SOUTH QUALITY

PROFICIENCY TESTING PROVIDER

REPORT No 11421

Date of issue: *November 21, 2025*

Status: FINAL REPORT

****

IEC 60068-2-27

ENVIRONMENTAL TESTING

- TEST EA AND GUIDANCE: SHOCK -

Program: SQ-6074.V3

****

Prepared by:	Reviewed by:	Approved by:
cn=BERENICE C. FERREL, o=PT SOUTH QUALITY SAS, ou=SOUTH QUALITY, email=tech@ptsouthquality.com, c=AR 2025.11.21 11:56:04 -03'00'	cn=ESTHER CASAS, o=PT SOUTH QUALITY SAS, ou=SOUTH QUALITY, email=ecasas@ptsouthquality.com, c=AR 2025.11.21 15:17:43 -03'00'	cn=Emiliano Medina, o=SOUTH QUALITY, ou=PT SOUTH QUALITY SAS, email=quality@ptsouthquality.com, c=ES 2025.11.22 11:41:10 -03'00'
Berenice Ferrel Assistant Technician	**Lic. Esther Casas** Physics expert	**Eng. Emiliano Medina** Quality Assurance Lead

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1. FOREWORD

This report summarizes the results of the **SQ-6074.V3** proficiency testing program, focusing on the verification of the adequacy of specimens to resist repetitive shocks. This program is conducted in a bilateral format, following the A.3.3 classification of the ISO 17043 standard ("Split-sample testing schemes").

South Quality conducted the testing program in July 2025 with the aim of assessing the laboratory's ability to competently perform the designated tests.

2. ORGANIZATION

Program Coordinator:	Lic. Esther Casas
Assistant Technician:	Berenice Ferrel
Statistic:	Lic. Manuel Tozaki
Supervision:	Eng. Emiliano Medina

3. OBJECTIVE

The objective of this proficiency testing program is to perform a visual and functional inspection of the equipment under test, using the following standard:

Standard
IEC 60068-2-27: 2008

To verify this, electronic equipment has been selected.

Participants in this program have not been informed in advance about the expected behavior of the samples they receive.

As a usual practice of this program, three different combinations of samples can be sent to participants:

i. Sample A (PASS) + Sample B (PASS).
ii. Sample A (PASS) + Sample B (FAIL).
iii. Sample A (FAIL) + Sample B (FAIL).

4. PARTICIPANT

Company: **Hermon Laboratories Ltd.**

Laboratory: **Hermon Laboratories Ltd.**

Country: Israel

Client ID: S332

Contact person: George Shleimovich
Quality Manager
george@hermonlabs.com

5. HOMOGENEITY

Several batches were prepared identically by the staff at South Quality.

Subsequently, a homogeneity study was conducted with an ISO 17025 accredited laboratory.

The control process followed ISO 33405: 2024, clauses 7.4.1.1 / 7.4.1.2. Stratified random sampling was employed, and samples were chosen using random number generation software.

The results of this test are presented below:

Size of each batch: **30 units**
Tested samples from each batch: **8 units**
Test conditions: **940 m/s^2, Half sine, 6 ms, 3 axes (±)**

DETERMINATION	HOMOGENEITY OF RESULTS IN THE SAMPLES ANALYZED		
	BATCH: LMI1801	BATCH: LMI1802	BATCH: LMI1803
VISUAL INSPECTION	NO	YES	YES
FUNCTIONAL INSPECTION	YES	YES	YES

Size of each batch: **30 units**
Tested samples from each batch: **8 units**
Test conditions: **800 m/s^2, Half sine, 6 ms, 3 axes (±)**

DETERMINATION	HOMOGENEITY OF RESULTS IN THE SAMPLES ANALYZED		
	BATCH: LMI2783	BATCH: LMI2784	BATCH: LMI2785
VISUAL INSPECTION	YES	NO	YES
FUNCTIONAL INSPECTION	YES	NO	YES

Samples for this program are taken from the selected batches identified as **LMI1803** and **LMI2783**.

For the indicated batches, the results determined in the homogeneity study are utilized as the assigned values.

The analysis of the test data indicated that the selected samples exhibited sufficient homogeneity for the program. Therefore, the results of participants identified as outliers cannot be attributed to sample variability.

