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CE EMC Test Report



JIANGSU SAVING ELECTRONIC CO., Ltd.

Xincheng Road#256, Environment And Science Area, Yixing City, Jiangsu Province, China

Product : Single Phase Din Rail Energy Meter

Trade Name : Saving

Model No : DDSU1218-1P

Serial Model: .

Prepared By: Nowd Testing Services Co., Ltd. 5A, Building 29B, Yintian Industrial Zone, Yantian Community, Xixiang Street, Bao'an District, Shenzhen, China

> Tel : (86) 755-27830065 Fax : (86) 755-27830095

Report No. : NTS2307080E

Date of Test: July 28, 2023

Date of Rep. : August 04, 2023

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Report No.: NTS2307080E

TEST REPORT DECLARATION

Applicant	: JIANGSU SAVING ELECTRONIC CO.,Ltd.
Address	: Xincheng Road#256, Environment And Science Area, Yixing City,
40, 40.	Jiangsu Province, China
Manufacturer	: JIANGSU SAVING ELECTRONIC CO.,Ltd.
Address	: Xincheng Road#256, Environment And Science Area, Yixing City,
	Jiangsu Province, China
EUT Description	: Single Phase Din Rail Energy Meter
Trademark	: Saving
Model No.	: DDSU1218-1P
Serial Model	ON TOM ONO ON THE THOSE ONO NO
Power Supply	: Input: 220V~
Standards	: EN IEC 61000-6-1: 2019
	EN IEC 61000-6-3: 2021
10 10M	EN IEC 61000-3-2: 2019+ A1: 2021
	EN 61000-3-3: 2013+ A1: 2019+ A2: 2021

This device described above has been tested by Nowd Testing Services Co., Ltd., and the test results show that the equipment under test (EUT) is in compliance with the 2014/30/EU requirements. And it is applicable only to the tested sample identified in the report.

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5. EUT TEST PHOTO

ATTACHMENT PHOTOGRAPHS OF EUT



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Description of Test	Result
Conducted Emission	Compliant
Radiated Emission	Compliant
EN61000-3-2 Harmonic Current Emission	Compliant
EN61000-3-3 Voltage Fluctuation And Flicker	Compliant
Electrostatic Discharge Immunity (ESD) in accordance IEC 61000-4-2	Compliant
Radiated RF-Electromagnetic Field Immunity in accord with IEC 61000-4-3	Compliant
Electrical Fast Transient/Burst (EFT/B) immunity i accordance with IEC 61000-4-4	in Compliant
Surge immunity test immunity in accordance with IEC 61000-4-5	n Compliant
Immunity to conducted disturbances in accordance IEC 61000-4-6	with Compliant
Power-frequency magnetic field Immunity in accorda with IEC 61000-4-8	ance Compliant
Voltage Dips/Interruptions immunity test in accordance IEC 61000-4-11	e with Compliant

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TEST FACILITY

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Test Firm: Nowd Testing Services Co., Ltd.Address: 5A, Building 29B, Yintian Industrial Zone, Yantian Community,
Xixiang Street, Bao'an District, Shenzhen, China

MEASUREMENT UNCERTAINTY

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The reported uncertainty of measurement $\mathbf{y} \pm \mathbf{U} \cdot \mathbf{w}$ where expended uncertainty \mathbf{U} is based on a standard uncertainty multiplied by a coverage factor of $\mathbf{k=2} \cdot \mathbf{providing}$ a level of confidence of approximately **95** %.

Conducted Emission Uncertainty = ± 2.23dB

Radiated Emission Uncertainty = ± 4.26 dB



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HOWE . GENERAL INFORMATION

NOND GENERAL DESCRIPTION OF EUT

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. GE	NERAL INFORMATIO	NAT NOWD NO NO NO NO NOW NOW NO
GE	NERAL DESCRIPTION C	DF EUT
10 1	EUT Description:	Single Phase Din Rail Energy Meter
QUA	Model No.:	DDSU1218-1P
-2000	Adding Model:	- 40° all alove 20° 0 000 alo
.owo	Model Difference	On O who we are an an an
NOW NOW	Product Description	The EUT is a Single Phase Din Rail Energy Meter. Operating frequency: N/A Connecting I/O port: N/A
400 PMC	3	Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.
4040 HC	Power Source	exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical
10 000 NO	Power Source Power Rating	exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.
NO N		 exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual. AC Voltage
NAO NAO NAO NAO NAO NAO NAO NAO NAO NAO		 exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual. AC Voltage



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DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation Running mode or test configuration Running mode which possible have effect on EMI emission level. Each of these EUT operation Running mode(s) or test configuration Running mode(s) mentioned above was evaluated respectively.

