



CONFORMANCE TEST REPORT FOR IEC/EN 62040-2

Report No.: 22-06-RBP-083-01

Client : American Power Conversion Holdings Inc., Taiwan Branch
Product : Uninterruptible Power System
Model No. : SRTL3KRM1UWC, SRTL3KRM1UWNC
Series Model : SRTL3KRM1UaXXXXXXXXX (a=IC or INC or WC or WNC
X= 0~9, A~Z, "-" or nil for marketing purpose),
SRTL2K2RM1UaXXXXXXXXX(a=IC or INC or WC or WNC
X= 0~9, A~Z, "-" or nil for marketing purpose)

Date test item received : 2022/06/21

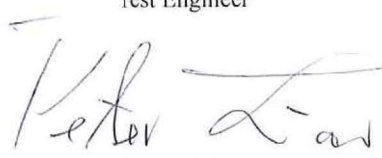
Date test campaign completed : 2022/12/15

Date of issue : 2023/03/02

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Total number of pages of this test data: 119 pages

Total number of pages of this test annex: 21 pages

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1 TEST REPORT CERTIFICATION

Client	: American Power Conversion Holdings Inc., Taiwan Branch	
Address	: 5F., No.189, Sec. 2, Jiuzong Rd., Neihu District, Taipei City 11494, Taiwan	
EUT	: Uninterruptible Power System	
Trade Name	: APC by Schneider Electric	
Model No.	: SRTL3KRM1UWC,SRTL3KRM1UWNC	
Series Model	: SRTL3KRM1UaXXXXXXXXXX (a=IC or INC or WC or WNC X= 0~9, A~Z, “-“ or nil for marketing purpose), SRTL2K2RM1UaXXXXXXXXXX(a=IC or INC or WC or WNC X= 0~9, A~Z, “-“ or nil for marketing purpose)	
Test Standard	: Emissions EN 62040-2:2018 IEC 62040-2:2016 BS IEC EN 62040-2:2018 IEC 61000-3-2:2018	Immunity IEC 61000-4-2:2008 IEC 61000-4-3:2006/A1:2007/A2:2010 IEC 61000-4-4:2012 IEC 61000-4-5:2014+A1:2017 IEC 61000-4-6:2013 IEC 61000-4-8:2009 IEC 61000-2-2:2002+A1:2017+A2:2018
Note	: Test standard version according to customer requirements.	
Category	: C2 UPS	
Note	: First environment	

The testing described in this report has been carried out to the best of our knowledge and ability, and our responsibility is limited to the exercise of reasonable care. This certification is not intended to believe the sellers from their legal and/or contractual obligations.

2 GENERAL INFORMATIONS

2.1 Description of EUT

Uninterruptible Power System

2.2 Related Information of EUT

Power Supply : 208Vac/ 220Vac/ 230Vac/ 240Vac, 50/60Hz, 10.58A/2200W,
14.43A/3000W

Test Power Voltage : 220Vac/50Hz , 230Vac/50Hz, 240Vac/50Hz

Highest working : 400 MHz

Power Line : ☒ Nonshielded ☐ Shielded ☐ None , length: 2.5 m

Signal Line : ☐ Nonshielded ☐ Shielded ☐ None , length: _____ m

Control Line : ☐ Nonshielded ☐ Shielded ☐ None , length: _____ m

Data Line : ☐ Nonshielded ☐ Shielded ☐ None , length: _____ m

* For more detailed features, please refer to User's Manual.

2.3 Tested Configuration

The EUT connected with the following peripheral devices.

Following peripheral devices and interface cables were connected during the measurement:

Device	Manufacture	Model	Description
Uninterruptible Power System(UPS) *	American Power Conversion Holdings Inc., Taiwan Branch	SRTL3KRM1UW C,SRTL3KRM1U WNC	2.5m AC Power Line
Battery module	American Power Conversion Holdings Inc., Taiwan Branch	APCRBC173-LI	--
Load	--	--	--

Remark “*” means equipment under test

2.4 Deviation Record

(If any deviation from additions to or exclusions from test method must be stated)

N/A

2.5 Modification Record

No modifications were required. (That is the EUT complied with the requirement as tested.)

