ENSURING A STABLE AC MAINS VOLTAGE

AC mains voltage fluctuations can cause equipment to behave erratically and malfunction. Some systems may even break down due to these fluctuations, noise or spikes. Failure to ensure the incoming mains voltage is stable and clean can often result in costly equipment repairs and unplanned down-time.

Ashley-Edison AC Voltage Stabilisers offer -

- **Voltage Stability & Protection**
  Suitable for all electrical and electronic equipment, Ashley-Edison’s SES AC Voltage Stabilisers continuously monitor the incoming supply. Should the incoming voltage rise or drop, the Stabilisers will automatically control the output to ensure the voltage reaching the load equipment always remains constant at the requisite voltage. With inbuilt Transient Voltage Surge Suppression (TVSS), they also protect electrical and electronic load equipment against, all too common, harmful high-energy surges, transients and voltage spikes.

- **Durability & Dependability**
  With an impressively wide range of input voltage window options and precise tight output voltage regulation, the electro-mechanical / servo electronic design based SES Voltage Stabilisers have repeatedly proven their durability and dependability in some of the world’s harshest and most demanding power environments. All SES AC Voltage Stabilisers include as standard many advanced protection and control features - such as Independent Phase Sensing, TVSS, Input Circuit Breaker, Bypass Control Switch and Soft-Switch On, which others only offer as expensive add-on options.

- **Energy Efficiency**
  Configured to optimise energy usage and deliver energy cost savings, SES Stabilisers generate no magnetic interference, are completely unaffected by power factor, or load and frequency variations and are capable of withstanding high instantaneous overloads. Their compact and quiet nature means these they are suitable for indoor use and may be located near to sensitive equipment.

- **Unparalleled Protection and Value**
  When looking for affordable durable Quality voltage protection, the SES Range of AC Voltage Stabilisers from Ashley-Edison lead the market in all respects.

FEATURES

- **Automatic Voltage Regulation**
  Step less automated voltage regulation - ideal for 95% of all applications.

- **Wide Range of Power Ratings**
  Three Phase 6 to 600 kVA

- **Broad Input Voltage Swing Ranges**
  Input Swing - ±15% (S15), ±20% (S20), ±25% (S25), ±30% (S30), ±35% (S35) & ±40% (S40) - to specify.

- **Precise Output Voltage Regulation**
  Output Voltage Accuracy ± 0.5% / ± 1%

- **Transient Voltage Surge Suppression**
  TVSS - Protects loads against harmful high-energy surges, transients and spikes.

- **High Efficiency**
  Better than 98% for low running costs.

Independent Phase Balancing & Control
Independent phase voltage sensing and control to ensure the individual phase voltages remain stable - regardless of load unbalance.

Inbuilt High Overload Capability
Ideal for loads with an inherent initial high current draw on start up.

Soft-Switch On / Start Up Load Protection
Protection of the load from momentary over voltage situations on start up.

Over / Low Voltage Protection
Ability to automatically shutdown the Voltage Stabiliser in the event of the input supply voltage going outside the input voltage window.

Bypass Control Switch
Manual Electronic Controls Bypass Facility

Phase Failure Protection
Protection of the load in the event of phase failure.

Front Panel Status Monitoring & Metering
Front Panel display showing system status with internal output Voltmeter with phase selector switch.

Input Circuit Breaker
Input over current protection fitted as standard.

Optional Accessories

Compliance with International Standards
Designed, manufactured and supplied to comply with leading international standards

CE Conformity
Fully compliant and labelled

www.AshleyEdisonUK.com
VOLTAGE CHOICES AVAILABLE

4 WIRE SOLUTIONS
THREE PHASE WITH NEUTRAL (+ GROUND)

**H SERIES**
- **High Voltage Models:** 380/220V, 400/230V or 415/240V.
- **Models:** X468: 440/254V, 460/265V or 480/277V

**LY SERIES**
- **Low Voltage Models:** 190/110V, 200/115V, 208/120V or 220/127V.

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Input / Utility</th>
<th>Output / Load</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Voltage Models</td>
<td></td>
<td></td>
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<tr>
<td>400V</td>
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<tr>
<td>220V</td>
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<tr>
<td>240V</td>
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<tr>
<td>277V</td>
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<tr>
<td>324V</td>
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<tr>
<td>365V</td>
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<tr>
<td>Low Voltage Models</td>
<td></td>
<td></td>
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<tr>
<td>190V</td>
<td></td>
<td></td>
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<tr>
<td>200V</td>
<td></td>
<td></td>
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<tr>
<td>220V</td>
<td></td>
<td></td>
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</tbody>
</table>

In situations where there is a reasonably good mains supply, a Stabiliser offering an input variation swing of ±15% (S15 Models) will usually be more than acceptable, but in more remote locations, or countries where the national supply infrastructure is less developed, variations of ±20% or greater may be needed to be accommodated by the Stabiliser.

Please Note – These Stabilisers are not designed to support / protect voltage “back feed” applications, where energy is required to be also fed back into the utility supply.