Pretest Mode	Description
Mode 1	Run Mode

OWD JOND	F10%			12000	00		
		For Ra	diated Tes	t			
Final Test Mod	e		De	scription			
Mode 1	9	2	R	un Mode	60	9m	1

	For EMS Test	
Final Test Mode	Description	ND
Mode 1	Run Mode	2 20

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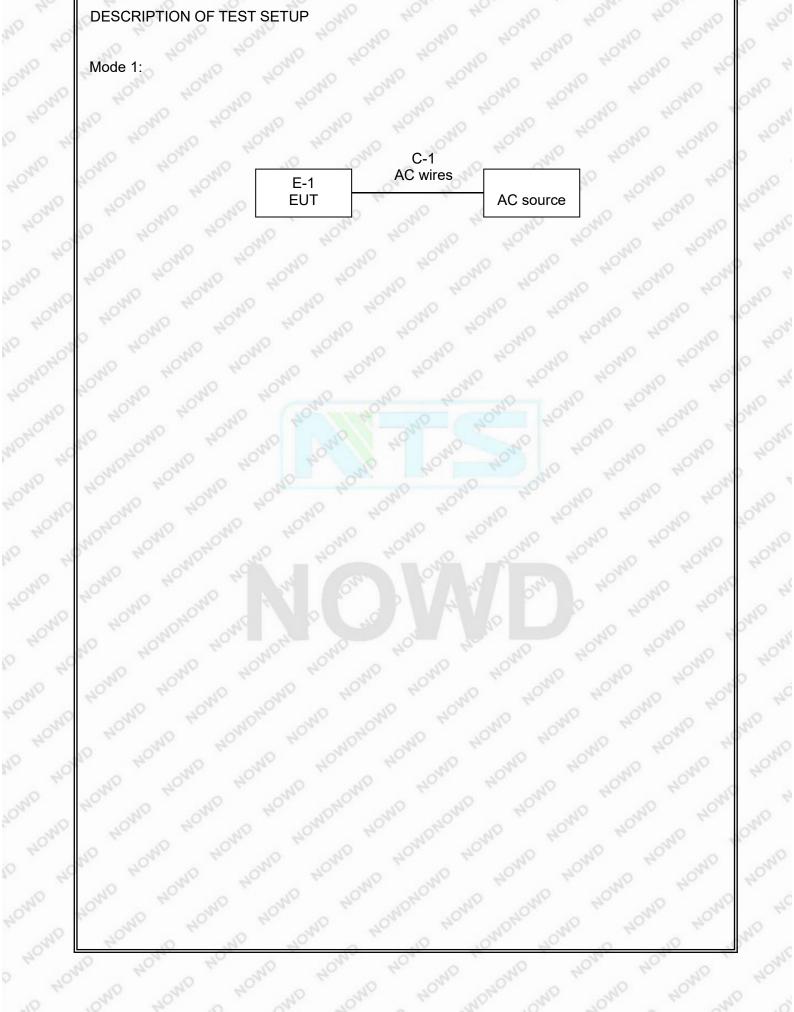
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DESCRIPTION OF TEST SETUP

Mode 1:





DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Equipment	Mfr/Brand	Model/Type No.	Series No.	Note
Single Phase Din Rail Energy Meter	Saving	DDSU1218-1P	N/A	EUT
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	Single Phase Din Rail	Single Phase Din Rail	Single Phase Din Rail Saving DDSI 1218-1P	Single Phase Din Rail

Item	Shielded Type	Ferrite Core	Length	Note
C1	No	No	1.0m	Power cord
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.0	, own with			M CHARLEN HO
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205	an choose all	0	Se 11	P P P P P
>	out you	QL 40	201	D JOINT MONT
.0	NO 104	20	04. 01	John C 10 ONL

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in $\[\]$ Length $\[\]$ column.
- (3) "YES" means "shielded" "with core"; "NO" means "unshielded" "without core".

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MEASUREMENT INSTRUMENTS LIST

CONDUCTED TEST SITE

		Page 11	of 51	Report No	D.: NTS2307080		
MEASUREMENT INSTRUMENTS LIST							
Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date		
EMI Test Receiver	Rohde & Schwarz	ESPI	101611	2023-07-17	2024-07-16		
L.I.S.N	Schwarz beck	NSLK8126	8126-224	2023-07-17	2024-07-16		
Pulse Limiter	Rohde & Schwarz	ESH3-Z2	100911	2023-07-17	2024-07-16		
AMN	EMCO	3825/2	11967C	2023-07-17	2024-07-16		
Power Divider	Weinschel	1506A	PM204	2023-07-17	2024-07-16		
Current Probe	FCC	F-33-4	091684	2023-07-17	2024-07-16		

RADIATED TEST SITE

Description	Manufacturer	Model	Serial Number	Cal. Date	Due. Date
Spectrum Analyzer	R&S	FSP	836079/035	2023-07-17	2024-07-16
EMI Test Receiver	R&S	ESVB	825471/005	2023-07-17	2024-07-16
Positioning Controller	C&C	CC-C-1F	N/A	2023-07-17	2024-07-16
RF Switch	EM	EMSW18	SW060023	2023-07-17	2024-07-16
Pre-amplifier	Agilent	8447F	3113A06717	2023-07-17	2024-07-16
Pre-amplifier	Compliance Direction	PAP-0118	24002	2023-07-17	2024-07-16
Trilog Broadband Antenna	SCHWARZBECK	VULB9163	9163-333	2023-07-17	2024-07-16
Horn Antenna	ETS	3117	00086197	2023-07-17	2024-07-16

