in Voltage Optimisation is a growing worldwide trend, being particularly strong in the UK and Europe.

With Europe’s electrical equipment’s normally intended design voltage being 220V, in the UK, where generated supply voltage is typically between 240 to 245V, VOLSTSTREAM AVOs consistently deliver savings of between 10 to 20% on electricity bills.

A VOLSTSTREAM Automatic Voltage Optimiser (AVO) reduces your energy usage by optimising the electricity supply voltage; significantly reducing your ongoing electricity costs and, through the need for less energy, greatly assisting in the quest for reducing your carbon footprint.

In addition, a VOLSTSTREAM AVO protects electrical equipment against damaging power surges and voltage transients. Through ensuring an optimised supply voltage, your electrical load equipment should be able to operate more efficiently and be more able of obtaining intended design life - with the added benefit of reduced ongoing equipment maintenance costs.

All VOLSTSTREAM AVOs are ideal for retrofitting into existing switchgear rooms. Available as either single or three phase models to suit the particular site power requirement, they are offered in a range of ratings from 10 to over 1000 kVA.

Want to learn more? - Check-out our website or contact us.

Also available in Outdoor IP54 / NEMA 3 Style Enclosures - OVS / OVSL Series
IEE Cable Sizing Requirements

Installations with long cable runs have an inherent problem of developing high voltage drops along the length of the cable. To overcome this, it is necessary to select and use cables with a larger cross sectional area in order to reduce such voltage drops to acceptable levels.

IEE Regulations stipulate that a volt drop should be no more than 4% which means that for a three phase 400V system, the drop along any length of cable should not exceed 16V L-L. Therefore when the length of cable between the supply source and the load means that the volt drop exceeds this value the cross sectional area of the cable has to be increased. In addition they also have to take the mains supply voltage fluctuations into consideration, typically mains fluctuations are expected to be ±6% of the nominal supply voltage. This means that the design engineer has to make allowances in his cable sizing calculations to accommodate these variations and still deliver the correct voltage to the load. This can result in cables with far larger cross sectional areas than that required to carry the design load current causing extremely high installation costs.

CVC Constant Voltage Compensators are specifically designed and configured to eliminate voltage drops in long cable runs.

While traditional wisdom for such cable runs requires cables to be over-sized to accommodate such volt drops, the use of a Constant Voltage Compensator enables a smaller sized cable to be installed, thereby enabling a potentially considerable saving to be made in the cost of the cable.

With the Compensator installed at the end of the cable where the volt drop is at its highest, it will continuously monitor and adjust / boost the voltage to ensure a constant voltage is maintained to within a ±1% accuracy. Any load change will not have any effect on the output voltage, being kept constant at all times.

As the cable size is optimised for use with the Compensator, the resulting selected smaller cable should be easier and less costly to install.

Want to learn more? - Check-out our website or contact us.

Also available in Outdoor IP54 / NEMA 3 Style Enclosures - OCVC SERIES
Variable Transformers

TAROIDAL DESIGN

AC VARIABLE AUTO-TRANSFORMERS

AC SINGLE & THREE PHASE - 3 TO 180 AMPS

MANUAL (AE) & MOTORISED (MAE) OPERATION

AE & MAE SERIES

Variable Transformers are available in a full range of single and three phase models. Standard models include input voltages from 120VAC to 600VAC and 3 to 180 Amps. Special units for voltages up to 1000V AC are available to order.

While today there are many modern alternatives to the Variable Transformer for controlling voltage, the load tolerant nature of the Variable Transformer ensures that it is still the best and most reliable method of control for a large variety of applications where step-less control of a distortion-free AC output is essential.

Typical uses include quality control testing, electronic equipment burn-in, low voltage performance evaluation, DC rectifier / regulator analysis or other industrial and engineering applications.

Our endurable ranges of variable transformers all deliver an efficient and trouble free method of varying AC voltages with an output from zero to line voltage.

Want to learn more? - Check-out our website or contact us.

Ranges available include -

HB SERIES 220 / 380V to 277 / 480V
LB SERIES 110 / 190V to 127 / 220V

AE SERIES - SINGLE PHASE
Manually operated variable transformers from 3 to over 80 amps.

HB Models - 220V to 240V
LB Models - 110V to 120V

AE SERIES - THREE PHASE
Manually operated variable transformers from 3 to over 60 amps.

HB Models - 380V to 415V
LB Models - 440V to 480V

MAE SERIES - SINGLE & THREE PHASE
Single & Three Phase motorized variable transformers from 3 to over 150 amps.

