

SES H SERIES - THREE PHASE - 6 to 600 kVA

COST EFFICIENT VOLTAGE STABILISATION
with fast speed of response, high output voltage accuracy and inbuilt energy saving ability.

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 - $\pm 15\%$ (S15), $\pm 20\%$ (S20), $\pm 25\%$ (S25), $\pm 30\%$ (S30), $\pm 35\%$ (S35) & $\pm 40\%$ (S40) - to specify.
- **Precise Output Voltage Regulation**
Output Voltage Accuracy $\pm 0.5\%$ / $\pm 1.1\%$
- **Transient Voltage Surge Suppression**
TVSS - Protects loads against harmful high-energy surges, transients and spikes.
- **High Efficiency**
Better than 98% for low running costs.



SERVO **ELECTRONIC** DESIGN
AC VOLTAGE STABILISERS & REGULATORS
AC THREE PHASE - 6 TO 600 kVA

SES
H - THREE PHASE

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.
- **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**
Output Circuit Breaker, Manual Maintenance Bypass Switch, Ammeter with Phase Selector Switch, No Volt Remote Monitoring Contacts, Digital Power Metering (with RS-485 interface option) & Lightning Arrestors.
- **Compliance with International Standards**
Designed, manufactured and supplied to comply with leading international standards
- **CE Conformity**
Fully compliant and labelled

VOLTAGE CHOICES AVAILABLE

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

4 WIRE SOLUTIONS

THREE PHASE WITH NEUTRAL (+ GROUND)

H SERIES

6 to 600 kVA

High Voltage Models:

380/220V, 400/230V or 415/240V.

440/254V, 460/265V or 480V/277V to order.

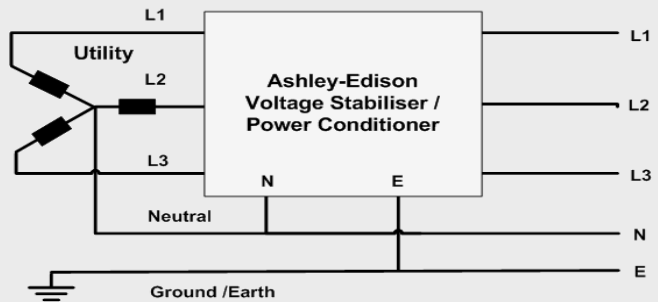
LY SERIES

6 to 200kVA

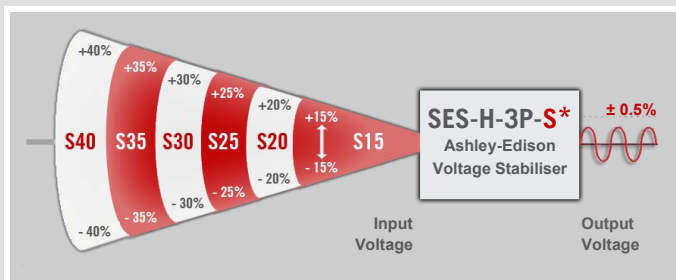
Low Voltage Models:

190/110V, 200/115V, 208/120V

or 220/127V.



H SERIES INPUT VOLTAGE WINDOW OPTIONS



In situations where there is a reasonably good mains supply, a Stabiliser offering an input variation swing of $\pm 15\%$ (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 $\pm 20\%$ 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 - SES-H-3P-S* Input Voltage Windows & Output Accuracy

