

REDUCE FAILURE RATE OF ELECTRICAL EQUIPMENTS

&

RAKHE SAB SAFE

by installing

ECO POWER SOLUTIONS

AUTOMATIC VOLTAGE CONTROLLER



LINEAR CONTACT SERVO VOLTAGE STABILIZER
upto 5000 KVA



SERVO VOLTAGE STABILIZER

The Servo Voltage Stabilizer (Voltage Connector or Voltage Regulator) is an electrical and electronic product specially designed to control the fluctuations or stabilize the output voltage to prevent the electrical appliances and electrical equipment from breakdown due to voltage fluctuations on the input side. The Servo Voltage Stabilizer usually works on Low Voltage Lines (LT).

Why Servo Voltage Stabilizer is Required?

We are all part of Hi-tech world; everything is automated with sophisticated sensors and robotic technologies. Automation plays an important role in every field, whether it is business, industry, telecommunications, printing, manufacturing, software, hospitals, homes, infrastructures, intelligence agencies, CNC machines, data science and many other diversified Industries.

Voltage fluctuations are a common phenomenon worldwide, especially in developing and underdeveloped countries, Voltage manifests itself in various ways, namely as low voltage or voltage drop, as high voltage or over voltage, and as unbalanced voltage. The duration of these phenomena depends on the cause and is not easily predictable. Normally, the input voltage is low during the day and relatively high during hours, resulting in frequent power outages and consequently affecting production and overall costs.

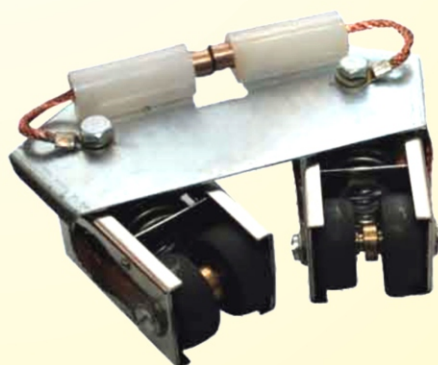
In industry, due to the high load on equipment, unusual voltage fluctuations occur, which are one of the main causes of power outages or damage to expensive equipment. We cannot prevent the input voltage fluctuations, but we can install a servokon make Servo Voltage Stabilizer to prevent the fluctuations. Subsequent use of the Servo Voltage Stabilizer saves energy and reduces MDI.

List of Fittings & Accessories :

- Oil Level Gauge / Indicator.
- Earthing Terminals.
- Name, Rating & Diagram Plate.
- Uni-Directional Flat Wheels.
- Lifting Lugs.
- Monogram Plate.
- Cable Box.
- First Filling of Transformer Oil as per IS:335.

Optional Features & Protections:

- High Voltage Cut Off
- Over Load Cut Off
- Single Phase Preventer
- Phase Sequence Corrector
- By Pass Switch
- Phase Reversal Cut Off
- Low Voltage Cut Off



LINEAR CARBON

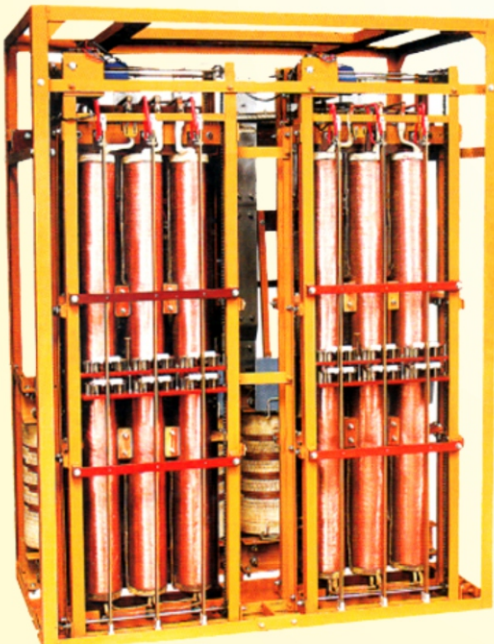
ROLLING CONTACT / LINEAR TYPE SERVO VOLTAGE STABILIZER

Rolling Contact / Linear Type Servo Voltage Stabilizers detects the unexpected voltage fluctuations of the power supply and reduce or increase the voltage levels with the help of Servo Motors (an important component of servo stabilizers), and then provide a stabilized, high output voltage to the end devices.

To ensure better cooling of the Servo Voltage Stabilizers, Transformer Oil as per IS:335 is used. Oil cooled Servo Voltage Stabilizers are the best solution for industry to avoid voltage fluctuation.

