



TEST REPORT



ULR Number: TC154052600000023F

Report Number: 80260300020001

1 Details of Customer / Applicants:

Applicant's Name	M B Control & Systems Pvt. Ltd.
Address	M.B. Control & Systems Pvt. Ltd. Srijan industrial Logistic Park, Part – A, Block – B, 3 rd Floor, NH – 06. Howrah – 711302, West Bengal, India
Client Representative	Mr. Vaibhav Agarwal Email: vaibhav@mbcontrol.com
Date of issue.....	04-03-2026
No Of Pages	16 Pages
Test Report Version.....	1.00
EUT ID/Sample ID	BLC-01-1003926-001
Name of Testing Laboratory preparing the Report	TUV SUD South Asia Pvt Ltd.
QR Code	

1.1 General disclaimer:

- a. Unless otherwise agreed upon, Pass or Fail or Statement of compliance verdicts are given based on the measured values without any considerations of measurement uncertainties. Every test method has a measurement uncertainty which has been evaluated by the laboratory and are available on request. By taking measurement uncertainty into account, it might happen that measured values can neither be assessed as Pass nor as Fail.
- b. The test results presented in this report relate only to the object/Equipment tested.
- c. This report shall not be reproduced, except in full, without the written approval of the Issuing Testing Laboratory.
- d. The testing conditions are followed as per the reported test standard. For additional test conditions, apart from the reported test conditions, the laboratory can be contacted for details.
- e. The laboratory will retain the EUT (s) for 45 days except for the mandatory retention period specified by the Regulatory Bodies and unless otherwise specified by the client.
- f. Any use for advertising purposes must be granted in writing. This technical report may only be quoted in full. This report is the result of a single examination of the object/equipment in question and is not generally applicable evaluation of the quality of other products in regular production.
- g. The correctness of the information related to EUT(s) in the Test Request Form/Customer letterhead/Email is the customer's responsibility. The laboratory reports the said information in the test report and is not liable for the same.
- h. Laboratory does not involve in sampling if it is not mentioned in report.
- i. Any amendment or update required to report should be informed within 30 days from date of issue of the report.
- j. The information given in this report, such as name of test EUT, trademark, part no/id no, supplier, customer etc., are based on the information received from the customer, TUVSUD South Asia Pvt. Ltd., does not take any responsibility for the authenticity of such information.



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Prepared by	Reviewed & authorized by
<i>P.vemana.</i>	<i>Sathisha C N</i>
Name & Date: Purimitla Vemana & 04-03-2026 Test Engineer/ Testing Officer	Name & Date: Sathisha C N & 04-03-2026 Lab-Manager



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2 Description of the Equipment Under Test (EUT/DUT):

2.1 Test item particulars:	
EUT Received Date	09-02-2026
EUT received condition.....	<input checked="" type="checkbox"/> Good <input type="checkbox"/> Others (If applicable Specify)
Equipment mobility.....	<input type="checkbox"/> Movable <input type="checkbox"/> Hand-held <input checked="" type="checkbox"/> Transportable <input type="checkbox"/> Stationary <input type="checkbox"/> For building-in <input type="checkbox"/> Direct plug-in
Category	<input type="checkbox"/> Automotive <input type="checkbox"/> Avionics <input type="checkbox"/> Consumer Electronics <input checked="" type="checkbox"/> Industrial <input type="checkbox"/> Information Technology <input type="checkbox"/> Laboratory <input type="checkbox"/> Medical <input type="checkbox"/> Telecom <input type="checkbox"/> Naval <input type="checkbox"/> Lighting <input type="checkbox"/> Railway <input type="checkbox"/> Military <input type="checkbox"/> Consumer/Household <input type="checkbox"/> Others
Operating condition.....	<input checked="" type="checkbox"/> ON Condition <input type="checkbox"/> OFF Condition <input type="checkbox"/> Operating / OFF time <input type="checkbox"/> ON During Last 30min/1Hr. <input type="checkbox"/> Others (Specify)
Purpose of the test	<input type="checkbox"/> Development Analysis <input checked="" type="checkbox"/> Performance Testing

