

File Number **26/36400883****TEST REPORT**
Human Exposure**Petitioner's Reference:** NAD, S.L

Company Address: C/.OctaveLecante,2-6 08100 Mollet del Vallés - Spain

PMN: KEYLESS 2.0

Brand: SHAD

HMN: Keyless

Sample #1: WPTNA0120260427

Applus Id: 42398-00001

Result: **complies**

It has been tested and complies with the applicable standard. See test result summary section.

Applicable Standard:

EMF standard/s:

FCC 47 CFR Part 2 Subpart J (October 2024)¹
FCC 47 CFR Part 1 Subpart I (October 2024)¹
KDB 447498 D01 General RF Exposure Guidance (October 2015)¹
RSS-102 - Radio Frequency (RF) Exposure Compliance of Radiocommunication Apparatus (All Frequency Bands) – Issue 6 (December 2023)¹

¹Not covered by ENAC accreditation.**Dates and Test Site:** Applus Barcelona. Bellaterra

Equipment Reception Date: April 27, 2026

Test Manager: Javier Miguel Nadales Lisbona**Date of issue:** Bellaterra, June 26, 2026

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JAIME
BARRANQUERO
GOMEZ
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Technical Manager
Electrical and Electronics

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satisfaccion.cliente@applus.com

2 GENERAL DESCRIPTION OF TEST ITEMS

3.2 EQUIPMENT DESCRIPTION

This information has been provided by the customer and it is not covered by the accreditation. LGAI does not assume any responsibility from it.

EQUIPMENT DESCRIPTION				
Description	Induction system with power transfer between Motorcycle and Motorcase, using FSK/ASK modulation to control motor and LED.			
EUT Version	SW Version		HW Version	
	TxRx_20260313		70100x	
Power supply	DC	+/-	12 V	-- Hz
Applicability	Fixed Equipment	Vehicular Equipment		Portable Equipment
	☐	☒		☐
Equipment Size	Length	Width		Height
	6 cm	10 cm		4 cm
Maximum internal frequency	64 MHz			

Table 1: Equipment Description

I/O CABLES						
Description	Port #	Name	Type	Cable length	Cable Shielded	Comments
	1	POWER	+12 V	70 cm	No	Provided by customer
	2	Ground	GND	70 cm	No	Provided by customer
	3	A	Signal: Unlock Motor	70 cm	No	Provided by customer
	4	B	Signal: Lock Motor	70 cm	No	Provided by customer
	5	LIN	LIN bus line	70 cm	No	Provided by customer

Table 2: Input/output ports description

RF FEATURES					
Description	Communication Technology	Radio Chipset	Brand	Module Model	Antenna Peak Gain
	WPT (Wireless Power Transfer)				

Table 3: Modules Description

3.2 PHOTOGRAPHS

Photographs identifying the equipment under test and its auxiliaries, as well as assembly photographs for radiated and conducted tests, can be found in the document: *Annex_Photos_SHAD_Keyless.pdf*

2..1 DUT Modifications performed

No modifications have been performed.

3.2 DUT TEST MODES

DUT Operation Modes		
Mode #	Description	Set-up
1	OPEN input: Applying 12V to this input will make motor be unlocked + turn ON the LED. CLOSE input: Applying 12V to this input will make motor be locked + turn OFF the LED. LIN: LIN commands can be sent to Lock or Unlock the motor: ID=0x9A (1 Byte-length) -> Unlock the motor ID=0x0A (1 Byte-Length) -> Lock the motor. ID=0x0B (1 Byte-Length) -> Receive status.	Table top

Table 4: DUT test modes

3.2 TEST FACILITIES ID

TEST FACILITIES ID	
FCC Test Firm Registration Number:	507478
ISED Assigned Code:	5766A
CABID	ES0001

Table 5: Test Facilities ID

3.2 COMPETENCES AND GUARANTEES

LGAI Technological Center. S.A. is a testing laboratory accredited by the National Accreditation Body (ENAC -Entidad Nacional de Acreditación). to perform the tests indicated in the Certificate No. 9/LE894.

In order to assure the traceability to other national and international laboratories. Applus+ Laboratories has a calibration and maintenance program for its measurement equipment.

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3 TEST RESULTS

3.2 REQUIREMENTS

According to the standard FCC 47 CFR Part 2 Subpart J and KDB 447498 D01.

Applications for equipment authorization of portable and mobile RF sources subject to routine environmental evaluation must contain a statement confirming compliance with the limits specified in Table 7. A minimum separation distance applicable to the operating configurations and exposure conditions of the device shall be used for the evaluation. valuation of compliance with the SAR limits can be demonstrated by either laboratory measurement techniques or by computational modeling. The latter must be supported by adequate documentation showing that the numerical method as implemented in the computational software has been fully validated; in addition, the equipment under test and exposure conditions must be modeled according to protocols established by FCC-accepted numerical computation standards or available FCC procedures for the specific computational method.

Frequency Range [MHz]	Electric field strength [V/m]	Magnetic field strength [A/m]	Power density [mW/cm ²]	Averaging time [minutes]
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 - 1500	-	-	f/300	<6
1500 - 100000	-	-	5	<6
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 - 1500	-	-	f/1500	<30
1500 - 100000	-	-	1.0	<30

Table 6: Requirements – Human exposure - FCC

f=frequency

*=Plane-wave equivalent power density

According to RSS-102, the electric and magnetic field strength reference levels for devices employed by the general public (uncontrolled environment) and controlled-use devices (controlled environment) are summarized in table 5 and table 6.