TECHNICAL SPECIFICATIONS	
Standard	Confirms to latest IS:9815, IS:2026, IS:1180 & relevant International Standard or As Applicable
Capacity	10 KVA to 5000 KVA (any Special Customised Capacity as per Customer Requirement)
Correction Method	Rolling Contact / Linear Type On-load Voltage Regulator with Stepless Regulation
Control Module	Microprocessor based Control Card
Classification	100% Unbalanced / Balanced Supply & 100% Unbalanced / Balanced Loads
No. of Phases	Three Phase
Frequency	50 / -60 Hz $\pm$ 5%
Mode of Control	Automatic / Manual / Mechanical
Load Variation	Admitted from 0 to 100%
Type of Installation	Indoor / Outdoor (As per customer requirement)
Cooling	Oil Natural
Type of Oil	Transformer Oil as per IS:335
Output Voltage	380/400/415 V ($\pm$ 1%) Phase to Phase 220/230/240 V ($\pm$ 1%) Phase to Neutral (Any Special Customised Output Voltage as per Customer Requirement)
Input Voltage (Phase to Phase)*	280-480-320-480-250-480
Input Voltage (Phase to Neutral)*	160-280-180-280-140-280
	*(Any Special Customised Range as per Customer Requirement)
Duty Cycle/Life	Continuous 24 Hrs
Response Time	Less Than 20 milliseconds
Correction Rate	5-15 V/Sec
Operating Temperature	-15° C to + 50° C
Waveform Distortion	Nil (Negligible)
Efficiency	As per Indian Standard & International Standard as applicable - 98% & 99%
Mounting Arrangement	On Unidirectional Wheels

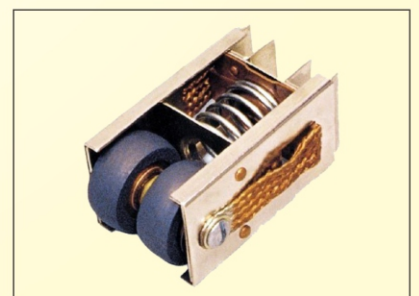
Advantages of AVC with Linear Regulator Rolling Contact Carbon Roller Assembly



- ▶ Power consumption is below 0.5 to 1.5% depending upon the input voltage range
- ▶ Suitable for 100% duty cycle
- ▶ Life at full load is more than 20 years
- ▶ Five years Guarantee
- ▶ Economical for continuous / industrial load above 100 KVA

Specifications

Eco Power Linear Servo Stabilizers are available in a wide range and various models. The standard Three phase models are suitable for balanced & unbalanced supply and loads.



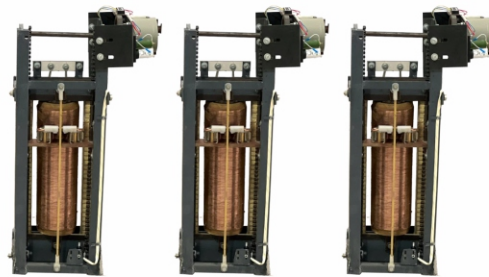
COMPARISON OF AUTOMATIC VOLTAGE CONTROLLER

DIMMER REGULATOR CARBON BRUSH ASSEMBLY



- Torroidal Dimmers are used, wound with max. 8 mm² copper wire. Cross-section area is 3 times lesser. I²R losses are more.
- Heat generated is more. Size is bulky. Quantity of oil is more.
- Regulators are straight 254 volts type, remaining always in circuit. At any given point, it will contain its max. current.
- Light duty carbon brushes are used which are in full contact with the winding. Wear & tear requires change of brushes periodically.
- Light duty. Suitable only for partial loads.
- Maximum life is 3-5 years if operating at full load.
- Prone to damage when working on high capacity motors and jerking loads. Double the capacity is required for such applications.
- Normal guarantee/warranty of 1 year.

LINEAR REGULATOR ROLLING CONTACT ASSEMBLY



- Linear type regulators wound with min. 24 mm² copper strips. Since the cross-section area is more, I²R losses are much less. ($R = L/A$)
- As the losses are less, heat generated is less. The size of the stabilizer is very compact, the quantity of oil less.
- Regulators are ± 440 or ± 254 volts therefore half the capacity is sufficient. At max buck or boost position, regulator is out of circuit. No losses at those points.
- Graphite Carbon roller assemblies are used, which do not require replacements for at least 8 – 10 years (or 100,000 meters of travel). There is no wear & tear of the bared copper track.
- Suitable for 100% continuous duty cycle. Sufficient overload bearing capacity due to its liberal design.
- Life at full load is 20-25 years.
- No effect on jerking loads or with heavy starting current machines. Same capacity Stabilizer can be installed.
- 5 years warranty in India.

APPLICATIONS :

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| <ul style="list-style-type: none"> ■ Air Conditioners Plants ■ Medical Equipment ■ Offset Printing Presses ■ CNC Machines ■ Escalators And Elevators ■ Industrial And Lighting Equipment ■ Shopping Malls and Commercial Complexes ■ Homes and Offices, Telecommunications Systems ■ Advanced Laboratory Equipment ■ Defence Equipment ■ Engines ■ Cement Plants | <ul style="list-style-type: none"> ■ Hotels ■ Industries ■ Research And Development Facilities ■ Data Centres ■ Distilleries and Beverages ■ Tea Plantations ■ Metrological Equipment ■ Food Processing Equipment ■ Cold Storage, Rubber Industries ■ Rice Mills ■ Sugar Mills ■ RO Plants |
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ECO POWER SOLUTIONS

AN ISO 9001:2015 CERTIFIED CO.

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