6. SAMPLE INFORMATION

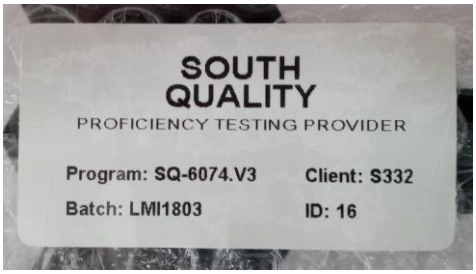
The following samples were sent for testing:

Batch:	LMI1803
Sample ID:	16
Characteristics:	Dual side passive infrared motion detector Trademark: CYGNUS Model: CY-BIR2-60-S2

Batch:	LMI2783
Sample ID:	07
Characteristics:	Switched-mode power supply Trademark: SUDVISION Model: S-250-12

7. IMAGES

SAMPLES



SAMPLES


8. ASSIGNED VALUES

BATCH	TEST SEVERITIES	INSPECTION		RESULT
LMI1803	940 m/s2, Half sine, 6 ms, 3 axes (±)	VISUAL	BEFORE THE TEST	PASS
			AFTER THE TEST	PASS
		FUNCTIONAL (DETECTING SIGNAL)	BEFORE THE TEST	PASS
			AFTER THE TEST	PASS
LMI2783	800 m/s2, Half sine, 6 ms, 3 axes (±)	VISUAL	BEFORE THE TEST	PASS
			AFTER THE TEST	PASS
		FUNCTIONAL (VOLTAGE)	BEFORE THE TEST	PASS
			AFTER THE TEST	PASS

9. PARTICIPANT RESULTS (SEE APPENDIX B)

CODE	TEST SEVERITIES	INSPECTION		RESULT
LMI1803-16	940 m/s2, Half sine, 6 ms, 3 axes (±)	VISUAL	BEFORE THE TEST	PASS
			AFTER THE TEST	PASS
		FUNCTIONAL (DETECTING SIGNAL)	BEFORE THE TEST	PASS
			AFTER THE TEST	PASS
LMI2783-07	800 m/s2, Half sine, 6 ms, 3 axes (±)	VISUAL	BEFORE THE TEST	PASS
			AFTER THE TEST	PASS
		FUNCTIONAL (VOLTAGE)	BEFORE THE TEST	PASS
			AFTER THE TEST	PASS

10. STATISTICS

The results must be treated as qualitative.

For qualitative results, the comparison will be made directly against the assigned values, so any difference will be evaluated as **Satisfactory**.

11. EVALUATION OF PERFORMANCE

BATCH	INSPECTION		PARTICIPANT RESULT	ASSIGNED VALUE	PERFORMANCE RESULT
LMI1803	VISUAL	BEFORE THE TEST	PASS	PASS	**SATISFACTORY**
		AFTER THE TEST	PASS	PASS	**SATISFACTORY**
	FUNCTIONAL (DETECTING SIGNAL)	BEFORE THE TEST	PASS	PASS	**SATISFACTORY**
		AFTER THE TEST	PASS	PASS	**SATISFACTORY**
LMI2783	VISUAL	BEFORE THE TEST	PASS	PASS	**SATISFACTORY**
		AFTER THE TEST	PASS	PASS	**SATISFACTORY**
	FUNCTIONAL (VOLTAGE)	BEFORE THE TEST	PASS	PASS	**SATISFACTORY**
		AFTER THE TEST	PASS	PASS	**SATISFACTORY**

12. CONCLUSIONS

The overall performance on this **SQ-6074.V3** program from the participant laboratory **HERMON LABORATORIES LTD.**, is **SUFFICIENT** based on expected results.

The criteria used for the evaluation of the overall performance is the following:

- **SUFFICIENT** performance: No unsatisfactory results were obtained.
- **INSUFFICIENT** performance: An unsatisfactory result was obtained.

APPENDIX A

INSTRUCTIONS

SOUTH QUALITY
PROFICIENCY TESTING PROVIDER

INSTRUCTIONS

PROGRAM:	Environmental testing - Test Ea and guidance: Shock -
CODE:	SQ-6074
VERSION:	3
STANDARD:	IEC 60068-2-27
COORDINATOR:	Lic. Esther Casas (ecasas@ptsouthquality.com)

1 - General

This document serves as a guide for managing the results of the **SQ-6074.V3** program.