2.6 Measurement Uncertainty

Electromagnetic Interference		
Measurement	Frequency	Uncertainty
Conducted emissions	9kHz ~ 30MHz	±2.27dB(Mains)(LISN)
Conducted emission at telecommunication ports		±2.26dB(Voltage)(T2/T4/CAT 6)
		±2.38dB(Current)
Radiated emissions	30MHz ~ 1GHz	±4.12dB(30MHz ≤ f ≤ 300MHz)
		±4.36dB(300MHz < f ≤ 1GHz)
Harmonics Current Emissions	---	±1.283%(V) 、1.496%(A)
Voltage Fluctuations and Flicker	---	±1.283%(V) 、1.496%(A)
Electromagnetic Susceptibility		
Measurement	Item	Uncertainty
Electrostatic Discharges (ESD)	---	±0.22(A) 、58.67(V)
Radiated RF electromagnetic Fields	---	±1.2(dBμV)
Electrical Fast Transients and bursts	---	±2.95(V)
Surges	---	±2.95(V)
Conducted Disturbances, induced by RF fields	---	±2.5(dB)
Power-frequency Magnetic Field	---	±2.98(dB)
Voltage Dips, Interruptions, and variations	---	±4.18(V)

Where relevant, the above measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

The test result(s) does not consider the uncertainty of measurement when the test standard(s) and/or test method which refer by the labs has the limit or judgments for the test result(s).

3 SUMMARY OF TEST RESULTS

Emission				
Test Item	Standard	Limit	Result/Remarks	Verdict
Conducted Emissions	EN 62040-2:2016	--	Test Mode: Bat. Mode Full Load Minimum passing margin is <u>-2.05dB at 0.8992 MHz</u> Test Mode: Bypass Mode Full Load Minimum passing margin is <u>- 8.44dB at 0.8992MHz</u> Test Mode: Line Mode Full Load Minimum passing margin is <u>- 11.62 dB at 0.1796MHz</u>	Pass
Conducted Telecommunication ports	EN 62040-2:2016	--	--	N/A
Radiated Emissions 30-1000 MHz	EN 62040-2:2016	--	Test Mode: Bat. Mode Full Load Minimum passing margin is <u>-3.65dB at 93.5500 MHz</u> Test Mode: Bypass Mode Full Load Minimum passing margin is <u>- 5.11dB at 223.5300MHz</u> Test Mode: Line Mode Full Load Minimum passing margin is <u>- 4.32dB at 223.5300MHz</u>	Pass
Radiated Emissions Above 1GHz	EN 62040-2:2016	--	The highest internal frequency of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz	N/A
Harmonics Current Emissions	IEC 61000-3-2:2018	--	The harmonics current values were under the limits of the <u>class A</u> equipment	Pass

Immunity				
Test Item	Standard	Requirement	Result/Remarks	Verdict
Electrostatic Discharge Immunity	IEC 61000-4-2:2008	Criterion B	Performance Criterion A	Pass
RF Radiated Fields Immunity	IEC 61000-4-3: 2006/A1:2007/A2:2010	Criterion A	Performance Criterion A	Pass
EFT/Burst Immunity	IEC 61000-4-4:2012	Criterion B	Performance Criterion A	Pass
Surge Immunity	IEC 61000-4-5: 2014+A1:2017	Criterion B	Performance Criterion A	Pass
RF Common Mode Immunity	IEC 61000-4-6:2013	Criterion A	Performance Criterion A	Pass
Power Frequency Magnetic Field Immunity	IEC 61000-4-8:2009	Criterion A	Performance Criterion A	Pass
Low-frequency signals Immunity	IEC 61000-2-2: 2002+A1:2017+A2:2018	Criterion A	Performance Criterion A	Pass