H SERIES INPUT VOLTAGE WINDOW OPTIONS

<table>
<thead>
<tr>
<th>Nominal Voltage</th>
<th>Input Voltage Window Options &amp; Output Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>380V L-N: 220V</td>
<td>-</td>
</tr>
<tr>
<td>400V L-N: 230V</td>
<td>-</td>
</tr>
<tr>
<td>415V L-N: 240V</td>
<td>-</td>
</tr>
</tbody>
</table>

TYPICAL APPLICATIONS
- Computers & Network Systems
- Medical Equipment
- Electronics Equipment
- Testing Equipment
- Laboratory Equipment
- POS Terminals
- Process Control Systems
- Audio/Video Systems
- Security Systems
- Elevators / Lifts
- TV/Radio Broadcasting Stations
- CNC & SMT Equipment

Also available as 3 Wire Solutions (No Neutral) - SES-HD & LD SERIES
### TECHNICAL SPECIFICATION

**Technology:** Servo Electronic - Variable Transformer controlled, series regulation transformer (buck-boost transformer with secondary wired in series with the load).

**Input Voltage Swing:** ±40% (or −42% +43% or −44% +46%) Three Phase, 4 Wire (with Neutral + Ground / Earth).

**Output Voltage:** Presettable for any voltage between 380/220V, 400/230V & 415/240V (Customer to specify), Three Phase, 4 Wire, 440/254V, 460/265V & 480/277V models available on request.

The permissible input voltage swing is relative to the preset output voltage.

**Output Voltage Accuracy:** ± 0.5%, ± 3% or ± 5% - auto selection based on input voltage swing.

**Frequency:** 47 - 65Hz

**Response Time:** <1.5ms

**Correction Time:** A 10% supply variation will be corrected to within 2.5% in 0.2 seconds.

**Efficiency:** 98%

**Power Factor:** The Power Factor has no effect on performance providing the stabiliser is being used within its rated capacity.

**Surge Ratings:**
- 10 x max. current rating for 2 seconds
- 3 x max. current rating for 1 minute
- 2 x max. current rating for 2 minutes

**Surge Suppression:** TVSS - Protects loads against high-energy Spikes and Transient Voltages.

**Total Harmonic Distortion:** Less than 1%

**Independent Phase Control:** Maintains each phase voltage stable irrespective of load unbalance, even up to 100% load unbalance.

**Soft-Switch On:** Ensures the output voltage is set at minimum upon Switch-On before commencing stabilisation - protects load equipment from damaging start up voltage surges.

**Environment:**
- Temperature range –15 to 45 °C. Derate by 2% for each additional °C Up to max 60 °C.
- Suitable for indoor tropical use 95% RH (non-condensing). Maximum altitude 1000m. Derate by 2.5% for each additional 500m.

**Construction:** Enclosures to IP20 (NEMA 1 Style) - BS EN 60529.

**Paint Colour:** RAL 7032 (Pebble Grey - Epoxy Powder Coating)

**EMC Conformance:**

**Standard Warranty:** Three Years / 36 Months from date of supply

**Standard Features:**
- Input Circuit Breaker
- Over/Low Voltage Protection
- Phase Failure Protection
- Bypass Control Switch
- Voltmeter / Phase Selector Switch (internal)

**Optional Accessories:**
- Output Circuit Breaker
- Manual Maintenance Bypass Switch
- Ammeter (with Phase Selector Switch)
- Lightning Surge Arrestors
- No Volt Remote Monitoring Contacts
- Drop Proof Cowf for IP21 Ingress Protection
- Digital Power Metering (with RS-485 interface) - showing V, A, W, VA, AER, PF & KWH
- AquaStop Protective Coating
- protection against damp and moisture ingress

**Optional Step Down Voltage Feature:** Ideal for applications where the utility supply voltage is different from the load equipment's requirement - see SES-NL SERIES Step Down AC Voltage Stabilisers.

**Optional Isolation Transformer:** Shielded isolation transformer providing extra protection between the utility and the load. Protects against common and transverse mode electrical noise - see PCS-M SERIES AC Power Conditioners.

*Note: Optional Accessories added may affect dimensions - subject to confirmation.*

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### S40 PRODUCT SELECTION TABLE

