

## AC Automatic Magnetic Induction Voltage Stabilisers & Regulators Magnetic Induction Design

## MVSI SERIES THREE PHASE 100KVA ~ 1500KVA

AC mains voltage fluctuations can cause equipment to behave erratically and malfunction. Some systems may even breakdown due to these fluctuations. Failure to ensure the incoming mains voltage remains stable can often result in costly equipment repairs.

**Ashley-Edison, MVSI Series** Voltage Stabiliser / Regulator utilizes the latest in Magnetic Induction technology to ensure the mains voltage remains constant at all times. As a Magnetic Induction based solution, MVSI 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.

**MVSI Stabilisers**, due to their individual phase sensing and control, is an ideal solution for use with 100% unbalance line voltage or load.

**MVSI Stabilisers** have no carbon brushes and there is no contact wear. As a result, system reliability is extremely high and IVSI Stabilisers are viewed as virtually maintenance free solutions.

**INDEPENDENT PHASE CONTROL  
MAINTENANCE FREE BRUSHLESS TECHNOLOGY**



**MVSI** Magnetic Induction Voltage Stabilisers utilizing **Brushless Technology** are highly reliable. **No carbon brushes**, high efficiency and **maintenance-free**.

### Models:

#### High Voltage (H) Models

380/220V; 400/230V or 415/240V  
(Three Phase)

#### Low Voltage (L) Models

200/115V; 208/120V or 220/127V  
(Three Phase)

### Features:

- **Wide Range of Voltage Stabiliser**  
Three Phase 100 to 1500KVA
- **Input Swing Range**  
Input Swing Range Available from  $\pm 13\%$ ,  $\pm 18\%$ ,  $\pm 23\%$ ,  $\pm 28\%$ ,  
(To Specify)
- **Output Voltage Regulation**  
Output Voltage Accuracy  $\pm 1.5\%$ ,
- **High Efficiency**  
Better than 97%
- **Independent Phase Control Circuit**  
Maintain each phase voltage stable,  
irrespective of load unbalance.
- **Standard Features**  
Loss of Phase & Phase Reversal Alarms  
Over Temperature Alarm  
Over Voltage & Low Voltage Alarms  
Voltmeter/selector switch  
Ammeter/selector switch  
Lightning arresters
- **Optional Accessories**  
Input circuit breaker  
Output circuit breaker  
Over/low voltage protection  
Phase-failure protection  
Frequency meter  
Manual maintenance bypass switch
- **Compliance with International Standards**  
BS EN50081-1;2/IEC 61000-4-3;4  
BS EN5490/IEC 60529
- **CE Conformity**  
EN55022,EN50082-2,ENV50140-1
- **Warranty**  
2 Years

### Applications:

- Cement Manufacturing
- Induction Heaters
- Machine-tool Control
- Manufacturing and Testing
- Motor Testing
- Radiant Heaters
- Semi-conductor Equipment
- Manufacturing Plant



## AC Automatic Magnetic Induction Voltage Stabilisers & Regulators (Brushless Design)

### Technical Specifications

<b>Input Swing Range Available (*) (To Specify)</b>	± 13%, ± 18%, ± 23%, ± 28%, 3 Phase 4 Wire (3P+N)
<b>Output Voltage</b>	Presettable for any voltage between 380/220V; 400/230V or 415/240V
<b>Output Voltage Accuracy</b>	± 1.5%
<b>Frequency</b>	47 – 65 Hz
<b>Response Time</b>	<1.5ms
<b>Correction Time</b>	A 10% supply variation will be corrected to within 2.5% in 0.6 seconds.
<b>Efficiency</b>	97%
<b>Power Factor</b>	Any lagging to 0.95 leading
<b>Surge ratings</b>	10 x max current rating for 2 seconds 3 x max current rating for 1 minutes 2 x max current rating for 5 minutes
<b>Surge Suppression</b>	Protect loads against high-energy spikes and transient voltage.
<b>Surge Arrester</b>	40KA at 415V AC Class III (IEC 61643-1:1998-02, EN 61643- 11:2001)
<b>Total Harmonic Distortion</b>	<1%
<b>Independent Phase Control</b>	Maintain each phase voltage stable irrespective of load unbalance, even up to 100% load unbalance.

<b>Environment</b>	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.
<b>Standard Features</b>	Loss of Phase & Phase Reversal Alarms Over Temperature Alarm Over Voltage & Low Voltage Alarms Voltmeter/selector switch Ammeter/selector switch Provide No-volt free contact (N.C & N.O)
<b>Construction</b>	Enclosures to IP20, BS EN5490 / IEC 60529
<b>EMC Conformance</b>	BS EN50081-1;2 / IEC 61000-4-3;4
<b>CE Conformity</b>	EN55022, EN50082-2, ENV50140-1
<b>Warranty</b>	Two Years
<b>Optional Accessories</b>	Input circuit breaker Output circuit breaker Over/Low voltage protection Phase failure protection Frequency meter Manual maintenance bypass switch
Note: Optional accessories added may affect dimension, subject to confirmation.	
Note: 1) 208V 3Phase 3Wire or 4Wire options available on order 2) Special voltage configurations available on order	



### Three Phase Model: MVSI-H-3P-S(\*)

Model:	Rating KVA	Amps @ 380V	Amps @ 400V	Amps @ 415V	Dimensions (mm) W x H x D	Weight (Kgs)
MVSI 100H-3P-S	100	152	144	139	Dimensions and Weight upon request	
MVSI 120H-3P-S	120	182	173	167		
MVSI 150H-3P-S	150	228	216	209		
MVSI 200H-3P-S	200	304	289	278		
MVSI 250H-3P-S	250	380	361	348		
MVSI 300H-3P-S	300	456	433	417		
MVSI 400H-3P-S	400	608	577	556		
MVSI 500H-3P-S	500	760	722	695		
MVSI 750H-3P-S	750	1139	1082	1043		
MVSI 1000H-3P-S	1000	1519	1443	1391		
MVSI 1200H-3P-S	1200	1823	1732	1669		
MVSI 1500H-3P-S	1500	2279	2165	2087		

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