2.2 EUT/DUT Details:	
EUT Name	PV Module Temperature Sensor – RS485 O/P
Manufacturer	M B Control & Systems Pvt. Ltd
Address	M.B. Control & Systems Pvt. Ltd. Srijan industrial Logistic Park, Part – A, Block – B, 3 rd Floor, NH – 06. Howrah – 711302, West Bengal, India
Trademark	
Model Number	MB Met-803
Part Number	NA
Serial Number	25593
EUT Dimensions	64 (W)x 36 (H)x 98 (L) mm
Mass of EUT (kg)	754 g
Number EUT's to be Tested	01 No
Accessories	Antenna, Power Supply and cables
Power Supply (Voltage, Amps, and Watts)	12-24VDC for PV Module Temperature Sensor



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2.2.1 General Product Information:

NA

3 Summary of tests Performed:

Sl. No.	Type of Testing	Standard / Edition	EUT Condition	Test Start Date	Test End Date
1	Dry Heat Test	IEC 60068-2-2	ON Condition	10-02-2026	11-02-2026
2	Damp Heat Steady State Test	IEC 60068-2-78	ON Condition	11-02-2026	12-02-2026
3	Cold Test	IEC 60068-2-1	ON Condition	12-02-2026	13-02-2026

3.1 Details About the Testing Laboratory

Testing Laboratory Name	TUV SUD South Asia Pvt Ltd.
Testing Location / Address	Plot No. 3-P1-B, Hitech Defence & Aerospace Park, KIADB Industrial Area, BK Palya, Bengaluru, Bengaluru North Taluk Pin code – 562149, India.
Contact Person / Details	Mr. Sathisha C N & Environmental & Mechanical – Lab Manager

3.1.1 Test Report Amendment History

Sl. No	Revision No.	Revision Date	Page No.	Reason for Amendment	Amendments made	Issued By (Designation)	Approved By (Designation)

Note: NA



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3.1.2 General Information & Accreditation approval details:

Following is the accreditation and approvals.

Accreditation / Approvals	Registration / Certificate Number
NABL: National Accreditation Board for Testing and Calibration Laboratories	Certificate No: TC-15405

4 Environmental Condition:

Temperature (°C)	21.3
Humidity (%RH)	53.6
Pressure (hPa)	908.7

Table 1: Environmental Condition

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5 Photos of Equipment Under Test (EUT/DUT):



Figure 1: Equipment Photos / Images

6 Environmental Testing: Dry Heat Test

6.1 Test Setup Photos / Images



Figure 2: Dry Heat Test Setup Photo

6.1.1 Test Specifications:

Parameter	Requirements
Test Name	Dry Heat Test
Standard	IEC 60068-2-2
Test Temperature	+55°C
Duration	16 Hours
Recovery	1 Hour
EUT Condition	ON Condition

Table 2: Dry Heat Test Specification

6.1.2 Test Procedure:

- The climatic chamber switched ON and verified the working conditions before starting the test.
- The test profile was created as per the specifications given.
- Test sample was placed inside the test chamber.
- The test was executed with automatic operation, and the test plot was generated at the end of the test.
- After completion of the test as per the profile, verified the chamber conditions and switched OFF

6.1.2.1 Initial, Intermediate, and final measurements of the EUT/DUT

- Performance checks were carried out by the lab representative before and after completion of the test on the test sample.

