



## DESCRIPTION

'Dimmerstat' is registered trademark for continuously variable voltage auto - transformer. It is the most effective device for stepless, breakless & continuous control of AC voltage & therefore for various parameters, dependent on AC voltage.

The basic Dimmerstat is meant for operation from a nominal input voltage of 240V AC & can give output voltage anywhere between 0 to 240V or 0 to 270V AC by simple transformer action. Three such Dimmerstat connected electrically in star and mechanically in tandem, become suitable for operation from a nominal input voltage of 415V 3Ph AC and can give output anywhere between 0 to 415V or 0 to 470V.

Resin moulded Dimmerstat is basically a variable Auto-Transformer which is partly or fully Moulded in Reinforced Polyester Resin. This has adjustable spindles which allows easy assembling of flush, table or Motorized Type in single or three phase models. These models are designed upto 120% continuous load.

## FEATURES

- Simple, rugged construction.
- Coils made from high grade CRGO Silicon Steel & 99.9% pure copper.
- Output voltage variation is smooth, continuous, breakless & linearly proportional to angular rotation.
- High efficiency.
- Negligible waveform & power factor distortion.
- Excellent short time overload capacity.
- Remote operation possible by motorization.
- Wide range of current ratings.
- High quality carbon brush used for current collection.

## ELECTRICAL SPECIFICATIONS

- MODEL : a) Flush Open Manual (Air Cooled) — F  
b) Portable Enclosed Manual (Air Cooled) — P  
c) In Tank Manual (Oil Cooled) — T  
'F', 'P', 'T' suffixed by 'M' means motor operated models.
- OPERATING VOLTAGE : For Single Phase — 240V AC, 50 - 60 Hz. 1 $\phi$ .  
For Three Phase — 415V AC, 50 - 60 Hz., 3 $\phi$  - 4wire.
- CURRENT RATINGS : For Oil Cooled models, maximum current & continuous current are one & the same.  
For Air Cooled models, the ratings are as shown below

Maximum Current	0.7	2	4	8	10	15	20	28
Continuous Current	0.6	1.8	3.8	6.5	9	11.5	16	22

- OPERATING TEMP. : 0° - 45°C.
- INSULATION RESISTANCE: Not less than 5M ohms at 500V DC.
- DIELECTRIC TEST : 2.5kV RMS for 1 minute.
- STORAGE TEMP. : -9°C to 70°C
- HUMIDITY : Upto 95% RH
- CONFORMS TO : I.S. 5142.

**Notes:** 1) As output voltage is continuously variable, Dimmerstats are rated in terms of current that can be drawn from the output.  
2) Oil should be Transformer Oil conforming to IS 335, IEC 296.

# DIMMERSTAT® - 0.75 to 1600 Amps

Continuously Variable Voltage Auto-Transformer



## MECHANICAL CONSTRUCTION

Single phase Dimmerstats are available in 3 types.

- Portable type (P) with sheet steel enclosure for floor / table mounting.
- Flush type (F) with open type construction. Suitable for panel mounting.
- Tank type (T) immersed in oil in sheet steel tank with roller mounting.

Three phase Dimmerstat are usually ganged assemblies of 3 coils, available in all 3 types: P, F, T.

Higher rating Dimmerstat (above 200 Amps) use 2/3 or more coils in parallel with load balancing arrangements.

Motorised Dimmerstat uses 240V A C Step-Syn Motor having 60 rpm speed at 50Hz. With proper gearing higher torque at lower speed can be achieved. Standard gear ratios used provide sweep time of 8, 15, 30, 45, 60, 120secs.

## Ordering information

(as per code specified below)

1 <sup>st</sup> block	Output current rating amps	0.7,2,4,8,10,15,20,28,40,50,60,75,100,125,150,200,300,400,500'600'800'1000'1200'1600A
2 <sup>nd</sup> block	Dimmerstat (D)	Continuously variable voltage auto transformer.
3 <sup>rd</sup> block	No. of coils	1,2,3,4,6,9,12,15.
4 <sup>th</sup> block	Type of construction	F,P,T F = Flush, back of panel, open. P = Portable, floor, table mounting, air cooled with enclosure. T = In tank, immersed in oil.
5 <sup>th</sup> block	Provided with motor drive (M)	"Step-syn' 230V 1Ph AC 50Hz. 60rpm motor having instantaneous start-stop-reverse characteristics.
6 <sup>th</sup> block	Approx. time in secs. for full rotation sweep time.	8,15,30,45,60,120 (As per standard gear ratios available)

e.g. 

1	2	3	4	5	6
75	D	3	T	M	15

 75 A Dimmerstat with 3 coils (Three phase) in oil-cooled tank construction with motor drive having 15s sweep.

e.g. 

1	2	3	4
8	D	I	P

 8A Dimmerstat with 1 coil (single phase). Portable type & suitable for manual operation (no motorisation)

Similarly, other Dimmerstats can be configured & ordered.

## APPLICATIONS

- Auditorium, Hotels, Conference Halls, Exhibitions, Laboratories etc.,
- AC Voltage Stabilizers, Rectifiers, Battery Chargers.
- Temperature control of Ovens, Furnaces.
- Testing of Instruments, Relays, Circuit Breakers etc.
- Welding, Electro-plating, Anodizing etc. Colleges & Universities.

