

RCL-ENVESS22M868LOR-02/A (01)

This report cancels and replaces the test report N°RCL-ENVESS22M868LOR-02/A, Edition 00

CLIMATIC TEST REPORT

Damp heat test

According to the standard(s):
IEC 60068-2-78 test Cab (2001)

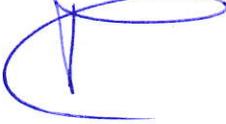
Equipment under test:
Linear indicator with numeric display

Company:
LOREME

DISTRIBUTION: Mr REPERT

Company: LOREME

Number of pages: 13

Ed.	Date	Modified Pages	Written by	Technical & Quality Approval
			Name, function and Visa	Name, function and Visa
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EQUIPMENT UNDER TEST: Linear indicator display with numeric display

Serial number (S/N) : 143472/163

Part number (P/N) : BGL 136-NAV2 & CALT25 & CAL4/100IG

MANUFACTURER: LOREME

CUSTOMER'S NAME AND ADDRESS:

Company: LOREME

Address: 12 rue des Potiers d'Etain Actipôle BORNAY
B.P 35014
57071 METZ CEDEX 3 - FRANCE

Contact: Emmanuel REPPERT

Person(s) who were present during tests: /

PURCHASE ORDER: N° E230345AMP

TEST DATES: From 08th to 12th of June, 2023

TEST LOCATION: Environne'Tech
49 Boulevard Pré Pommier
38300 BOURGOIN-JALLIEU
Laboratoire d'essais

TESTER: Romane MOIROUD

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1. PURPOSE OF TESTS.

The purpose of these tests is to validate the behaviour of the equipment in a climatic environment.

2. EQUIPMENT UNDER TEST.

Equipment under test: 1 linear indicator with numeric display



photo 1



photo 2



photo 3



photo 4



photo 5



photo 6



photo 7

3. CUSTOMER SPECIFICATIONS SHEET.

The tests are to be carried out according to the following document (s), included in the technical offer Environne'Tech *DNV – ENVESS22M868LOR-03*.

3.1. According to the standard(s):

IEC 60068-2-78 test Cab (2001)

3.2. *Reminder of the main test criteria:*

3.2.1. *Damp heat test:*

Temperature:	+40°C
Humidity:	85 %RH
Soak duration:	48 hours
Temperature rate:	< 1°C/ minute
Number of cycles:	1
Equipment configuration:	Power on

Description of the cycle:

The equipment is placed inside the climatic chamber, with the power on.

The temperature of the enclosure, after it has been closed, is set at +40°C while respecting a temperature variation rate of less than 1°C/min. Then, the humidity is set at 85%RH.

This parameter must be maintained for 48 h.

Then, the temperature is increased until it reaches the ambient temperature and while respecting a temperature variation rate of less than 1°C/min. The humidity is set at 75%RH during one hour, before to be set at 50 %RH.

3.3. *Control and / or verification of proper operation:*

A visual check is carried out before and after each test.
Functional checks are carried out by the company LOREME.

4. EQUIPMENT USED.

4.1. Test facilities.

Identity	Designation	Brand and Model	Characteristics
CLIM 44	Climatic chamber	SERVATHIN WEISS /	T°C:-35/+85, %HR: NC, inside dimensions l=1.20m, p=1.30m, h=1.20m, volume=1872 l

4.2. Measurement Equipment.

Identity	Designation	Brand and Model	Characteristics	Last validity date	Metrological confirmation valid until
CLIM 781	Thermo-hygrometer probe	Rotronic HC2A-IC105	Probe 0/100%HR and -50/+150°C	15/06/2022	15/08/2024
CLIM 587	Thermo sensor	TC 16-1-3.0-3.220-CE4CLA-R100-B-2M RT37	-75°C/+250°C	15/06/2022	15/08/2024
SOND-001-04	Thermo sensor	TC 1-T-B10-5METRES	Thermocouple type T, class 1	20/12/2022	20/02/2025

5. TEST LOG.

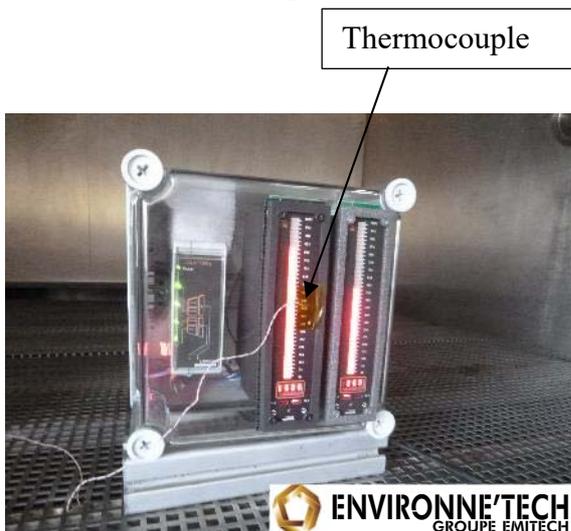
5.1. Variant(s) made during the test with regard to the Specifications:

No variant.

