



सत्यमेव जयते

# TEST/CALIBRATION REPORT



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

**Government of India**

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## **MEMORANDUM**

The Test/Calibration Report issued by ERTL (W) is a record of the measurements conducted on the products submitted to it for testing / calibration and the results thereof. Unless otherwise specified in the report, the results are applicable only to those products which have been tested / calibrated and do not apply to other products even though declared to be identical.

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## **LIABILITY CLAUSE**

1. ERTL(W) shall not be liable for any change in test/calibration data and performance specification on account of malfunctioning of the standard / instrument / equipment due to any damage caused to it after the report, in respect of it has been issued.
2. The report shall not be regarded in any way diminishing the normal contractual responsibilities / obligations between the customer and ERTL (W).
3. The results reported in this report are valid only at the time of and under the stated conditions of the measurements.

ELECTRONICS REGIONAL TEST LABORATORY (WEST) DEPARTMENT OF INFORMATION TECHNOLOGY		REPORT NO. ERTL (W) / 2004 E&S 244	
SUBJECT: TESTING OF RTD TRANSDUCER		DATE 30 SEP 2004	PAGE 1 OF 6

1. SCOPE

1.1 Service Request No : ERTL(W) / 20041845 DT. 14<sup>th</sup> Sept. 2004

1.1.1 Service Request finalised on : 14<sup>th</sup> Sept. 2004

1.2 Requested by (Name and address of organisation) : SETO TEKNOLOG PVT LTD.  
406,HILL VIEW INDL. ESTATE  
OFF. LBS MARG.,  
GHATKOPAR(W),  
MUMBAI 400086

1.3	Description	Qty	Manufacturer	Type No.	Serial Nos.
	RTD TRANSDUCER	01	SETO TEKNOLOG PVT LTD.	STE-D-12T	341047

1.4 Test specifications Customer's

1.5 Lab Ambient Temperature: (25 ±2)<sup>o</sup> C  
RH : (55 ±5) %

1.6 Test Equipment used

DMM	E&S 122
DMM	S&C 167
W/I TESTER	E&S 66
INSUTESTER	E&S 123

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SUBJECT: **TESTING OF RTD TRANSDUCER**

DATE

**30 SEP 2004**

PAGE

2

OF

6

2.0 Test Results.

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation	Remark
1	Marking	As per clause 7.1 of IEC 60688	As per clause IEC 688, 7.1	Marking provided on the case of meter except Nominal range of use for temperature is not marked.	Non complied
2	Accuracy	As per clause IEC 60688 INPUT in Resistance in Ohm	±0.5%	Out put current In mA	Complied
		212.03		20.02	
		185.00		16.181	
		138.50		9.530	
		119.40		6.796	
		105.85		4.856	
		100.00		4.020	



Released by

SUBJECT: **TESTING OF RTD TRANSDUCER**

DATE

**30 SEP 2004**

PAGE

3

OF

6

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation		Remark
				At 187 V	At 275 V	
3	Auxiliary supply Variation	As per clause IEC 60688, 6.2 Variation 85-125%	Permissible variation in output 50 % of class index	At 187 V	At 275 V	Complied
		Input( $\Omega$ )		Output (mA)	Output (mA)	
		212.03		20.02	20.01	
		138.50		9.530	9.522	
4	High voltage test	As per clause IEC 60688, 6.19 2.0kV AC for 1 minute	As per clause IEC 60688, 6.19	4.013	4.010	Complied
		Between Input terminal shorted and Output terminal shorted together		No flash over, breakdown observed		
		Between Input terminal shorted and Aux. supply terminal shorted together				
		Between Output terminal shorted and Aux. supply terminal shorted together				
5	Insulation Test	As per clause IEC 688, 6.19 At 500 V DC	IR > 100Mohm	IR > 2000M Ohm	Complied	
		Between Input terminal shorted and Output terminal shorted together				
		Between Input terminal shorted and Aux. supply terminal shorted together				
		Between Output terminal shorted and Aux. supply terminal shorted together				
6	Ripple voltage	As per cl. IEC 60688 , cl. 5.4	< 1% p-p	0.4% p-p	Complied	
7	Burn in test	At ambient temp, for 100 Hrs with full output current	-----	Conditioned	-----	



