



Test report issued under the responsibility of:  
EMITECH MONTPELLIER laboratory  
MRA US-EU Designation Number: FR0006  
Canadian CAB Identifier: FR0003

## EMC TEST REPORT

FCC part 15  
ANSI C 63.4: 2014  
ICES-001 Issue 5 July 2020

**Company** ..... : **UNICACCES GROUPE**  
**Address**..... : 24 chemin des Vieilles Vignes  
84240 LA TOUR D'AIGUES  
FRANCE

**Test item description** ..... : **Badge management**  
**Trade Mark** ..... : ASGARD ANNA  
**Manufacturer**..... : Unicaces Groupe  
**FCC ID**..... : 2B023UGPCTRE  
**Model/Type reference**..... : Extension (with Centrale) / UGP-CTR-E  
**Ratings**..... : 12Vdc

**Testing Laboratory** ..... : **EMITECH MONTPELLIER laboratory**  
**Address**..... : 145 rue de Massacan  
34740 VENDARGUES  
FRANCE

**Report Reference No.**..... : **RC-EVE-23C710-2A**  
**Test procedure** ..... : Certification  
**Diffusion**..... : MR FAUVEL  
**Applicant's name** ..... : UNICACCES GROUPE  
**Date of issue**..... : May 19, 2025  
**Total number of pages**..... : 20  
**Revision**..... : 0  
**Compiled by**..... : Fabien MOINACHE  
**Approved by (+ signature)**..... : David MONTAULON (Technical Manager)

*Duplication of this test report is only permitted for an integral photographic facsimile. It includes the number of pages referenced here above.  
This document is the result of testing a specimen or a sample of the product submitted. It does not imply an assessment of the conformity of  
the whole manufactured products of the tested sample.*

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## REVISION HISTORY:

| Revision | Date         | Modified pages | Modifications |
|----------|--------------|----------------|---------------|
| 0        | May 19, 2025 | /              | Creation      |

## 1. GENERAL INFORMATION

This document submits the results of Electromagnetic Compatibility tests performed on the equipment **Badge management Extension (with Centrale) / UGP-CTR-E** (denominated hereafter E.U.T.: equipment under test) according to document(s) listed in §2 of this test report.

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                |       |                         |     |                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-------|-------------------------|-----|---------------------|
| <b>TESTING PROCEDURE AND TESTING LOCATION:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                |       |                         |     |                     |
| <b>Testing Location</b> ..... : EMITECH MONTPELLIER laboratory<br><b>Address</b> ..... : 145 rue de Massacan<br>34740 VENDARGUES<br>FRANCE<br><b>Test procedure</b> ..... : Certification<br><b>Tested by</b> ..... : Fabien MOINACHE<br><b>Test supervisor</b> ..... : None<br><b>Date of receipt of test item</b> ..... : N/A<br><b>Date (s) of performance of tests</b> ..... : June Between the 5 <sup>th</sup> to the 13 <sup>th</sup> of 2024                                                                                                                                                                                                                                         |                                |       |                         |     |                     |
| <b>APPLICANT'S GENERAL INFORMATION:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                |       |                         |     |                     |
| <b>Company name</b> ..... : UNICACCES GROUPE<br><b>Company address</b> ..... : 24 chemin des Vieilles Vignes<br>84240 LA TOUR D'AIGUES<br>FRANCE<br><b>Person(s) present during the tests</b> ..... : Mr MERLE<br><b>Responsible</b> ..... : MR FAUVEL                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                |       |                         |     |                     |
| <b>GENERAL REMARKS:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                |       |                         |     |                     |
| <p><b>The information in italics is declared by the manufacturer and is under his responsibility</b><br/> <b>The test results presented in this report relate only to the object tested.</b><br/> <b>The results contained in this report reflect the results for this particular model and serial number. It is the responsibility of the manufacturer to ensure that all production models meet the intent of the requirements detailed within this report.</b></p> <p>"(see Enclosure #)" refers to additional information appended to the report.<br/> "(see appended table)" refers to a table appended to the report.<br/> Throughout this report the decimal separator is point.</p> |                                |       |                         |     |                     |
| <b>POSSIBLE TEST CASE VERDICTS:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                |       |                         |     |                     |
| <b>Test case does not apply to the test object</b> .: N/A<br><b>Test case not performed</b> ..... : N/P<br><b>Test object does meet the requirement</b> ..... : P (Pass)<br><b>Test object does not meet the requirement</b> . F (Fail)<br>..... :                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                |       |                         |     |                     |
| <b>DEFINITIONS AND ABBREVIATIONS:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                |       |                         |     |                     |
| E.U.T.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Equipment Under Test           | AE    | Ancillary Equipment     | Pk  | Peak detector       |
| RBW                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Resolution BandWidth           | VBW   | Video BandWidth         | QP  | Quasi-peak detector |
| FSOATS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Free Space Open Area Test Site | FAR   | Full Anechoic Room      | Av  | Average detector    |
| VP                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Vertical Polarization          | HP    | Horizontal Polarization | RMS | Root Mean Square    |
| RF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Radio Frequency                | N.T.R | Nothing To Report       | N/C | Not Communicated    |
| SAC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Semi Anechoic Chamber          |       |                         |     |                     |

## 2. REFERENCE DOCUMENT(S)

### NORMATIVE REFERENCES:

The following referenced documents are necessary for the application of the present test report.

#### **FCC 47 Part 15**

Code of Federal Regulations

Title 47 – Telecommunications

Chapter 1 – Federal Communications Commission

Part 15 – Radio frequency devices

Subpart B – Unintentional Radiators

#### **ANSI C 63.4: 2014**

American National Standard for Methods of measurement of Radio-Noise from low-voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

#### **ICES-001 Issue 5 July 2020**

Industrial, Scientific and Medical (ISM) Equipment

Although the product standard uses obsolete technical standards, the latest versions of standards achievable by the laboratory will be used for testing.