Nominal Single Phase Voltage	Output Voltage Accuracy \pm % of Nominal	INPUT VOLTAGE SWINGS / SWING MODEL NO VARIANTS					
		S15	S20	S25	S30	S35	S40
		6 to 600 kVA	6 to 600 kVA	6 to 500 kVA	6 to 400 kVA	6 to 300 kVA	6 to 300 kVA
380V	$\pm 0.5\%$	323v to 437v ($\pm 15\%$)	304v to 456v ($\pm 20\%$)	285v to 475v ($\pm 25\%$)	266v to 494v ($\pm 30\%$)	247v to 513v ($\pm 35\%$)	228v to 532v ($\pm 40\%$)
	$\pm 3\%$	315v to 448v (-17% / +18%)	296v to 467v (-22% / +23%)	277v to 486v (-27% / +28%)	258v to 505v (-32% / +33%)	239v to 524v (-37% / +38%)	220v to 543v (-42% / +43%)
	$\pm 5\%$	308v to 460v (-19% / +21%)	289v to 479v (-24% / +26%)	270v to 498v (-29% / +31%)	251v to 517v (-34% / +36%)	232v to 536v (-39% / +41%)	213v to 555v (-44% / +46%)
400V	$\pm 0.5\%$	340v to 460v ($\pm 15\%$)	320v to 480v ($\pm 20\%$)	300v to 500v ($\pm 25\%$)	280v to 520v ($\pm 30\%$)	260v to 540v ($\pm 35\%$)	240v to 560v ($\pm 40\%$)
	$\pm 3\%$	332v to 472v (-17% / +18%)	312v to 492v (-22% / +23%)	292v to 512v (-27% / +28%)	272v to 532v (-32% / +33%)	252v to 552v (-37% / +38%)	232v to 572v (-42% / +43%)
	$\pm 5\%$	324v to 484v (-19% / +21%)	304v to 504v (-24% / +26%)	284v to 524v (-29% / +31%)	264v to 544v (-34% / +36%)	244v to 564v (-39% / +41%)	224v to 584v (-44% / +46%)
415V	$\pm 0.5\%$	353v to 477v ($\pm 15\%$)	332v to 498v ($\pm 20\%$)	311v to 519v ($\pm 25\%$)	291v to 540v ($\pm 30\%$)	270v to 560v ($\pm 35\%$)	249v to 581v ($\pm 40\%$)
	$\pm 3\%$	344v to 490v (-17% / +18%)	324v to 510v (-22% / +23%)	303v to 531v (-27% / +28%)	282v to 552v (-32% / +33%)	261v to 573v (-37% / +38%)	241v to 593v (-42% / +43%)
	$\pm 5\%$	336v to 502v (-19% / +21%)	315v to 523v (-24% / +26%)	295v to 544v (-29% / +31%)	274v to 564v (-34% / +36%)	253v to 585v (-39% / +41%)	232v to 606v (-44% / +46%)

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



TECHNICAL SPECIFICATION

Technology:	Servo Electronic - Variable Transformer controlled, series regulation transformer (buck-boast transformer with secondary wired in series with the load).
Input Voltage Swing:	±15% (or -17% +18% or -19% +21%) Three Phase, 4 Wire (with Neutral + Ground / Earth).
Output Voltage:	Presetable 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 0.6 seconds.
Efficiency:	98%
Power Factor:	Any lagging to 0.95 leading
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 °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 (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:	CE Marked - being fully compliant with European Union Directives 2004/108/EC (The EMC Directive) and 2006/95/EC (The Low Voltage Directive).
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 Cowl 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-HL 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-H SERIES AC Power Conditioners.

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

S15 PRODUCT SELECTION TABLE

MODEL	kVA	Max Rating @ (Amps per Phase)			Dimensions & Weight		Enclosure Type
		380V	400V	415V	W x H x D (mm)	(Kg)	
SES-6H-3P-S15	6	9.1	8.7	8.3	300 x 550 x 590	62	331
SES-10H-3P-S15	10	15.2	14.4	13.9	300 x 550 x 590	63	331
SES-15H-3P-S15	15	22.8	21.6	20.9	300 x 550 x 590	73	331
SES-20H-3P-S15	20	30.4	28.9	27.8	300 x 550 x 590	77	331
SES-25H-3P-S15	25	38	36.1	35	300 x 550 x 590	86	331
SES-30H-3P-S15	30	46	43	42	300 x 550 x 590	87	331
SES-35H-3P-S15	35	53	51	49	380 x 670 x 780	130	332
SES-40H-3P-S15	40	61	58	56	380 x 670 x 780	131	332
SES-45H-3P-S15	45	68	65	63	380 x 670 x 780	132	332
SES-50H-3P-S15	50	76	72	70	380 x 670 x 780	134	332
SES-55H-3P-S15	55	84	79	77	380 x 670 x 780	143	332
SES-60H-3P-S15	60	91	87	83	380 x 670 x 780	144	332
SES-75H-3P-S15	75	114	108	104	490 x 800 x 990	209	333
SES-80H-3P-S15	80	122	115	111	490 x 800 x 990	240	333

