RF-EXPOSURE REPORT

FCC 1.1307, 1.1310

RF-Exposure evaluation for wireless power transfer applications

Report Reference No	G0M-1902-8075-TFCWPTEX-V01
Testing Laboratory	Eurofins Product Service GmbH
Address	Storkower Str. 38c 15526 Reichenwalde Germany
Accreditation	A2LA Accredited Testing Laboratory, Certificate No.: 1983.01 FCC Test Firm Designation Number: DE0008 ISED Testing Laboratory site: 3470A-2
Applicant	Piavita AG
Address	Technoparkstrasse 1 8005 Zurich SWITZERLAND
Standard	FCC 47 CFR 1.1307(b), 1.1310
Non-Standard Test Method	None
Equipment under Test (EUT):	
Product Description	Equine vital signs wireless monitoring device
Model(s)	Piavita Measuring device
Additional Model(s)	None
Brand Name(s)	None
Hardware Version(s)	V04
Software Version(s)	2
FCC-ID	2ASL2-PD9
IC	N/A
Test Result	**PASSED**

Possibe test case verdicts:		
required by standard but not tested	N/T	
not required by standard	N/R	
test object does meet the requirement	P(PASS)	
test object does not meet the requirement	F(FAIL)	
Testing:		
Test Lab Temperature	15 - 35 °C	
Test Lab Humidity	30 – 50 %	
Date of receipt of test item	2019-03-11	
Report:		
Compiled by	Toralf Jahn	
Tested by (+ signature) (Responsible for Test)	Toralf Jahn	T. J .....
Approved by (+ signature) (Head of Lab)	Christian Weber	C. Weber .....
Date of Issue	2019-03-26	
Total number of pages	10	
General Remarks:		
The test results presented in this report relate only to the object tested. **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.** This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.		
Additional Comments:		

VERSION HISTORY

Version History			
Version	Issue Date	Remarks	Revised By
01	2019-03-26	Initial Release	

ABBREVIATIONS AND ACRONYMS

Acronyms	
Acronym	Description
EUT	Equipment Under Test
MPE	Maximum Permissible Exposure
WPT	Wireless Power Transfer

REPORT INDEX

Eurofins Product Service GmbH
Storkower Str. 38c, D-15526 Reichenwalde, Germany

1 Equipment (Test Item) Under Test

Description	Equine vital signs wireless monitoring device
Model	Piavita Measuring device
Additional Model(s)	None
Brand Name(s)	None
Serial Number(s)	None
Hardware Version(s)	V04
Software Version(s)	2
FCC-ID	2ASL2-PD9
IC	None
Equipment type	End Product
Environment	Uncontrolled / General Public
Operating frequency range [kHz]	110 to 205

1.1 Reference Documents

Document Type	Document No.	Issued by	Date
FCC Knowledge Database Publication	KDB 680106 D01 v03	FCC	2013-05-31
Test report Wireless Power Transfer	G0M-1902-8075-TFC106WP-V01	Eurofins Product Service GmbH	2019-03-25

2 Result Summary

FCC 1.1307(b), 1.1310				
Product Standard Reference	**Requirement**	**Reference Method**	**Frequency**	**Verdict**
FCC 1.1307(b)	Maximum permissible exposure	KDB 680106 D01 v03	110 to 205 kHz	PASS
Comment:				

3 RF-Exposure Classification

RF-Exposure Categories	
Occupational	Limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational/controlled limits apply provided he or she is made aware of the potential for exposure.
General public	Exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

4 RF-Exposure Limits

Limits

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposure				
0.3-3.0	614	1.63	*100	6
3.0-30	1842/f	4.89/f	$*900/f^2$	6
30-300	61.4	0.163	1.0	6
300-1,500			f/300	6
1,500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*100	30
1.34-30	824/f	2.19/f	$*180/f^2$	30
30-300	27.5	0.073	0.2	30
300-1,500			f/1500	30
1,500-100,000			1.0	30

5 RF-Exposure Evaluation

MPE Evaluation Procedure

The evaluation is performed according KDB 680106 D01 v02 Section 3.

The magnetic and electric field strength is measured using magnetic and electric isotropic probes at the given separation distance. If possible all six positions (left, right, front, rear, top and bottom) with respect to the combination of transmitter with client device are measured. If one or multiple locations are not accessible, the positions are marked as N/A (not applicable).

The measured field strength are compared to the MPE field strength limits given in FCC 1.1310.

6 Evaluation Results

MPE Results – Magnetic Field					
Frequency [kHz]	Position	Magnetic field strength [A/m]	Limit [A/m]	30 % Limit [A/m]	Verdict
110 to 205	Left	0.19	1.63	0.489	PASS
	Right	0.19			
	Front	0.19			
	Rear	0.19			
	Top	0.24			
	Bottom	0.24			
Comment:					

MPE Results – Electric Field					
Frequency [kHz]	Position	Electric field strength [V/m]	Limit [V/m]	30 % Limit [V/m]	Verdict
110 to 205	Left	0.4	614	184.2	PASS
	Right	0.5			
	Front	1.1			
	Rear	0.6			
	Top	2.0			
	Bottom	0.4			
Comment:					

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