### INFORMATIVE REFERENCES:

The following referenced documents are not necessary for the application of the present test report but they assist the user with regard to a particular subject area.

### 3. EQUIPMENT TECHNICAL DESCRIPTION

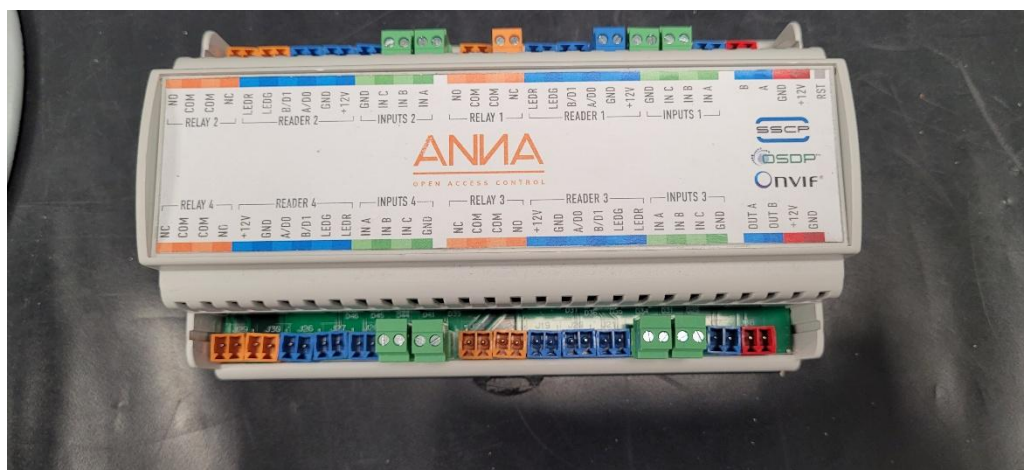
#### 3.1. Test Conditions

Test item description. .... : Badge management  
Model/Type reference..... : Extension (with Centrale) / UGP-CTR-E  
Trade Mark. .... : ASGARD ANNA  
Serial number (S/N)..... : Not communicated  
Part number (P/N). .... : Not communicated  
Software version..... : *Not communicated*  
Firmware version. .... : *A/02/06 (extension) + 00.00.76 (EA : centrale)*  
Type of sample. .... : Standard equipment  
Function(s)..... : Extension box for 4 more readers and other Extension boxes,  
door keeper (relay), general inputs and communication with  
supervisor (events...)  
Manufacturer name. .... : Unicacces Groupe SAS  
Address. .... : 24 Chemin des Vieilles Vignes - ZA LE REVOL  
84240 La Tour-d'Aigues  
FRANCE

**General product information:**

N/A

### 3.2.E.U.T. General view



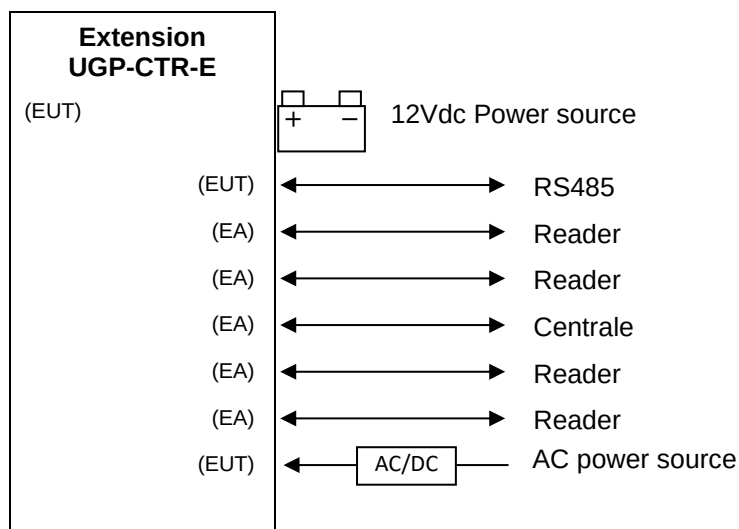
### 3.3.E.U.T. Mechanical and Electrical Design

|                                  |                      |
|----------------------------------|----------------------|
| Power supply.....                | : 12Vdc              |
| Power supply range.....          | : 12Vdc              |
| Power type.....                  | : Battery powered    |
| Power (W).....                   | : Not communicated   |
| Nominal current (A). ....        | : Not communicated   |
| Dimensions (L x W x H) (m). .... | : 0.16 x 0.95 x 0.60 |
| Weight (kg). ....                | : Not communicated   |
| Temperature range (°C). ....     | : 0°C ; +50°C        |
| Ground bounding strap.....       | : No                 |

#### Comments:

N/A

### 3.4.E.U.T. Input/Output ports



| PORT | NAME               | TYPE  | LENGTH | CABLE TYPE   | COMMENTS |
|------|--------------------|-------|--------|--------------|----------|
| 0    | Main frame         | N/E   | N/A    | Plastic      | N/A      |
| 1    | 12Vdc Power source | DC    | N/A    | Not shielded | N/A      |
| 2    | RS485              | I/O   | >3m    | Not shielded | N/A      |
| 3    | Reader             | I/O   | >3m    | Not shielded | N/A      |
| 4    | Reader             | I/O   | >3m    | Not shielded | N/A      |
| 5    | Centrale           | I/O   | >3m    | N/A          | EA       |
| 6    | Reader             | I/O   | >3m    | Not shielded | N/A      |
| 7    | Reader             | I/O   | >3m    | Not shielded | N/A      |
| 9    | Power supply       | AC/DC | N/A    | Not shielded | N/A      |

AC/DC : AC/DC Converter port      AC ..... : Alternative current port      DC ..... : Direct current port  
I/O ..... : Input or Output port      TP ..... : Telecommunication port      RF ..... : Radio frequency port  
N/E ..... : Non Electrical port

### 3.5.Supporting Equipment Used During Test

Sample subject to the tests was tested with following equipment.

