



LCIE

TEST REPORT

N°: 158806-730751-A (FILE#1013075)

Version : 02

Subject Electromagnetic compatibility tests according to the standards:
FCC CFR 47 Part 15, Subpart B.
ANSI C63.4 (2014)

Issued to IR LYNX
43 Chemin du vieux chêne
38240 - MEYLAN
France

Apparatus under test

↗ Product Human activity sensor
↗ Trade mark PEOPLESENSE™
↗ Manufacturer IRLYNX
↗ Model under test PEOPLESENSE
↗ Serial number 8c28d3c8 / 32002e000f47373032303434

Conclusion See Test Program chapter

Test date December 6, 2018 to December 7, 2018

Test location MOIRANS

Sample receipt date December 6, 2018

Composition of document 22 pages

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PUBLICATION HISTORY

Version	Date	Author	Modification
01	December 18, 2018	Majid MOURZAGH	Creation of the document
02	March 15, 2019	Majid MOURZAGH	Modification of model

Each new edition of this test report replaces and cancels the previous edition. The control of the old editions of report is under responsibility of client.



SUMMARY

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1. TEST PROGRAM

1.1. REQUIREMENTS FOR DISTURBANCE EMISSIONS

Standard:

- ✓ FCC Part 15, Subpart B (Digital Devices)
- ✓ ANSI C63.4 (2014)
- ✓ ICES-003 (2016)

EMISSION TEST	LIMITS			RESULTS (Comments)
Limits for conducted disturbance at mains ports 150kHz-30MHz	Frequency	Quasi-peak value	Average value	PASS
	150-500kHz	66.0 dBμV to 56.0 dBμV	56.0 dBμV to 46.0 dBμV	
	0.5-5MHz	56.0 dBμV	46.0 dBμV	
	5-30MHz	60.0 dBμV	50.0 dBμV	
Radiated emissions 30MHz-1GHz	Frequency	Quasi-peak value @3m		PASS
	30MHz-88MHz	40.0 dBμV/m		
	88MHz-216MHz	43.5 dBμV/m		
	216MHz-960MHz	46.0 dBμV/m		
	Above 960MHz	54.0 dBμV/m		
Radiated emissions 1GHz-6GHz*	Frequency	Peak value @3m	Average value @3m	PASS
	1-6GHz	74.0 dBμV/m	54.0 dBμV/m	

NP: Not Performed / NA: Not Applicable / NR: Not Requested by the customer (It cannot be taken into account for the declaration of conformity)

*§15.33: The highest internal source of a testing device is defined like more the highest frequency generated or used in the testing device or on which the testing device works or agrees.

- If the highest frequency of the internal sources of the testing device is lower than 108 MHz, measurement must be only performed until 1GHz.
 - If the highest frequency of the internal sources of the testing device ranges between 108 MHz and 500 MHz, measurement must be only performed until 2GHz.
 - If the highest frequency of the internal sources of the testing device ranges between 500 MHz and 1 GHz, measurement must be only performed until 5GHz.
- If the highest frequency of the internal sources of the testing device is above 1 GHz, measurement must be only performed until 5 times the highest frequency or 40 GHz, while taking smallest of both.

2. EQUIPMENT UNDER TEST: CONFIGURATION (DECLARED BY PROVIDER)

2.1. INFORMATIONS

All tests are performed on the product which is the full options product.
See below for details:

- HUB: Sn 8c28d3c8
- Sensor n°1: Sn 32002e000f447373032303434
- Sensor n°2: Sn 330027001447373032303434
- Sensor n°3: Sn 3c003d000b51373233363431
- Sensor n°4: Sn 43002c000e51373139323537

2.2. HARDWARE IDENTIFICATION (EUT AND AUXILIARIES):

Equipment under test (EUT):
PEOPLESense

Serial Number: 8c28d3c8 / 32002e000f47373032303434



Equipment Under Test

Power supply:

During all the tests, EUT is supplied by V_{nom} : 48VDC
For measurement with different voltage, it will be presented in test method.

Name	Type	Rating	Reference / Sn	Comments
PoE_cable	☒ DC	48VDC	/	Power supply on POE (Power Over Eternet)



Inputs/outputs - Cable:

Access	Type	Length used (m)	Declared <3m	Shielded	Under test	Comments
PoE_cable	Ethernet	3	☐	☒	☒	
USB_cable n°1	USB cable	9	☐	☒	☒	
USB_cable n°2	USB cable	9	☐	☒	☒	
USB_cable n°3	USB cable	9	☐	☒	☒	
USB_cable n°4	USB cable	9	☐	☒	☒	
USB_maintenance	/	/	☐	☐	☐	Not used during tests for maintenance only

Auxiliary equipment used during test:

Type	FCC Id	Reference	Sn	Comments
Laptop	/	TOSHIBA Satellite L50-B-11Z	/	/
POE adapter	/	TP-LINK / TL-POE200A	2168528003068	48VDC
AC/DC power source	/	TP-LINK Technologies Co	T480050-2C1	Input 100-240Vac Output 48VDC

2.3. EUT CONFIGURATION – RUNNING MODE

Hardware information			
Highest internal frequency (PLL, Quartz, Clock, Microprocessor...):	F _{Highest} :	1000	MHz
Sensitive frequencies: (in addition to stepped frequencies for 61000-4-3 and 61000-4-6)	None declared by provider		
Firmware HUB	V. :	2a36fc0753	
Firmware sensor	V. :	181123-16ce014	
Software (if applicable):	V. :	NA	
Time necessary for the EUT to be exercised and to respond:	Dwell:	1	s

Configuration n°1:

Access	Process	Auxiliary for test
PoE_cable/Ethernet	Data send in loop to laptop	Laptop
USB_cable n°1	Live video (sensor) send in loop to laptop	Laptop
USB_cable n°2	/	/
USB_cable n°3	/	/
USB_cable n°4	/	/

2.4. EQUIPMENT MODIFICATIONS

☒ None ☐ Modification:



2.5. SPECIAL ACCESSORIES

None

2.6. FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor, and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as follow:

$$FS = RA + AF + CF - AG$$

Where

- FS = Field Strength
- RA = Receiver Amplitude
- AF = Antenna Factor
- CF = Cable Factor
- AG = Amplifier Gain

Assume a receiver reading of 52.5dB μ V is obtained. The antenna factor of 7.4 and a cable factor of 1.1 is added. The amplifier gain of 29dB is subtracted, giving field strength of 32 dB μ V/m.

$$FS = 52.5 + 7.4 + 1.1 - 29 = 32 \text{ dB}\mu\text{V/m}$$

The 32 dB μ V/m value can be mathematically converted to its corresponding level in μ V/m.

$$\text{Level in } \mu\text{V/m} = \text{Common Antilogarithm } [(32\text{dB}\mu\text{V/m})/20] = 39.8 \mu\text{V/m}.$$

2.7. CALIBRATION DATE

The calibration intervals are extended at 12+2 months. This extended interval is based on the fact that there is sufficient calibration data to statistically establish a trend or based on experience of use of the test equipment to assure good measurement results for a longer period.

