

MATERIAL SPECIFICATIONS CELL

TECHNICAL SPECIFICATION

OF

THREE PHASE DIMMERSTAT

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1.0 SCOPE

The equipment required for variation of stepless, brakeless & continuous control voltage from 0 to 270 V AC per phase, for testing of electrical equipments up to continuous current up to 32A. The equipment should be portable & horizontal floor mounted may be supplied with wheel/ trolley for easy transportation.

2.0 CLIMATIC CONDITION

i) Maximum Ambient Air Temperature	55°C
ii) Minimum Ambient Air Temperature	05°C.
iii) Maximum Relative Humidity	Upto 95% (non-condensing)
iv) Storage Temperature	-20°C to 70°C
v) Storage Humidity	Upto 95% (non condensing)
vi) Max. Altitude	1000 meter

3.0 GENERAL & CONSTRUCTION REQUIREMENT

3.01 Test set should be of extremely rugged construction suitable for field use.

3.02 The kit should be mounted on castor wheels with necessary transport packing arrangement for easy movement

3.03 The equipment shall be three single phase gang operated dimmerstat

3.04 Instrument should be portable, horizontal/ vertical and enclosed in steel cabinet having suitable lifting arrangement.

3.05 The instrument shall be Air cooled & closed type.

4.0 GENERAL FEATURES

4.01 Phase wise input mains ON indication lamps shall be provided at suitable place.

4.02 The instrument shall conform to IS 5142

4.03 Input and output Terminals shall be suitable spaced with terminal markings for phase and neutral identification.

4.04 The Output voltage variation is smooth, continuous, breakless & linearly proportional to angular rotation.

4.05 The coils made from high grade CRGO Silicon steel & 99.9 % pure Electrolytic copper.

4.06 The power factor and waveform distortion shall be negligible or nil.

4.07 The equipment shall have excellent short time overload capacity.

4.08 The insulation resistance shall be more than 5MΩ at 500 V DC

4.09 The high quality carbon brush shall be used for current collection & spare carbon brushes shall be provided.

4.10 The instrument should withstand Dielectric test of 3KV for one minute.

4.11 The instrument should have Voltage dial.

4.12 Instrument should have suitable protection against short circuit on output side by providing a miniature circuit breaker.

4.13 Input and output Terminals shall be suitable spaced with terminal markings for phase and neutral identification.

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- 4.14 Two earthing studs shall be provided.
- 4.15 Digital meter for voltage & current measurement of each phase and shall be provided shall be on output side
- 4.16 After sales support: The after – sales service support / warranty services has to be provided.
- 4.17 Technical evaluation: Technical evaluation of offer of the equipment shall be carried out
- 4.18 Documentation- Sufficient no. of Operating/Service Manuals shall be provided along with supplied material.
- 4.19 RCCB/MCCB inbuilt protection shall be provided

5.0 TECHNICAL FEATURES:

- 5.01 Input voltage range shall be 180VAC to 270 VAC per phase, 50Hz.
- 5.02 Output voltage range shall be 120% of input voltage
- 5.03 Output current shall be 0 to 32 A continuous.

6.0 COMPLIANCE STANDARDS

- 6.01 All required safety standard shall be provided as per the relevant IS.
- 6.02 Safety :IEC61010-1

7.0 TYPE TESTS

The Type Test Certificate as per IS: 5142 (amended upto date) shall be submitted along with the offer. The Type Test certificate carried out during last five years prior to the date of offer shall be valid. All the Type Tests specified in the technical specifications and as per IS: 5142 shall be carried out at laboratories which are accredited by the National Board of Testing and Calibration Laboratories (NABL) of Govt. of India such as ERDA, ERTL, CPRI, etc. Type Test Reports conducted in manufacturers own laboratory and certified by testing institute shall not be acceptable All the type test reports shall be got approved from Chief Engineer, MSEDCL, Testing & Quality Control Cell, Prakashgad, Mumbai.

8.0 PRE DESPATCH INSPECTION

The inspection shall be carried out at the place of manufacturer unless otherwise agreed upon by the manufacturer and purchaser at the time of purchases. For imported equipments the supplier/bidder shall offer the equipment at the authorized service centre /works of the original manufacturer in India or at the supplier's works/Testing centre. The manufacturer shall offer to the inspector representing.

9.0 NAME PLATE & MARKING

Equipment shall have name plate clearly visible, effectively secured against removal and indelibly and distinctly marked with all essential particulars as per relevant standards. Following details shall be marked on the Name Plate

Manufacturer's name & address:
Serial no.
Purchase Order No.
Month and Year of manufacture
Name of purchaser: MSEDCL
Guarantee: Five Years
ISI mark if applicable

10.0 GUARANTEE

The instrument shall be guaranteed for the period of **Five** years from the date of Dispatch.

11.0 PACKING

The instrument shall be suitably packed in order to avoid damage or disturbance during transit or handling. Each instrument may be suitably packed in the first Instance to prevent ingress of moisture and dust and then placed in a cushioned carton of a suitable material to prevent damage due to shocks during transit. The lid of the carton may be suitably sealed. A suitable number of sealed cartons may be packed in a case adequate strength with extra cushioning if considered necessary. The cases may then be properly sealed against accidental opening in transit. The packing cases may be marked to indicate the fragile nature of the contents.

The following information shall be furnished with the consignment:

- a. Name of consignee.
- b. Details of consignment
- c. Destination
- d. Total Weight of consignment.
- e. Sign showing upper / lower side of the crate.
- f. Sign showing fragility of the material.
- g. Handling and unpacking instructions

12.0 TRAINING OF ENGINEERS:

The successful supplier shall train Engineers of MSEDCL free of charge at their works for familiarization of design, operation and maintenance of testing equipments

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GUARANTEED AND TECHNICAL PARTICULARS

ITEM NAME	3 PHASE DIMMERSTAT WITH CONTINUOUS CURRENT			
SR. NO.	PARTICULARS	REQUIREMENT	GTP VALUES	
1	Input Voltage range	180VAC to 270 VAC per phase, 50Hz		
2	Output Voltage range	120% of input voltage		
3	Output current	0 to 32 A continuous		
4	Digital meter for voltage & current measurement of each phase is provided	Yes [For output]		
5	Dimmerstat shall withstand Dielectric test of	3KV for one minute		
6	Insulation resistance	More than 5M Ω at 500 V DC		