



सत्यमेव जयते

TEST / CALIBRATION REPORT

TYPE TEST OF
DIGITAL INSULATION TESTER
MODEL : DIT99-C



ELECTRONICS REGIONAL TEST LABORATORY (WEST)

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

Government of India

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ELECTRONICS REGIONAL TEST LABORATORY (WEST) DEPARTMENT OF INFORMATION TECHNOLOGY		REPORT NO. ERTL (W)/2004E&S286	
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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)

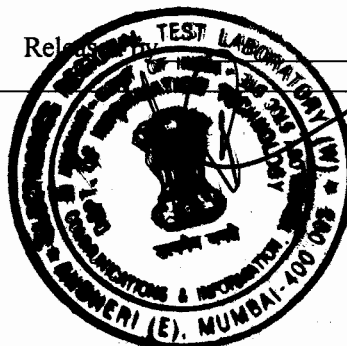
MECO INSTRUMENTS PVT. LTD.
301, BHARAT INDUSTRIAL ESTATE,
T.J. ROAD, SEWREE,
MUMBIA 400 015

1.3	<u>Description</u>	<u>Qty</u>	<u>Manufacturer</u>	<u>Type No.</u>	<u>Serial Nos.</u>
	DIGITAL INSULATION TESTER	01	MECO INSTRUMENTS PVT. LTD	DIT99-C	359534

1.4 Test specifications : TYPE TESTING AS PER IS 10656

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

1.6	Test Equipment used :	1. HIGH STABILTIY DECADE MEGAOHM BOX	S&C /156
		2. HV PROBE	S&C /14(A)
		3. DMM	E&S/122
		4. VIBRATION MACHINE	ENV/62
		5. SHOCK TEST MACHINE	E&S/11
		6. TEMP. TEST CHAMBER	ENV/28
		7. HUMIDITY CHAMBER	ENV/58
		8. OSCILLOSCOPE	E&S/77
		9. WI TESTER	E&S/66
		10. INSU TESTER	E&S/123



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2.0 TEST RESULTS

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation	Remark										
2.1	Initial measurement	As per cl.9.0	As per cl. 9.1	<table border="1"> <tr> <td>Std. Value(Ω)</td> <td>Measured value(Ω)</td> </tr> <tr> <td>50 M</td> <td>50.4M</td> </tr> <tr> <td>100M</td> <td>100.8M</td> </tr> <tr> <td>180M</td> <td>181.8M</td> </tr> <tr> <td>500V</td> <td>509.4 V</td> </tr> </table>	Std. Value(Ω)	Measured value(Ω)	50 M	50.4M	100M	100.8M	180M	181.8M	500V	509.4 V	Complied
Std. Value(Ω)	Measured value(Ω)														
50 M	50.4M														
100M	100.8M														
180M	181.8M														
500V	509.4 V														
2.2	HIGH VOLTAGE TEST	2 kV AC for 1 min. between all the terminals connected together and the case	As per cl. 9.2(terminal voltage) No break down, arcing or sparking shall occur.	No break down, arcing or sparking is observed.	Complied										
2.3	INSULATION RESISTANCE TEST	At 500 V DC between all the terminals connected together and the case	50Mohm	>50Mohm	Complied										
2.4	TEST FOR LIMITS OF ERROR														
2.4.1	Error due to variation of level.	A change of 5 degrees in the level of the tester in any direction	Deviation of the pointer from its initial position should be less than 0.5 mm	Not applicable	--										
2.4.2	Error due to variation of Ambient Temperature	a) at 47 deg.c b) at 7 deg.c	Deviation Shall not exceed $\pm 5\%$	<table border="1"> <tr> <td>Std. Value(Ω)</td> <td>Measured value(Ω)</td> </tr> <tr> <td>100.0M</td> <td>a)100.7M</td> </tr> <tr> <td>100.0M</td> <td>b)100.6M</td> </tr> </table>	Std. Value(Ω)	Measured value(Ω)	100.0M	a)100.7M	100.0M	b)100.6M	Complied				
Std. Value(Ω)	Measured value(Ω)														
100.0M	a)100.7M														
100.0M	b)100.6M														
2.4.3	Error due to variation of Excessive Humidity	At 27 deg.c, 90% RH for 24 Hours	Deviation Shall not exceed $\pm 5\%$	<table border="1"> <tr> <td>Std. Value(Ω)</td> <td>Measured value(Ω)</td> </tr> <tr> <td>100.0M</td> <td>100.8M</td> </tr> </table>	Std. Value(Ω)	Measured value(Ω)	100.0M	100.8M	Complied						
Std. Value(Ω)	Measured value(Ω)														
100.0M	100.8M														
2.4.4	Ripple at Meas. Terminal	As per cl 11.6.4	Less than 10% of Terminal voltage at 10% of Terminal voltage		Complied										