5.2. Damp heat test:

5.2.1. Test setup:

The equipment is placed in the climatic chamber and the thermocouples are installed, the test can begin.



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photo 8



 **ENVIRONNE'TECH**
GROUPE EMITECH

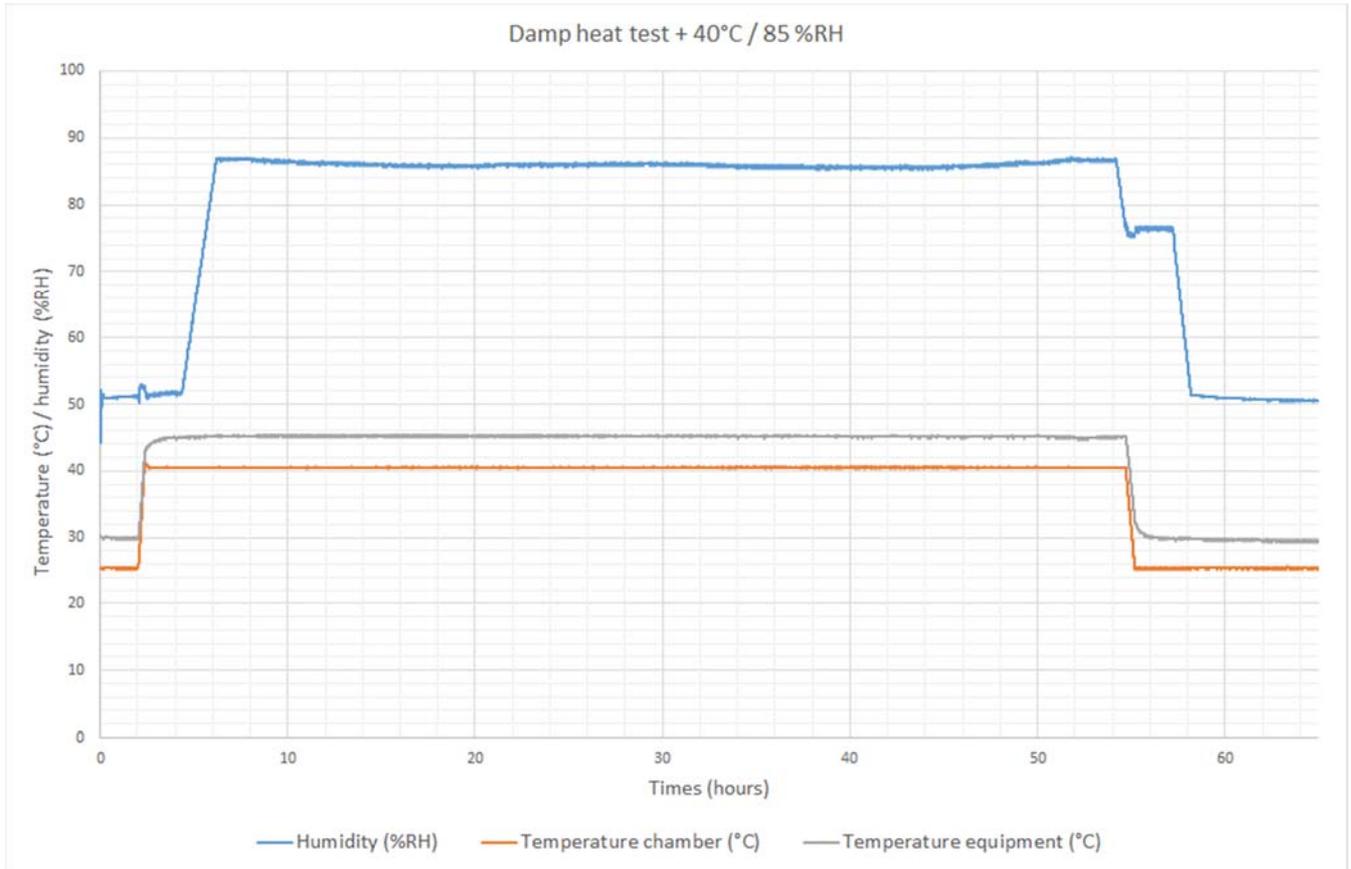
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 **ENVIRONNE'TECH**
GROUPE EMITECH