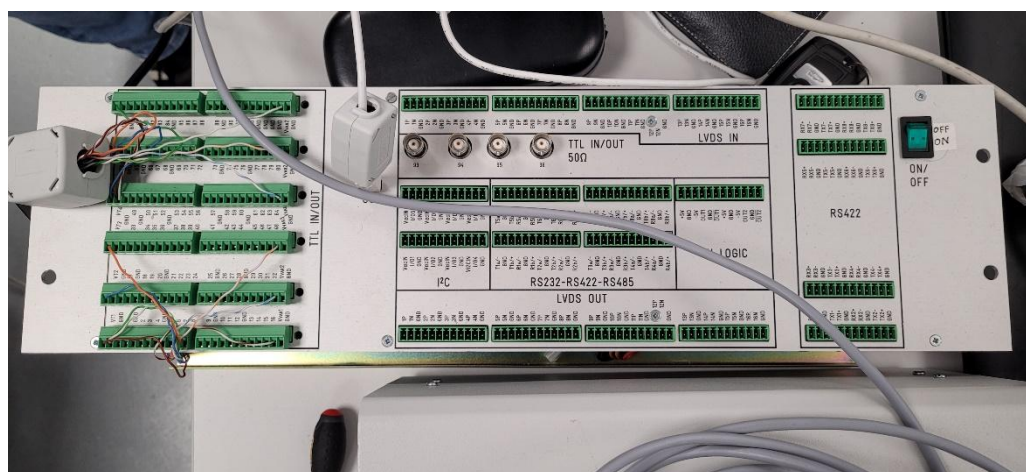
| PRODUCT TYPE         | MANUFACTURER | MODEL     | N°EMITECH / COMMENTS |
|----------------------|--------------|-----------|----------------------|
| EA                   | UNICACCES    | UGP-CTR   | N/A                  |
| Interface RS485 /USB | UNICACCES    | N/A       | N/A                  |
| Battery              | UNICACCES    | N/A       | N/A                  |
| Laptop               | Packard Bell | MS2290    | N/A                  |
| Power supply         | IZYX         | PSXM-1203 | N/A                  |
| Reader               | UNICACCES    | N/A       | N/A                  |



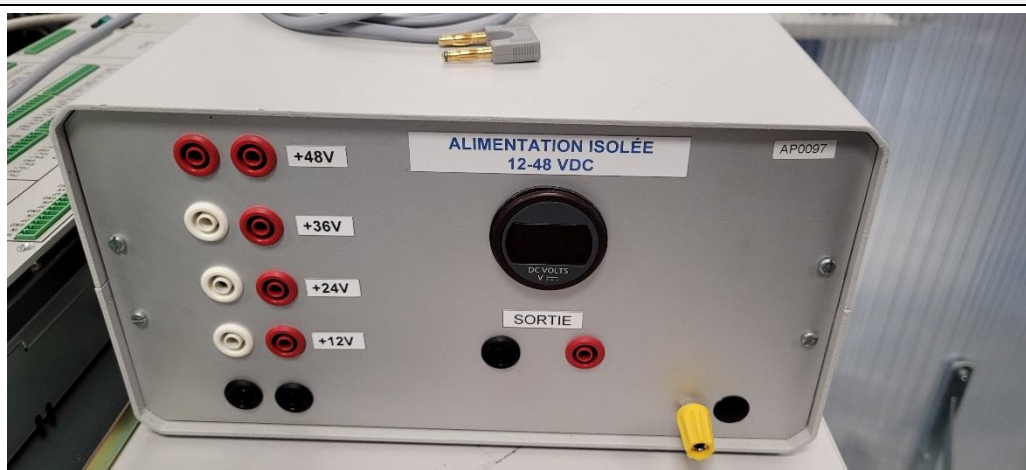
(EA)



INTERFACE RS485 TO USB EA

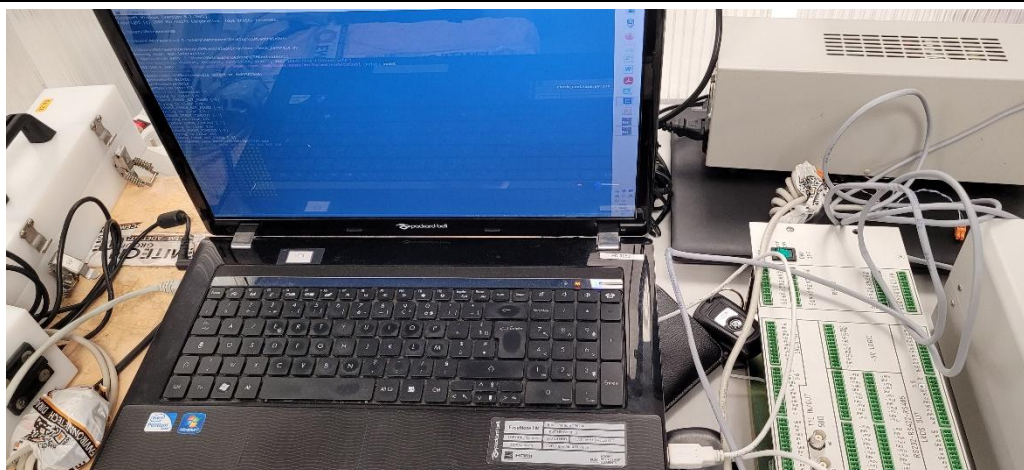


(EA) BATTERY





### LAPTOP (EA)



### POWER SUPPLY (EA)



# READER (EA)



## 3.6. EMC Environment and Performance Criteria

According to manufacturer's declarations:

Electromagnetic environment. .... : *Light Industry*  
Professional use ? ..... : *Yes*  
Typical mounting ..... : *Wall mounted equipment*  
Internal frequencies ..... : *100MHz*  
Configuration(s) ..... : *N/A*

### Comments:

N/A

### a) EUT OPERATION MODES:

| MODE # | DESCRIPTION                                                                                                                                           |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | 2 2 OSDP readers on ports 1 and 2. Valid badge on reader 2, 2 other Wiegand readers on ports 3 + 4. Cycle: valid badge reading, open door, close door |

Opinion(s) and interpretation(s)

| TEST(S) PERFORMED                        | DEVIATION(S) TO TEST METHOD(S) |
|------------------------------------------|--------------------------------|
| CISPR 11: 2015 / AMD1: 2016 / AMD2: 2019 | N/A                            |
| ANSI C63.4: 2014                         | N/A                            |

Comments: N/A

## 4. EUT REQUIREMENTS FOR FCC RULES

### 4.1. Subpart A - General

This part sets out the regulations under which an intentional, unintentional, or incidental radiator may be operated without an individual license. It also contains the technical specifications, administrative requirements and other conditions relating to the marketing of part 15 devices.