3. MEASUREMENT OF CONDUCTED EMISSION

3.1. ENVIRONMENTAL CONDITIONS

Date of test : December 7, 2018
Test performed by : Majid MOURZAGH
Atmospheric pressure (hPa) : 998
Relative humidity (%) : 48
Ambient temperature (°C) : 22

3.2. TEST SETUP

Mains terminals

The EUT and auxiliaries are set:

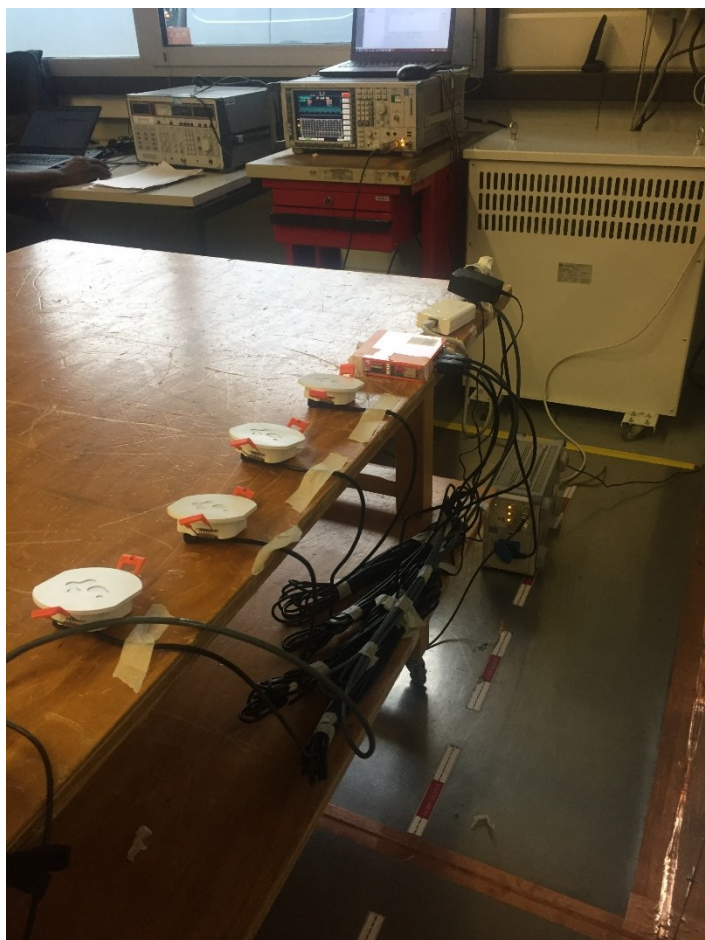
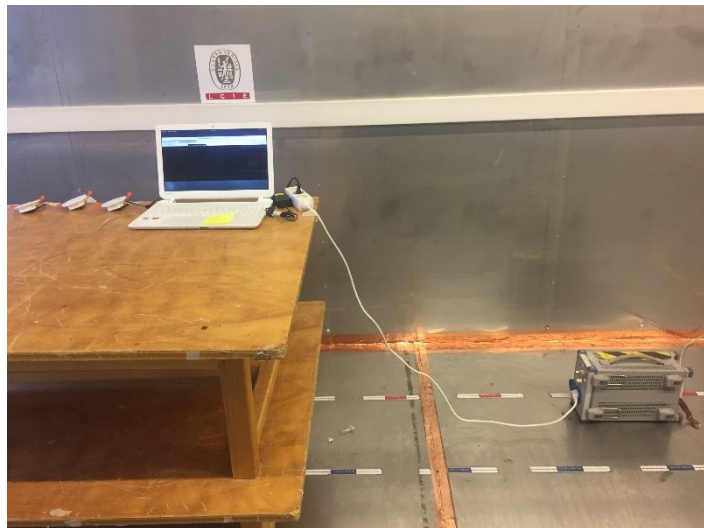
- ☒ 80cm above the ground on the non-conducting table (Table-top equipment)
- ☐ 10cm above the ground on isolating support (Floor standing equipment)

The distance between the EUT and the LISN is 80cm. The EUT is 40cm away for the vertical ground plane.

The EUT is powered by V_{nom} .

The EUT is powered through a LISN (measure). Auxiliaries are powered by another LISN.





Test setup



3.3. TEST METHOD

The product has been tested according to ANSI C63.4 and FCC Part 15 subpart B. The product has been tested with 120V/60Hz power line voltage and compared to the FCC Part 15 subpart B. Measurement bandwidth was 9kHz from 150kHz to 30MHz. This was followed by a Quasi-Peak, i.e. CISPR measurement for any strong signal. If the average limit is met when using a Quasi-Peak detector, the EUT shall be deemed to meet both limits and measurement with the average detector is unnecessary. The LISN (measure) is 50Ω / 50μH. The Peak data are shown on plots in annex 1. Quasi-Peak and Average measurements are detailed in a table with frequencies and levels measured. Interconnecting cables and equipment's were moved to position that maximized emission. A summary of the worst case emissions found in all test configurations and modes is shown on the following page.

Measurements are performed on the phase (L1) and neutral (N) of power line voltage. Graphs are obtained in PEAK detection. Measures are also performed in Quasi-Peak and Average for any strong signal.

