

iINDIAN
Transformers
and Electricals
Pvt. Ltd. Gurgaon



An ISO 9001:2015 unit



The controlled power to serve your future...

**SERVO
VOLTAGE
CONTROLLERS**



**Indian Transformers and Electricals Pvt. Ltd.
Gurgaon**

Need to Have











It is seen that despite best efforts by many Electricity Boards/ Supply undertakings due to diverse loading duties arising in transmissions and distribution network, voltage at consumer's end is never constant. Mostly during day time it remains quite low and during night it goes up than the normal. Mostly industrial load is of induction motors and heaters. Induction motors draw high current (may increase by 1.5 times) both at low and high voltage, resulting into higher losses and causing premature failure/ damage of their windings. At low voltage heaters take a long to reach at required temperature and at high voltage their life period is shortened. Higher power losses also increase the losses of cables, windings, switches, transformers, heaters and other equipments.

For smooth and continuous running of motors overload relays are normally set at 15-20% higher than actual running current so in such a case the relay will take about 5 minutes to trip and stop the motor. A motor (particularly of smaller capacity upto 5-6 KW) is not able to tolerate high current continuously for such a long period further resulting into temperature rise, damage to insulation and possible burns out before the tripping of the relay. In some cases there may be a fire also.

Besides industries, voltage fluctuations also play a havoc by damaging expensive, sophisticated, CNC/PLC controlled equipments, lighting and elevators etc.

Advantages

There are Enormous Advantages of having ITE Indian Make Servo Voltage Controllers Few of these are :-

-  Controlled and Constant Voltage.
-  Reduced failure rate of Electrical Equipments
-  Reduction in down time / maintenance expenses
-  Improvement in power factors reduction in MDI.
-  Energy Saver - Reduction in power consumption Less Electricity bills upto 10%.
-  Uniform quality of end product.
-  Ensure longer life of cables, wires, switches & electric fittings/ equipment etc.
-  100% depreciation under income tax rules being an energy saving equipment.
-  Prevents Production Loss.
-  Prevents Fire / Accidents

PAY BACK PERIOD

Being categorized as a Power Saving Device depreciation @80% (refer to IT rules) can also be claimed on Servo Voltage Controller and keeping in view various other factors related to production & quality of item produced / life of Machinery, electrical equipment & cables etc its pay back period is about 18-24 months for details please contact us.



Few of Salient Features

1. Electronically controlled-IC based solid state circuit & designed to run continuously round the clock for year & years.
2. Heavy duty, Reliable, Safe and Longer Life.
3. Available in various input & output voltage ranges as per specific requirements.
4. Special models for specific application / uses at places like textile industries, testing labs, offices and houses and for CNC / PLC sophisticated equipments & computers etc.
5. Constant and controlled flow of voltage.
6. Various protections/optional features provided as per specific requirement. (Please refer to the technical specifications)

Applications

Servo Voltage Controllers are virtually required at all such places where controlled and constant voltage is one of the most important ingredients. Like Hospitals, Laboratories, various life saving & testing equipments, pharmaceuticals, Research Institutes, Defense, Telecommunications, Air Conditioning, Data Processing, Electronics based Industries, Educational Institutes, Food processing units, Paper plants, Footwear and Leather Industries, Cement plants, Textile Industries, moulding units, hotels, farm houses, offices and residences/ housing apartments etc.

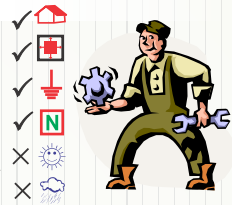
Operation

The specially designed solid state IC based control circuit continuously monitors the set output voltage and looks for any drift / error in the set output voltage. Any deviation in the voltage is immediately corrected by switching on the Servo Motor. This motor coupled with continuous variable auto transformer further moves in forward /reverse direction w.r.t. reference point.

This continuous variable auto transformer feeds the voltage to the primary of Buck & Boost Transformer. With the help of secondary winding of Buck & Boost Transformer which is in series with the mains the voltage is added or subtracted to the mains, so that the set limit of output voltage remains constant.

Installation

SVC must be installed indoor to avoid direct sunlight, rain & dust etc. It is suggested to provide a minimum 2 ft. space clearance from all the 4 sides of the Servo Voltage Controller & the room should be airy & properly ventilated. Servo Voltage Controller should be installed on the mains or section wise after the LT main switch/ MCB. A change over / main switch must be installed to bypass the Servo Voltage Controller in case of Service/maintenance. Proper earthing & neutral must be provided.