The user notice, shall include the following informations:

| a) LABELING REQUIREMENTS (§15.19):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Equipment authorization: Supplier's Declaration of Conformity (SDoC) or Certification</b></p> <p>List of different <b>type of devices</b> and associated <i>"statement on product"</i>:</p> <p><b>§15.19(a)(1) - Receivers associated with the operation of a licensed radio service:</b><br/> <i>"This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference."</i></p> <p><b>§15.19(a)(2) - A stand-alone cable input selector switch:</b><br/> <i>"This device complies with part 15 of the FCC Rules for use with cable television service."</i></p> <p><b>§15.19(a)(3) - All other devices:</b><br/> <i>"This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:</i><br/> <i>(1) This device may not cause harmful interference, and</i><br/> <i>(2) this device must accept any interference received, including interference that may cause undesired operation."</i></p> <p><b>§15.19(a)(4) - Where a device is constructed in two or more sections connected by wires and marketed together:</b><br/> The statement specified only to the main control unit:<br/> <i>"This device complies with part 15 of the FCC Rules. Operation is subject to the condition that this device does not cause harmful interference."</i></p> <p><b>§15.19(a)(5) - When the device is so small:</b><br/> The statement of §15.19(a) shall be placed in the user manual and must also either be placed on the device packaging or on a removable label attached to the device.</p> <p><b>Compliance information (§2.1077):</b><br/> The identification, by name, address and telephone number or internet contact information, of the responsible party, as defined in § 2.909 of the standard. The responsible party for Supplier's Declaration of Conformity must be located within the United States.</p> <p><b>Identification (§2.1074):</b><br/> (a) Devices subject only to Supplier's Declaration of Conformity shall be uniquely identified by the party responsible for marketing or importing the equipment within the United States.<br/> (b) Devices subject to authorization under Supplier's Declaration of Conformity may be labeled with the following logo on a voluntary basis as a visual indication that the product complies with the applicable FCC requirements.</p> <div data-bbox="813 1675 916 1756" data-label="Image">  </div> <p>(image size: 6.7 x 2.8" ;3.5 x 1.4" ;1.6 x .7")</p> |

The label shall be located in a conspicuous location on the device.

The label shall not be a stick-on, paper label. The label on these products shall be permanently affixed to the product and shall be readily visible (font of at least 4-point or larger) to the purchaser at the time of purchase.

**b) DEVICES INCLUDING MODULAR TRANSMITTER(S) (§15.212):**

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following:

*“Contains Transmitter Module FCC ID: XYZMODEL1” or “Contains FCC ID: XYZMODEL1.”*

Device under test includes single modular transmitter(s):

**FCC ID: N/A**

**IC: N/A**

**c) INFORMATION TO USER (§15.21):**

The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that:

*“The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user’s authority to operate the equipment”*

## 4.2. Subpart B - Unintentional Radiators

In addition to Subpart A, the user notice, shall include the following informations:

**d) INFORMATION TO USER (§15.105):**
**Equipment authorization: Supplier's Declaration of Conformity (SDoC) or Certification**

**§15.105(a) - For a Class A digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:**

*“NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.”*

**§15.105(b) - For a Class B digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:**

*“NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:*

*—Reorient or relocate the receiving antenna.*

*—Increase the separation between the equipment and receiver.*

*—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.*

*—Consult the dealer or an experienced radio/TV technician for help.”*

## 5. RESULT SUMMARY

| TEST DESIGNATION                                                                                                                                                                                                                    | SEVERITY                       | VERDICT                                       | BASIC STANDARDS / COMMENTS               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------|-----------------------------------------------|------------------------------------------|
| <b>Conducted emission (measurement)</b><br>- Power Supply 120Vac/60Hz / RF OFF<br>- Power Supply 120Vac/60Hz<br><b>Measurement of radiated disturbances</b><br>- IP central unit 3 Readers in 12Vdc + Extension 4 Readers / Battery | 15.107<br>15.107<br><br>15.109 | <b>PASS</b><br><b>PASS</b><br><br><b>PASS</b> | ANSI C63.4: 2014<br><br>ANSI C63.4: 2014 |

Sample subject to the test complies for tests done with the requirements of the reference document(s) listed in §2 of this test report and, where applicable, with deviation(s) specified in this document.

To declare, or not, the compliance with the specifications, it was not explicitly taken into account of uncertainty associated with the results with the exception of emission tests based on CISPR standards.

| TEST(S) PERFORMED                        | MODIFICATION(S) |
|------------------------------------------|-----------------|
| CISPR 11: 2015 / AMD1: 2016 / AMD2: 2019 | N/A             |
| ANSI C63.4: 2014                         | N/A             |