HARMONICS AND FILCK

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1	Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
	01 ¹ 2	Harmonic & Flicker	EM TEST	DPA500	0303-04	June 16, 2024
1	2	AC Power Source	EM TEST	ACS500	0203-01	June 16, 2024

ESD

Item Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1 ESD TEST GENERATOR	SCHAFFNER	NSG438	859	June 16, 2024
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Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
4	Signal Generator	R&S	SMT 06	832080/007	July 16, 2024
2	Log-Bicon Antenna	Schwarzbeck	VULB9161	4022	July 16, 2024
3	Power Amplifier	AR	150W1000M1	320946	July 16, 2024
4	Microwave Horn Antenna	AR	AT4002A	321467	July 16, 2024
5	Power Amplifier	AR	25S1G4A	308598	July 16, 2024

SUR	GE, EFT/BURST, VO	LTAGE INTERRUP	TION/DIPS	10 40.	Mr. Mr
Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Surge Generator	EVERFINE	EMS61000-5 A	1101002	July 16, 2024
2	DIPS Generator	EVERFINE	EMS61000-1 1K	1011002	July 16, 2024
10	EFT/B Generator	EVERFINE	EMS61000-4 A-V2	1012005	July 16, 2024

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated un
1	Signal Generator	IFR	2023A	202301/368	July 16, 202
2	Power Amplifier	AR	75A250AM1	0320709	July 16, 202
3	CDN	FCC	FCC-801-M2	06043	July 16, 2024
4	EM Clamp	FCC	F-203I-23MM	504	July 16, 202
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5					120.
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. EMC EMISSION TEST

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CONDUCTED EMISSION MEASUREMENT

(Frequency Range 150KHz-30MHz)

POWER LINE CONDUC	TED EMISSION	(Frequen	cy Range 150KHz-	30MHz)
	Class A	(dBuV)	Class B (dBuV)	
FREQUENCY (MHz)	Quasi-peak	Average	Quasi-peak	Average
0.15 -0.5	79.00	66.00	66 - 56 *	56 - 46 *
0.50 -5.0	73.00	60.00	56.00	46.00
5.0 -30.0	73.00	60.00	60.00	50.00

NOND Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz
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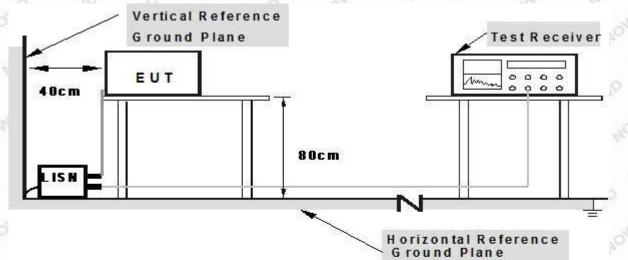


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TEST PROCEDURE

- a. The EUT was placed 0.4 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

TEST SETUP



Note: 1.Support units were connected to second LISN. 2.Both of LISNs (ANN) are 80 cm from EUT and at least 80 from other units and other metal planes

EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.



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TEST RESULTS

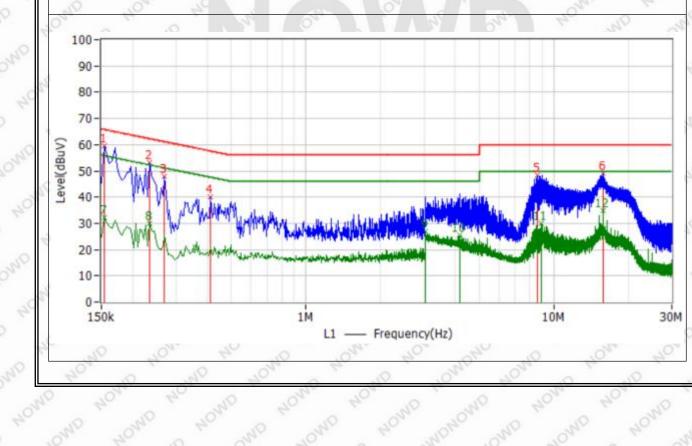
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	°0, 0, 4		
EUT :	Single Phase Din Rail Energy Meter	Model Name. :	DDSU1218-1P
Temperature :	22 ℃	Relative Humidity :	52%
Pressure :	1010hPa	Test Date :	2023-08-04
Test Mode:	Mode 1	Phase :	10 40 4
Test Voltage :	220V~	404 . 10 F	JONNO NOW N

	40. 40	10 10 ¹	20.	0 0	200 -1	011	
No.	Froquency	Limit	Level	Delta	Factor	Detector	Polar
NO.	Frequency	dBuV	dBuV	dB	dB	Delector	Pulai
1*	154.000 kHz	65.8	59.7	-6.1	9.7	PK	L1
2*	234.000 kHz	62.3	53.3	-9.0	9.7	PK	L1
3*	270.000 kHz	61.1	47.9	-13.2	9.7	PK	L1
4*	414.000 kHz	57.6	40.1	-17.5	9.8	PK	L1
5*	8.638 MHz	60.0	48.3	-11.7	10.1	PK	L1
6*	15.882 MHz	60.0	49.2	-10.8	10.1	PK	L1
7*	154.000 kHz	55.8	32.3	-23.5	9.7	AV	L1
8*	234.000 kHz	52.3	30.1	-22.2	9.7	AV	L1
9*	3.046 MHz	46.0	27.1	-18.9	9.9	AV	L1
10*	4.186 MHz	46.0	25.3	-20.7	9.9	AV	L1
11*	8.954 MHz	50.0	30.0	-20.0	10.1	AV	L1
12*	15.882 MHz	50.0	34.7	-15.3	10.1	AV	L1
0	-	-1-	1	- 109 -	100		10

Remark:

Factor = Antenna Factor + Cable Loss.