Single Phase 3 to 90 amps - 220V to 240V
- 110V to 120V

Three Phase 10 to 150 amps - 380V to 415V
- 440V to 480V
- 190V to 208V

Our endurable ranges of variable transformers all deliver an efficient and trouble free method of varying AC voltages with an output from zero to line voltage.

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Manually operated variable transformers from 3 to over 60 amps.

HB Models - 380V to 415V
LB Models - 440V to 480V

MAE SERIES - SINGLE & THREE PHASE
Single & Three Phase motorized variable transformers from 3 to over 150 amps.

Single Phase 3 to 90 amps - 220V to 240V
- 110V to 120V

Three Phase 10 to 150 amps - 380V to 415V
- 440V to 480V
- 190V to 208V

Manually operated Variable Transformers are also available in IP20 / NEMA 1 Style enclosures with digital metering and input circuit breaker protection.

www.AshleyEdison.com
**FCL SERIES**

**THE UNIVERSAL AC POWER SOURCE**
ideal for use in testing centres, research laboratories and for testing on production lines.

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<th>Input: 380/220V to 415/240V - 50 or 60Hz</th>
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<td>Output: 0/0V to 520/300V - 40 to 499 Hz</td>
</tr>
<tr>
<td>H-X468 SERIES</td>
<td>Input: 440/256V to 480/277V - 50 or 60Hz</td>
</tr>
<tr>
<td></td>
<td>Output: 0/0V to 600/346V - 40 to 499 Hz</td>
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**FCL SERIES** Single & Three Phase Static Variable Voltage and Frequency Converters utilise the latest in solid state Pulse Width Modulated (PWM) Inverter and Rectifier technology, combined with Galvanic Isolation, to deliver a clean and regulated variable AC power supply.

With the ability to replicate all the numerous nominal utility single and three phase mains voltages and frequencies deployed throughout the world, they are ideal for use in testing centres, research laboratories and for testing on production lines.

Want to learn more? - Check-out our website or contact us.

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**STATIC IGBT PWM DESIGN TOPOLOGY**

A FCL SERIES Variable AC Voltage & Frequency Converter takes the electrical input power at one frequency and voltage and provides an adjustable output voltage and frequency - ideal for testing loads over their full voltage and frequency range.

By design the incoming AC Mains Utility supply is converted by a rectifier into DC. The DC is then feed into an Inverter which produces the required AC output power. The resulting stable and pure sinewave is then passed though a low distortion linear amplifier to achieve the required high power output rating. By utilising crystal oscillation the availability of enhanced frequency stability is ensured.

Solid State in basic design, the only moving parts are the fans used to force cool the system.
Today in the world it is estimated that one in five people still have no access to electricity and where access is available national power generation companies are struggling to keep up with the ever rising demand of consumers and as a result the reliability and quality of the power being delivered is becoming a growing problem.

Historically the problem has been widely held to be an issue of the less developed countries, but in recent years even in Europe and North America, with a lack of general investment in new generation capacity and the failure to replace decommissioned fossil fuel and nuclear power stations, existing supply networks have been found to be struggling to keep up with the demand of the new power hungry digital age. Many consumers are now witnessing a marked general deterioration in the availability and quality of power they receive.

Today, with power consumers across the globe becoming ever more aware of the key competitive importance of ensuring the quality of power, Ashley-Edison Voltage Stabilisers and Power Line Conditioning solutions can be found on duty offering protection to vital equipment in -

- Africa
- Europe
- Middle East
- North America
- Central & South America
- Caribbean
- Asia
- Oceania
Clients include

Tried, tested and extensively proven in all corners of the world, including some of the harshest and most remote power environments on this planet, our solutions can be found on duty protecting vital equipment where the supply must never be found wanting . . . not even for a single second.

Only by delivering Quality in product and service have we been able to consistently grow our client base year on year. Today we are an approved supplier to many well-known major international corporations and public organisations.

With an emphasis always on building and maintaining strategic and long-lasting relationships with our Customers, our Clients are drawn from a wide selection of industries and market sectors spread throughout the world, including -

- Agriculture, Forestry & Fishing
- Financial Services
- Mining, Quarrying and Oil & Gas Exploration
- Retail
- Healthcare
- Transportation
- Education
- Public Administration & Services (inc. Armed Forces)
- Sport, Leisure & Hospitality
- Media & Broadcasting
- Energy & Utilities
- Charities & Aid Agencies
- Resale & Wholesale

Want to learn more?
Check-out our website or contact us.
All Ashley-Edison (UK) product ranges are supported by brochures and data sheets giving full detailed specifications. Ask for the copies you require or download from our website at -

www.AshleyEdison.com