## 6. MEASUREMENT UNCERTAINTY

Uncertainties values presented below are required by standards:

| PARAMETER                                   | MAXIMAL EMITECH UNCERTAINTY | STANDARD UNCERTAINTY |
|---------------------------------------------|-----------------------------|----------------------|
| Conducted emission                          |                             |                      |
| (Artificial Mains Network) 3kHz – 9kHz      | ± 3.8 dB                    | /                    |
| (Artificial Mains Network) 9kHz – 150kHz    | ± 3.6 dB                    | ± 3.8 dB             |
| (Artificial Mains Network) 150kHz – 30MHz   | ± 3.4 dB                    | ± 3.4 dB             |
| Radiated magnetic field emission            |                             |                      |
| 9kHz – 30MHz                                | ± 2.7 dB                    | /                    |
| Radiated electric field emission            |                             |                      |
| (FSOATS/SAC) HP-VP 30MHz – 200MHz           | ± 4.8 - 5.0 dB              | ± 5.1 - 5.2 dB       |
| (FSOATS/SAC) HP-VP 200MHz – 1GHz            | ± 5.0 - 5.0 dB              | ± 5.3 - 6.3 dB       |
| (FSOATS/SAC) HP-VP with bilog. 30MHz – 1GHz | ± 5.1 - 5.2 dB              | ± 5.3 - 6.3 dB       |
| (FAR) HP-VP 30MHz – 200MHz                  | ± 4.7 - 4.9 dB              | ± 5.0 dB             |
| (FAR) HP-VP 200MHz – 1GHz                   | ± 5.0 - 5.0 dB              | ± 5.3 dB             |
| (FAR) HP-VP with bilog 30MHz – 1GHz         | ± 5.1 - 5.2 dB              | ± 5.3 - 6.3 dB       |
| (FSOATS/FAR) 1GHz - 6GHz                    | ± 5.0 / 5.2 dB              | ± 5.2 dB             |
| (FSOATS/FAR) 6GHz - 18GHz                   | ± 5.3 / 5.4 dB              | ± 5.5 dB             |
| 18GHz - 40GHz                               | ± 6.1 dB                    | /                    |
| 40GHz - 140GHz                              | ± 5.7 dB                    | /                    |

For the calculation of expanded uncertainty, the confidence interval is 95 % (k=2).



## 7. TEST CONDITIONS AND RESULTS

### 7.1. Conducted emission (measurement)

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|
| <b>Reference standard:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | FCC 47 CFR PART 15.107<br>ICES-001 Issue 5 July 2020         |
| <b>Test method:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | ANSI C63.4: 2014<br>CISPR 11: 2015 / AMD1: 2016 / AMD2: 2019 |
| <p><b>General test setup:</b> EUT is set on an insulating support at 40cm from the ground reference plane. All power was connected to the system through Artificial Mains Network (AMN). The AMN is placed at 80cm from the boundary of the EUT and bonded to a ground reference plane.</p> <p>All tested telecommunications lines (if applicable) were connected to an Asymmetric Artificial Network (AAN) and conducted voltage measurements on telecommunications lines were made at the output of the AAN.</p> <p>Where an AAN was not appropriate or available, measurements were made using a Capacitive Voltage Probe and/or a Current probe.</p> <p>Additional ground terminals (if any) are connected to earth terminal of the AMN.</p> |                                                              |

| TESTED CABLE                      | PARAMETER    | SEVERITY | RESULT TAB. | VERDICT     |
|-----------------------------------|--------------|----------|-------------|-------------|
| Power Supply 120Vac/60Hz / RF OFF | 150kHz-30MHz | 15.107   | EMI4661     | <b>PASS</b> |
| Power Supply 120Vac/60Hz          | 150kHz-30MHz | 15.107   | EMI4662     | <b>PASS</b> |

| LABORATORY PARAMETERS:            | REQUIRED PRIOR TO THE TEST | DURING THE TEST |
|-----------------------------------|----------------------------|-----------------|
| Ambient Temperature               | 15 to 35 °C                | See Graph(s)    |
| Relative Humidity                 | 30 to 60 %                 | See Graph(s)    |
| Atmospheric pressure              | N/A                        | See Graph(s)    |
| <b>Test method deviation:</b> N/A |                            |                 |
| Supplementary information: N/A    |                            |                 |

| TEST EQUIPMENT USED |                     |                         |            |            |            |
|---------------------|---------------------|-------------------------|------------|------------|------------|
| CATEGORY            | BRAND               | TYPE                    | IDENTIFIER | CAL. DATE  | CAL. DUE   |
| AC power source     | KIKUSUI             | PCR 4000L               | 15322      | 20/02/2024 | 20/04/2026 |
| Cable               | EMITECH             | Current absorber sheath | 18366      | 17/08/2023 | 17/10/2025 |
| Cable               | /                   | N-3m 3GHz               | 16410      | 16/08/2023 | 16/10/2025 |
| Ground plane        | EMITECH             | Test area               | 11569      |            |            |
| LISN                | Rohde & Schwarz     | ENV216                  | 17925      | 06/12/2023 | 06/02/2026 |
| PE choke            | EMITECH             | CISPR 16-2-1: 2008      | 10071      |            |            |
| Receiver            | Rohde & Schwarz     | ESI                     | 9704       | 26/01/2024 | 26/03/2025 |
| Software            | Nexio               | BAT EMC                 | 0000       |            |            |
| Thermohygrometer    | Testo               | 608-H2                  | 12269      | 10/06/2022 | 10/08/2024 |
| Thermohygrometer    | Bioblock Scientific | Météostar               | 0963       | 25/09/2023 | 25/11/2025 |

BAT-EMC software version: V3.18.0.26

Blank cells = Permanent validity



TEST SETUP PHOTO(S) - POWER SUPPLY 120VAc/60Hz / RF OFF



CONDUCTED EMISSION (MEASUREMENT) - TABULATED RESULTS

POWER SUPPLY 120VAc/60Hz / RF OFF

EMI4661

| Terminal | Test Frequency (MHz) | Detector (Pk/QP/Av) | Gain/Loss Factor (dB) | Level dB (μV) | Limit dB (μV) | Margin (dB) |
|----------|----------------------|---------------------|-----------------------|---------------|---------------|-------------|
| Line 1   | 0.193                | Pk                  | 9.60                  | 44.45         | 53.92         | -9.47       |
| Line 1   | 1.108                | Pk                  | 9.63                  | 31.48         | 46.00         | -14.52      |
| Line 1   | 12.44                | Pk                  | 9.87                  | 32.60         | 50.00         | -17.40      |
| Neutral  | 0.157                | Pk                  | 9.59                  | 46.30         | 55.63         | -9.33       |
| Neutral  | 1.126                | Pk                  | 9.63                  | 30.21         | 46.00         | -15.79      |
| Neutral  | 13.56                | Pk                  | 9.88                  | 35.02         | 50.00         | -14.98      |