2 - Standard

IEC 60068-2-27: 2008

3 - Tests involved

TEST
Verification of the adequacy of specimens to resist repetitive shocks

4 - Samples

CODE	SAMPLE	QUANTITY
LMI1803-16	Dual side passive infrared motion detector Trademark: CYGNUS Model: CY-BIR2-60-S2	1
LMI2783-07	Switched-mode power supply Trademark: SUDVISION Model: S-250-12	1

5 - Notes

a) Being a bilateral program, there is no deadline for submitting results.
b) The participant must submit the results using the usual report employed by their laboratory.
c) Samples must be retained until the end of the program, which concludes with the submission of the final report.
d) To review the results, test images would be appreciated. Images can be attached at the end of this document or sent by email.

6 - Test conditions

CODE	TEST SEVERITIES	SUPPLY
LMI1803-16	940 m/s^2, Half sine, 6 ms, 3 axes (±)	-
LMI2783-07	800 m/s^2, Half sine, 6 ms, 3 axes (±)	-

7 - **Parameters to determine**

CODE	PARAMETERS (BEFORE/AFTER)
LMI1803-16	VISUAL INSPECTION FUNCTIONAL PERFORMANCE
LMI2783-07	VISUAL INSPECTION VOLTAGE

PHOTOGRAPHS

APPENDIX B

PARTICIPANT RESULTS (TEST REPORT)

HERMON LABORATORIES

Mechanical Testing 0839.04

Hermon Laboratories
Harakevet Industrial Zone, Binyamina
30500, Israel
Tel. +972-4-6268001
Fax. +972-4-6268277
mail@hermonlabs.com

ENVIRONMENTAL TEST REPORT

Mechanical shock

ACCORDING TO:

IEC 60068-2-27:08 and Document #SQ-6074.V3 Rev 05

FOR:
PT SOUTH QUALITY SAS.

EUT:
1) CYGNUS Dual side passive infrared motion detector

Model: CY-BIR2-60-S2, S/N: LMI1803-16

2) SUDVISION Switched-mode power supply,

Model: S-250-12, S/N: LMI2783-07

Document ID: SOUENV_IEC.Shock

Date of issue: 14-Jul-25

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1. Applicant Information

Client Name	PT SOUTH QUALITY SAS
Address	Pereja 3981 - Villa Devoto (C1419gvg); Ciudad Autónoma De Buenos Aires - Argentina
Telephone	+54-9-11-2614-6800
E-mail	ecasas@ptsouthquality.com
Contact Name	Lic. Esther Casas lambda

2. Equipment under test attributes

Product name	1) CYGNUS Dual side passive infrared motion detector 2) SUDVISION Switched-mode power supply
Product type	Industrial
Model	1) CY-BR2-60-S2 2) S-250-12
Serial numbers:	1) LMI1803-16 2) LMI2783-07
Condition of equipment	Production model
Receipt date	30 Jun 25

3. Manufacturer information

Manufacturer Name	PT SOUTH QUALITY SAS
Address	Pereja 3981 - Villa Devoto (C1419gvg); Ciudad Autónoma De Buenos Aires - Argentina
Telephone	+54-9-11-2614-6800
E-mail	ecasas@ptsouthquality.com
Contact Name	Lic. Esther Casas lambda

4. Test details

Project ID	SQUENV_EC Shock
Locations	Hermon Laboratories Ltd. P.O. Box 23, Binyamina 3055001, Israel
Testing started	01-JUL-25
Testing completed	01-JUL-25
Test specifications	IEC 60068-2-27:08 and Document #SQ-6074.V3 Rev 05

5. EUT Description

Note: The following data in this clause is provided by the customer and represents his sole responsibility.

5.1. General information

The Equipment Under Test (EUT) is as follows:

1) CYGNUS Dual side passive infrared motion detector,

Model: CY-BR2-60-S2, S/N: LMI1803-16

2) SUDVIS ON Switched-mode power supply,

Model: S-250-12, S/N: LMI2783-07

5.2. Acceptance criteria

Before and after tests the EUT shall pass:

LMI 1803-16: Visual inspection and functional performance (check transmitter-receiver indication of detection)

LMI 2783-07: Visual inspection and green led and outputs voltage (12 VDC supply to detectors per specifications)

5.3. EUT visual inspection and functional check

Before, and after Mechanical shock test, the EUT was visually inspected and functionally checked (as per Section 5.2 above) by the HL engineers.