Technical Specification & Salient Features

Standards	: Conforming to IS : 9815/1994 with latest amendments or as per customer's specifications.	Oil Filled Type	: "ONAN" (Oil Natural Air Natural) cooled. T. oil conforming to IS:335/1994 with latest amendments T. oil used is doubly vacuum filtered & dehydrated.
Input Voltage Range	: 3 phase: 210-470 V: 1 phase: 120-270 V or as per specific requirement.	Dry Type	: "AN" (Air Natural) cooled.
Normal Output Voltage	: 3 phase: 380/400/415V : 1 phase: 220/230/240 V or as per specific requirement.	Terminal Arrangements	: Both for input/output connection for cables covered with box/enclosures with cable passage 4 wire (3-phase+1 neutral)-for 3 phase 2 wire (1-phase+1 neutral) -for 1 phase
Output Voltage Regulation	: ±1 % of set output voltage within specified input range	Raw Material/ Inputs	: EC grade copper & Low Loss Electrical Stamping/ magnetic core & high grade of insulation material
Average Correction Rate	: High speed stepless correction upto 32v/sec. (phase to phase) depending upon the capacity & input voltage range or as per C.S.	Housing/ enclosers /fittings	: M. S. body with/without radiators/louvers in case of oil filled type & with louvers in case of dry type. Inside - coated with insulating material. Outside - coated with rust resistance paint & double coat of synthetic enamel paint. Unidirectional C.I. wheels are also provided.
Response Time	: 10m.Sec.	Control Panel	: Voltmeter toggle switch to read input/output Voltage Input low/high and power on indicators Manual operation increase/decrease push switch Output voltage adjustment potentiometer (screw with lock nut type) Manual/Auto operation toggle switch. IC based solid state main control circuit (no relay).
Freq. Range	: 47-53 hz	Earthing Protections (Optional as per specific requirement)	: Two separate earthing terminals provided. <ul style="list-style-type: none"> • Under / over voltage cutoff (with/without by-pass) • Single phase preventor. • Automatic time delay with manual reset. • Audio & visual alarm at tripping condition. • Reverse phasing protection. • R.F Filter & Surge Suppressor • Provision for High Temp. & Servo by-pass • Thermal cut off protection. • Overload protection
Compatibility to D.G. Set	: Specially designed freq. Control cards are suitable for both Mains & D.G. supply		
Efficiency	: >98% in all models above 15 kva		
Wave form (output)	: True reproduction of input. No distortion introduced by controller/stabilizer.		
Effect of Load	: Nil		
Operating Temp.	: -5°c to 50°c		
Temperature rise	: Max. 40°c in Oil Cooled Model Max. 65°c in Air Cooled Models		
Duty Cycle	: 100% continuous.		
Type	: Suitable for both balanced / unbalanced Load & Voltage. Widely accepted design to suit various conditions. All the phase/s are independently sensed & corrected.		
Operating Mode	: Both Auto and Manual Mode.		
Servo Motor	: Rugged AC synchronous motor with instant start/stop characteristics		

PRODUCTS

TRANSFORMERS (OIL/DRY) | VCBs / LBS | VOLTAGE CONTROLLERS / AVR's | PANELS | COMPACT SUB-STATIONS

APPROVALS & REGISTRATIONS ✦ E-in-C (Defence) ✦ MAP ✦ Railways ✦ BSNL ✦ MTNL & more ...



Indian Transformers and Electricals Pvt. Ltd.

38th Km. Stone, Delhi-Jaipur Highway, Behrampur Road, Sector-34, Post Box#44, **GURGAON** - 122004

Phone : +91-124-4031900 (5 lines), 2372100, 2372200 Fax : +91-124-2372300

E-mail: info@indiantransformers.com, sales@indiantransformers.com Website : www.indiantransformers.com

Note : Specifications, Features & Information etc. given may vary & are subject to change with any prior notice & manufacturer is not liable for any loss and or damage due to any reason whatsoever. Our Scope of work limits upto design, manufacture, testing & delivery of our products at our works.(unloading, installation & commissioning etc. do not come under our scope of work)