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 to common, harmful high-energy surges, transients and 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.
VOLTAGE CHOICES AVAILABLE

4 WIRE SOLUTIONS
THREE PHASE WITH NEUTRAL (+ GROUND)

**H SERIES**
6 to 600 kVA
High Voltage Models:
380/220V, 400/230V or 415/240V,
X468 Models: 440/254V, 460/265V or 480/277V

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

**INPUT VOLTAGE WINDOW OPTIONS**

- **Nominal Voltage**
- **Accuracy**
- **Input Voltage Windows**
- **Output Accuracy**

<table>
<thead>
<tr>
<th>Nominal Voltage</th>
<th>Accuracy</th>
<th>Input Voltage Windows</th>
<th>Output Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>380V L-N 220V</td>
<td>± 3%</td>
<td>183 to 260V (-17% / +13%)</td>
<td>± 20%</td>
</tr>
<tr>
<td></td>
<td>± 5%</td>
<td>178 to 265V (-10% / +21%)</td>
<td>± 20%</td>
</tr>
<tr>
<td>400V L-N 230V</td>
<td>± 3%</td>
<td>183 to 285V (-17% / +13%)</td>
<td>± 20%</td>
</tr>
<tr>
<td></td>
<td>± 5%</td>
<td>176 to 264V (-10% / +21%)</td>
<td>± 20%</td>
</tr>
<tr>
<td>415V L-N 240V</td>
<td>± 3%</td>
<td>190 to 285V (-17% / +13%)</td>
<td>± 20%</td>
</tr>
<tr>
<td></td>
<td>± 5%</td>
<td>182 to 276V (-10% / +21%)</td>
<td>± 20%</td>
</tr>
</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.

TYPICAL APPLICATIONS

- Computers & Network Systems
- Medical Equipment
- Electronics Equipment
- Testing Equipment
- Laboratory Equipment
- POS Terminals
- Process Control Systems
- TV/Radio Broadcasting Stations
- Audio/Video Systems
- Security Systems
- Elevators / Lifts
- CNC & SMT Equipment
**GENERAL COMMERCIAL & INDUSTRIAL PRODUCTS**

**SES H-3P-S20 SERIES - THREE PHASE - 6 to 600 kVA**

**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:** ±20% (or −22% to +23% or −24% to +26%) 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.
- **Surge Suppression:** 440/254V, 460/265V & 480/277V models available on request.
- **Response Time:** 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
- **Correction Time:** <1.5ms
- **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 stabilization - protects load equipment from damaging start up voltage surges.

**Environment:**
- Temperature range –15 to 45 °C. Derate by 2% for each additional 1 °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:**
- Complies with BS EN 55022 and the relevant parts of the BS EN 61000 series of standards.

**CE Conformity:**

**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
- Drip Proof Cowf for IP21 Ingress Protection
- EMC Directive) and 2014/35/EU (The Low Voltage Directive)

**Optional Step Down Voltage Feature:**
- Ideal for applications where the utility supply voltage is different from the load equipment's requirement - see **SES-H 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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**S20 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>
</thead>
<tbody>
<tr>
<td></td>
<td>380V</td>
<td>400V</td>
<td>415V</td>
<td>W x H x D (mm)</td>
</tr>
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<td>SES-6H-3P-S20</td>
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<td>9.1</td>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>380V</td>
<td>400V</td>
<td>415V</td>
<td>W x H x D (mm)</td>
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<td>911</td>
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<td>835</td>
</tr>
</tbody>
</table>

Also available in Outdoor IPS4 / NEMA 3 Style Enclosures - **OSES SERIES**

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

331 & 332 Enclosures
Bottom Cable Entry

Front
Rear
Right Side

331
300(W) x 550(H) x 590(D) mm
11.9"(W) x 21.7"(H) x 23.3"(D) inches

332
380(W) x 670(H) x 780(D) mm
15.0"(W) x 26.4"(H) x 30.8"(D) inches

333 & 334 Enclosures
Bottom Cable Entry

Front
Rear
Right Side

333
490(W) x 880(H) x 990(D) mm
19.3"(W) x 31.5"(H) x 39.0"(D) inches

334
540(W) x 900(H) x 1000(D) mm
21.3"(W) x 35.5"(H) x 39.4"(D) inches

335 Enclosure
Bottom Cable Entry

Front
Rear
Left Side
Right Side

335
1000(W) x 1300(H) x 580(D) mm
39.4"(W) x 51.2"(H) x 22.9"(D) inches

336, 337 & 339 Enclosures
336 - Bottom Cable Entry
337 & 339 - Top Cable Entry (Bottom to Special Order)

Front
Rear
Left Side
Right Side

336
1280(W) x 1480(H) x 660(D) mm
50.4"(W) x 58.3"(H) x 26.0"(D) inches

337
1280(W) x 1950(H) x 850(D) mm
50.4"(W) x 76.8"(H) x 34.7"(D) inches

339
1470(W) x 1950(H) x 1340(D) mm
57.9"(W) x 76.8"(H) x 52.8"(D) inches

AVALIBILTY

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/