6.1.3 Test Graphs:

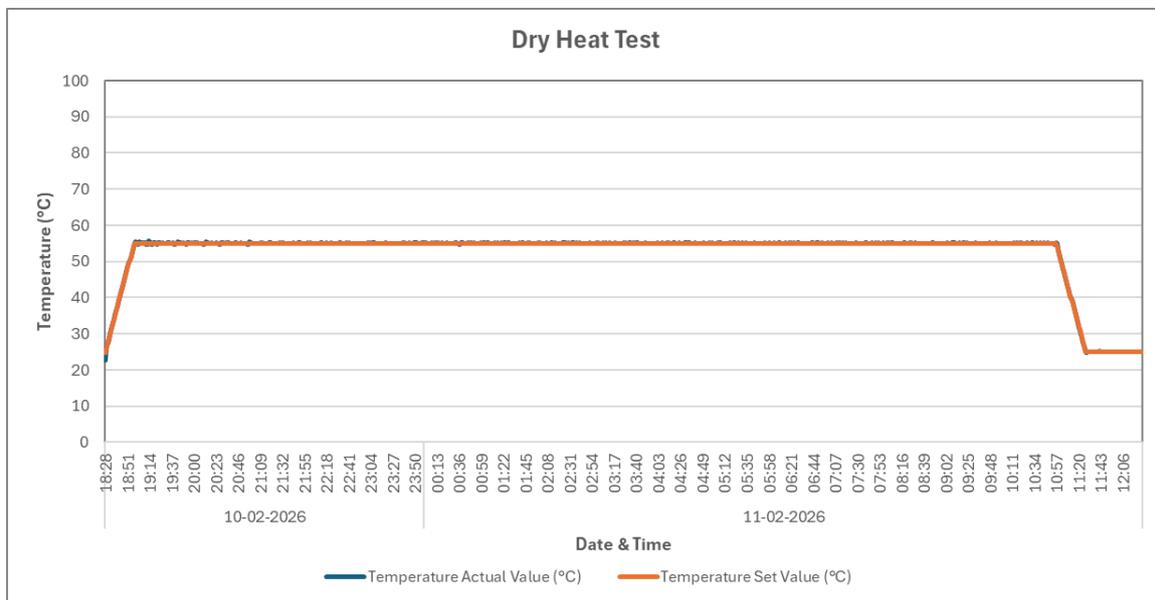


Figure 3: Dry Heat Test Graph

6.1.4 Remarks/Observations/ Results:

- NO physical damages were observed before and after completion of the test on the test samples.