3.4. TEST EQUIPMENT LIST

DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
Cable + self	-	-	A5329578	10/18	10/19
EMC comb generator	LCIE SUD EST	-	A3169098	-	-
LISN	RHODE & SCHWARZ	ENV216	C2320123	06/18	06/19
LISN	RHODE & SCHWARZ	ENV216	C2320291	12/17	12/18
Load 50Ω	-	-	A7152030	02/18	02/19
Receiver 20Hz – 8GHz	ROHDE & SCHWARZ	ESU8	A2642019	12/17	12/18
Thermo-hygrometer (PM1/2/3)	KIMO	HQ 210	B4206022	08/18	08/20
Transient limiter	RHODE & SCHWARZ	ESH3-Z2	A7122204	02/18	02/19

3.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

☒ None ☐ Divergence:

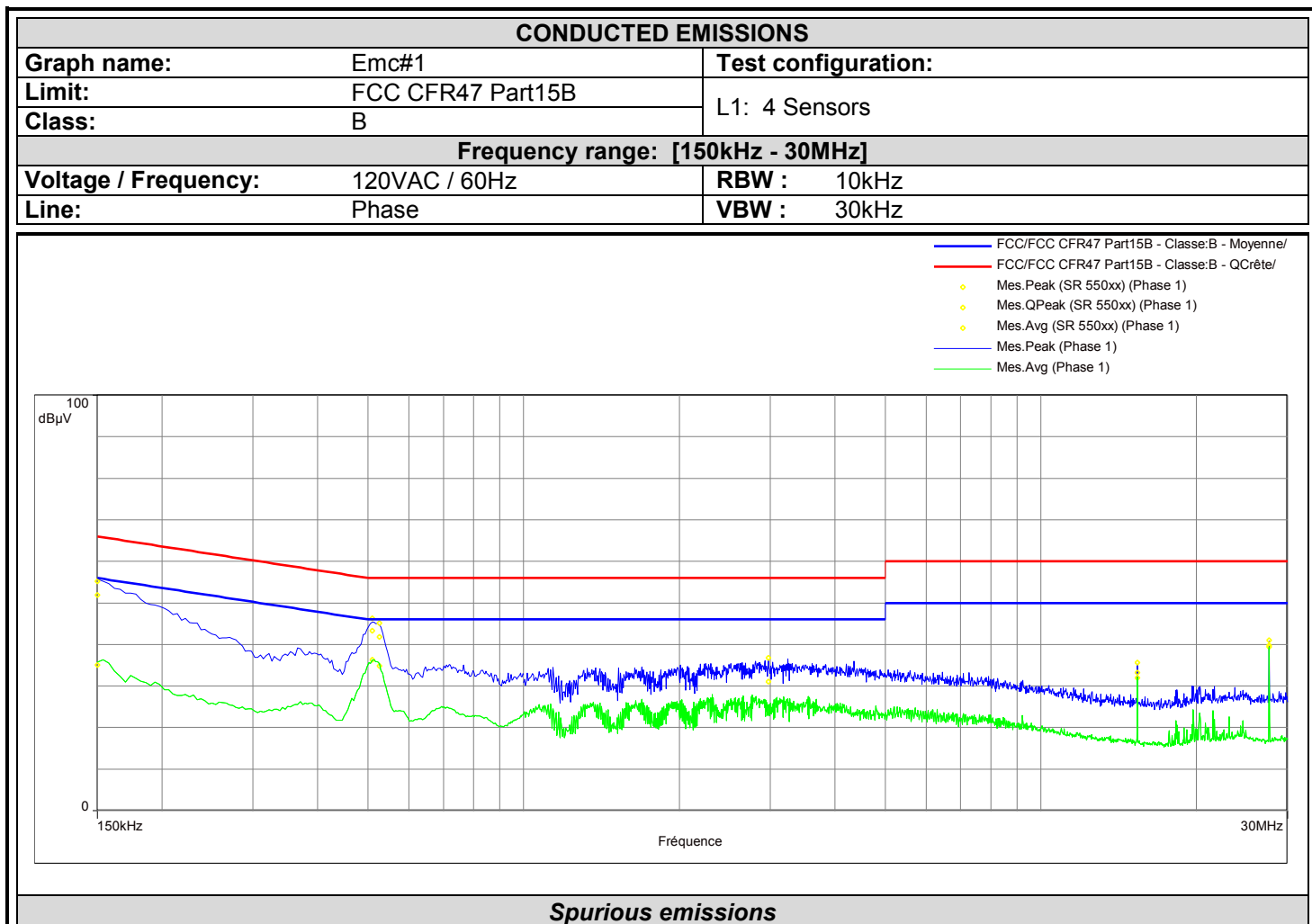
3.6. TEST RESULTS

AC/DC ADAPTER

Measurements are performed on the phase (L1) and neutral (N) of the power line.

Results: (PEAK detection)

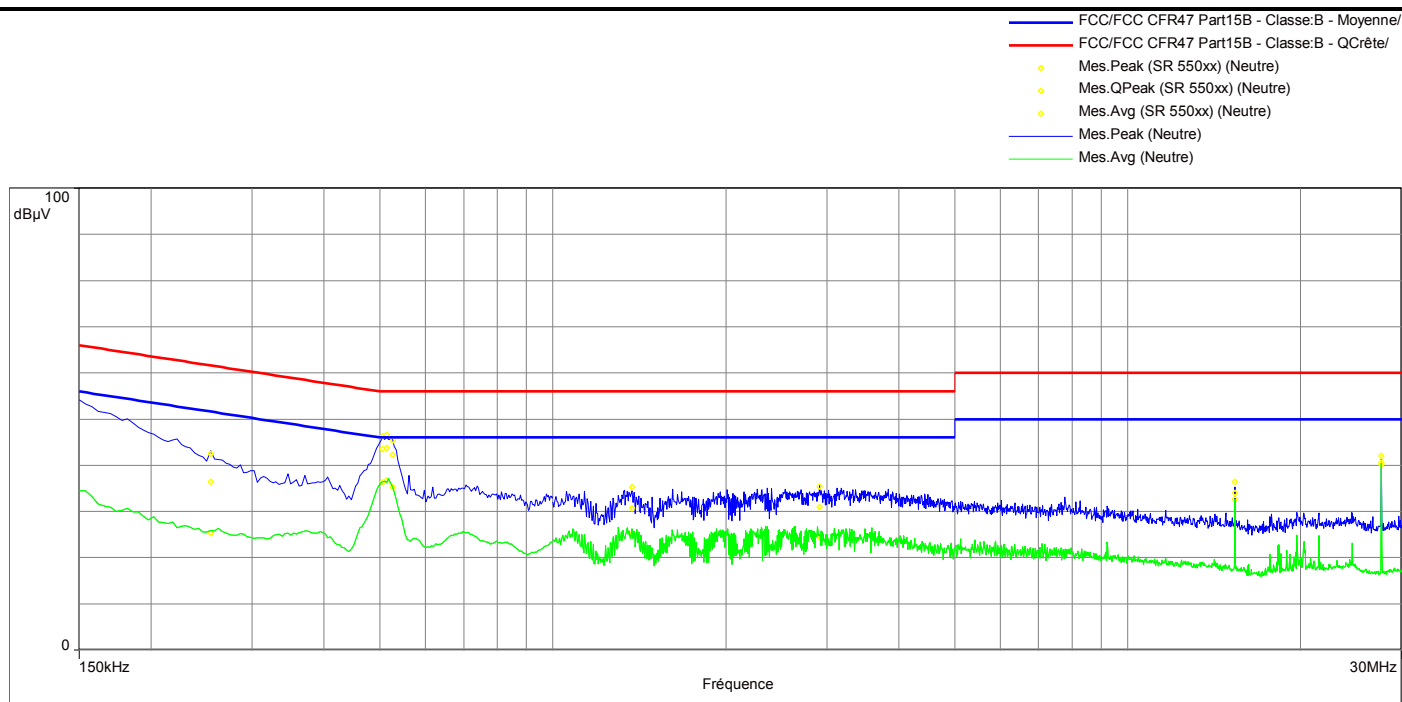
Graph identifier	Line	Comments
Emc# 1	Phase	120VAC/60Hz See below
Emc# 2	Neutral	120VAC/60Hz See below
Emc# 3	Phase	240VAC/50Hz See below
Emc# 4	Neutral	240VAC/50Hz See below