6. Tests summary

Test	Status
IEC 60068-2-27:08 and Document #SQ-6074.V3 Rev 05	
Mechanical shock (EUT: CYGNUS) test:	**Pass**
Mechanical shock (EUT: SUDVISION) test:	**Pass**

	Name and title	Date	Signature
Tested by	Mr. Sergey Prud, Environmental Test Engineer	14-Jul-25	
Compiled by	Ms. Tal Alon, Environmental Technical Writer	14-Jul-25	
Reviewed and approved by	Mr. Mihaeli Feldmann, Environmental Group Manager	14 Jul 25	

HERMON LABORATORIES

Test specifiestion:	Mechanical shock (EUT: CYGNUS) test		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Comp. # 08	Verdict: PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	Temperature: 26 °C	Relative humidity: 55 %	Air pressure: 1008 hPa
Remarks:			

6.1. Mechanical shock (EUT: CYGNUS) test procedure and results

6.1.1. Test purpose

This test was performed to demonstrate the EUT immunity to mechanical shocks, which are likely to occur, in the service environment.

6.1.2. Test procedure

6.1.2.1. The EUTs were fastened to the shaker's armature, as presented in Photograph 6.1.1. The shocks were applied to the EUTs along the vertical axis, according to IEC 60068-2-27: 08 as presented in Table 6.1.2.

6.1.2.2. The Paragraphs 6.1.2.1 and 6.1.2.2 were repeated along the transverse and longitudinal axes, as presented in Figure 6.1.2, Photograph 6.1.2 and Photograph 6.1.3.

6.1.2.3. The control accelerometer signal was monitored and results are presented in Plot 6.1.1 to Plot 6.1.6.

6.1.2.4. A visual inspection followed by a functional check was performed after each axis.

6.1.3. Test results

Table 6.1.1 Test results

Observation	Verdict
No structural or mechanical damages were registered during the visual inspection for all tested units. Functional performance (indication of detection)	Pass

Reference numbers of test equipment used:
HL 2190, HL 6741, HL 2132, HL 3468, HL 4019

Full description is given in Appendix A.

HERMON LABORATORIES

Test specifiestion:	Mechanical shock (EUT: CYGNUS) test		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Comp. # 08	Verdict: PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	Temperature: 26 °C	Relative humidity: 55 %	Air pressure: 1008 hPa
Remarks:			

Table 6.1.2 Shock test specification (Operational)

Parameter	Unit	Severity
Amplitude	m/s²	980
Pulse type	N/A	half sine
Pulse width	ms	6
Direction of shocks	±Z, ±X, ±Y	6
Number of pulses per direction	N/A	3
Total number of pulses	N/A	18

HERMON LABORATORIES

Test specifiestion:	Mechanical shock (EUT: CYGNUS) test		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Comp. # 08	Verdict: PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	Temperature: 26 °C	Relative humidity: 55 %	Air pressure: 1008 hPa
Remarks:			

Photograph 6.1.1 Shock test setup (vertical axis)

HERMON LABORATORIES

Test specifiestion:	Mechanical shock (EUT: CYGNUS) test		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Comp. # 08	Verdict: PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	Temperature: 26 °C	Relative humidity: 55 %	Air pressure: 1008 hPa
Remarks:			

Photograph 6.1.2 Shock test setup (transverse axis)

HERMON LABORATORIES

Test specifiestion:	Mechanical shock (EUT: CYGNUS) test		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. #1-28	Verdict: PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	Temperature: 25 °C	Relative humidity: 55 %	Air pressure: ~1008 hPa
Remarks:			

Photograph 6.1.3 Shock test setup (longitudinal axis)

HERMON LABORATORIES

Test specifiestion:	Mechanical shock (EUT: CYGNUS) test		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. #1-28	Verdict: PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	Temperature: 25 °C	Relative humidity: 55 %	Air pressure: ~1008 hPa
Remarks:			

Photograph 6.1.4 The EUT visual inspection after vertical axis

HERMON LABORATORIES

Test specifiestion:	Mechanical shock (EUT: CYGNUS) test		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. #1-28	Verdict: PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	Temperature: 25 °C	Relative humidity: 55 %	Air pressure: ~1008 hPa
Remarks:			

Photograph 6.1.5 The EUT visual inspection after transverse axis

HERMON LABORATORIES

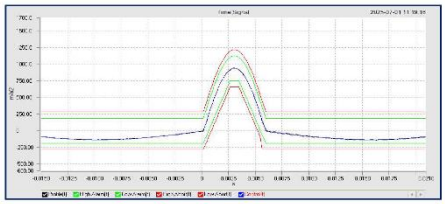
Test specifiestion:	Mechanical shock (EUT: CYGNUS) test		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. #1-28	Verdict: PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	Temperature: 25 °C	Relative humidity: 55 %	Air pressure: ~1008 hPa
Remarks:			

