

SES L/LH-R SERIES - SINGLE PHASE - 3 to 10 kVA

COST EFFICIENT VOLTAGE STABILIZATION
specifically designed for ease of installation within a 19" rack environment.

FEATURES

- **Automatic Voltage Regulation**
Step less automated voltage regulation - ideal for 95% of all applications.
- **Wide Range of Power Ratings**
Single Phase 3 to 10 KVA
- **Broad Input Voltage Swing Ranges**
Input Swing - $\pm 15\%$ (S15), $\pm 20\%$ (S20), $\pm 25\%$ (S25), $\pm 30\%$ (S30) & $\pm 35\%$ (S35) - to specify.
- **Precise Output Voltage Regulation**
Output Voltage Accuracy $\pm 1.0\%$
- **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 STABILIZERS & REGULATORS
RACK MOUNTABLE AC SINGLE PHASE - 3 TO 10 KVA

SES-R

100V - 110V - 115V - 120V - 127V - 50/60Hz

L & LH - SINGLE PHASE 

ENSURING A STABLE AC UTILITY SUPPLY 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 unscheduled down-time.

Ashley-Edison AC Voltage Stabilizers offer -

- **Voltage Stability & Protection**
Suitable for all electrical and electronic equipment, Ashley-Edison's SES AC Voltage Stabilizers continuously monitor the incoming supply. Should the incoming voltage rise or drop, the Stabilizers will automatically control the output to ensure the voltage reaching the load equipment always remains constant at the requisite voltage. Inbuilt spike protection ensures the load is continuously protected against harmful utility supply born high energy spikes and surges.
- **Durability & Dependability**
With an impressively wide range of input voltage window options and precise output voltage regulation, the electro-mechanical / electronic servo design based SES Voltage Stabilizers have repeatedly proven their durability and dependability in some of the world's harshest and most demanding power environments.
- **Energy Efficiency**
Characterized by high efficiency, SES Stabilizers are completely unaffected by power factor and load variations. Able to withstand high instantaneous overloads, SES Stabilizers do not generate any magnetic interference - making them ideal for being located near to sensitive equipment. Through delivering a regulated, stable and optimized voltage to the equipment they support, SES Stabilizers ensure you only pay for the actual energy you need.
- **Unparalleled Protection and Value**
Unparalleled inbuilt protection features, including the provision of Soft Switch-On as standard on all models, ensures SES AC Voltage Stabilizers deliver, without compromising on technical performance or quality, outstanding value for money.

- **Inbuilt High Overload Capability**
Ideal for loads with an inherent initial high current
- **Input Circuit Breaker**
Standard protection on all models
- **Bypass Control Switch**
Manual Electronic Controls Bypass Facility
- **Soft - Switch On**
Load protection 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.
- **Compliance with International Standards**
Designed, manufactured and supplied to comply with leading international standards
- **CE Conformity**
Fully compliant and labelled
- **Warranty**
3 Years / 36 Months as standard

Available Standard Models:

- **L Series - Low Voltage Models**
100V, 110V, 115V, 120V or 127V (Single Phase)
- **H Series - High Voltage Models**
220V, 230V or 240V (Single Phase)
- **LH & HL Series**
Step-Up & Step-Down Voltage Models (Single Phase)

VOLTAGE CHOICES AVAILABLE

2 WIRE SOLUTIONS

SINGLE PHASE WITH NEUTRAL (+ GROUND)

L/LH SERIES

3 to 10 kVA
3 to 5 kVA (LH)

Low Voltage Models:

100V, 110V, 115V, 120V or 127V.