Supplementary information: N/A

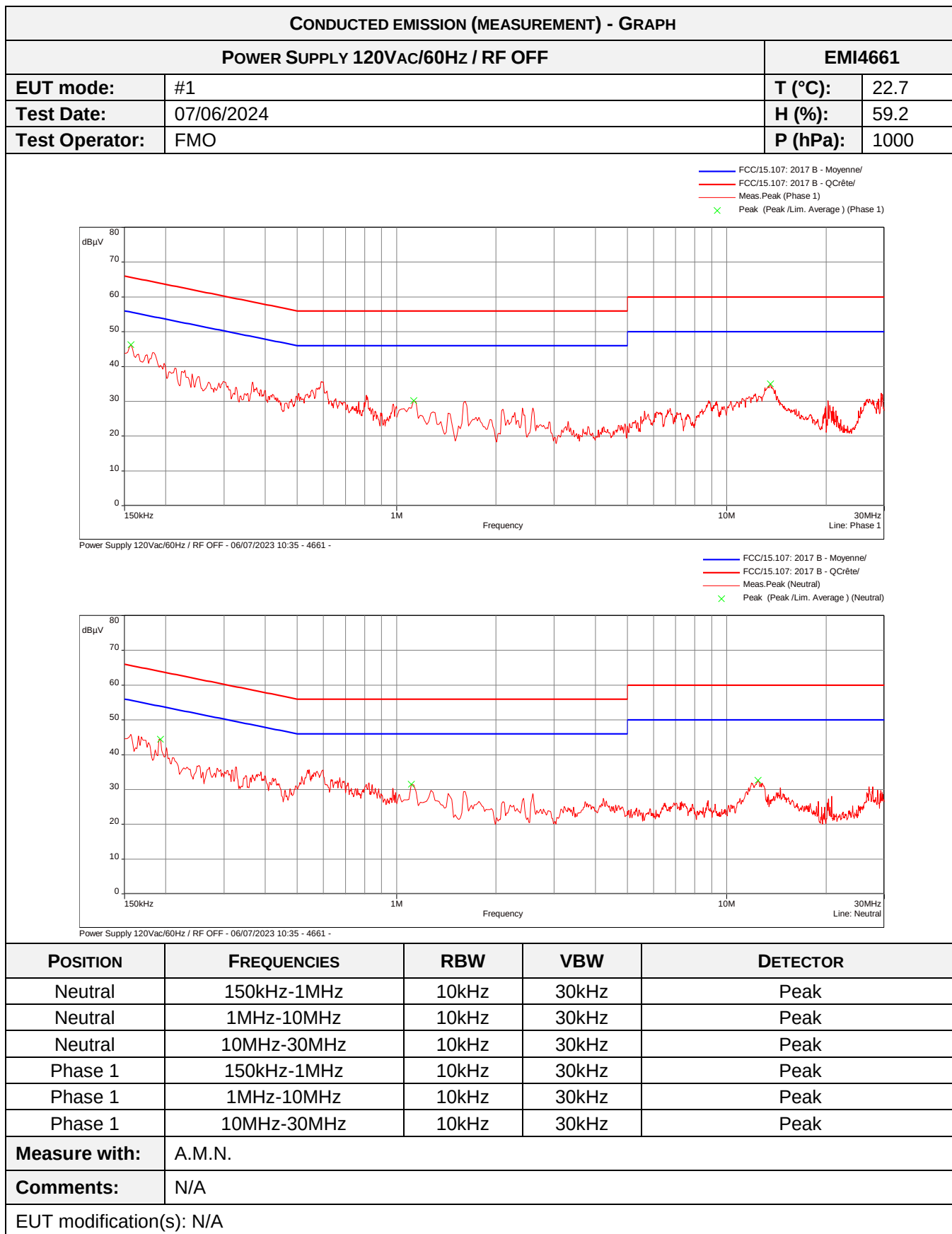
CONDUCTED EMISSION (MEASUREMENT) - TABULATED RESULTS

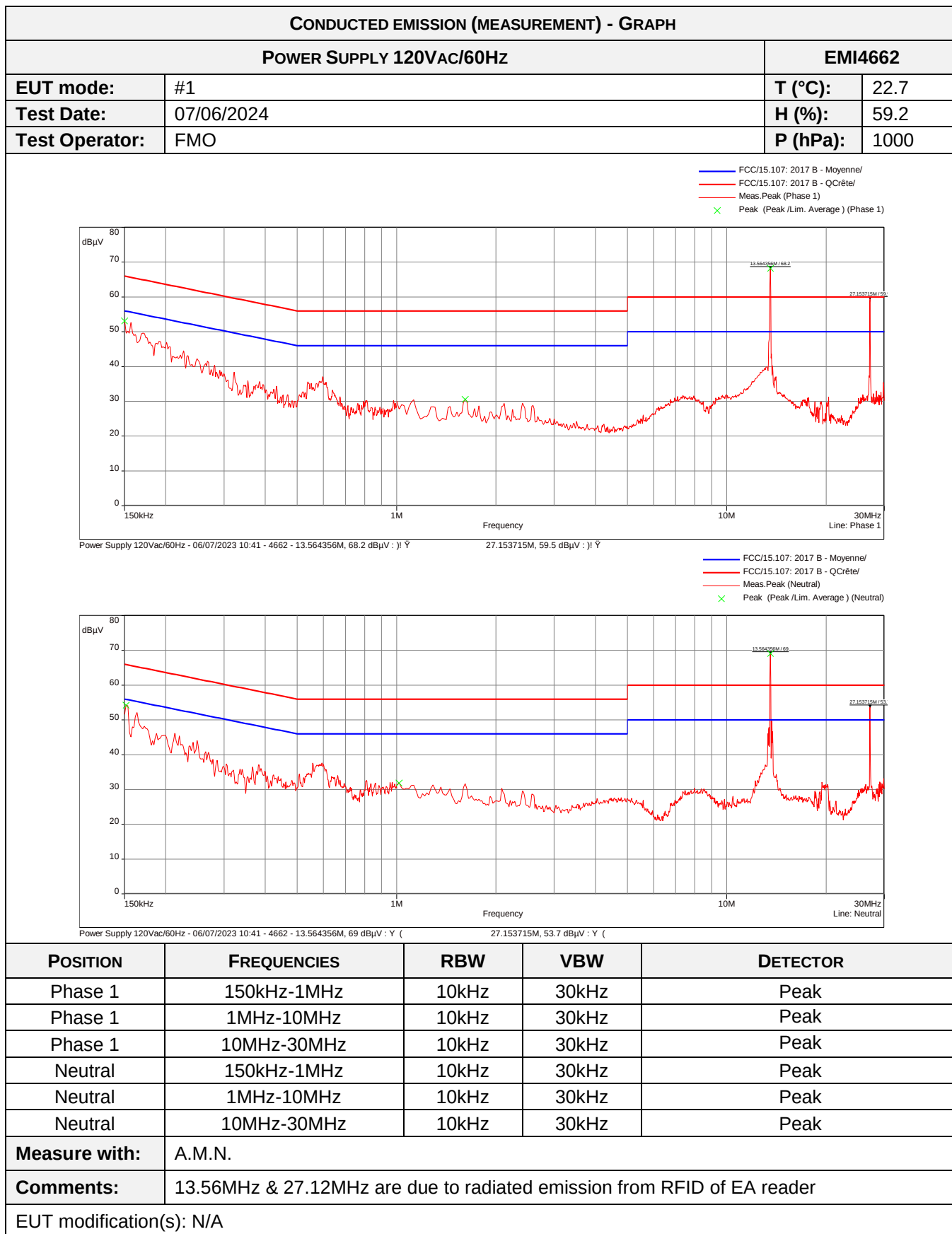
POWER SUPPLY 120VAc/60Hz

EMI4662

| Terminal | Test Frequency (MHz) | Detector (Pk/QP/Av) | Gain/Loss Factor (dB) | Level dB (μV) | Limit dB (μV) | Margin (dB) |
|----------|----------------------|---------------------|-----------------------|---------------|---------------|-------------|
| Line 1   | 0.150                | Pk                  | 9.60                  | 53.08         | 56.00         | -2.92       |
| Line 1   | 1.613                | Pk                  | 9.65                  | 30.49         | 46.00         | -15.51      |
| Line 1   | 13.56                | Pk                  | 9.88                  | 68.22         | 50.00         | 18.22       |
| Neutral  | 0.152                | Pk                  | 9.60                  | 54.20         | 55.91         | -1.71       |
| Neutral  | 1.018                | Pk                  | 9.63                  | 31.85         | 46.00         | -14.15      |
| Neutral  | 13.56                | Pk                  | 9.88                  | 69.06         | 50.00         | 19.06 *     |

Supplementary information: \* 13.56MHz is due to radiated emission from RFID of EA reader





## 7.2. Measurement of radiated disturbances

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| <b>Reference standard:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | FCC 47 CFR PART 15.109<br>ICES-001 Issue 5 July 2020 |
| <b>Test method:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | ANSI C63.4: 2014                                     |
| <p><b>General test setup:</b> EUT is set on an insulating support at 80cm above the ground reference plane.</p> <p>First (peak) measurements were performed at an antenna to EUT separation distance of 3-meter. The EUT was rotated 360° about its azimuth with the receive antenna located in horizontal and vertical polarities and, for SAC method, at various heights.</p> <p>Final measurements (quasi-peak) were then performed in a reference test site that complies to CISPR 16-1-4. The EUT was rotated 360° about its azimuth and, for SAC method, adjusting the receive antenna height from 1 to 4 m.</p> <p>All frequencies were investigated in both horizontal and vertical antenna polarization, where applicable.</p> |                                                      |