Frequency Range [MHz]	Electric field strength [V/m]	Magnetic field strength [A/m]	Power density [W/m ²]	Reference period [minutes]
Limits for General Population/ Uncontrolled Exposure				
10 - 20	27.46	0.0728	2	6
20-48	58.07 / f ^{0.25}	0.1540 / f ^{0.25}	8.944 / f ^{0.5}	6
48 - 300	22.06	0.05852	1.291	6
300 - 6000	3.142 f ^{0.3417}	0.008335 f ^{0.3417}	0.02619 f ^{0.6834}	6
6000 - 15000	61.4	0.163	10	6
15000 - 150000	61.4	0.163	10	616000/ f ^{1.2}
150000 - 300000	0.158 f ^{0.5}	4.21×10 ⁻⁴ f ^{0.5}	6.67×10 ⁻⁵ f	616000/ f ^{1.2}
Limits for Occupational / Controlled Exposure				
10 - 20	61.4	0.163	10	6
20 - 48	129.8 / f ^{0.25}	0.3444 / f ^{0.25}	44.72 / f ^{0.5}	6
48 - 100	49.33	0.1309	6.455	6
100 - 6000	15.60 f ^{0.25}	0.04138 f ^{0.25}	0.6455 f ^{0.5}	6
6000 - 15000	137	0.364	50	6
15000 - 150000	137	0.364	50	616000/ f ^{1.2}
150000 - 300000	0.354 f ^{0.5}	9.40×10 ⁻⁴ f ^{0.5}	3.33×10 ⁻⁴ f	616000/ f ^{1.2}

Table 7: Requirements – Human exposure - ISED

f=frequency in MHz

3.2 TEST RESULTS

3.2.1 EMF ASSESMENT ANALYSIS

Compliance with the basic restrictions of the standard is demonstrated by establishing the boundaries or distances at which the EMF levels do not exceed the general-public limits. Therefore, respect of all recommended reference levels will ensure respect of basic restrictions.

The compliance boundaries are established by the methodologies given by the basic standard. The manufacturer must ensure that the safe boundaries are not compromised. The separation distance from the device must be maintained to a minimum distance such that the EMF levels are below the general-public limits.

3.2.2 ASSESSMENT METHOD

For mobile RF exposure

- a) H-field measurements should be taken with the probe geometric center located 20cm around the EUT and 20cm above the top surface of the master/client pair.
- b) The highest emission level was recorded and compared with limit as soon as measurement of each point (A, B, C, D, E) were completed.

For portable RF exposure

- a) The measurement probe was placed at minimum test distance which is between the edge of the charger and the geometric center of probe.
- b) The highest emission level was recorded and compared with limit as soon as measurement of each point (A, B, C, D, E, F) were completed

Frequency range (MHz)	Reference level basis	Reference level (HRL) for uncontrolled environment (ARMS/m)	Reference level (HRL) for controlled environment (ARMS/m)
0.003-10	NS	90	180
0.1-10	SAR	0.73/f	1.6/F

Table 8: Test Limits

3.2.3 MEASUREMENT SET-UP

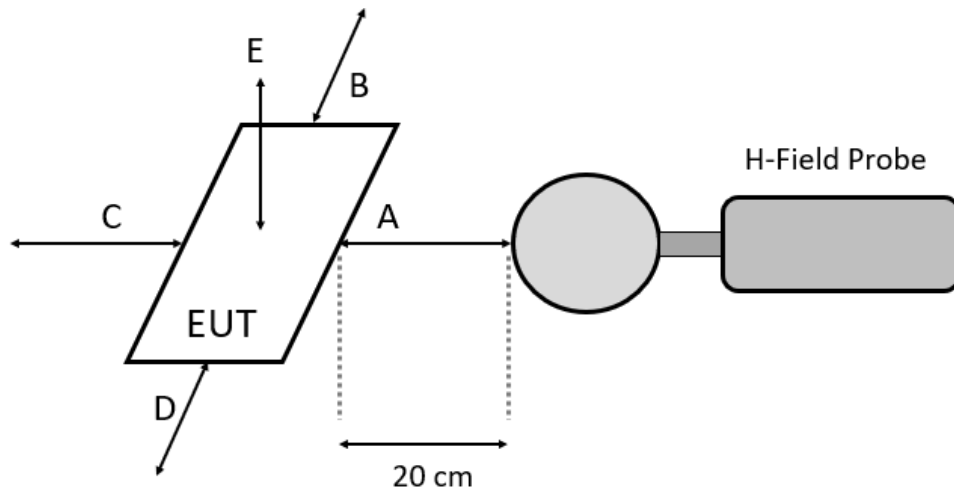


Fig. 1. Measurement Set-Up

3.2.4 TEST ENVIROMENTAL CONDITIONS

Test Date	Technician	Supervisor	Temperature [°C]	Humidity [%]	Atm. Pressure [hPa]
22/06/2026	A. Moliner	--	21.2	52.8	999.2

Table 9: Test Enviromental Conditions

3.2.5 TEST RESULTS

Measured H-Field Strength Values (A/m)							
Distance	Position A	Position B	Position C	Position D	Position E	Limit	Result
20 cm	0.169 A/m	0.155 A/m	0.163 A/m	0.160 A/m	0.175 A/m	90 A/m	PASS

Table 10: Test Results

3.2.6 TEST INSTRUMENT USED

EQUIPMENT	BRAND	MODEL	Applus Ref.	LAST CALIBRATION	NEXT CALIBRATION
RF FIELD METER	NARDA	ELT-400	1042418	28/05/2026	28/05/2027
RF FIELD PROBE	NARDA	ELT Probe 100cm2	1042419	28/05/2026	28/05/2027

Table 11: Test Instruments Used