Other voltages available on individual request / quotation



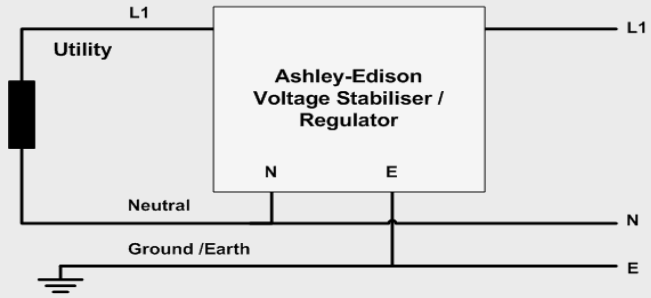
H/HL SERIES

3 to 15 kVA (H)
3 to 5 kVA (HL)

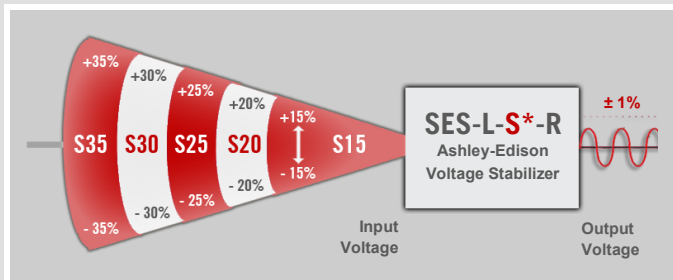
High Voltage Models:

220V, 230V or 240V.

Other voltages available on individual request / quotation.



L & LH SERIES INPUT VOLTAGE WINDOW OPTIONS



In situations where there is a reasonably good mains supply, a Stabilizer 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 Stabilizer.

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



L & LH SERIES - SES-L/LH-S*-R 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
		L - 3 to 10 kVA LH - 3 to 5 kVA	L - 3 to 10 kVA LH - 3 to 5 kVA	L - 3 to 10 kVA LH - 3 to 5 kVA	L - 3 to 7.5 kVA	L - 3 to 7.5 kVA
100V	$\pm 1\%$	85v to 115v ($\pm 15\%$)	80v to 120v ($\pm 20\%$)	75v to 125v ($\pm 25\%$)	70v to 130v ($\pm 30\%$)	65v to 135v ($\pm 35\%$)
	$\pm 3\%$	83v to 118v (-17% / +18%)	78v to 123v (-22% / +23%)	73v to 128v (-27% / +28%)	68v to 133v (-32% / +33%)	63v to 138v (-37% / +38%)
	$\pm 5\%$	81v to 121v (-19% / +21%)	76v to 126v (-24% / +26%)	71v to 131v (-29% / +31%)	66v to 136v (-34% / +36%)	61v to 141v (-39% / +41%)
110V	$\pm 1\%$	94v to 127v ($\pm 15\%$)	88v to 132v ($\pm 20\%$)	83v to 138v ($\pm 25\%$)	77v to 143v ($\pm 30\%$)	72v to 149v ($\pm 35\%$)
	$\pm 3\%$	91v to 130v (-17% / +18%)	86v to 135v (-22% / +23%)	80v to 141v (-27% / +28%)	75v to 146v (-32% / +33%)	69v to 152v (-37% / +38%)
	$\pm 5\%$	89v to 133v (-19% / +21%)	84v to 139v (-24% / +26%)	78v to 144v (-29% / +31%)	73v to 150v (-34% / +36%)	67v to 155v (-39% / +41%)
115V	$\pm 1\%$	98v to 132v ($\pm 15\%$)	92v to 138v ($\pm 20\%$)	86v to 144v ($\pm 25\%$)	81v to 150v ($\pm 30\%$)	75v to 155v ($\pm 35\%$)
	$\pm 3\%$	95v to 136v (-17% / +18%)	90v to 141v (-22% / +23%)	84v to 147v (-27% / +28%)	78v to 153v (-32% / +33%)	72v to 159v (-37% / +38%)
	$\pm 5\%$	93v to 139v (-19% / +21%)	87v to 145v (-24% / +26%)	82v to 151v (-29% / +31%)	76v to 156v (-34% / +36%)	70v to 162v (-39% / +41%)
120V	$\pm 1\%$	102v to 138v ($\pm 15\%$)	96v to 144v ($\pm 20\%$)	90v to 150v ($\pm 25\%$)	84v to 156v ($\pm 30\%$)	78v to 162v ($\pm 35\%$)
	$\pm 3\%$	100v to 142v (-17% / +18%)	94v to 148v (-22% / +23%)	88v to 154v (-27% / +28%)	82v to 160v (-32% / +33%)	76v to 166v (-37% / +38%)
	$\pm 5\%$	97v to 145v (-19% / +21%)	91v to 151v (-24% / +26%)	85v to 157v (-29% / +31%)	79v to 163v (-34% / +36%)	73v to 169v (-39% / +41%)
127V	$\pm 1\%$	108v to 146v ($\pm 15\%$)	102v to 152v ($\pm 20\%$)	95v to 159v ($\pm 25\%$)	89v to 165v ($\pm 30\%$)	83v to 171v ($\pm 35\%$)
	$\pm 3\%$	105v to 150v (-17% / +18%)	99v to 156v (-22% / +23%)	93v to 163v (-27% / +28%)	86v to 169v (-32% / +33%)	80v to 175v (-37% / +38%)
	$\pm 5\%$	103v to 154v (-19% / +21%)	97v to 160v (-24% / +26%)	90v to 166v (-29% / +31%)	84v to 173v (-34% / +36%)	77v to 179v (-39% / +41%)