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2.0 TEST RESULTS (CONTINUED)

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation		Remark
				Std. value(Ω)	Measured value(Ω)	
2.5	Dust test	Temp. 40 \pm 2 and RH 80% Duration: 4 hrs.	Conditioning	Conditioned		---
2.5.1	Post measurement	As per cl.9.0	Resistance: \pm 5%	50 M	50.3M	Complied
				100M	100.4M	
				180M	180.5M	
2.6	Vibration Test	As per cl 11.8, Accordance with IS 9000 (Part 8) Freq. 10 to 150 Hz Amplitude: 0.15mm Duration:6 hrs	Conditioning	Conditioned		Complied
2.6.1	Post measurement	As per cl.9.0	Resistance: \pm 5%	50 M	50.2M	Complied
				100M	101.0M	
				180M	181.6M	
2.7	Bump Test	As per cl 11.9, Accordance with IS 9000 (Part 7/sec 2)) No. of bumps:4000 Acc.: 100 m/s ² Pulse duration:6 ms	Conditioning	Conditioned		Complied



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2.0 TEST RESULTS (CONTINUED)

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation		Remark
				Std. value(Ω)	Measured value(Ω)	
2.7.1	Post measurement	As per cl.9.0	Resistance: $\pm 5\%$	50 M	50.3M	Complied
				100M	101.0M	
				180M	181.6M	
2.8	Dry heat Test	As per cl 11.10, Accordance with IS 9000 (Part 3/sec 2) Duration: 16 Hrs.	Terminal voltage: $\pm 25\%$	500V	532 V	---
				Conditioning		
2.8.1	Post measurement	As per cl.9.0	Resistance: $\pm 5\%$	50 M	50.2M	Complied
				100M	100.6M	
				180M	181.4M	
2.9	Cold Test	As per cl 11.11 Accordance with IS 9000 (Part 2/sec 2) Temp.: -10 deg.c Duration: 16 Hrs.	Terminal voltage: $\pm 25\%$	500V	532 V	---
				Conditioning		



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2.0 TEST RESULTS (CONTINUED)

Sr.No.	Test/Parameter	Test Condition	Requirement	Observation		Remark
				Std. value(Ω)	Measured value(Ω)	
2.9.1	Post measurement	As per cl.9.0	Resistance: ± 5%	50 M	50.2M	Complied
				100M	100.7M	
				180M	181.6M	
				500V	536 V	
2.10	Damp Heat (cyclic)	As per cl 11.12 of IS 10656 IS 9000(Part 5/sec 2) Number of cycle: 2	Terminal voltage: ± 25%			
2.10.1	Post measurement	As per cl.9.0	Resistance: ± 5%	50 M	50.2M	Complied
				100M	100.6M	
				180M	181.5M	
				500V	530 V	
			Terminal voltage: ± 25%			



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3.0 General Remarks : Nil

REPORT APPROVED BY

REPORT

[Signature]
HEAD (E&S)