7 Environmental Testing: Damp Heat Steady State Test

7.1 Test Setup Photos / Images

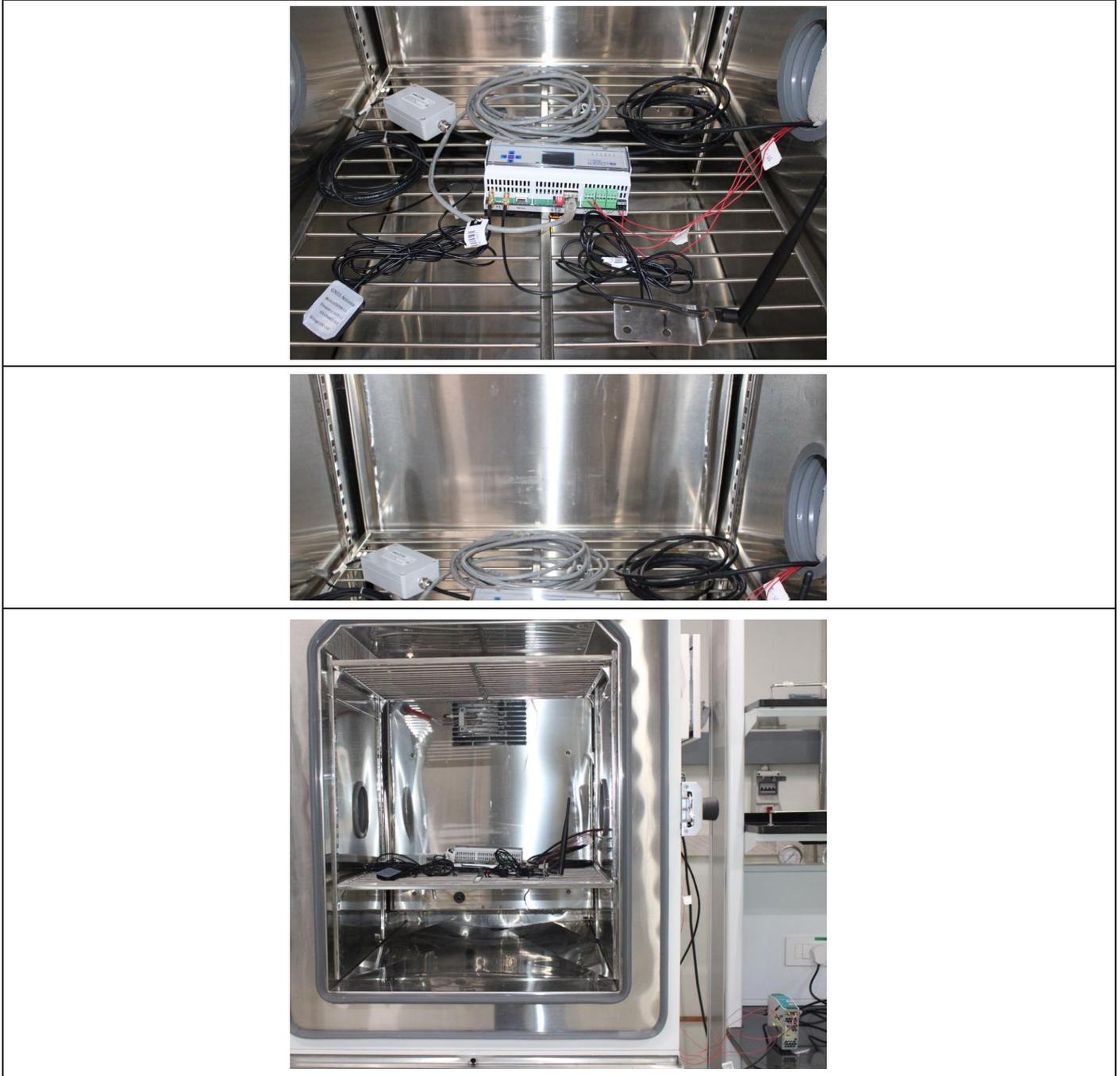


Figure 4: Damp Heat Steady State Test Setup Photo

7.1.1 Test Specifications:

Parameter	Requirements
Test Name	Damp Heat Steady State Test
Standard	IEC 60068-2-78
Temperature	+40°C
Humidity	95 %RH
Duration	16 Hours
Recovery	1 Hour
EUT Condition	ON Condition

Table 3: Damp Heat Steady State Test Specification

7.1.2 Test Procedure:

- The climatic chamber switched ON and verified the working conditions before starting the test.
- The test profile was created as per the specifications given.
- Test sample was placed inside the test chamber.
- The test was executed with automatic operation, and the test plot was generated at the end of the test.
- After completion of the test as per the profile, verified the chamber conditions and switched OFF

7.1.2.1 Initial, Intermediate, and final measurements of the EUT/DUT

- Performance checks were carried out by the lab representative before and after completion of the test on the test sample.

7.1.3 Test Graphs:

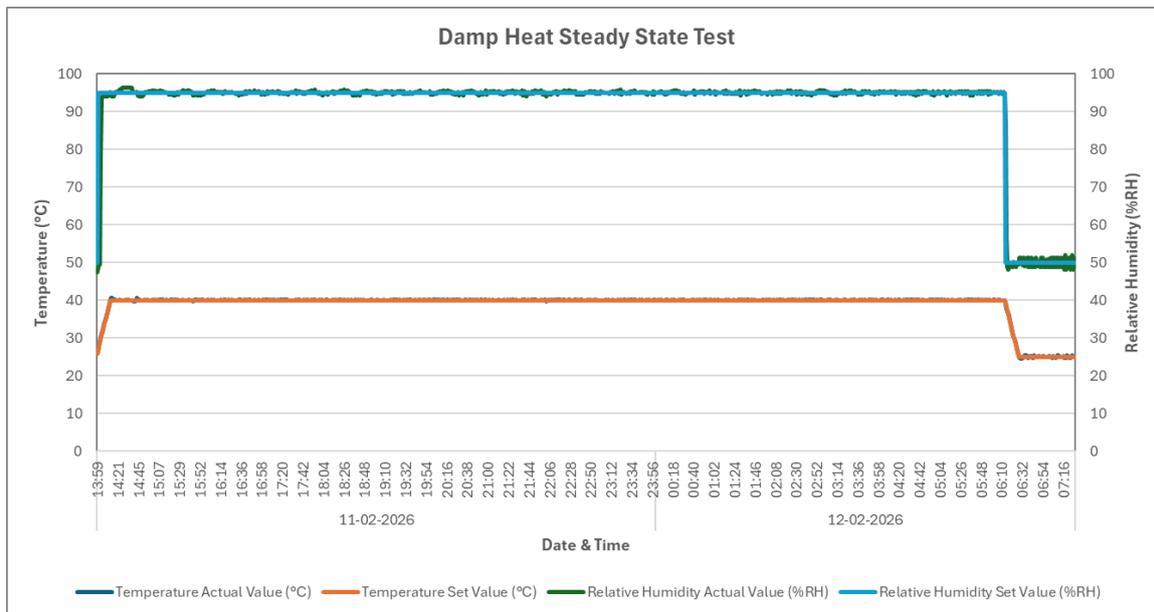


Figure 5: Damp Heat Steady State Test Graph

7.1.4 Remarks/Observations/ Results:

- NO physical damages were observed before and after completion of the test on the test samples.