photo 10

5.2.2. Test:



curve 1

5.2.3. Visual inspection:



photo 11

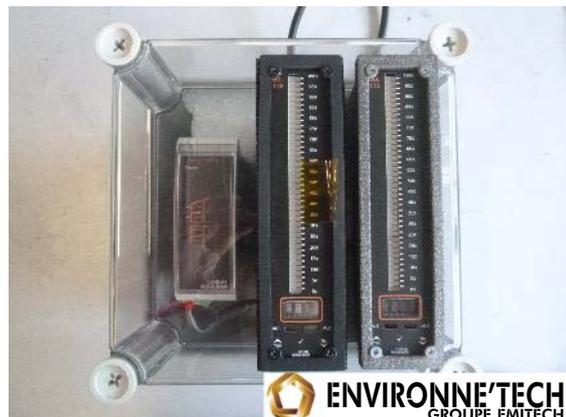


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photo 13



 **ENVIRONNE'TECH**
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photo 14



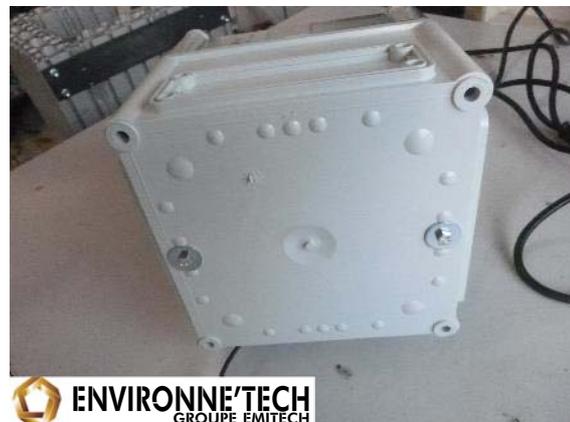
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photo 15



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photo 16



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photo 17



 **ENVIRONNE'TECH**
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photo 18

Results: At the end of the tests, no visual degradation was observed.

5.2.4. *Functional check:*



photo 19



photo 20



photo 21

Results: The equipment is functional, the results are the responsibility of the company LOREME.

Note: During the test, the gauge of the numeric display on the right was higher than the left one.

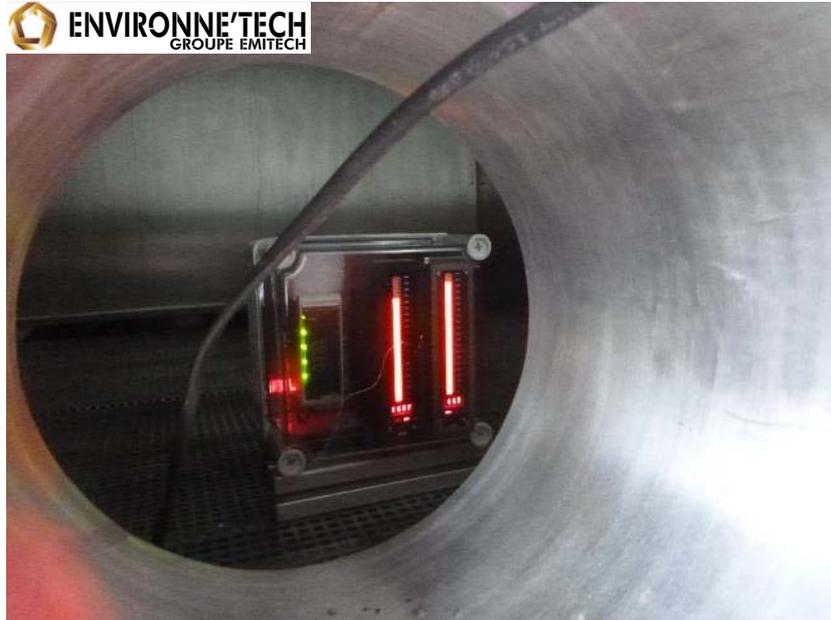


photo 22

6. CONCLUSION.

The equipment was tested in accordance with the test specification described in chapter 3 of this report.

At the end of the tests, no visual degradation was observed.

The equipment is functional, the results are the responsibility of the company LOREME.

Equipment was sent back to LOREME for final assessment.

□□□ End of report □□□