L SERIES TECHNICAL SPECIFICATION

100V - 110V - 115V - 120V - 127V - 50/60Hz

Technology:	Servo Electronic - Variable Transformer controlled, series regulation transformer (buck-boast transformer with secondary wired in series with the load).			
Input Voltage Swing:	Model / Accuracy	± 1%	± 3%	± 5%
	S15	± 15%	-17% +18%	-19% +21%
	S20	± 20%	-22% +23%	-24% +26%
	S25	± 25%	-27% +28%	-29% +31%
	S30	± 30%	-32% +33%	-34% +36%
	S35	± 35%	-32% +33%	-34% +36%
Output Voltage:	Presettable for any voltage between 100V, 110V, 115V or 120V, (Customer to specify), Single Phase, 2 Wire. 127V models available to special order. The permissible input voltage swing is relative to the preset output voltage.			
Output Voltage Accuracy:	± 1%, ± 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 Suppression:	TVSS - Protects loads against high-energy Spikes and Transient Voltages.			

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
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 Input / Output Terminals Bypass Control Switch Output Voltmeter Over / Low Voltage Protection Volt Free Contacts - (Normally Open / Closed)
Optional Accessories:	Lightning Surge Arrestor AquaStop Protective Coating - protection against damp and moisture ingress

Note: Special voltage configurations available to individual order.

L SERIES PRODUCT SELECTION TABLERack Mount Enclosure
Height = 5.4U

Model	Rating kVA	Max Rating (Amps)					Dimensions (mm) W x H x D	Weight (Kg)
		@ 100V	@ 110V	@ 115V	@ 120V	@ 127V		
S15 - Single Phase Input Swing ± 15%								
SES-3L-S15-R	3	30	27	26	25	23	480 x 240 x 400	28
SES-5L-S15-R	5	50	45	43	41	39	480 x 240 x 400	30
SES-10L-S15-R	10	100	90	87	83	78	480 x 240 x 400	36
S20 - Single Phase Input Swing ± 20%								
SES-3L-S20-R	3	30	27	26	25	23	480 x 240 x 400	30
SES-5L-S20-R	5	50	45	43	41	39	480 x 240 x 400	36
SES-10L-S20-R	10	100	90	87	83	78	480 x 240 x 400	45
S25 - Single Phase Input Swing ± 25%								
SES-3L-S25-R	3	30	27	26	25	23	480 x 240 x 400	34
SES-5L-S25-R	5	50	45	43	41	39	480 x 240 x 400	36
SES-10L-S20-R	10	100	90	87	83	78	480 x 240 x 400	48
S30 - Single Phase Input Swing ± 30%								
SES-3L-S30-R	3	30	27	26	25	23	480 x 240 x 400	37
SES-5L-S30-R	5	50	45	43	41	39	480 x 240 x 400	40
SES-7.5L-S30-R	7.5	75	68	65	62	59	480 x 240 x 400	48
S35 - Single Phase Input Swing ± 35%								
SES-3L-S35-R	3	30	27	26	25	23	480 x 240 x 400	41
SES-5L-S35-R	5	50	45	43	41	39	480 x 240 x 400	48
SES-7.5L-S30-R	7.5	75	68	65	62	59	480 x 240 x 400	50