| TESTED CONFIGURATION                                                  | PARAMETER  | SEVERITY | RESULT TAB. | VERDICT     |
|-----------------------------------------------------------------------|------------|----------|-------------|-------------|
| IP central unit 3 Readers in 12Vdc +<br>Extension 4 Readers / Battery | 30MHz-1GHz | 15.109   | EMI4663     | <b>PASS</b> |

| LABORATORY PARAMETERS:            | REQUIRED PRIOR TO THE TEST | DURING THE TEST |
|-----------------------------------|----------------------------|-----------------|
| Ambient Temperature               | 10 to 40 °C                | See Graph(s)    |
| Relative Humidity                 | 10 to 90 %                 | See Graph(s)    |
| Atmospheric pressure              | N/A                        | See Graph(s)    |
| <b>Test method deviation:</b> N/A |                            |                 |
| Supplementary information: N/A    |                            |                 |

| TEST EQUIPMENT USED |                     |           |            |            |            |
|---------------------|---------------------|-----------|------------|------------|------------|
| CATEGORY            | BRAND               | TYPE      | IDENTIFIER | CAL. DATE  | CAL. DUE   |
| Antenna             | ETS lindgren        | 3142E     | 14523      | 27/01/2022 | 27/03/2025 |
| Cable               | SUCOFLEX            | N-3m      | 14378      | 17/08/2023 | 17/10/2025 |
| Cable               | SUCOFLEX            | N-6,5m    | 14380      | 17/08/2023 | 17/10/2025 |
| Cable               | Techniwave          | N-8m      | 18349      | 17/08/2023 | 17/10/2025 |
| Receiver            | Rohde & Schwarz     | ESW26     | 17791      | 08/07/2023 | 08/09/2024 |
| Shielded enclosure  | COMTEST             | SAC 3m    | 14494      | 09/08/2023 | 09/10/2026 |
| Software            | Nexio               | BAT EMC   | 0000       |            |            |
| Thermohygrometer    | Testo               | 608-H2    | 12269      | 07/06/2022 | 07/08/2024 |
| Thermohygrometer    | Bioblock Scientific | Météostar | 0963       | 25/09/2023 | 25/11/2025 |