<table>
<thead>
<tr>
<th>MODEL</th>
<th>kVA</th>
<th>Max Rating @ (Amps per Phase)</th>
<th>Dimensions &amp; Weight</th>
<th>Enclosure Type</th>
</tr>
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<tbody>
<tr>
<td>SES-6H-3P-S40</td>
<td>6</td>
<td>9.1 8.7 8.3</td>
<td>380 x 670 x 780</td>
<td>128 332</td>
</tr>
<tr>
<td>SES-10H-3P-S40</td>
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<td>15.2 14.4 13.9</td>
<td>380 x 670 x 780</td>
<td>130 332</td>
</tr>
<tr>
<td>SES-15H-3P-S40</td>
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<td>22.8 21.6 20.9</td>
<td>380 x 670 x 780</td>
<td>145 332</td>
</tr>
<tr>
<td>SES-20H-3P-S40</td>
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<td>30.4 28.9 27.8</td>
<td>490 x 800 x 990</td>
<td>210 333</td>
</tr>
<tr>
<td>SES-25H-3P-S40</td>
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<td>38 36.1 35</td>
<td>540 x 900 x 1000</td>
<td>280 334</td>
</tr>
<tr>
<td>SES-30H-3P-S40</td>
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<td>46 43 42</td>
<td>540 x 900 x 1000</td>
<td>282 334</td>
</tr>
<tr>
<td>SES-35H-3P-S40</td>
<td>35</td>
<td>53 51 49</td>
<td>1000 x 1300 x 580</td>
<td>459 335</td>
</tr>
<tr>
<td>SES-40H-3P-S40</td>
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<td>61 58 56</td>
<td>1000 x 1300 x 580</td>
<td>462 335</td>
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<tr>
<td>SES-45H-3P-S40</td>
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<td>68 65 63</td>
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<tr>
<td>SES-50H-3P-S40</td>
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<td>76 72 70</td>
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<tr>
<td>SES-55H-3P-S40</td>
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<td>84 79 77</td>
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<td>507 335</td>
</tr>
<tr>
<td>SES-60H-3P-S40</td>
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<td>91 87 83</td>
<td>1000 x 1300 x 580</td>
<td>510 335</td>
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</table>

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<tr>
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<th>Enclosure Type</th>
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<tbody>
<tr>
<td>SES-75H-3P-S40</td>
<td>75</td>
<td>114 108 104</td>
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<td>SES-80H-3P-S40</td>
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<td>SES-90H-3P-S40</td>
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<td>137 130 125</td>
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<tr>
<td>SES-100H-3P-S40</td>
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<tr>
<td>SES-120H-3P-S40</td>
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<td>182 173 167</td>
<td>1280 x 1950 x 880</td>
<td>1120 337</td>
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<tr>
<td>SES-150H-3P-S40</td>
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<td>228 216 209</td>
<td>1470 x 1950 x 1340</td>
<td>1560 339</td>
</tr>
<tr>
<td>SES-180H-3P-S40</td>
<td>180</td>
<td>273 260 250</td>
<td>1470 x 1950 x 1340</td>
<td>1710 339</td>
</tr>
<tr>
<td>SES-200H-3P-S40</td>
<td>200</td>
<td>304 289 278</td>
<td>1470 x 1950 x 1340</td>
<td>1740 339</td>
</tr>
<tr>
<td>SES-250H-3P-S40</td>
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<td>380 361 348</td>
<td>1470 x 1950 x 1340</td>
<td>1910 339</td>
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<tr>
<td>SES-300H-3P-S40</td>
<td>300</td>
<td>456 433 417</td>
<td>1470 x 1950 x 1340</td>
<td>2100 339</td>
</tr>
</tbody>
</table>

*Note: Higher kVA and alternative voltage options available to order / individual request.*

**Also available in Outdoor IP54 / NEMA 3 Style Enclosures - OSES SERIES**
STANDARD ENCLOSURE TYPES

331 & 332 Enclosures

Physical Size:
- 331: 300(W) x 550(H) x 590(D) mm
- 332: 380(W) x 670(H) x 780(D) mm

333 & 334 Enclosures

Physical Size:
- 333: 490(W) x 880(H) x 920(D) mm
- 334: 540(W) x 900(H) x 1000(D) mm

335 Enclosure

Physical Size:
- 335: 1000(W) x 1300(H) x 580(D) mm

336, 337 & 339 Enclosures

Physical Size:
- 336: 1280(W) x 1480(H) x 660(D) mm
- 337: 1280(W) x 1950(H) x 880(D) mm
- 339: 1470(W) x 1950(H) x 1340(D) mm

AVAILABILITY

We offer probably the best availability on AC Voltage Stabiliser & Power Conditioning solutions.

Many of our most popular ratings are readily available from stock at the factory or from one of our strategically located Service and Distribution Hubs. Where a solution is not readily available, due to our considerable investment in component inventory and fine-tuned accredited build processes, we are able to ensure very short lead times on deliveries – even for the largest of models!

CUSTOM BUILT SOLUTIONS

Ashley-Edison, with a strong and wide manufacturing base, is able to meet the requirements of customers from our own in-house professional resources.

Where bespoke / custom built solutions are required we are able to call upon our extensive portfolio of proven standard designs and tailor offerings to accommodate, without breaking the bank, most individual specific requirements.

WANT TO KNOW MORE . . . . .

Want to learn more about our Servo Electronic AC Voltage Regulators / Stabilisers and Power Conditioners?
Please ask for a copy of our . . . .
Servo Electronic Overview Brochure

NEED HELP SELECTING THE RIGHT MODEL FOR YOUR NEEDS?
Check out our Online Selection Tool at https://www.AshleyEdisonUK.com/product-selector-872/