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STEP-UP AC VOLTAGE STABILISERS

100V - 110V - 115V - 120V - 127V - 50/60Hz

LH SERIES TECHNICAL SPECIFICATION

Ideal for applications where the utility supply voltage is different from the load equipment's requirement.

Technology:	Servo Electronic - Variable Transformer controlled, series regulation transformer (buck-boast transformer with secondary wired in series with the load).																
Input Voltage:	100V, 110V, 115V & 120V (Customer to specify), Single Phase, 2 Wire (1 Phase + Neutral + G/E). 127V models available to special order.																
Input Voltage Swing:	<table border="1"> <thead> <tr> <th>Model / Accuracy</th> <th>± 1%</th> <th>± 3%</th> <th>± 5%</th> </tr> </thead> <tbody> <tr> <td>S15</td> <td>± 15%</td> <td>-17% +18%</td> <td>-19% +21%</td> </tr> <tr> <td>S20</td> <td>± 20%</td> <td>-22% +23%</td> <td>-24% +26%</td> </tr> <tr> <td>S25</td> <td>± 25%</td> <td>-27% +28%</td> <td>-29% +31%</td> </tr> </tbody> </table>	Model / Accuracy	± 1%	± 3%	± 5%	S15	± 15%	-17% +18%	-19% +21%	S20	± 20%	-22% +23%	-24% +26%	S25	± 25%	-27% +28%	-29% +31%
Model / Accuracy	± 1%	± 3%	± 5%														
S15	± 15%	-17% +18%	-19% +21%														
S20	± 20%	-22% +23%	-24% +26%														
S25	± 25%	-27% +28%	-29% +31%														
Output Voltage:	Presetable for any voltage between 220V, 230V & 240V (Customer to specify), Single Phase, 2 Wire.																
Output Voltage Accuracy:	± 1%, ± 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.
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 Input / Output Terminals Bypass Control Switch Output Voltmeter Over / Low Voltage Protection Volt Free Contacts - (Normally Open / Closed)
Optional Accessories:	Lightning Surge Arrestor AquaStop Protective Coating - protection against damp and moisture ingress

Note: Special voltage configurations available to individual order.

HL SERIES PRODUCT SELECTION TABLERack Mount Enclosure
Height = 5.4U

Model	Rating kVA	Max Rating (Amps)			Dimensions (mm) W x H x D	Weight (Kg)
		@ 220V	@ 230V	@240V		
S15 - Single Phase Input Swing ± 15%						
SES-3LH-S15-R	3	13.6	13	12.5	480 x 240 x 400	46
SES-5LH-S15-R	5	23	22	21	480 x 240 x 400	56
S20 - Single Phase Input Swing ± 20%						
SES-3LH-S20-R	3	13.6	13	12.5	480 x 240 x 400	48
SES-5LH-S20-R	5	23	22	21	480 x 240 x 400	62
S25 - Single Phase Input Swing ± 25%						
SES-3LH-S25-R	3	13.6	13	12.5	480 x 240 x 400	52
SES-5LH-S25-R	5	23	22	21	480 x 240 x 400	62