Photograph 6.1.6 The EUT visual inspection after longitudinal axis

HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: CYGNUS) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. # 08	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 26 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

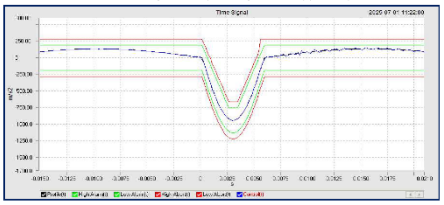
Plot 6.1.1 The positive shock pulse along vertical axis (operational)



HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: CYGNUS) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. # 08	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 26 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

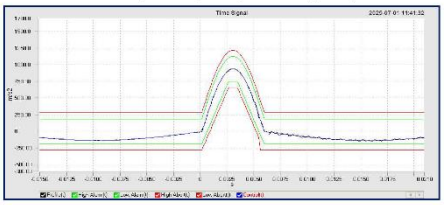
Plot 6.1.2 The negative shock pulse along vertical axis (operational)



HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: CYGNUS) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. # 08	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 26 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

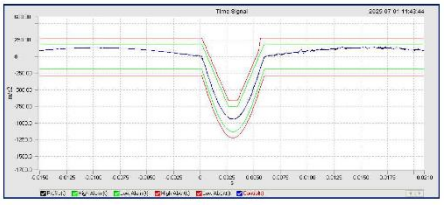
Plot 6.1.3 The positive shock pulse along transverse axis (operational)



HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: CYGNUS) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. # 08	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 26 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

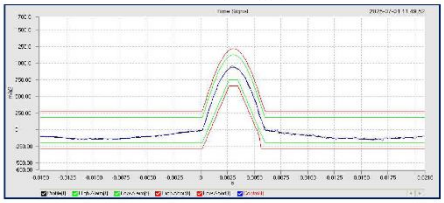
Plot 6.1.4 The negative shock pulse along transverse axis (operational)



HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: CYGNUS) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Comparison	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 25 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

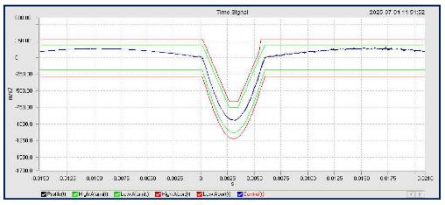
Plot 6.1.5 The positive shock pulse along longitudinal axis



HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: CYGNUS) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Comparison	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 25 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

Plot 6.1.6 The negative shock pulse along longitudinal axis



HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: SUDVISION) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Comparison	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 25 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

6.2. Mechanical shock (EUT: SUDVISION) test procedure and results

6.2.1. Test purpose

This test was performed to demonstrate the EUT immunity to mechanical shocks which are likely to occur, in the service environment.

6.2.2. Test procedure

6.2.2.1. The EUT was fastened to the shaker's armature, as presented in Photograph 6.2.1. The shocks were applied to the EUT along the vertical axis, according to IEC 60068-2-27: 08 as presented in Table 6.2.2.

6.2.2.2. The Paragraphs 6.2.2.1 and 6.2.2.2 were repeated along the transverse and longitudinal axes, as presented in Photograph 6.2.2 and Photograph 6.2.3.

6.2.2.3. The control accelerometer signal was monitored and results are presented in Plot 6.2.1 to Plot 6.2.6.

6.2.2.4. A visual inspection followed by a functional check was performed after each axis, as presented in Photographs 6.2.4 to 6.2.6.

6.2.3. Test results

Table 6.2.1 Test results

Observation	Verdict
No structural or mechanical damages were registered during the visual inspection. Green led and output voltage 12VDC supplied to tranemitter-receiver detectors OK.	**Pass**

Reference numbers of test equipment used:
HL 2190, HL 5141, HL 2102, HL 3480, HL 4019, HL1415

Full description is given in Appendix A

HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: SUDVISION) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Comparison	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 25 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

Table 6.2.2 Shock test specification (Operational)

Parameter	Unit	Severity
Amplitude	m/s²	600
Pulse type	N/A	half sine
Pulse width	ms	6
Direction of shocks	±Z, ±X, ±Y	6
Number of pulses per direction	N/A	3
Total number of pulses	N/A	18

