



GOVERNMENT OF INDIA
Electronics Regional Test Laboratory (west)
MINISTRY OF COMMUNICATIONS & INFORMATION TECHNOLOGY,
DEPT. OF INFORMATION TECHNOLOGY, STQC DTE.

COVER SHEET

TEST REPORT

REPORT No.:ERTL(W)2009 E&S 251

TITLE: TESTING OF SHUNT (150A/75mV)

23 FEB 2010

1.1 Service Request No. and Date: 20091386 dated: 09-OCT-09

1.2 Service Requested By:
(Name & Address) M/s. RISHABH INSTRUMENTS PVT. LTD.

F-31,
MIDC
SATPUR,
NASIK-422007

Report Released By:

J.L.N.MURTY/JAYANT KATHE
Customer Service Cell





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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 :	SHUNT
		Make :	RISHABH INSTRUMENTS PVT.LTD.
		Model/Type :	-----
		Sl. No. :	922214
		Quantity:	01
1.4	Item(s) condition on receipt: OK	Received Date 15/10/2009	Test Completed Date : 16/02/2010
1.5	Testing performed at :	ERTL(W)	
1.6	Test Specification / Test Procedure used	As per IS 1248 :2003	

1.7	Major Equipments used and Traceability Details:			
Sl. No.	Equipment Used	Uncertainty (Best Case)	Calibration Report Ref.	Valid up to
1.	Std. Resistor 0.001 Ohm (S&C/62)	± 130 ppm	2009 S&C 539	10 MAR 2011
2.	DMM (S&C/204)	± 60 ppm	2009 S&C 1413	04 FEB 2010
3.	Nano Volt Meter (S&C/192)/ High Current Source (S&C/154)	± 10 ppm	2009 S&C 267	20 FEB 2010
4.	Temperature Cyclic Chamber, Despatch (ENV/56)	± 2° C	2009 TNP 068	23 MAR 2010
5.	Humidity Chamber (ENV/41)	± 0.75° C, RH : ± 2.5 %	2009 TNP 278	28 MAY 2010



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2.0 Test Results

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation	Remark
2.1	Intrinsic Error	IS 1248 Part 9 Clause No. 4.9 150 A/ 75 mV	Class index (1 %)	-0.2 %	Complied
2.2	Variation due to influential quantities				
2.2.1	Variation due to ambient temp.	IS 1248 part 1 Table 2, part 9 Clause no. 5.2 Reference Temperature: 30 °C Lower temp. 20 °C, Upper temp. 40 °C Intrinsic error checked at 150A/75 mV	Permissible variation shall be 100% of class index At 40 °C At 20°C	0.0 % 0.0 %	Complied
2.2.2	Variation due to humidity	IS 1248 part 1 Table 2, part 9 Clause no. 5.3 1) RH 30%, 30 °C for 16 h 2) RH 80%, 30 °C for 16 h	Permissible variation shall be 100% of class index	-0.2 %	Complied





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Sr.No.	Test/Parameter	Test Condition	Requirement	Observation	Remark
2.2.3	Variation due to ripple on DC measured quantity	IS 1248 part 8 Table 1, part 9 Clause no. 5.6.2 a) Apply DC excitation at 80 % of upper limit. b) Superimpose 20 % of ripple at 45 Hz and increase to 65 Hz. c) Note down the frequency for maximum deviation. d) Change the DC excitation to bring down the value as at (a) above e) Repeat for 90 Hz to 130 Hz.	Permissible variation shall be 50% of class index	Not done due to facility limitation.	-----
2.3	Self Heating	IS 1248 part 1 & 8 clause 7.3, part 9 Clause no. 6.14.2 By applying 90% of upper limit of measuring range for 30 to 35 min. & note down the deviation (%)	Permissible variation shall be 100% of class index	-0.06 %	Complied



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2.0 Test Results (continued)

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation	Remark
2.4	Continuous overload	IS 1248 part 8 clause 7.4.1, part 9 Clause no. 6.7 a) By applying 120% of upper limit for 2h b) Accuracy test at 150A/75 mV after 2 h.	Shall comply with accuracy requirements.	-0.4 %	Complied
2.5	Overloads of short duration	IS 1248 part 8 clause 7.4.2 Table 2, part 9 Clause no. 6.5 a) Apply 1500 A DC for one time for 5s. c) Accuracy test at 150A/75 mV.	Shall comply with accuracy requirements.	Not done due to facility limitation	-----





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3.0 General Remarks : Nil.

REPORT APPROVED BY

REPORT RELEASED BY

K.MURARI
HEAD, TEST OPERATIONS



JAYANT KATHE/N.V.CHAVAN
OIC/HEAD, CUSTOMER SERVICE CELL