



सत्यमेव जयते

TEST / CALIBRATION REPORT

TYPE TEST FOR
3 ½ DIGIT POWER FACTOR PANEL METER



ELECTRONICS REGIONAL TEST LABORATORY (WEST)
MINISTRY OF COMMUNICATIONS & INFORMATION TECHNOLOGY, (STQC Dte.)

Government of India

Plot No. F 7 & 8, MIDC Area, Opp. SEEPZ,
Andheri (E), Mumbai - 400 093.

Phone : (022) 2832 5134, 2830 1468, 2830 1138 Fax : (022) 2822 5713

E-mail : ertlbom@bom4.vsnl.net.in

ELECTRONICS REGIONAL TEST LABORATORY (WEST) DEPARTMENT OF INFORMATION TECHNOLOGY		REPORT NO. ERTL (W)/2004E&S281	
SUBJECT:TYPE TEST OF DIGITAL PANEL METER		DATE 14 FEB 2005	PAGE 1
			OF 4

1. SCOPE

1.1 Service Request No : ERTL (W)/20042011 Dated: 6th Oct 04

1.1.1 Service Request finalised on : DT. 6th Oct 2004

1.2 Requested by
(Name and address of organisation)
MECO INSTRUMENTS PVT. LTD.
301,BHARAT INDUSTRIAL ESTATE,
T.J.ROAD,SEWREE,
MUMBIA 400 015

1.3	<u>Description</u>	<u>Qty</u>	<u>Manufacturer</u>	<u>Type No.</u>	<u>Serial Nos.</u>
	3 ½ DIGIT PANELMETER (POWER FACTOR)	01	MECO INSTRUMENTS PVT. LTD	DPF 31	042402

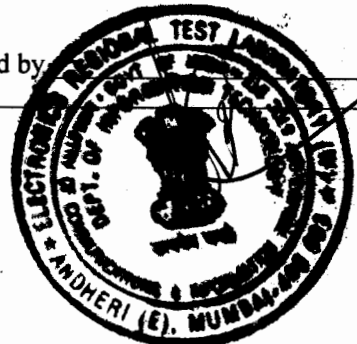
1.4 Test specifications : TYPE TESTING AS PER IS 13875

1.5 Lab Ambient
Temperature: (25 + 2) ° C
RH : (55± 5) %

1.6 Test Equipment used :

1. POWER ENERGY CALIBRATOR	E&S/126
2.TEMP-HUMIDITY CHAMBER	ENV/42
3.VIBRATION MACHINE	ENV/62
4. SHOCK TEST MACHINE	ENV/11

Released by _____



SUBJECT: TYPE TEST OF DIGITAL PANEL METER

DATE

14 FEB 2005

PAGE

2

OF

4

2.0 TEST RESULTS

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation		Remark
				Std. value	Measured value	
2.1	Intrinsic Error Test	As per Cl. No. 4.2	Error shall be within ± 1 degree electrical	1.00	0.999 L	Complied
				0.5	0.499 L	
				-0.5	0.500 C	
				0.866	0.865 L	
				-0.866	0.867 C	
2.2	Influence error Test	As per Cl. No. 4.3				
2.2.1	Error due to Change in Ambient Temperature	Temperature varied from a) 0 deg. C. to b) 50 deg. C. while other conditions at reference value	Deviation shall be 100% of error for a change of ± 10 deg.c	1.000	0.999 L	Complied
				0.500	0.499 L	
2.2.2	Error due to Change in Relative Humidity	Relative Humidity varied from a) 25%. to b) 80%RH while other conditions at reference value	Deviation shall be 100% of error	1.000	0.999 L	Complied
				0.5	0.499 L	
2.2.3	Error due to Change in Position	The UUT is tilted till it get topple while other conditions at reference value	Deviation shall be 50% of error.	1.00	0.999 L	Complied
				0.5	0.499 L	



Released by

BR= Reference Value BX=Influential value UUT=Unit under Test

SUBJECT: TYPE TEST OF DIGITAL PANEL METER

DATE

14 FEB 2005

PAGE

3

OF

4

2.0 TEST RESULTS (CONTINUED)

Str.No.	Test/Parameter	Test Condition	Requirement	Observation	Remark
2.3	Mechanical Load	As per cl. No. 4.9			
2.3.1	Shock test	As per IS 9000 (part 7/sec.1) Pulse shape=Half sine wave Pulse duration=11 ms Peak acceleration= 147m/S ² No of shocks=18	No visual damage shall occur.	Conditioned	Complied
2.3.1.1	Intrinsic Error Test	230 V AC, 1 A a) PF=1.0 b) PF=0.5	Error shall be within ± 1 degree electrical	Std.Value a) 1.0 b) 0.5 Measured value a) 1.000 b) 0.501 L	Complied
2.3.2	Vibration test	As per IS 9000 (part 8) Amplitude=+ 0.15 mm Frequency=10-55-10 Hz Rate=1 oct/min No of scan cycles 2 in each direction	No visual damage shall occur.	Conditioned	Complied
2.3.2.1	Intrinsic Error Test	230 V AC, 1 A a) PF=1.0 b) PF=0.5	Error shall be within ± 1 degree electrical	Std.Value a) 1.0 b) 0.5 Measured value a) 1.000 b) 0.501 L	Complied

BR= Reference Value BX=Influential value

Released by



ELECTRONICS REGIONAL TEST LABORATORY (WEST) DEPARTMENT OF INFORMATION TECHNOLOGY	REPORT NO. ERTL (W)/2004 E&S 281		
SUBJECT: TYPE TEST OF DIGITAL PANEL METER	DATE 11 FEB 2005	PAGE 4	OF 4

3.0 General Remarks :

- 3.1 The accuracy requirement as specified by customer.,
- 3.2 Supply voltage and frequency variation tests are not applicable, as UUT was self powered type.

REPORT APPROVED BY

REPORT BY

27.11.08
HEAD (E&S)