8 Environmental Testing: Cold Test

8.1 Test Setup Photos / Images

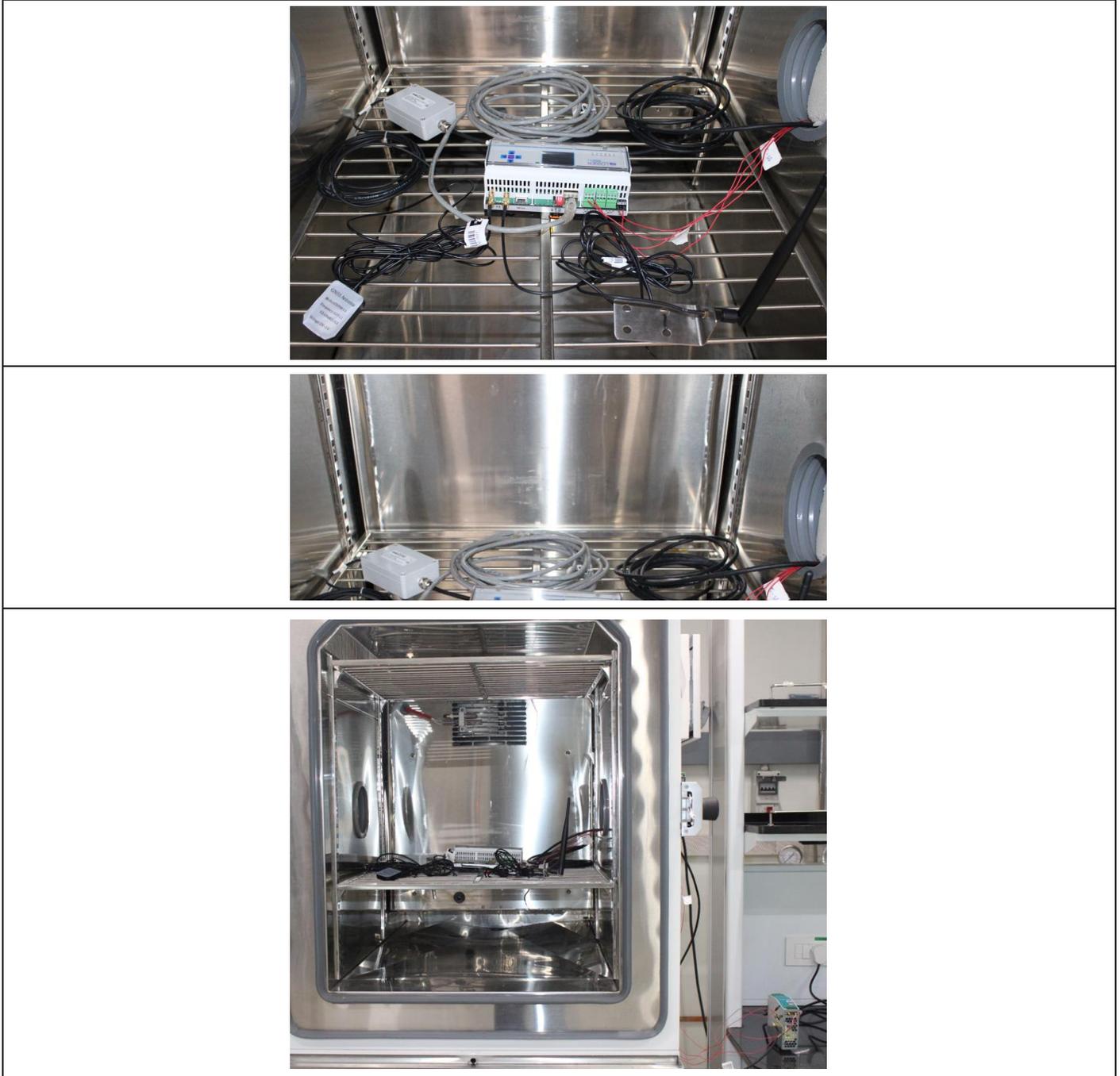


Figure 6: Cold Test Setup Photo

8.1.1 Test Specifications:

Parameter	Requirements
Test Name	Cold Test
Standard	IEC 60068-2-1
Temperature	+0.0°C
Duration	16 Hours
Recovery	1 Hour
EUT Condition	ON Condition

