



GOVERNMENT OF INDIA
ELECTRONICS REGIONAL TEST LABORATORY (WEST)
 MINISTRY OF COMMUNICATIONS & INFORMATION TECHNOLOGY
 DEPT. OF INFORMATION TECHNOLOGY, STQC DTE.

REPORT NO. : ERTL (W)/ 2008 E&S 357

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TEST REPORT

TITLE: TESTING OF CLAMP-ON TRMS POWER METER	DATE OF ISSUE December 19, 2008
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1.0 Scope

1.1 Service request no and Date	As per cover sheet
1.2 Name and address of Customer :	As per cover sheet

1.3	Description & Identification of Test item(s)	Nomenclature :	CLAMP-ON TRMS POWER METER	
		Make :	MECO	
		Model/Type :	3510PHW	
		Sl. No. :	080912468 ,	
		Quantity:	01 No.	
1.4	Item(s) condition on receipt: OK	Received Date 8 th October, 2008	Test Completed Date : 15 th December, 2008	
1.5	Testing performed at :	ERTL(W)		
1.6	Test Specification / Test Procedure used	IS 1248 & IS 13875		

1.7 Major Equipments used and Traceability Details:				
Sl. No.	Equipment Used	Uncertainty (Best Case)	Calibration Report Ref.	Valid up to
1	Power Energy Calibrator	±0.02 %	ERTL(N)/90(4)-20084	OCT 2010
2	High Voltage Tester	±2 %	2008 S&C 984	10-6-09
3	Insulation Tester	±5 %	2008 S&C 983	10-6-09
4.	Calibrator	±0.05 %	2008 S&C 822	23/5/2009
5	Climatic Chamber	Temp: ±0.45 deg.C RH: ±1.5%	2008TNP859	19-9-09
6	Vibration Test Machine	±4.73%	2007ENV551	28-01-09
7	Shock Test Machine	±0.4 kg/cm ²	2007ENV849	21-01-09





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2.0 TEST RESULTS:

LABORATORY AMBIENT : Temperature: (25±2) °C Humidity:(55±5) %

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation	Remark
2.1	Insulation Resistance	At 500 V DC for 1 min. between terminals shorted together and body.	Not less than 5 MΩ	More than 2000 MΩ	Complied
2.2	High Voltage Test	AT 2.5 kV AC (rms) for 1 min. between terminals shorted together and foil wrapped on body.	There shall not be any breakdown/ flashover.	No breakdown/ flashover observed.	Complied
2.3	Intrinsic Error	Ranges as per the technical specification of the UUT	Accuracy of each function Shall be within the specified limit.	Percentage error observed with in the specified limit of each function.	Complied
2.4					
2.4.1	Variation due to ambient temp.	Temperature varied 27 ± 10 deg C	Variation shall not exceed specified limits	The results were within the limits	Complied
2.4.2	Variation due to humidity	Relative Humidity varied 25% & 80%	Variation shall not exceed specified limits	The results were within the limits	Complied
2.4.3	Variation due to distortion of AC measured quantity.	a) Apply AC excitation to 80% of range. b) Superimpose 20% of third harmonics up on the fundamental wave form & adjust the amplitude of distorted wave form to produce the same rms value on the reference instrument.	Variation shall not exceed specified limits	The results were within the limits	Complied



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DATE OF ISSUE
December 19, 2008
Humidity:(55±5) %

2.0 TEST RESULTS:

LABORATORY AMBIENT : Temperature: (25±2) °C

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation	Remark
2.4.5	Variation due to magnetic field of external origin	AC excitation of upper limit under an external magnetic field of 0.4 kA/m. Maximum deviation to be observed.	Variation shall not exceed specified limits	The results were within the limits	Complied
2.4.6	Variation due to position	Position of used ± 10 degree.	Variation shall not exceed specified limits	The results were within the limits	Complied
2.5	Self heating	By applying 90% of upper limit of measuring range for 30 to 35 min. & note down the deviation	Variation shall not exceed specified limits	The results were within the limits	Complied
2.6	Temp. cycling	40 deg.C for 16h & 0 deg.C for 8h. No. of cycles = 3 cycles	To be conditioned	Conditioned	—
2.6.1	Intrinsic Error	Ranges as per the technical specification of the UUT	Accuracy of each function Shall be within the specified limit.	Percentage error observed with in the specified limit of each function.	Complied



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December 19, 2008

2.0 TEST RESULTS:

LABORATORY AMBIENT : Temperature: (25±2) °C

Humidity:(55±5) %

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation	Remark
2.7	Vibration	As per IS 9000 Part 8:1981 Frequency range: 10-55-10 Hz Amplitude: 0.15 mm Scanning speed : 1 octave /min No. of scanning cycles: 2 in each direction of the axes (6 in all) Direction of vibration: In the direction of the three vertically arranged axes.	To be conditioned	Conditioned	—
2.7.1	Intrinsic Error	Ranges as per the technical specification of the UUT	Accuracy of each function Shall be within the specified limit.	Percentage error observed with in the specified limit of each function.	Completed
2.8	Shock Test	As per IS 9000(Part 7/sec1):1979 Pulse shape:half sine, Pulse duration:1 ms, Peak acceleration:15g, No. of shocks: 3 in each of 3 vertically arranged axes & each of 2 direction (18 shocks in all)	To be conditioned	Conditioned	—
2.8.1	Intrinsic Error	Ranges as per the technical specification of the UUT	Accuracy of each function Shall be within the specified limit.	Percentage error observed with in the specified limit of each function.	Completed



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3.0 General Remarks: -NIL-

REPORT APPROVED BY

REPORT

K.MURARI
HEAD, TEST OPERATIONS



J L N MURARI
OIC, CUSTOMER SERVICE
ELECTRONICS REGIONAL TEST LABORATORY (WEST), MUMBAI-400 083

23 DEC 2008



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COVER SHEET

TEST REPORT

REPORT No.:ERTL(W)2008 E&S 357

TITLE: TESTING OF CLAMP-ON TRMS POWER METER

1.1 Service Request No. and Date: 20081570 dated: 08-OCT-08

1.2 Service Requested By:
(Name & Address)

M/s. **MECO METERS PVT LTD**

PLOT No.60,
MIDC ELECTRONICS ZONE,
TTC INDUSTRIAL AREA,MAHAPE,
NAVI MUMBAI-400710

