

DIGITAL CONTROLLED SERVO VOLTAGE STABILIZER



1 KVA TO 2000 KVA

www.selvon.net

Company Profile

Selvon has a proven track record of more than three decades in manufacturing of highly reliable and efficient Servo Controlled Automatic Voltage Stabilizers and other products. Our motto is total commitment towards customer's satisfaction. Since established in 1986 we have focused on the various aspects of power quality and its possible solutions. With this experience in hand, we move ahead with constant refinement of production techniques for the optimum satisfaction of our clients. Due to our special designs, stringent quality standard (as per IS: 9815-94) and effluent after Sales Service, we enjoy a good rapport with our buyers. **Our efforts have been amply rewarded with repeat orders and project assignments from Govt. Deptts / Public sectors / Institutions / MNCs & Big Business / Industrial houses.**

Introduction

Fluctuations in the voltage, is a constant feature of our electricity supply. This is observed irrespective of the distribution being H.T./L.T. Constant fluctuations of voltage leads to frequent break down & higher rejection in the end products, high cost of production and last, but not the least-loss of energy.

Major Industrial loads are inductive (i.e., A.C. Motors) and they draw very high currents at high / low voltages, resulting in higher losses which in turn raise the operating temperature of motors, thereby reducing the motor life. Other equipments that are affected by high / low voltages are Lighting loads, A/C plants, Lifts, Medical/ Analytical equipment to name a few.

Advantages of Selvon Stabilizers

- Corrects voltage automatically and continuously.
- Induction motors operate at high efficiency and improved power factor when supplied constant voltages.
- Protects costly manufacturing equipments from menace of High/Low Voltages, thus cutting on the maintenance cost.
- Less Production losses & better efficiency in plant.
- Increased productivity.
- 100% depreciation from Income Tax.
- Reduces MDI and saves power.
- Reduction in electricity bills up to the level of approximately 15% (This also depends on the input variation, loading and the number of working hours)
- Saves diesel cost, as generator is not required to run at high/low input voltages.
- The average pay back period of Servo Controlled Voltage Stabilizer owing to its high energy saving capability is approx. 18 months.

Quality Policy

Selvon Instruments Pvt. Ltd. An ISO 9001-2015 Company is committed to improve its methods & ways to satisfy the needs of our customers & deliver to them on time, quality product & services.

Designing, Manufacturing, Installation & servicing is done as per ISO 9001-2015 quality procedures for Global Acceptance. Our 'Quest for excellence' helps us to maintain the trust of our customers through consistent improvements in all the related aspects.

Field of Application

- Information technology and Call centres.
- Computers and Micro-processor control systems.
- Sophisticated research instruments used in Scientific, Medical, Agriculture, Educational and other Research Institutions.
- Offset Printing presses. Colour Scanners, Processors, Phototypesetters, Photographic equipments, Photo copiers and Packaging Industries.
- Medical equipments, X-Ray machines, E.C.G. machines/monitors, Refrigerated systems, Centrifuge, NMR, MRI, CT scans etc.
- Defence installations, LPTs, HPTs, Broadcasting and Telecommunications.
- Lifts, Escalators and Elevators.
- Central Air-Conditioning plants, Processing plants, Chemical Industries, Textile Industries, Cold Stores.
- CNC machines, Laser machines and Moulding machines.
- Commercial buildings and Complexes.

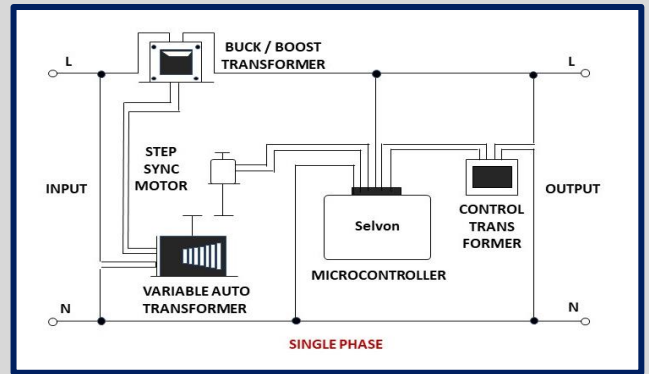


Single Phase

Principle of Operation

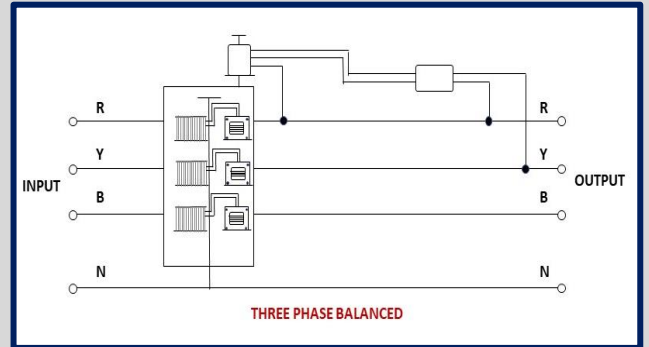
SINGLE PHASE

The control circuit continuously monitors the output voltage and looks for any error in the output. Any deviation in the output is immediately corrected by switching on the Servo motor. The motor coupled to the variable auto transformer increases / decreases the voltage to primary of buck / boost transformer. The buck / boost transformer adds / subtracts the voltage to mains so that the output voltage remains within the set limits.