Frequency (MHz)	Mes.Peak (dBµV)	Mes.QPeak (dBµV)	LimQP (dBµV)	Mes.QPeak-LimQP (dB)	Mes.Avg (dBµV)	LimAvg (dBµV)	Mes.Avg-LimAvg (dB)	Correction (dB)
0.15	55.26	51.84	66.00	-14.16	35.08	56.00	-20.92	19.40
0.51	46.29	43.33	56.00	-12.67	36.31	46.00	-9.69	19.54
0.526	45.14	41.80	56.00	-14.20	34.82	46.00	-11.18	19.54
2.976	36.79	31.07	56.00	-24.93	23.96	46.00	-22.04	19.71
15.36	35.65	33.24	60.00	-26.76	31.98	50.00	-18.02	20.58
27.648	41.02	39.79	60.00	-20.21	39.41	50.00	-10.59	21.30

CONDUCTED EMISSIONS

Graph name:	Emc#2	Test configuration:	
Limit:	FCC CFR47 Part15B	Neutral: 4 Sensors	
Class:	B		
Frequency range: [150kHz - 30MHz]			
Voltage / Frequency:	120VAC / 60Hz	RBW :	10kHz
Line:	Neutral	VBW :	30kHz



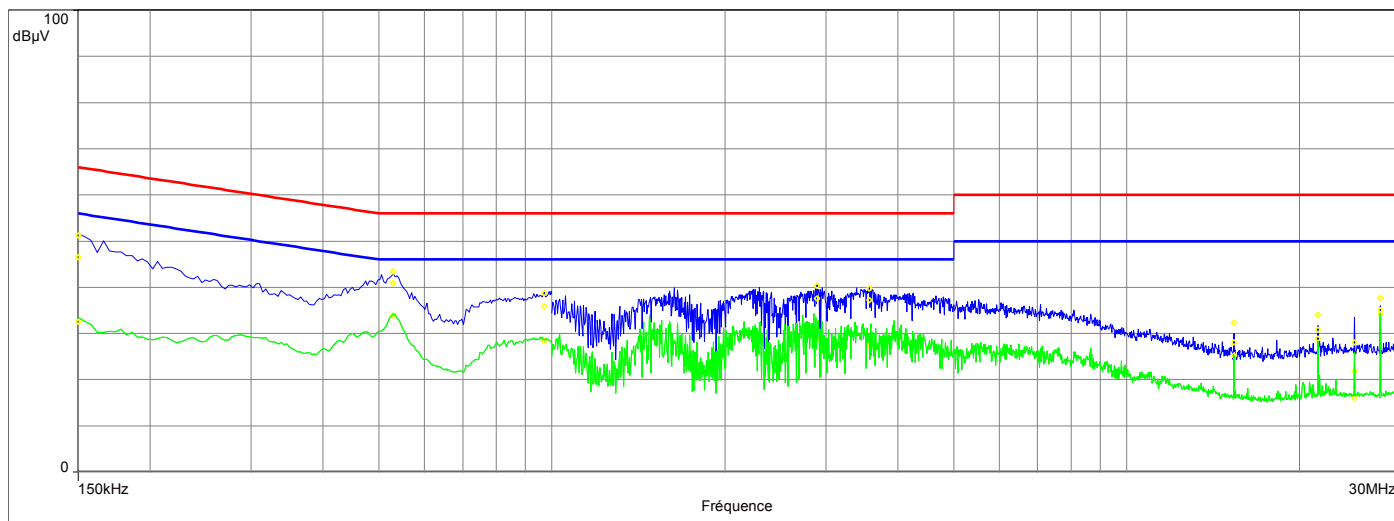
Spurious emissions

Frequency (MHz)	Mes.Peak (dBμV)	Mes.QPeak (dBμV)	LimQP (dBμV)	Mes.QPeak-LimQP (dB)	Mes.Avg (dBμV)	LimAvg (dBμV)	Mes.Avg-LimAvg (dB)	Correction (dB)
0.254	42.45	36.44	61.63	-25.19	25.32	51.63	-26.31	19.45
0.506	46.32	43.52	56.00	-12.48	36.32	46.00	-9.68	19.54
0.514	46.61	43.78	56.00	-12.22	36.73	46.00	-9.27	19.54
0.526	45.37	42.32	56.00	-13.68	35.32	46.00	-10.68	19.54
1.372	35.27	30.71	56.00	-25.29	25.08	46.00	-20.92	19.57
2.908	35.39	30.98	56.00	-25.02	24.44	46.00	-21.56	19.70
15.36	36.42	33.98	60.00	-26.02	32.63	50.00	-17.37	20.58
27.648	42.02	40.60	60.00	-19.40	40.23	50.00	-9.77	21.30

CONDUCTED EMISSIONS

Graph name:	Emc#3	Test configuration:	
Limit:	FCC CFR47 Part15B	240V/50Hz L1: 4 Sensors	
Class:	B		
Frequency range: [150kHz - 30MHz]			
Voltage / Frequency:	240V/50Hz	RBW :	10kHz
Line:	Phase	VBW :	30kHz

- FCC/FCC CFR47 Part15B - Classe:B - Moyenne/
- FCC/FCC CFR47 Part15B - Classe:B - QCrête/
- Mes.Peak (SR 550xx) (Phase 1)
- Mes.QPeak (SR 550xx) (Phase 1)
- Mes.Avg (SR 550xx) (Phase 1)
- Mes.Peak (Phase 1)
- Mes.Avg (Phase 1)



