

PUREVOLT

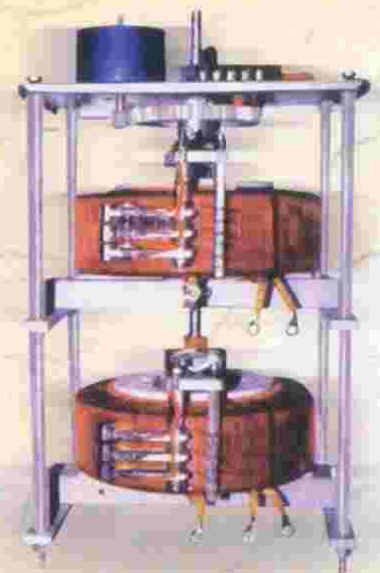
AN ISO 9001 - 2000 COMPANY

SPECIAL FEATURES

Variable Auto Transformer, is probably the best drive to obtain a continuously variable output voltage from a fixed a.c. voltage source. This is clearly evident from various special features and advantage given below :

Simple & rugged in construction. Therefore has long life is relatively cheaper, noiseless in operation compact and easy to understand maintain and repair.

- ❖ Good Regulation-Voltage drop on load is low due low residence of conductor and low leakage flux of toroidal core.
- ❖ Output voltage variation on no-load and even on load is effortless, smooth, continuous, breakless and linearly proportional to angular rotation.
- ❖ High Efficiency - No load losses and load losses are low.
- ❖ Negligible waveform and power factor distortion due to simple transformer action.
- ❖ Excellent short time overload capacity.
- ❖ Easy for remote operation with the help of motor drive.
- ❖ Models available 4 Amp - 500Amp single phase/three phase



VARIABLE AUTO TRANSFORMERS

PUREVOLT VARIABLE AUTO TRANSFORMERS

INTRODUCTION

Variable Auto Transformer, manufactured by Purevolt. It is the most useful and effective device for stepless, breakless and continuous control of a.c. voltage and, therefore for control of various other parameters, dependent on a.c. voltage. This widely known and highly acclaimed product. Its an ideal controlling device for numerous application in laboratories and in industrial & commercial fields.

The basic Variable Auto Transformer is meant for operation off a nominal voltage of 240V A.C. and can give output voltage anywhere between 0 to 240V, or upto 270V, by a simple transformer action. Three such Variable Auto Transformer, when connected electrically in star, and mechanically in tandem, become suitable for operation of 415V 3 Phase A.C. supply and to give output zero to 415V, or upto 470V.

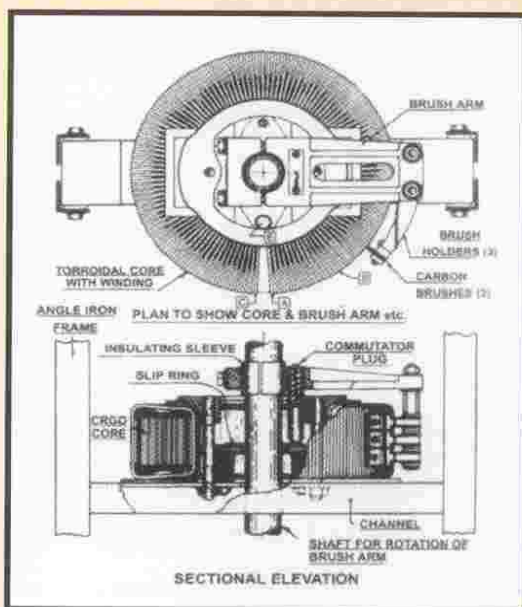
APPLICATIONS

Variable Auto Transformer, because of its unique characteristics and features find a very wide field of applications. A few of them are-