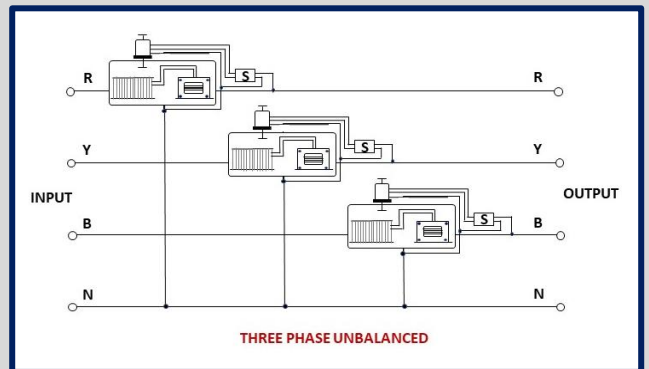
THREE PHASE (BALANCED TYPE)

This employs a single control circuit. The three variacs are mechanically coupled and driven by a single motor. Sensing is done phase to phase and the correction is done accordingly. This is suitable for use with balanced supply and balanced load. Some unbalance in load / supply can be tolerated but at a loss of accuracy in the output voltage.



THREE PHASE (UNBALANCED TYPE)

This type of stabilizer is more versatile and is the most commonly used type, for use with three phase / single phase machines / loads. This basically consists of 3 single phase units of 1/3 capacity each, connected in 'STAR'. In this type, the output voltage on all three phases are balanced even if the input voltage and the loads connected on the three phases are entirely different (unbalanced). This comprises of three motors along with three variacs with three buck/boost transformers and controlled by a microcontroller based panel.



Outstanding Features Of Selvon Stabilizers

- Microcontroller based system for more accuracy and control.
- High overload capacity for high inrush and regenerating currents of induction motors.
- Machine wound variable auto-transformer.
- Specially design transformer to minimized losses.
- Prime grade CRGO lamination and electrolytic conductors of 99.9% purity used for transformer.
- Plug in type microprocessor-based control panel designed for easy on-line serviceability.
- All components used are of reputed makes, confirming to relevant IS/BS standards.
- All electronics components tested at 55 Degree Celsius to minimize failure.
- Exceptionally low output impedance.
- Efficiency better than 98.6%. Resulting in large energy conservation.
- Burn proof / brush less AC synchronous motor for greater reliability and longer life.
- Easy accessibility from all sides.
- Stabilizers are subjected to routine and type test in accordance with latest IS standards. **(IS:9815-94)**



Three Phase

Technical Specifications

Topology	Microcontroller Based
Capacity	1KVA to 100 KVA (Single Phase) 3 KVA to 2000 KVA (Three Phase)
Input Voltage Range	120V-280V, 150V – 280V, 170V – 280V (Single Phase) 208V-485V, 260V – 485V, 300V – 485V (Three Phase) (Other ranges available on specific order)
Output Voltage	230V / 240V Single Phase (adjustable) 400V / 415V Three Phase (adjustable)
Regulation	±1 % or Better.
Supply Frequency	47 Hz – 53 Hz.
Efficiency	>98.6%
Effect Of Load Power Factor	Nil
Wave Form Distortion	Nil
Rate Of Correction	Better Than 36V / Sec. In AN Better Than 20V / Sec. In ONAN
Duty Cycle	100% Continuous
Response Time	Less than 10 ms.
Cooling	AN / ONAN
Over Load Capability	Upto 200% momentarily
No Load Losses	Less than 0.8% over entire range
Suitability	Suitable for 3 Ph unbalanced/ balanced supply & unbalanced / balanced load
Mounting	On wheels
Earthing	Two numbers of earthing terminals
Cable Termination Box	Input / Output connections
Ambient Temperature	-10°C to +55°C
Relative Humidity	Upto 95%

Note: Indicated input voltage ranges are corresponding to Nominal output voltage.

At other settings of output voltage, the input voltage range will shift proportionately.

Standard Accessories Controls

- Auto / manual soft switch.
- Output voltage adjusts by soft switches.
- Increase / decrease soft switches.

Digital Indications

- Input / Output Voltage.
- Output Current.
- Mains Input ON, Output ON
- Under Voltage / Over Voltage.

Optional Accessories (at extra cost)

- Under / Over Voltage Trip-Off system.
- Time delay facility.
- Protection against Single phasing/ reverse phasing.
- Overload / Short circuit protection.
- Ammeter with CTs & Selector Switch.

- By-pass facility.
- RFI / EMI filter/ Surge suppressor.
- Audio alarm facility.
- Switch fuse units.
- Remote panel.



Single Phase

Other Products

 Linear (Roller) Stabilizer	 Oil Cooled Servo Stabilizer	 Air Cooled Servo Stabilizer	 IGBT Static Stabilizer	 AMF Panel
 Isolation Transformer	 H.T. Transformer	 APFC Panel	 Digital AVR	 On-Line UPS

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