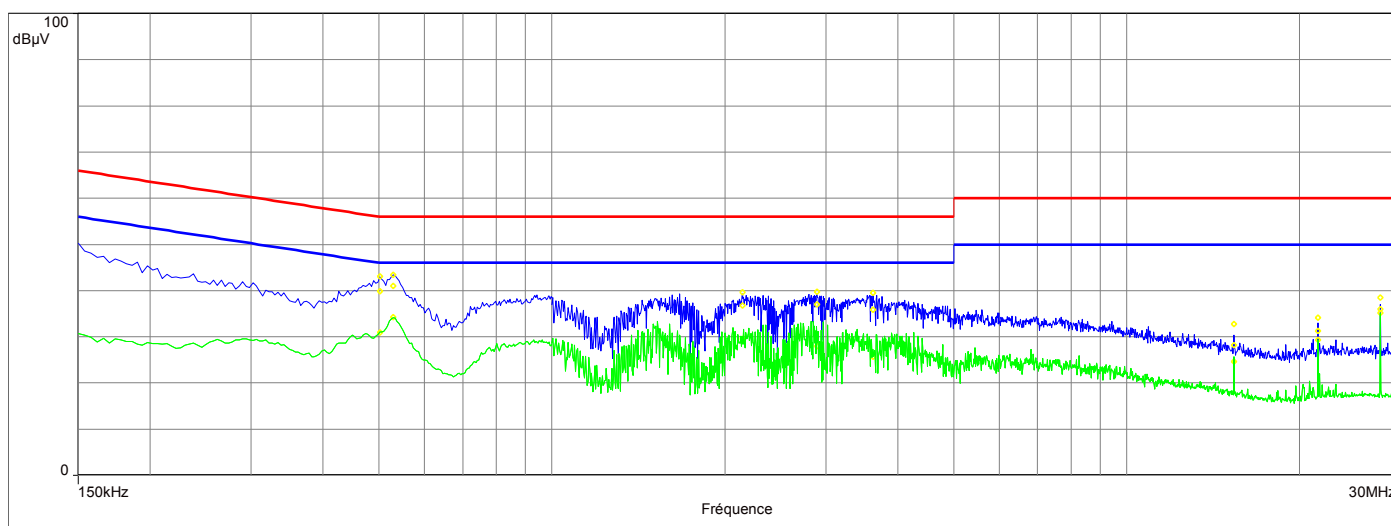
Spurious emissions

Frequency (MHz)	Mes.Peak (dBμV)	Mes.QPeak (dBμV)	LimQP (dBμV)	Mes.QPeak-LimQP (dB)	Mes.Avg (dBμV)	LimAvg (dBμV)	Mes.Avg-LimAvg (dB)	Correction (dB)
0.15	51.24	46.48	66.00	-19.52	32.53	56.00	-23.47	19.40
0.53	43.38	40.91	56.00	-15.09	33.96	46.00	-12.04	19.54
0.97	38.69	35.82	56.00	-20.18	28.44	46.00	-17.56	19.51
2.892	40.28	37.58	56.00	-18.42	28.82	46.00	-17.18	19.69
3.568	39.76	37.20	56.00	-18.80	27.38	46.00	-18.62	19.76
15.36	32.33	28.03	60.00	-31.97	25.23	50.00	-24.77	20.58
21.504	34.06	30.83	60.00	-29.17	28.91	50.00	-21.09	20.97
24.892	28.04	21.86	60.00	-38.14	16.04	50.00	-33.96	21.16
27.648	37.68	35.04	60.00	-24.96	34.10	50.00	-15.90	21.30

CONDUCTED EMISSIONS

Graph name:	Emc#4	Test configuration:	
Limit:	FCC CFR47 Part15B	240V/50Hz Neutral: 4 Sensors	
Class:	B		
Frequency range: [150kHz - 30MHz]			
Voltage / Frequency:	240V/50Hz	RBW :	10kHz
Line:	Neutral	VBW :	30kHz

— FCC/FCC CFR47 Part15B - Classe:B - Moyenne/
 — FCC/FCC CFR47 Part15B - Classe:B - QCrête/
 • Mes.Peak (SR 550xx) (Neutre)
 • Mes.QPeak (SR 550xx) (Neutre)
 • Mes.Avg (SR 550xx) (Neutre)
 — Mes.Peak (Neutre)
 — Mes.Avg (Neutre)



Spurious emissions

Frequency (MHz)	Mes.Peak (dBµV)	Mes.QPeak (dBµV)	LimQP (dBµV)	Mes.QPeak-LimQP (dB)	Mes.Avg (dBµV)	LimAvg (dBµV)	Mes.Avg-LimAvg (dB)	Correction (dB)
0.502	43.09	39.84	56.00	-16.16	30.92	46.00	-15.08	19.54
0.53	43.44	41.02	56.00	-14.98	34.27	46.00	-11.73	19.54
2.144	39.63	36.76	56.00	-19.24	29.62	46.00	-16.38	19.64
2.892	39.76	37.01	56.00	-18.99	27.97	46.00	-18.03	19.69
3.624	39.55	35.86	56.00	-20.14	25.67	46.00	-20.33	19.76
15.36	32.74	28.17	60.00	-31.83	24.60	50.00	-25.40	20.58
21.504	34.09	31.23	60.00	-28.77	29.31	50.00	-20.69	20.97
27.648	38.48	36.01	60.00	-23.99	35.13	50.00	-14.87	21.30

3.7. CONCLUSION

The sample of the equipment **PEOPLESense**, Sn: **8c28d3c8 / 32002e000f47373032303434**, tested in the configuration presented in this test report **satisfies** to requirements of class B limits of the standard FCC Part15B and ICES-003, for conducted emissions.

4. MEASUREMENT OF RADIATED EMISSION (30MHz-6GHz)

4.1. ENVIRONMENTAL CONDITIONS

Date of test : December 6, 2018
Test performed by : Majid MOURZAGH
Atmospheric pressure (hPa) : 999
Relative humidity (%) : 55
Ambient temperature (°C) : 21

4.2. TEST SETUP

The installation of EUT is identical for pre-characterization measures in a 3 meters semi- anechoic chamber and for measures on the 10 meters Open site.