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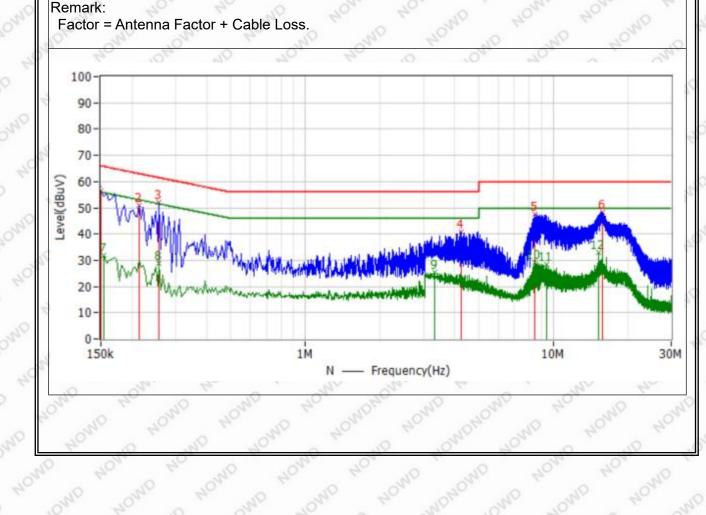
NOND Report No.: NTS2307080E

EUT :	Single Phase Din Rail Energy Meter	Model Name. :	ZXQT-K1-2BBS-1
Temperature :	22 ℃	Relative Humidity :	52%
Pressure :	1010hPa	Test Date :	2023-08-04
Test Mode:	Mode 1	Phase :	N NOW IO NO
Test Voltage :	220V~	40, 40	WD HONE HOR

No.	Frequency	Limit	Level	Delta	Factor	Detector	Polar
1*	150.000 kHz	dBuV 66.0	dBuV 56.7	dB -9,3	dB 9.7	PK	N
2*	214.000 kHz	63.0	50.9	-12.2	9.7	PK	N
3*	258.000 kHz	61.5	52.0	-9.5	9.7	PK	N
4*	4.246 MHz	56.0	40.9	-15.1	9.9	PK	N
5*	8.478 MHz	60.0	47.6	-12.4	9.9	PK	N
6*	15.810 MHz	60.0	48.4	-11.6	10.0	PK	N
7*	154.000 kHz	55.8	31.7	-24.0	9.7	AV	Ν
8*	258.000 kHz	51.5	28.8	-22.7	9.7	AV	N
9*	3.346 MHz	46.0	25.4	-20.6	9.9	AV	Ν
10*	8.414 MHz	50.0	29.3	-20.7	9.9	AV	N
11*	9.410 MHz	50.0	28.5	-21.5	10.0	AV	N
12*	15.286 MHz	50.0	33.1	-16.9	10.0	AV	N

Remark:

Factor = Antenna Factor + Cable Loss.



RADIATED EMISSION MEASUREMENT

LIMITS OF RADIATED EMISSION MEASUREMENT

(Below 1000MHz)

	Class A		Class B	
FREQUENCY (MHz)	FREQUENCY (MHz) At 10m		At 10m A	
	dBuV/m	dBuV/m	dBuV/m	dBuV/m
30 – 230	40	50	-30	40
230 – 1000	47	57	37	47

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

	Class A (at 3	3m) dBuV/m	Class B (at 3m) dBuV/m		
FREQUENCY (MHz)	Peak	Avg	Peak	Avg	
1000-3000	76	56	70	50	
3000-6000	80	60	74	54	

Notes:

- The limit for radiated test was performed according to as following: CISPR 22.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

TEST PROCEDURE

- a. The measuring distance of at 10 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured, above 1G Average detector mode will be instead.
- e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP(AV) Limits and then no additional QP Mode measurement performed.
- f. For the actual test configuration, please refer to the related Item -EUT Test Photos.

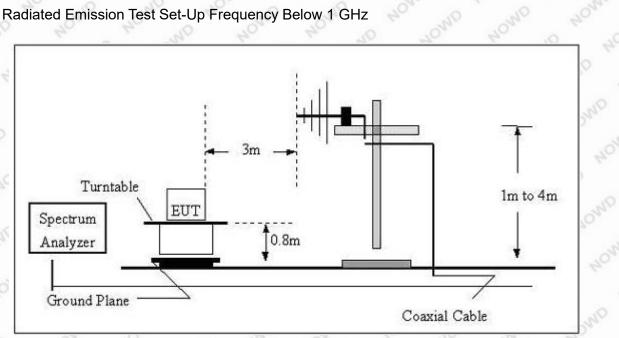


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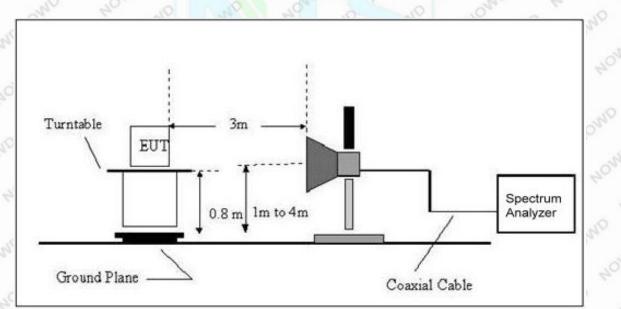
NOND

TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(B) Radiated Emission Test Set-Up Frequency Above 1GHz



EUT OPERATING CONDITIONS

NOND

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

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TEST RESULTS

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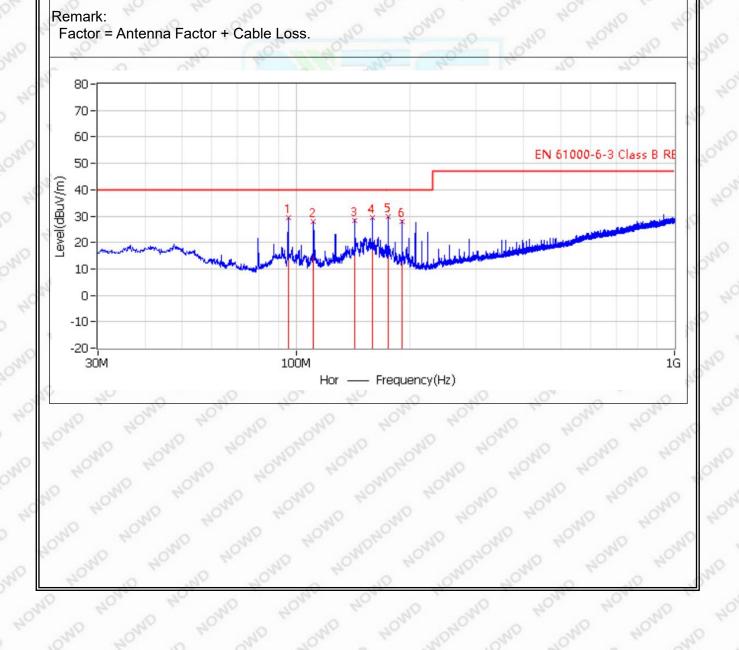
EUT :	Single Phase Din Rail Energy Meter	Model Name. :	DDSU1218-1P
Temperature :	23.2 ℃	Relative Humidity :	52%
Pressure :	1010 hPa	Test Date :	2023-08-04
Test Mode :	Mode 1	Polarization :	Horizontal
Test Power :	220V~	a an a	Mar 10 10

No.		Limit	Level	Delta	Factor	Detector	Polar	Height	Angle
	Frequency	dBuV/m	dBuV/m	dB	dB/m	Detector	roidi	cm	deg
1*	95.354 MHz	40.0	<mark>29.6</mark>	-10.4	10.5	PK	Hor	200.0	141.0
2*	111.237 MHz	40.0	28.0	-12.0	11.8	PK	Hor	200.0	134.0
3*	143.126 MHz	40.0	28.5	-11.5	14.0	PK	Hor	200.0	30.0
4*	159.131 MHz	40.0	29.3	-10.7	14.6	PK	Hor	200.0	319.0
5*	175.015 MHz	40.0	29.8	-10.2	13.6	PK	Hor	200.0	315.0
6*	191.020 MHz	40.0	28.1	-11.9	11.6	PK	Hor	200.0	298.0

Remark:

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Factor = Antenna Factor + Cable Loss.





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NOND Report No.: NTS2307080E

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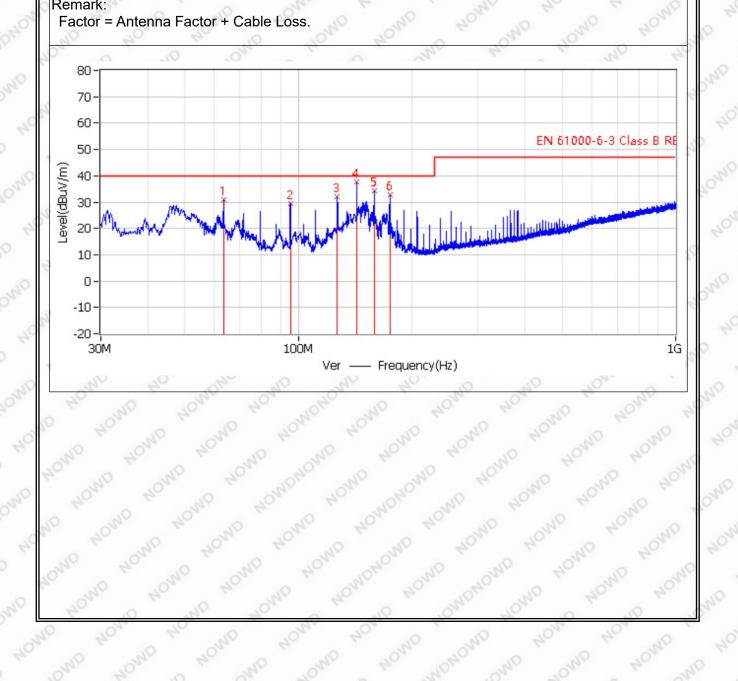
EUT :	Single Phase Din Rail Energy Meter	Model Name. :	DDSU1218-1P
Temperature :	23.2 ℃	Relative Humidity :	52%
Pressure :	1010 hPa	Test Date :	2023-08-04
Test Mode :	Mode 1	Polarization :	Vertical
Test Power :	220V~	Who who	WO GWD OWO

