



Rishabh Testing and Calibration Laboratory

(NABL Accredited testing and calibration laboratory)

Plot No. C-6, MIDC, Satpur, Nashik-422007,

Ph. 0253-2202307/388/309

Web: lab.rishabh.co.in, mail:praveen.chaplot@rishabh.co.in



TC-13203

Certificate No.: RTCL/EMC/2425/ESD/031

ULR No.:TC1320324000000046F

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I : Electrical testing

1. EMI/EMC Test Facility



Test Report



Laboratory Scope

TEST REPORT ELECTRO STATIC DISCHARGE TEST

1. Certified to :	Organization Name :	Rishabh Instruments Ltd.
	Address :	F-31, MIDC Satpur , Nashik 422 007, Maharashtra
2. Details of Unit under test. (UUT)	Product Name :	Digital TRMS Multimeter
	Manufacturer :	Rishabh Instruments Ltd.
	CRF NO :	2024-25/05/013 Dated : 15.05. 2024
	Type / Model :	Rishabh 610
	Detail Specifications :	Measuring Ranges DC Voltage : 1000V AC Voltage : 1000V Current AC/DC : 10A Resistance : 60MΩ
	No. of item/Total item :	01
	Sr. No./ID No.:	62307012082
	Condition of item :	Physically OK.
	Location of testing :	RTCL, Nashik.
3. Test Certificate	Sample Received On :	15 May 2024.
	Date of Issue :	18 May 2024.
	Date of Testing :	15 May 2024.

Tested By :	Checked By :	Approved By :
 (Mohmmad Hasan Sheikh)	 (Ravindra Shingote)	 (Praveen Chaplot)

- Note :**
1. This certificate may not be reproduced either in full or part without prior written approval of RTCL.
 2. This report relates only particular sample received in good condition for testing at RTCL.
 3. only test asked for by the customer have been carried out.
 4. In case of any dispute , Nashik will be exclusive Jurisdiction & shall be constructed as where the cause has arise.
 5. RTCL is not Responsible for the authenticity of photocopied or reproduced test reports,RTCL provides support to customer For verification of the authenticity of the test reports issued by RTCL.



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4.0 : Test Procedures and Applicable Standard

4.1. IEC 61326-1 : Edition 3.0 2020

Electrical equipment for measurement, control and laboratory use- EMC requirements
Part 1 : General requirements

4.2. IEC 61000-4-2:2008 (Edition 2, 2008)

Testing and measurement techniques - Electrostatic Discharge immunity test.

5.0 : Brief Description of Unit Under Test :

RISHABH 610 digital multimeter is suited for universal, general applications in the electrical and electronics fields, as well as in radio and television service, training and education.

It is of especially pocket size design, and thus fit into pocket.

6.0 : Performance Criteria

Performance criteria A: The equipment shall continue to operate as intended during and after the test.

No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the equipment is used as intended.

The performance level may be replaced by a permissible loss of performance which shall recover, without user Intervention. A permissible loss of performance is allowed within the performance level only when this information is clearly provided to the end user via documentation, such as the product user manual.

No change in the operating state is allowed nor is loss of data.

i.e. During and after the test, Measured Input values shall remain within +/- 0.5% of reading +3 Digits.

for Applied input Resistance value $1k\Omega$ allowed limit +/-0.053k Ω . No malfunctioning of meter display as specified by the manufacturer.

Performance criteria B : The equipment shall continue to operate as intended after the test.

No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer, when the equipment is used as intended.

During the test, the equipment performance level may be replaced by a permissible loss of performance if such loss of performance is detailed in the emc test plan.

A permissible loss of performance is allowed within the performance level only when this information is clearly provided to the end user via documentation, such as the product user manual.

An unintended change of the operating State is allowed if self-recoverable. No loss of stored data is allowed.

i.e. During the test, Measured value of Resistance may be out of tolerance specified in performance criteria A. Meter display may gets malfunction.

After the test, it shall be self recoverable, within the specified limit mention in performance criteria A, as specified by the manufacturer.

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M. Sheikh

(Mohmmad Hasan Sheikh)

Checked By:

Ravindra Shingote

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RTCL-F-114 Rev 03



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7.0 : Test Detail :

Test Instrumentation			
Test Gun:	EM test	Model No.:	ESD NX30
Sr. No.	22860	Firmware:	5.02

Test Conditions		
Ambient Temperature : 25.8°C	Relative Humidity : 53%	Atmospheric Pressure : 1000 mbar
Port Details: Enclosure .		
Connection : Resistance : 1 kΩ		
Description : Resistance value monitored throughout the test on EUT display .		
Tested as table top equipment.		

Test specification as per IEC 61326-1 : Edition 3.0 2020, Annex A and test procedure as per IEC 61000-4-2 : 2008 as specified by the manufacturer.

Contact Discharge :

Indirect Contact Discharge :

Horizontal Coupling Plane & Vertical Coupling Plane :

1. Electrostatic discharges are applied to UUT with the output voltage: +/- 4kV.
2. 10 number of discharge pulses of each polarity (+/-) are applied at each level.
3. Test severity level is 2.

Test Points	Requirement	Observation	Remark
1. Front View of UUT.	The Equipment Should Meet the Performance Criteria B.	The Equipment Meets the Performance Criteria B.	Conform
2. Left View of UUT.			
3. Right View of UUT.			
4. Back View of UUT.			

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Contact Discharge :

Direct Contact Discharge :

- Electrostatic discharges are applied to UUT with the output voltage: +/- 4kV.
- 10 number of discharge pulses of each polarity (+/-) are applied at each level.
- Test severity level is 2.

Test Points	Requirement	Observation	Remark
1.Battery cover screw	The Equipment Should Meet the Performance Criteria B.	The Equipment Meets the Performance Criteria B.	Conform

Air Discharge :

- Electrostatic discharges are applied to UUT with the output voltage: +/- 2kV, 4kV, 8kV.
- 10 number of discharge pulses of each polarity (+/-) are applied at each level.
- Test severity level is 3.
- Air discharges are applied to following points.

Test Points	Requirement	Observation	Remark
1. Display of UUT.	The Equipment Should Meet the Performance Criteria B.	The Equipment Meets the Performance Criteria B.	Conform
2. Front keys			
3. LED light			
4. Connection terminal with probe			
5. Case air gaps			

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8.0 : Test Observations :

Required Performance Criteria : B

Test result : Conform

9.0 : EUT Photograph :

Front View



Back View



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10.0 : Setup Photograph :



----- END -----

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