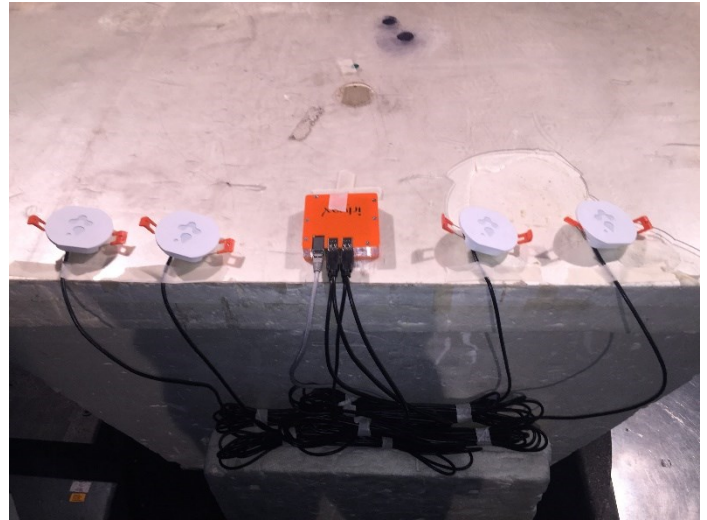
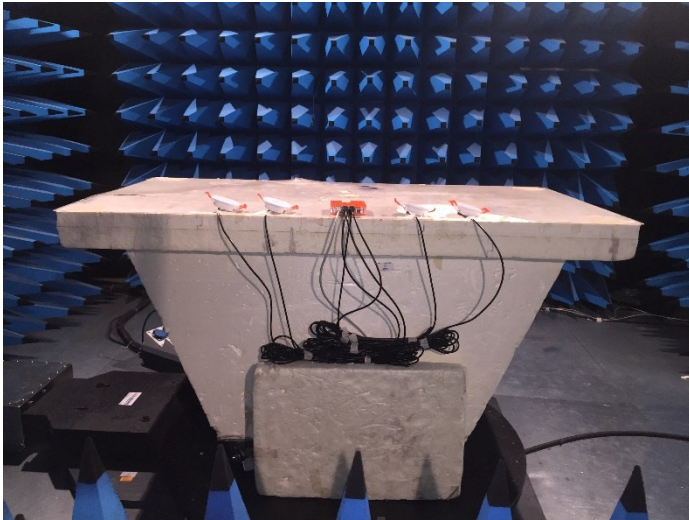
The EUT and auxiliaries are set:

- ☒ 80cm above the ground on the non-conducting table (Table-top equipment)
- ☐ 10cm above the ground on isolating support (Floor standing equipment)

The EUT is powered by V_{nom} .



Test setup on OATS



Test setup in anechoic chamber

4.3. TEST METHOD

The product has been tested according to ANSI C63.4, FCC part 15 subpart B.

Pre-characterisation measurement: (30MHz –6GHz)

A pre-scan of all the setup has been performed in a 3 meters semi-anechoic chamber for frequency from 30MHz to 6GHz. Test is performed in horizontal (H) and vertical (V) polarization during the test for maximized the emission measurement. Continuous linear turntable azimuth search was performed with 360 degrees range. Measurement performed on all axis of EUT used in normal configuration.

The pre-characterization graphs are obtained in PEAK detection and PEAK/AVERAGE from 1GHz to 6GHz.



Characterization on 10 meters open site from 30MHz to 1GHz:

Radiated Emissions were measured on an open area test site. A description of the facility is on file with the FCC. The product has been tested at a distance of **10 meters** from the antenna and compared to the FCC part 15 subpart B limits. Measurement bandwidth was 120kHz from 30 MHz to 1GHz. Test is performed in horizontal (H) and vertical (V) polarization, during the test for maximized the emission measurement. The height antenna is varied from 1m to 4m. Continuous linear turntable azimuth search was performed with 360 degrees range. Measurement performed on all axis of EUT used in normal configuration. A summary of the worst case emissions found in all test configurations and modes is shown. Frequency list has been created with anechoic chamber pre-scan results.

Characterization on 3 meters full anechoic chamber from 1GHz to 6GHz:

The product has been tested at a distance of **3 meters** from the antenna and compared to the FCC part 15 subpart B limits. Measurement bandwidth was 1MHz from 1GHz to 6GHz.

Test is performed in horizontal (H) and vertical (V) polarization. Continuous linear turntable azimuth search was performed with 360 degrees range. Measurement performed on all axis of EUT used in normal configuration. A summary of the worst case emissions found in all test configurations and modes is shown. The height antenna is

☐ On mast, varied from 1m to 4m

☒ Fixed and centered on the EUT (EUT smaller than the beamwidth of the measurement antenna)

Frequency list has been created with anechoic chamber pre-scan results.



4.4. TEST EQUIPMENT LIST

DESCRIPTION	MANUFACTURER	MODEL	N° LCIE	Cal_Date	Cal_Due
Amplifier 0.1MHz – 1300 MHz	HEWLETT PACKARD	8447D	A7085009	12/17	12/18
Antenna Bi-Log XWing	TESEQ	CBL6144	C2040146	03/17	03/19
Antenna horn 18GHz	EMCO	3115	C2042027	04/18	04/20
Emission Cable	MICRO-COAX	6GHz	A5329654	06/18	06/19
Emission Cable	MICRO-COAX	6GHz	A5329655	06/18	06/19
Emission Cable	MICRO-COAX	6GHz	A5329656	06/18	06/19
Semi-Anechoic chamber #2	SIEPEL	-	D3044015	04/18	04/19
Radiated emission comb generator	BARDET	-	A3169050	-	-
HF Radiated emission comb generator	LCIE SUD EST	-	A3169088	-	-
Spectrum Analyzer 9kHz - 6GHz	ROHDE & SCHWARZ	FSL6	A4060049	11/17	11/19
Receiver 20Hz – 8GHz	ROHDE & SCHWARZ	ESU8	A2642019	12/17	12/18
BAT EMC	NEXIO	v3.17.0.10	L1000115	-	-
Thermo-hygrometer (C2)	LACROSS Techn.	WS-2357	B4206015	10/18	10/20
Turntable controller (Cage#2)	ETS Lingren	Model 2066	F2000393	-	-
Turntable chamber (Cage#2)	ETS Lingren	Model 2165	F2000404	-	-
Table C2/OATS	LCIE	-	F2000438	-	-
Antenna Bi-log	CHASE	CBL6111A	C2040051	01/18	01/19
Emission Cable	SUCOFLEX	6GHz	A5329061	03/18	03/19
Cable (OATS)	-	1GHz	A5329623	03/18	03/19
OATS	-	-	F2000409	10/17	10/18
Receiver 20-1000MHz	ROHDE & SCHWARZ	ESVS30	A2642006	12/17	12/19
Facteur OATS 30M-1GHz	LCIE	V3	L2000035	-	-
Turntable / Mast controller (OATS)	ETS Lindgren	Model 2066	F2000372	-	-
Antenna mast (OATS)	ETS Lindgren	2071-2	F2000392	-	-
Turntable (OATS)	ETS Lindgren	Model 2187	F2000403	-	-
Table C1/OATS	MATURO GmbH	-	F2000437	-	-