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SUBJECT: **TESTING OF RTD TRANSDUCER**

DATE  
**30 SEP 2004**

PAGE  
4

OF  
6

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation	Remark
8	Accuracy	As per clause IEC 60688 INPUT in Resistance in Ohm	±0.5%	Output current In mA	Complied
		212.03		19.977	
		185.00		16.130	
		138.50		9.470	
		119.40		6.734	
		105.85		4.792	
		100.00	3.955		

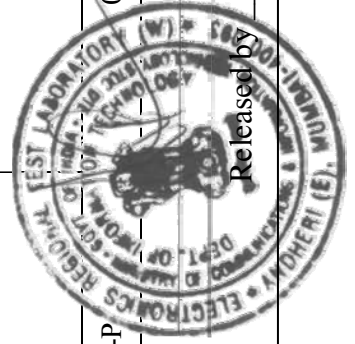


Released by

DATE		PAGE	OF
30 SEP 2004		5	6

**SUBJECT: TESTING OF RTD TRANSDUCER**

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation	Remark
9	Auxiliary supply Variation	As per clause IEC 60688, 6.2 Variation 85-125%	Permissible variation in output 50 % of class index	At 187 V	Complied
		Input ( $\Omega$ )		Output (mA)	
		212.03		19.994	
		138.50		9.449	
		100.00		3.960	
10	High voltage test	As per clause IEC 60688, 6.19 2.0kV AC for 1 minute	As per clause IEC 60688, 6.19	No flash over, breakdown observed	Complied
		Between Input terminal shorted and Output terminal shorted together			
		Between Input terminal shorted and Aux. supply terminal shorted together			
		Between Output terminal shorted and Aux. supply terminal shorted together			
11	Insulation Test	As per clause IEC 60688, cl. 6.19 At 500 V DC	IR > 100Mohm	IR > 2000M Ohm	Complied
		Between Input terminal shorted and Output terminal shorted together			
		Between Input terminal shorted and Aux. supply terminal shorted together			
		Between Output terminal shorted and Aux. supply terminal shorted together			
12	Ripple voltage	As per cl. IEC 60688, cl. 5.4	< 1% P-P	0.5 % P-P	Complied







ELECTRONICS REGIONAL TEST LABORATORY (WEST) DEPARTMENT OF INFORMATION TECHNOLOGY		REPORT NO. ERTL (W) / 2004 E&S 244	
SUBJECT: TESTING OF RTD TRANSDUCER		DATE <b>30 SEP 2004</b>	PAGE 6 OF 6

**3.0 General Remarks : Nominal values**

INPUT RESISTANCE(OHM)	TRANSDUCER OUPUT(mA)
212.03	20.000
185.00	16.139
138.50	9.498
119.40	6.771
105.85	4.835
100.00	4.000

**REPORT APPROVED BY**

**REPORT RELEASED BY**

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



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## OUR ACCREDITATION STATUS

ERTL (WJ set tip under the STQC Directorate, Ministry of Communications & Information Technology, Govt of India has been accredited under number of national / international systems as follows :

SYSTEM	AREA	STATUS
IECQ [International Electro-technical Commission on Quality Assessment System for Electronic Components)	Component Testing • Resistors (Fixed) • Capacitors (Fixed)	Accredited as ITL (Independent Test Laboratory)
NABL(C), India National Accreditation Board for Test & Calibration laboratories (Calibration System)	Calibration • Eteciro-technical discipline • Thermal discipline • Mechanical discipline	Accredited Calibration Laboratory
NABL (T). India National Accreditation Board for Test & Calibration laboratories (Testing System)	Electronic & Electrical Testing	Accredited Test Laboratory
IECEE-CB-Scheme	• Wains Operated Electronic Consumer Products • IT Products • Safely critical components	Approved as a CB Test Laboratory
SASO	Electronics & Electrical Testing	Recognised by Saudi Arabian Standard Organisation
Other recognitions	Electronics & Electrical Testing	Recognised by CSPO of State Govt., DOT. OGS & D, LCSO, RDSO. DRDO and BIS.