Table 4: Cold Test Specification

8.1.2 Test Procedure:

- The climatic chamber switched ON and verified the working conditions before starting the test.
- The test profile was created as per the specifications given.
- Test sample was placed inside the test chamber.
- The test was executed with automatic operation, and the test plot was generated at the end of the test.
- After completion of the test as per the profile, verified the chamber conditions and switched OFF

8.1.2.1 Initial, Intermediate, and final measurements of the EUT/DUT

- Performance checks were carried out by the lab representative before and after completion of the test on the test sample.

8.1.3 Test Graphs:

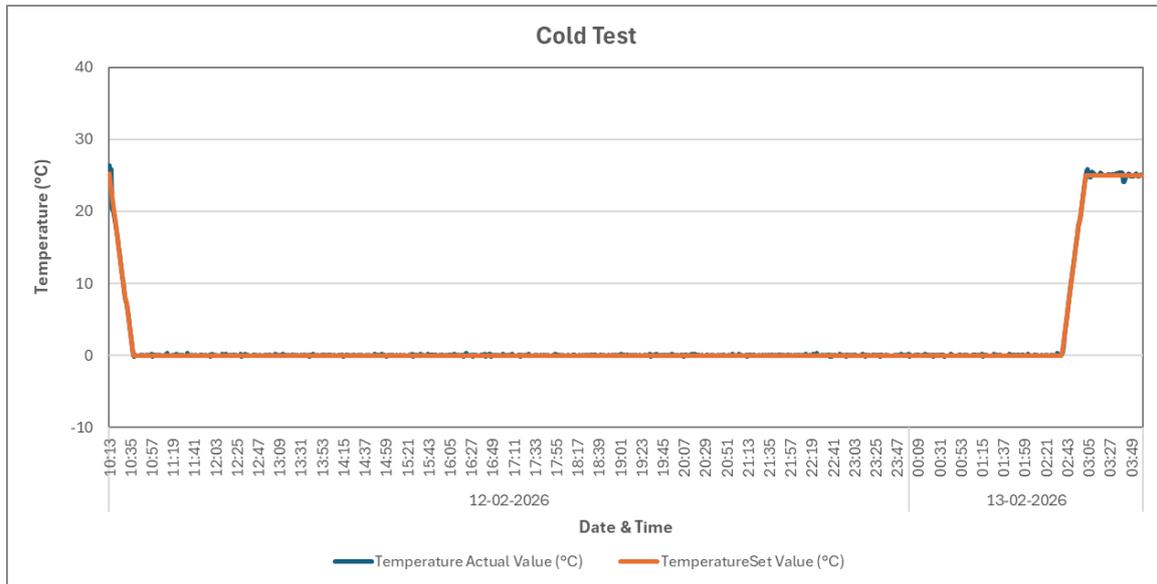


Figure 7: Cold Test Graph

8.1.4 Remarks/Observations/ Results:

- NO physical damages were observed before and after completion of the test on the test samples.



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9 Details of Equipment's and Calibration:

The list of following equipment used for this testing conforms to the applicable standards. Performance of all tests and measuring equipment including any accessories are checked periodically to ensure accuracy.

9.1 List of Equipment Used:

Equipment ID	Name of the Equipment	Make / Model Number	Serial Number	Calibration Due Date
TSA/CAMP/ENE/ENV/EQ/25/060	Climatic Chamber	PAC315B96	121327	03-02-2027
TSA/CAMP/ENE/ENV/EQ/23/019	Digital Humidity/Baro/Temp. Data Recorder	MHB-382SD	T.070169	20-08-2026

Table 5: List of Equipments Used

10 Acronyms

RH	Relative Humidity
Kg	Kilo gram
N/A	Not Applicable/ Available
EUT	Equipment Under Test
DUT	Device Under Test
hPa	Hectopascals
°C	Degree Centigrade
Sl.No	Serial Number
m/s	Meter per second

Table 6: Acronyms

End of report