			67				100		
No.	Frequency	Limit	Level	Delta	Factor	Detector	Polar	Height	Angle
NO.	Frequency	dBuV/m	dBuV/m	dB	dB/m	Delector	FUIdi	cm	deg
1*	63.465 MHz	40.0	31.1	-8.9	13.2	PK	Ver	100.0	225.0
2*	95.354 MHz	40.0	29.6	-10.4	10.5	PK	Ver	100.0	234.0
3*	127.121 MHz	40.0	32.1	-7.9	13.1	PK	Ver	100.0	260.0
4*	143.005 MHz	40.0	37.8	-2.2	14.0	PK	Ver	100.0	313.0
5*	158.889 MHz	40.0	34.2	-5.8	14.6	PK	Ver	100.0	332.0
6*	174.773 MHz	40.0	32.9	-7.1	13.6	PK	Ver	100.0	332.0
100		17 C		~ ~ (a	110	19-20		000	AVV.

Remark:

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Factor = Antenna Factor + Cable Loss.





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TEST RESULTS (1000~6000MHz)

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TEST RESULT	S (1000~6000MHz)	ADAN HOME OND	P HOWE HOWE OND
EUT :	Single Phase Din Rail Energy Meter	Model Name. :	DDSU1218-1P
Temperature :	23.2 ℃	Relative Humidity :	52%
Pressure :	1010 hPa	Test Date :	N/A
Test Mode :	N/A + O	Polarization :	N/A
Test Power :	N/A	0 m 0m 20	2 0 . O

Remark:

nome nome nome The oscillation frequency of the product is lower than 108MHz, it does not apply Momono Nomo Nomo Nomo Nomo NONO NOND NON NOWD NOWD NOWD

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HARMONICS CURRENT

NOND LIMITS OF HARMONICS CURRENT

		0	Page 22 d	51 51		Report No.: NTS230
HARMO	ONICS CUP	RENT	404	101110 HO	1 ¹⁰ 1	JOND NOV
			NON NO		40°N	
LIMITS	OF HARM	ONICS CUP	RENT			
	10 OH	N 40	WD WND	40°	NO	NO NOL
~ ~			IEC 5	55-2		
~ [Table -	1	Table - II		
SO E	Equipment	Harmonic	Max. Permissible	Equipment	Harmonic	Max. Permissible
22-	Category	Order	Harmonic Current	Category	Order	Harmonic Current
0		n	(in Ampers)		n	(in Ampers)
		Odd	Harmonics		Odd	Harmonics
		3	2.30		3	0.80
90.		5	1.14		5	0.60
0		7	0.77		7	0.45
	Non Portable	9 11	0.40 0.33	TV Receivers	9 11	0.30 0.17
201	Tools	13	0.33	Receivers	13	0.12
1	or	15≤n≤39	0.15 · 15/n		15≤n≤39	0.10 · 15/n
	TV		Harmonics	-		Harmonics
20	Receivers	2	1.08	1 1	2	0.30
		4	0.43		4	0.15
2.7			w. 10			0.10
		8	0.30			

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40	an		EN 6	1000-3-2/IEC	61000-3-2			5	
OWD	420°	Equipment	Max. Permissible	Equipment	Harmonic	Max. Perr	nissible	1050	
an an	and and	Category	Harmonic Current	Category	Order	Harmonic	Current		OWN
410°	NON		(in Ampers)		n	(in A)	(mA/w)		9
4 94	24-	3			3	2.30	3.4	ON	2015
olo.	an	Class A	Same as Limits Specified in	Class D	5 7	1.14 0.77	1.9 1.0	2.	
2010	40	Class A	4-2.1, Table - I,	Class D	9	0.40	0.5	10%	42
on o	20		but only odd		11	0.33	0.35		and
40%	.0		harmonics required		13≤n≤39	see Table I	3.85/n	4	in the
0 0	24.				only o	dd harmonics re	equired	JUP .	40.
0	and		40 6		ly. 27.			20	0
OWL	120					40 4		20°	120
14 MO	.01			ONL	the shi	owp	40.		an
40	2 6	OWD	40° 40	on no	40.		04	1º	0
Nº .0	20	96 94	2410 HO'	40		NO 40°			2050
12	an		4 ²⁰ ND	4 04	0, 40		105° 2	0°	
anno	120-		10 20° m			20 ⁰¹ .0		1050	2 4
que de		2. 40.	NO OWL	201		ON			ann
200	0			0 .0%				× •	·
0 .0	22-		own you	4		own you	12	ano	OW
0 6	QL	JOW	120 10		ly. 4			440	42
.ONL	202	2 2	NO OW			10 Min 14		an	120
0, 4	.0	hr 40	O CUNO	140'	Mr. Mr		120.	42	NO
2020	4	Q	Jes May	0	101	20 . A	o al	2	· ·
0 0		120.	M 200 200	140		NO 40°	120	NO	
40			0, 04		ON ONO		NP -		
QL	0	14	0 00 2	0	-We	.0°		No.	