HERMON LABORATORIES

Test specifiestion:	Mechanical shock (EUT: SUDVISION) test		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config #1-28	Verdict: PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	Temperature: 25 °C	Relative humidity: 55 %	Air pressure: ~1008 hPa
Remarks:			

Photograph 6.2.1 Shock test setup (vertical axis)

HERMON LABORATORIES

Test specifiestion:	Mechanical shock (EUT: SUDVISION) test		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config #1-28	Verdict: PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	Temperature: 25 °C	Relative humidity: 55 %	Air pressure: ~1008 hPa
Remarks:			

Photograph 6.2.2 Shock test setup (transverse axis)

HERMON LABORATORIES

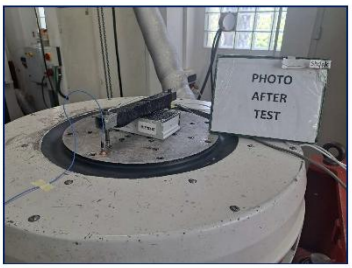
Test specifiestion:	Mechanical shock (EUT: SUDVISION) test		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config #1-28	Verdict: PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	Temperature: 25 °C	Relative humidity: 55 %	Air pressure: ~1008 hPa
Remarks:			

Photograph 6.2.3 Shock test setup (longitudinal axis)

HERMON LABORATORIES

Test specifiestion:	Mechanical shock (EUT: SUDVISION) test		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config #1-28	Verdict: PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	Temperature: 25 °C	Relative humidity: 55 %	Air pressure: ~1008 hPa
Remarks:			

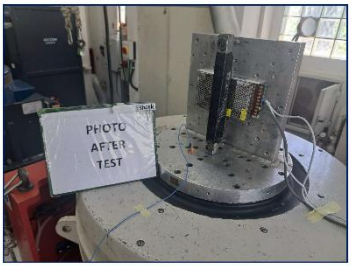
Photograph 6.2.4 The EUT visual inspection after vertical axis



HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: SUDVISION) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. #1 on	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 25 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

Photograph 6.2.5 The EUT visual inspection after transverse axis



HERMON LABORATORIES

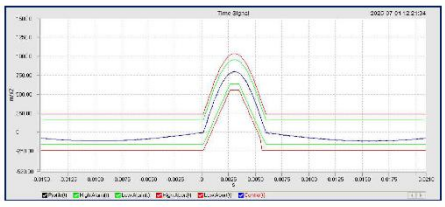
Test specifiestion:	**Mechanical shock (EUT: SUDVISION) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. #1 on	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 25 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

Photograph 6.2.6 The EUT visual inspection after longitudinal axis

HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: SUDVISION) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. #1 on	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 25 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

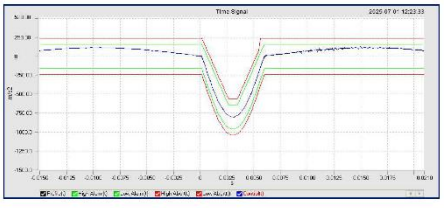
Plot 6.2.1 The positive shock pulse along vertical axis (operational)



HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: SUDVISION) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. #1 on	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 25 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

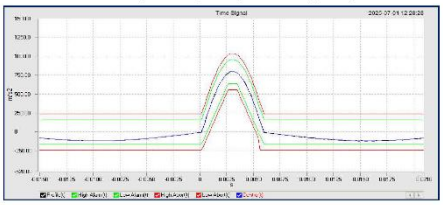
Plot 6.2.2 The negative shock pulse along vertical axis (operational)



HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: SUDVISION) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. # 1	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 25 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

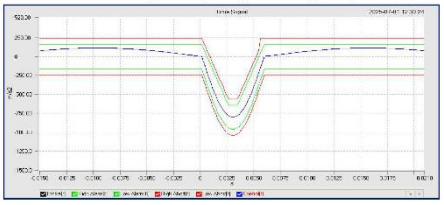
Plot 6.2.3 The positive shock pulse along transverse axis (operational)



HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: SUDVISION) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. # 1	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 25 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

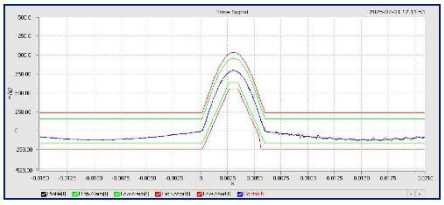
Plot 6.2.4 The negative shock pulse along transverse axis (operational)



HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: SUDVISION) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. # 1	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 25 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

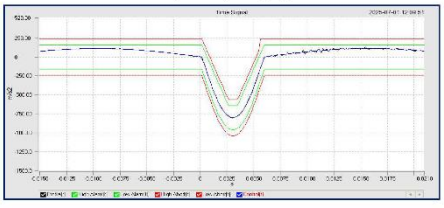
Plot 6.2.5 The positive shock pulse along longitudinal axis



HERMON LABORATORIES

Test specifiestion:	**Mechanical shock (EUT: SUDVISION) test**		
Test procedure:	STANDARD: IEC 60068-2-27 TEST METHOD: Mechanical shock test		
Test mode:	Config. # 1	**Verdict:** PASS	
Testing date(s):	01-Jul-25		
Laboratory atmospheric conditions during the test:	**Temperature:** 25 °C	**Relative humidity:** 55 %	**Air pressure:** 1008 hPa
Remarks:			

Plot 6.2.6 The negative shock pulse along longitudinal axis



7. APPENDIX A Test equipment and ancillaries used for tests

Code	Description	Manufacturer	Model	Serial no	Last calibration	Due calibration
HL 2190	Vibration Test System (Amplifier #SP9893-00191, Remote Control Panel #SP9893-00997, Vibrator #SP9893-00571, Slip Table, Drive Bar, Pamp, Fan, Head Expander)	Ling Dynamic Systems	V875	SP9893-00571-01171	05-May-25	05-May-26
HL 5741	Vibration Controller	Econ Technologies Co. Ltd	VT-9008	2946837769	12-Nov-24	12-Nov-25
HL 2132	Isotron Accelerometer 10 mV/g	Endevco	256-10	13084	04-Nov-24	04-Nov-25
HL 3490	Precision Barometer, 870 - 1050 hPa	LUFFT Mess- und Regeltechnik GmbH	DKD-K-26701	100469	22-Aug-24	22-Aug-26
HL 4019	Temp. & Humidity Meter, (-50 ... +70) deg, (20 - 99) % RH	Mad Electronics	HTC-1	NA	11-Jul-24	11-Jul-26
HL 1415	Multimeter	Fluke	73 III	78080133	13-Aug-24	13-Aug-25

8. APPENDIX B Test laboratory description

The tests were performed at Hermon Laboratories Ltd., which is a fully independent, private Environmental, EMC, Radio, Product safety and telecommunication testing facility recognized through the entire world. The Laboratory is accredited by American Association for Laboratory Accreditation (A2LA, USA) for Environmental testing (Certificate No. 0839.04 Mechanical testing).

Address: P.O. Box 23, Binyamina 3055001, Israel.
Telephone: +972-46288801
Fax: +972-46276277
e-mail: mail@hermonlabs.com
website: www.hermonlabs.com

Person for contact: Mr. Mihael Feldmann, Environmental group manager.

9. APPENDIX C Abbreviations and acronyms

°C	degree Celsius
cm	centimeter
dB	decibel
EUT	equipment under test
gn	acceleration due to gravity
HL	Hermon Laboratories
hPa	hectopascal
Hz	Hertz
kg	kilogram
m	meter
min	minute
ms	millisecond
oct	octave
pH	acidity scale
RH	relative humidity
RMS	root mean square
s	second

10. APPENDIX D Tests specifications

Vibration and shock TP-10 2023	Vibration And Shock Test Procedure according to MIL-STD – 810 B,C, D, E, F, G, MIL-STD-167 -1A, CR-63-CORE, IEC 60068-2-6 -27, -29, -55, -64, -75, RTCA DO-160D, E, F, G, ASTM D999, ASTM D4169, ASTM D4728, DEF STAN 00-35, IEC 61373, IEC 60601-1-1, ISO 11925-1, ISO 11925-4, IEC 61850-3, IEEE Std 1613 and ISTA 2A STANDARDS
Document WSQ-6074 V3 Rev 05	

11. APPENDIX E Measurement uncertainties

Parameter	Uncertainty estimation at 95% confidence	
	Calculated	Limit
Air pressure	± 1.16 mBar	± 4.1 mBar
Shock acceleration	+7.20-8.2 %	±20.0 %

END OF TEST REPORT

----- END OF REPORT -----