Static Voltage Stabilizer is an IGBT based PWM type buck-boost voltage stabilizer which has tight regulation and fast correction speed which is impossible to obtain using conventional methods such as servo voltage stabilizers, SCR / triac type stabilizer, relay type stabilizer etc.

This is an SMPS type voltage stabilizer for mains voltage (AC input and AC output). This is a new switching topology where PWM is made directly in AC-to-AC switching, without any harmonic distortion. In this topology there is no need to convert the AC input to DC and again convert it back to regulated AC output. This simplifies the design, reduces the component count and improves the efficiency and reliability. The power stage is an IGBT chopper control. The chopping frequency is around 20KHz which ensures absolutely silent operation and pure sine wave output (no waveform distortion).

IGBT Based
Static Voltage Regulations

The control section is based on dsPIC controller which ensures quick correction of output which is not possible in conventional relay type stabilizer or servo controlled stabilizers. The circuit is having LCD for display which will show all parameters like: input voltage, output voltage, connected load, etc.

Since the circuit is fully solid state (no mechanical or moving parts) there will not be any wear and tear like the brush tear in servo stabilizer or relay degrading in relay based stabilizer.

This is specially useful in places where we need very fast correction speed, constant output voltage, overload current limiting and short circuit protection, soft start, high voltage cut-off and low voltage cut-off, automatic bypass, no wear and tear, long life and maintenance free which is impossible with other conventional relay type or servo control stabilizers.

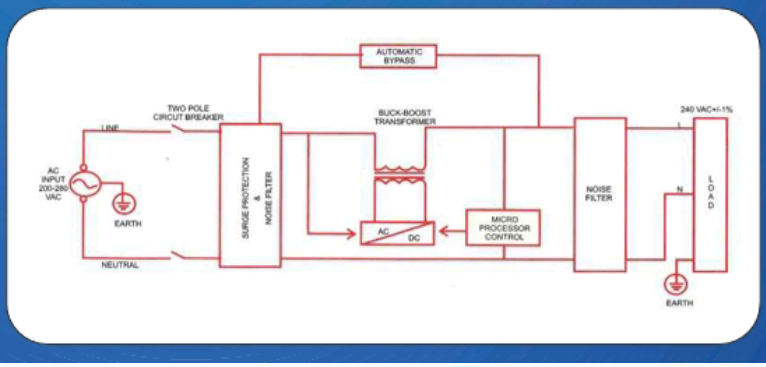
FEATURES

1. Direct AC-AC conversion without rectifying to DC improves the efficiency, reliability & reduces the components.
2. Rapid cycle by cycle correction of output.
3. Output regulation of +/- 1% which is impossible in conventional stabilizer.
4. No distortion in output waveform.
5. Overload cutoff and short circuit cut off
6. Over voltage and under voltage cutoff.
7. Automatic bypass incase of failure.
8. LCD display for displaying all parameters and your company name.

MICROLINE SVR IS IDEAL SOLUTIONS FOR

1. CNC Machines
2. Textiles Machines
3. Laser Cutting Machine
4. Robotics Machines
5. Food Processing Machines
6. Injection Molding Machine
7. Printing Machines
8. Automated Petrol Pumps & Dispensers
9. Medical, Diagnostics & Hospital Equipment
10. Lighting Load, Home Applicances

SCHEMATIC BLOCK DIAGRAM



TECHNICAL SPECIFICATIONS FOR STATIC VOLTAGE REGULATORS

PARTICULARS	SINGLE PHASE	THREE PHASE
Technology	DSP BASED ULTRA FAST CORRECTOR	
Capacities		
Discreet IGBT based	1KVA to 30KVA	3KVA to 90KVA
IGBT module based	30KVA to 70KVA	90KVA to 200KVA
Control type	DSP based IGBT PWM	DSP based IGBT PWM
	Switching	Switching
Input Voltage Range for	1Phase 3 Wire	3 Phase 5 Wire
220V output -		
Normal	180V to 280V	360V to 480V
Wide	150V to 290V	300V to 500V
Extended	90V to 300V	250V to 520V
Input Voltage Range for		
110V output -		
Normal	90V to 130V	180V to 240V
Wide	75V to 145V	150V to 250V
Extended	45V to 175V	100V to 300V
Output Voltage	220V +/- 1% settable	400/415V +/- 1% settable
	110V +/- 1% settable	200/220V +/- 1% settable
Regulation	+/- 1%	+/- 1%
Efficiency	> 97%	>97%
Input Frequency	45Hz to 65Hz	45Hz to 65Hz
Wave Form	Same as Input	Same as Input
Overload	110% for 60 sec, 130% for 10sec	
Display	LCD for –	LCD for –
	Input voltage	Input voltage
	Output voltage	Output voltage
	Load VA	Load VA
	Line frequency	Line frequency
	Overload	Overload
	High voltage input	High voltage input
	Low voltage input	Low voltage input
	Cut off mode	Cut off mode
	Bypass mode	Bypass mode
	Set up mode	Set up mode
Rate of Correction	20000V per second(10ms)	20000V per second(10ms)
Operating Temperature	0 to 50 deg Celsius	0 to 50 deg Celsius
Duty cycle	Continuous	Continuous