BAT-EMC software version: V3.18.0.26

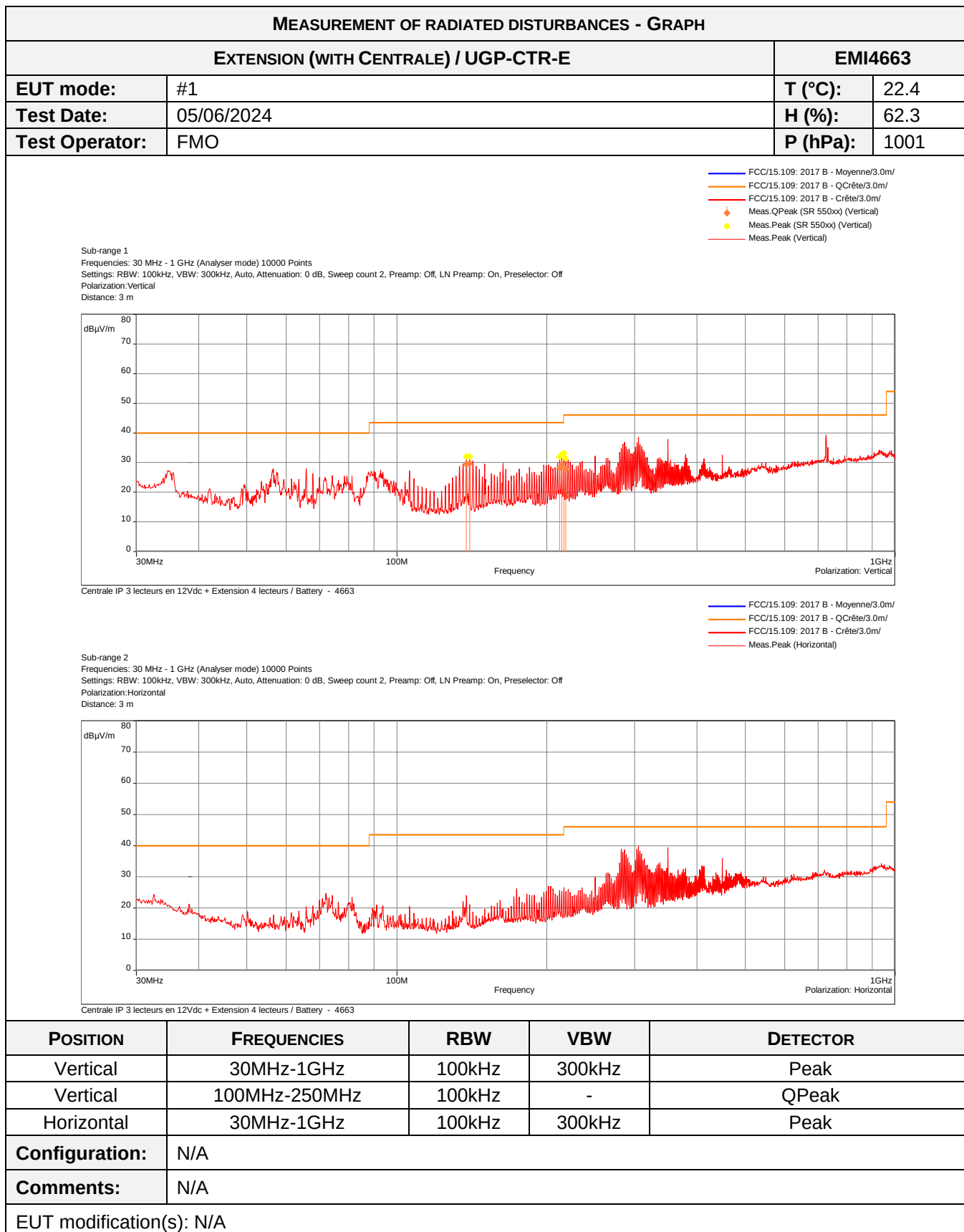
Blank cells = Permanent validity

TEST SETUP PHOTO(S) - EXTENSION (WITH CENTRALE) / UGP-CTR-E



MEASUREMENT OF RADIATED DISTURBANCES - TABULATED RESULTS

| EXTENSION (WITH CENTRALE) / UGP-CTR-E |                     |               |             |                  |                  |                 |                 | EMI4663     |
|---------------------------------------|---------------------|---------------|-------------|------------------|------------------|-----------------|-----------------|-------------|
| Test Freq. (MHz)                      | Detector (Pk/QP/Av) | Ant. position | Azimuth (°) | Ant. Height (cm) | Cor. Factor (dB) | Level dB (μV/m) | Limit dB (μV/m) | Margin (dB) |
| 137.87                                | QP                  | Verticale     | 300         | 100              | 15.60            | 29.40           | 43.50           | -14.10      |
| 140.01                                | QP                  | Verticale     | 300         | 100              | 15.60            | 29.72           | 43.50           | -13.78      |
| 212.09                                | QP                  | Verticale     | 300         | 100              | 18.53            | 28.20           | 43.50           | -15.30      |
| 214.22                                | QP                  | Verticale     | 300         | 100              | 18.52            | 29.53           | 43.50           | -13.97      |
| 216.26                                | QP                  | Verticale     | 300         | 100              | 18.56            | 28.28           | 46.00           | -17.72      |
| 218.39                                | QP                  | Verticale     | 300         | 100              | 18.65            | 27.74           | 46.00           | -18.26      |
| Supplementary information: N/A        |                     |               |             |                  |                  |                 |                 |             |



End of test report