



सत्यमेव जयते

# TEST / CALIBRATION REPORT

TYPE TEST FOR  
3 ½ DIGIT DIGITAL AC CURRENT PANEL METER



**ELECTRONICS REGIONAL TEST LABORATORY (WEST)**

**MINISTRY OF COMMUNICATIONS & INFORMATION TECHNOLOGY, (STQC Dte.)**

**Government of India**

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1. SCOPE

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

1.1.1 Service Request finalised on : DT. 6<sup>th</sup> 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	Description	Qty	Manufacturer	Type No.	Serial Nos.
	3 ½ DIGIT PANELMETER (AC CURRENT)	01	MECO INSTRUMENTS PVT. LTD	SMP 35SRS	0411987

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.UNIVERSAL CALIBRATOR	S&C /138
2.TEMP-HUMIDITY CHAMBER	ENV/42
3.VIBRATION MACHINE	ENV/62
4. SHOCK TEST MACHINE	ENV/11
5.ENERGY TEST BENCH	E&S/128

Released by \_\_\_\_\_



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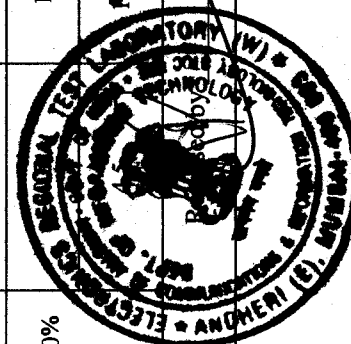
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**2.0 TEST RESULTS**

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation		Remark
				Set value(Amp)	Measured value(Amp)	
2.1	Intrinsic Error Test	As per Cl. No. 4.2	Error shall be within $\pm 0.3\%$ of reading +2 Digit	0.5	15.8	Complied Pl. see General remark 3.1
				1.5	47.8	
				2.5	79.9	
				4.5	144.0	
				5.0	160.0	
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 $\pm 10$ deg.c	0.5	15.8	a) 15.7 b) 15.7 Complied
				4.5	144.0	a) 143.5 b) 143.6
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	0.5	15.8	a) 15.8 b) 15.8 Complied
				4.5	144.0	a) 143.8 b) 143.5
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.		15.8	15.9 143.8 Complied



BR= Reference Value      BX=Influential value

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2.0 TEST RESULTS (CONTINUED)

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation		Remark
				Set Value (Amp)	BR BX	
2.2.4	Error due to Change in supply voltage	Supply voltage = $\pm 10\%$ of 230 V AC a) 207 V b) 253 V	Deviation shall be 50% of error	0.5	15.8	a) 15.8 b) 15.8
				4.5	143.6	a) 143.6 b) 143.5
2.2.5	Error due to Change in supply frequency	Supply frequency = $\pm 10\%$ of 50 Hz a) 45 Hz b) 55 Hz	Deviation shall be 100% of error	0.5	15.8	a) 15.8 b) 15.9
				4.5	143.6	a) 143.6 b) 143.8



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Sr.No.	Test/Parameter	Test Condition	Requirement	Observation	Remark
3	Mechanical Load	As per cl. No. 4.9			
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 <sup>2</sup> No of shocks=18	No visual damage shall occur.	Conditioned	Complied
3.1.1	Intrinsic Error Test	accuracy test at 10% and 90 % of range.	Error shall be within+0.3% of reading +2 Digit	Set Value (Amp) Measured value(Amp) a) 0.5 a) 15.8 b) 4.5 b) 143.6	Complied
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
3.2.1	Intrinsic Error Test	accuracy test at 10% and 90 % of range.	Error shall be within+0.3% of reading +2 Digit	Set Value (Amp) Measured value(Amp) c) 0.5 c) 15.8 d) 4.5 d) 143.6	Complied

BR= Reference Value Bx=Influential value



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**3.0 General Remarks :**

3.1 The display range for meter was 0-160 Amps against input range of 0 - 5 Amp.

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**REPORT APPROVED BY** **REPORT RELEASED BY**

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*[Signature]*  
**HEAD (E&S)**