4.5. DIVERGENCE, ADDITION OR SUPPRESSION ON THE TEST SPECIFICATION

☒ None ☐ Divergence:

4.6. TEST RESULTS

Pre-characterisation measurement (30MHz-1GHz): pre-scan measurement at 3m (PEAK detection, graph examples)

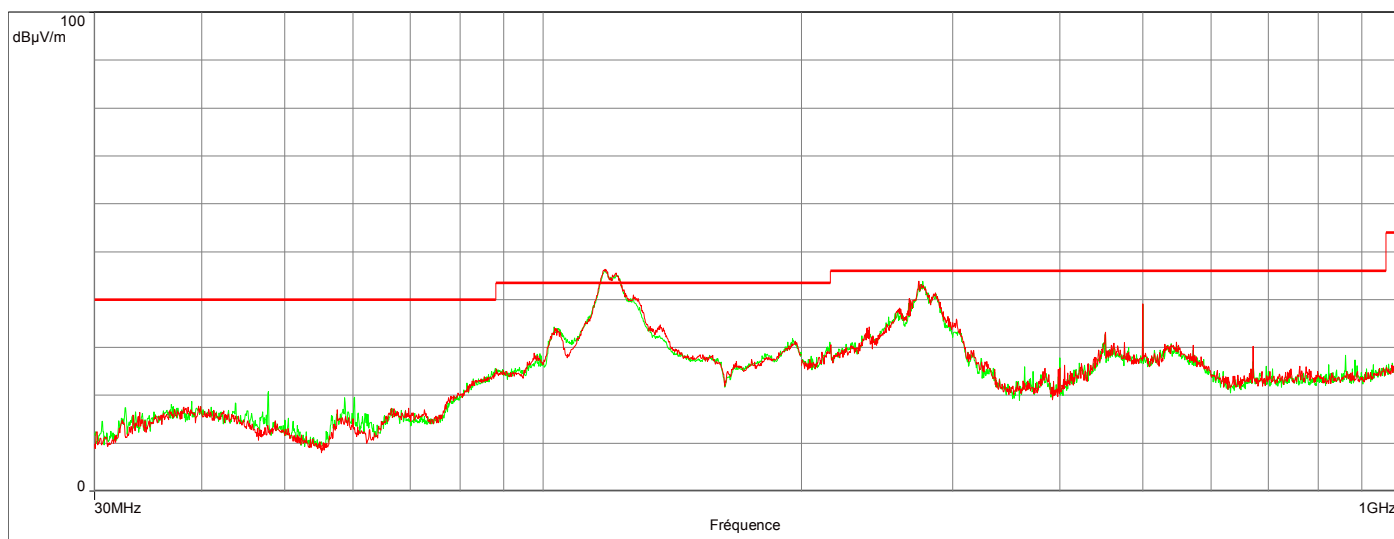
See graphs:

Graph identifier	Polarization	EUT position	Comments
Emr# 1	Vertical / Horizontal	Axis XY	See below

RADIATED EMISSIONS

Graph name:	Emr#1	Test configuration:	
Limit:	FCC CFR47 Part15B	(H+V) - Configuration 1 (4 sensors) <1GHz	
Class:	B		
Frequency range: [30MHz - 1GHz]			
Antenna polarization:	Horizontal & Vertical	RBW :	100kHz
Azimuth:	0° - 360°	VBW :	300kHz

— FCC/FCC CFR47 Part15B - Classe:B - Moyenne/3.0m/
— FCC/FCC CFR47 Part15B - Classe:B - QCrête/3.0m/
— FCC/FCC CFR47 Part15B - Classe:B - Crête/3.0m/
— Mes.Peak (Horizontale)
— Mes.Peak (Verticale)



Spurious emissions

Frequency (MHz)	Peak Level (dBµV/m)	Polarization
118.128	46.3	Horizontal
121.562	45.6	Horizontal
274.000	43.9	Horizontal
286.680	41.4	Horizontal
500.000	39.1	Horizontal
102.930	34.3	Vertical
118.043	46.0	Vertical
121.545	45.3	Vertical
274.360	42.9	Vertical
277.000	43.8	Vertical
286.760	41.1	Vertical
500.000	39.0	Vertical



QUALIFICATION (30MHz-1GHz): 10 meters measurement on the Open Area Test Site.
Frequency list has been created with semi-anechoic chamber pre-scan results.
Measurements are performed using a QUASI-PEAK detection.

Test Frequency (MHz)	Meter Reading dB(μV)	Detector (Pk/QP/Av)	Polarity (V/H)	Azimuth (Degrees)	Antenna Height (cm)	Transducer Factor (dB)	Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Remark
118.130	24.7	QP	V	0	110	14.3	39.0	43.5	-4.5	4 sensors
121.500	24.6	QP	V	45	100	14.5	39.1	43.5	-4.4	4 sensors
274.000	20.3	QP	V	90	120	16.4	36.7	46.0	-9.3	4 sensors
277.000	23.0	QP	V	45	120	16.4	39.4	46.0	-6.6	4 sensors
286.700	22.4	QP	V			16.6	39.0	46.0	-7.0	4 sensors
500.000	14.6	QP	H	270	250	22.5	37.1	46.0	-8.9	4 sensors

*Note: Measure have been done at 10m distance and corrected according to requirements of 15.209.e)
(M@3m = M@10m+10.5dB)*

Pre-characterisation measurement (1GHz-6GHz): pre-scan measurement at 3m (PEAK and AVERAGE detection, graph examples)