- ❖ Light control in auditoriums, hotels, restaurants, photo-studios, lobbies, conference halls, cinema houses and even in homes.
- ❖ Testing and calibration of indicating instruments.
- ❖ Current control for testing relays, current transformers circuit breakers etc.
- ❖ Temperature Control in event, furnaces, moulding processes etc.
- ❖ Testing of electrical and electronic equipments for undervoltage and over voltage performance.
- ❖ Breakdown testing of Insulation.
- ❖ Control of D.C. voltage in electrochemical process, such as electroplating, battery plate forming, anodizing, metal refining hydrogenation, cathodic protection etc.
- ❖ Starting of A.C. motors.
- ❖ Speed Control of D.C. motors in textile plastic and paper industries and other extrusion processes.
- ❖ Manual or Servo Controlled A.C. Voltage Sublizers and D.C. power Supply Equipments.
- ❖ Phase Shifting Transformer, for other applications and choice of models, where Variable Auto Transformer, is the best solution, consultancy and guidance can be provided by the Purevolt.

CONSTRUCTIONAL DETAILS OF LARGE OIL COOLED VARIABLE AUTO TRANSFORMER, (ONE ELEMENT)

Single phase Variable Auto TX. are generally supplied in two types of construction, one is a portable type with sheet metal enclosure for mounting on table, floor or wall (Type P). For mounting them flush or back of panel, or inside a cubicle, they are supplied without enclosure (Type F). For better cooling, or for continuous use at a fixed or near about in oil in a steel sheet tank mounted on rollers (Type T). Ganged assemblies using 3 coils are used for 3 Phase



Variable Auto TX. These would have a total of 6 or 9 coils. Against specific requirements, Variable Auto Transformer can also be supplied with 2 coils in series phases or for operation of two phases or for independent outputs.

MOTOR DRIVE

Variable Auto TX. can be proved with a motor drive for the purpose of remote operation or automatic operation. The type of motor used is specially made for this application 240V A.C. synchronous stepper motor and the Variable Auto TX. shaft are used to get a lower speed and higher torque. The approximate time required for the full sweep of the brush is required to be specified, such as 8 Secs., 15 Sec., etc. upto 120 Secs.

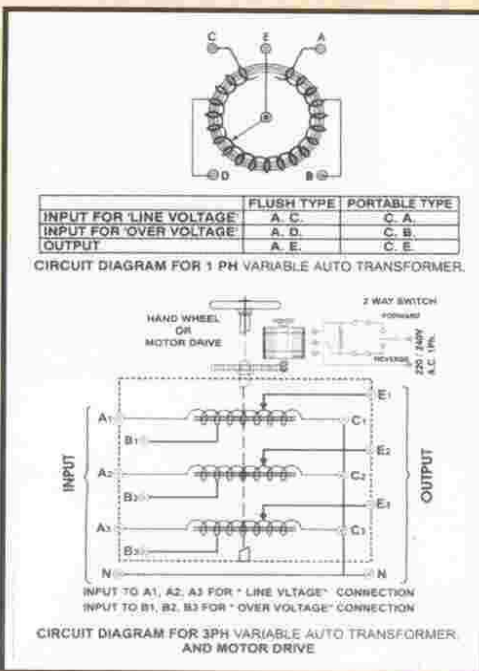
RATING AND SPECIFICATION

All single phase Variable Auto Transformer are rated for 240V A.C. 50/60Hz. three phase 4 Wire supply.

The output voltage can be varied smoothly over two range (i) from zero to full supply voltage (line voltage connection) or (ii) from zero to approx 12% higher than the supply voltage (Over voltage Connection).

As the output voltage is continuously variable Auto TX. cannot be rated in terms of current that can be drawn from the output. The rating assigned to a Variable Auto TX. generally indicates the max. output current that can be drawn from the entire range is generally lower in air cooled models. For all oil cooled models the two ratings are same. The table below gives the two corresponding ratings for air cooled models.

Variable Auto TX. are suitable for indoor use in a maximum ambient temperature of 45°C. They can also work at higher ambient temperatures, though at reduced output current rating. Variable Auto TX. can also be supplied for non-standard input and /or output voltages.



OTHER PRODUCTS :

- SERVO VOLTAGE STABILISERS
- CUSTOM BUILT TRANSFORMERS
- AUTO TRANSFORMERS (VARIACS)
- AUTOMATIC VOLTAGE STABILISERS
- ISOLATION TRANSFORMERS
- POWER INVERTERS
- CVT

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