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

ALSO available in Outdoor IP54 / NEMA 3 Style Enclosures - **0SES SERIES**

MODEL	kVA	Max Rating @ (Amps per Phase)			Dimensions & Weight		Enclosure Type
		380V	400V	415V	W x H x D (mm)	(Kg)	
SES-90H-3P-S15	90	137	130	125	490 x 800 x 990	242	333
SES-100H-3P-S15	100	152	144	139	490 x 800 x 990	244	333
SES-120H-3P-S15	120	182	173	167	540 x 900 x 1000	285	334
SES-150H-3P-S15	150	228	216	209	540 x 900 x 1000	311	334
SES-180H-3P-S15	180	273	260	250	1000 x 1300 x 580	465	335
SES-200H-3P-S15	200	304	289	278	1000 x 1300 x 580	500	335
SES-250H-3P-S15	250	380	361	348	1280 x 1480 x 660	710	336
SES-300H-3P-S15	300	456	433	417	1280 x 1480 x 660	810	336
SES-350H-3P-S15	350	532	505	487	1280 x 1950 x 820	960	337
SES-400H-3P-S15	400	608	577	556	1280 x 1950 x 820	980	337
SES-450H-3P-S15	450	684	649	626	1280 x 1950 x 820	1010	337
SES-500H-3P-S15	500	760	722	695	1280 x 1950 x 820	1030	337
SES-600H-3P-S15	600	911	866	835	1280 x 1950 x 1200	1420	338

STANDARD ENCLOSURE TYPES

ALSO available in Outdoor IP54 / NEMA 3 Style Enclosures - **0SES** SERIES

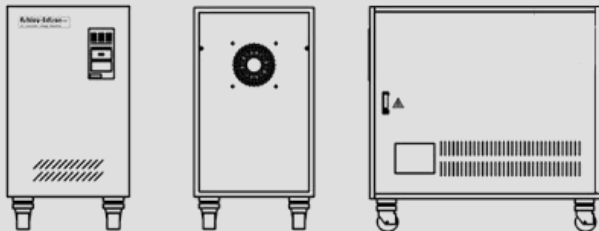
331 & 332 Enclosures

On Casters

Front

Rear

Right Side



Physical Size:

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)

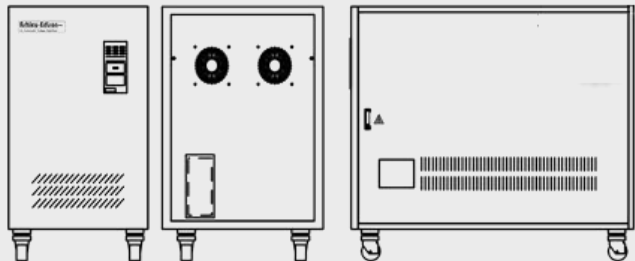
333 & 334 Enclosures

On Casters

Front

Rear

Right Side



Physical Size:

333	490(W) x 800(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

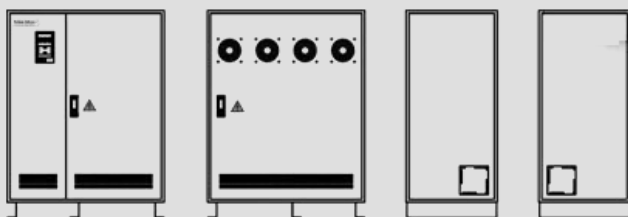
335 Enclosure

Front

Rear

Left Side

Right Side



Physical Size:

335	1000(W) x 1300(H) x 580(D) mm	39.4"(W) x 51.2"(H) x 22.9"(D) inches
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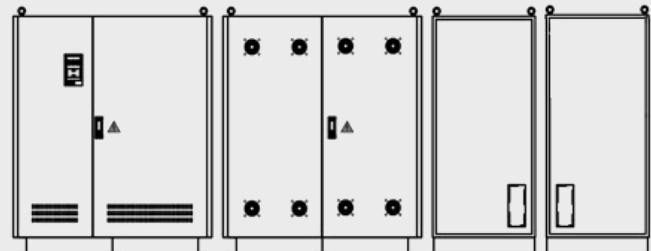
336, 337 & 338 Enclosures

Front

Rear

Left Side

Right Side



Physical Size:

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 820(D) mm	50.4"(W) x 76.8"(H) x 32.3"(D) inches
338	1280(W) x 1950(H) x 1200(D) mm	50.4"(W) x 76.8"(H) x 47.3"(D) inches

AVAILABILITY

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

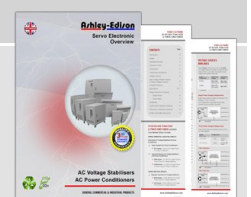
Many of our most popular ratings are readily available from stock at the factory or from one of our strategically located Service and Distribution Hubs. Where a solution is not readily available, due to our considerable investment in component inventory and fine-tuned accredited build processes, we are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

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



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.

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