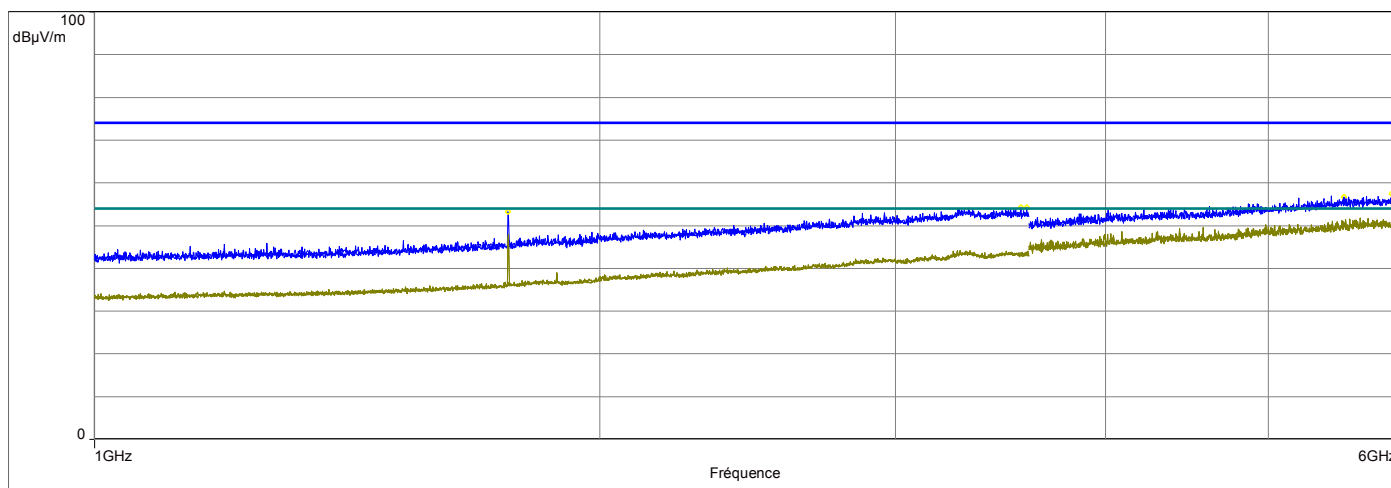
See graphs:

Graph identifier	Polarization	EUT position	Comments
Emr# 2	Vertical / Horizontal	Axis XY	See below

RADIATED EMISSIONS

Graph name:	Emr#2	Test configuration:
Limit:	FCC CFR47 Part15B	(H+V) - Configuration 1(4 sensors) [1-6]GHz - C2 -
Class:	B	ESU
Frequency range: [1GHz - 6GHz]		
Antenna polarization:	Horizontal & Vertical	RBW : 1MHz
Azimuth:	0° - 360°	VBW : 3MHz

- FCC/FCC CFR47 Part15B - Classe:B - Moyenne/3.0m/
- FCC/FCC CFR47 Part15B - Classe:B - QCrête/3.0m/
- FCC/FCC CFR47 Part15B - Classe:B - Crête/3.0m/
- ◊ Niveau (Suspect Manuel) (Verticale)
- Mes.Peak (Horizontale)
- Mes.Peak (Verticale)
- Mes.Avg (Horizontale)
- Mes.Avg (Verticale)
- ◊ Peak (Peak/LimAvg) (Horizontale)
- ◊ Peak (Peak/LimAvg) (Verticale)



Spurious emissions

Frequency (MHz)	Peak (dBμV/m)	LimM (dBμV/m)	Peak-LimM (dB)	Polarization	Correction (dB)
1762.940*	53.26	54.0	0.2	Horizontal	34.2

QUALIFICATION (1GHz-6GHz): 3 meters measurement in full anechoic chamber. The frequency list is created from the results obtained during the pre-characterization in anechoic chamber. Measurements are performed using a PEAK and AVERAGE detection.

No significant frequency observed

4.7. CONCLUSION

The sample of the equipment **PEOPLESense**, Sn: **8c28d3c8 / 32002e000f47373032303434**, tested in the configuration presented in this test report **satisfies** to requirements of class B limits of the standard FCC Part15B and ICES-003, for radiated emissions.

5. UNCERTAINTIES CHART

Type de mesure / Kind of measurement	Incertitude élargie laboratoire / Wide uncertainty laboratory (k=2) $\pm x$	Incertitude limite du CISPR / CISPR uncertainty limit $\pm y$
Mesure des perturbations conduites en tension sur le réseau d'énergie (monophasé /triphase) 10kHz-150kHz <i>Measurement of conducted disturbances in voltage on the power port (single & three phases)10kHz-150kHz</i>	3.27dB	3.8dB
Mesure des perturbations conduites en tension sur le réseau d'énergie (monophasé /triphase) 150kHz-30MHz <i>Measurement of conducted disturbances in voltage on the power port (single & three phases)150kHz-30MHz</i>	3.29dB	3.4dB
Mesure des perturbations conduites en tension sur le réseau de télécommunication <i>Measurement of conducted disturbances in voltage on the telecommunication port.</i>	3.26dB	5dB
Mesure des perturbations discontinues conduites en tension <i>Measurement of discontinuous conducted disturbances in voltage</i>	3.33dB	3.4dB
Mesure des perturbations conduites en courant <i>Measurement of conducted disturbances in current</i>	2.67dB	2.9dB
Mesure du champ électrique rayonné en cage de Faraday semi-anéchoïque de 30MHz à 1GHz <i>Measurement of radiated electric field in half-anechoic Faraday room From 30MHz to 1GHz</i>	5.06dB	5.3dB
Mesure du champ électrique rayonné en cage de Faraday semi-anéchoïque de 1GHz à 6GHz <i>Measurement of radiated electric field in half-anechoic Faraday room From 1GHz to 6GHz</i>	5.18dB	5.2dB
Mesure du champ électrique rayonné en cage de Faraday semi-anéchoïque de 6GHz à 18GHz <i>Measurement of radiated electric field in half-anechoic Faraday room From 6GHz to 18GHz</i>	5.21dB	5.5dB
Mesure du champ électrique rayonné sur le site en espace libre de Moirans 30MHz – 1GHz. <i>Measurement of radiated electric field on the Moirans open area test site 30MHz – 1GHz.</i>	5.2dB	6.3dB
Mesure du champ électrique rayonné IN SITU de 30 à 1000 MHz <i>IN SITU measurement of radiated electric field from 30 to 1000MHz</i>	A l'étude / Under consideration	5.2dB
Mesure de la puissance perturbatrice <i>Measurement of disturbance power</i>	3.32dB	4.5dB
Mesure des harmoniques de courant <i>Measurement of current harmonics</i>	11.11%	/
Mesure du flicker <i>Flicker measurement</i>	9.26%	/

Les valeurs d'incertitudes calculées du laboratoire étant inférieures aux valeurs d'incertitudes limites établies par le CISPR, la conformité de l'échantillon est établie directement par les niveaux limites applicables. Ce tableau regroupe l'ensemble des incertitudes maximales pour les essais réalisables dans le laboratoire, qu'ils aient été ou non réalisés dans le cadre du présent rapport / *The uncertainty values calculated by the laboratory are lower than limit uncertainty values defined by the CISPR. The conformity of the sample is directly established by the applicable limits values. This table includes all uncertainties maximum feasible for testing in the laboratory, whether or not made in this report*

Note - L'incertitude de mesure instrumentale est déterminée selon la CISPR 16-4-2. / *The instrumentation measurement uncertainty is determined according to CISPR16-4-2*