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TEST PROCEDURE

a. The EUT was placed on the top of a wooden table 0.8 meters above the ground and operated to produce the maximum harmonic components under normal operating conditions.

b. The classification of EUT is according to section 5 of EN 61000-3-2. The EUT is classified as follows:

Class A: Balanced three-phase equipment, Household appliances excluding equipment as Class D, Tools excluding portable tools, Dimmers for incandescent lamps, audio equipment, equipment not specified in one of the three other classes.

Class B: Portable tools. Portable tools.; Arc welding equipment which is not professional equipment.

Class C: Lighting equipment.

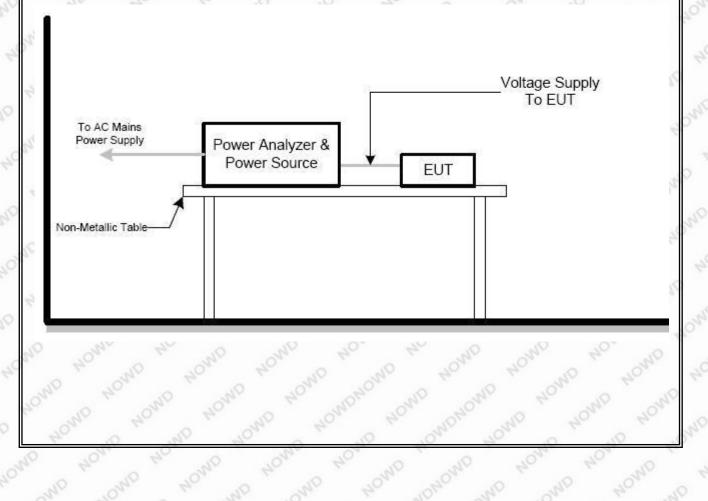
Class D: Equipment having a specified power less than or equal to600 W of the following types: Personal computers and personal computer monitors and television receivers.

c. The correspondent test program of test instrument to measure the current harmonics emanated from EUT is chosen. The measure time shall be not less than the time necessary for the EUT to be exercised.

EUT OPERATING CONDITIONS

TEST SETUP

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.





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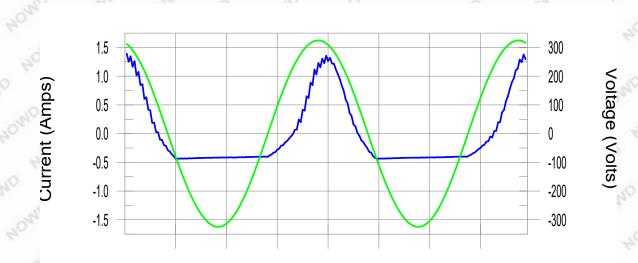
Report No.: NTS2307080E

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TEST RESULTS

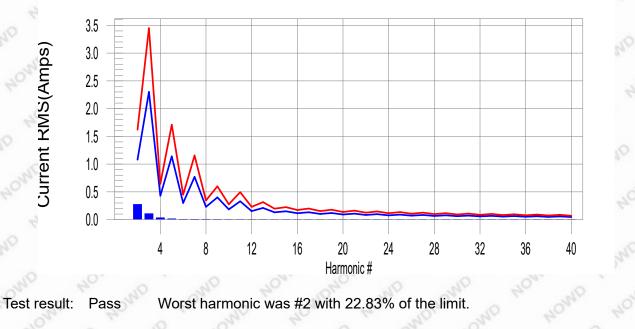
EUT :	Single Phase Din Rail Energy Meter	Model Name. :	DDSU1218-1P
Temperature :	23.2 ℃	Relative Humidity :	52%
Pressure :	1010 hPa	Test Date :	2023-08-04
Test Mode :	Model 1	10m 100	10 10 10m 20m
Test Power :	220V~	in an a	Na. 10 - 10

Current & voltage waveforms



Harmonics and Class A limit line European Limits

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VOLTAGE FLUCTUATION AND FLICKERS

LIMITS OF VOLTAGE FLUCTUATION AND FLICKERS

Tests	Li	mits	Descriptions
Tests	IEC555-3	IEC/EN 61000-3-3	Descriptions
Pst	≤ 1.0, Tp= 10 min.	≤ 1.0, Tp= 10 min.	Short Term Flicker Indicator
Plt	N/A	≤ 0.65, Tp=2 hr.	Long Term Flicker Indicator
dc	≤ 3 %	≤ 3.3 %	Relative Steady-State V-Chang
dmax	≤ 4 %	≤ 4%	Maximum Relative V-change
d (t)	N/A	\leq 3.3% for $>$ 500 ms	Relative V-change characteristic

TEST PROCEDURE

a. Harmonic Current Test:

Test was performed according to the procedures specified in Clause 5.0 of IEC555-2 and/or Sub-clause 6.2 of IEC/EN 61000-3-2 depend on which standard adopted for compliance measurement.

b. Fluctuation and Flickers Test:

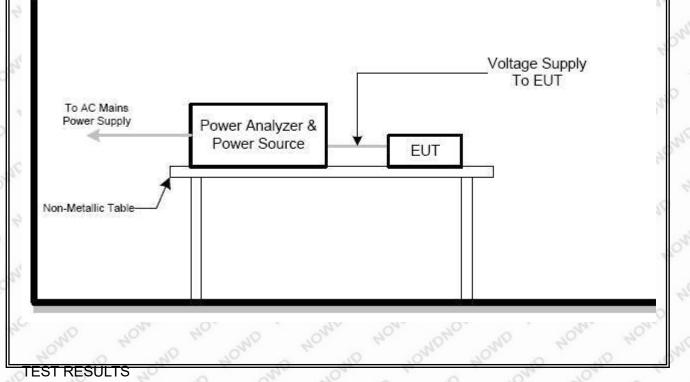
Tests was performed according to the Test Conditions/Assessment of Voltage Fluctuations specified in Clause 5.0/6.0 of IEC555-3 and/or Clause 6.0/4.0 of IEC/EN 61000-3-3 depend on which standard adopted for compliance measurement.

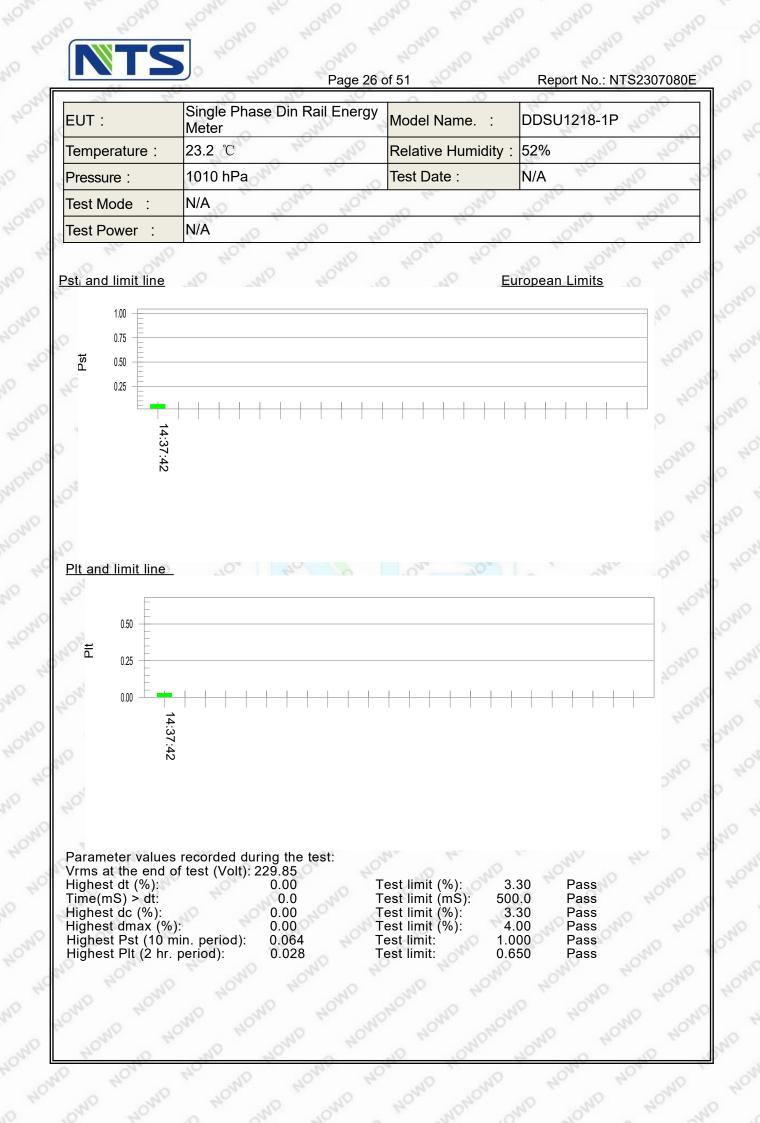
c. All types of harmonic current and/or voltage fluctuation in this report are assessed by direct measurement using flicker-meter.

EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.

TEST SETUP





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. EMC IMMUNITY TEST

Tests Standard No.	TEST SPECIFICATION	Test Mode Test Ports	Perform. Criteria
1. ESD IEC/EN 61000-4-2	8KV air discharge 4KV contact discharge	Direct Mode	В
	4KV HCP discharge 4KV VCP discharge	Indirect Mode	Во
2. RS IEC/EN 61000-4-3	80 MHz to 1000 MHz, 1000Hz, 80%, AM modulated	Enclosure	A A CO
3. EFT/Burst	5/50ns Tr/Th 5KHz Repetition Freq.	Power Supply Port	NOWB
IEC/EN 61000-4-4	5/50ns Tr/Th 5KHz Repetition Freq.	CTL/Signal Data Line Port	ND B NON
4. Surges	1.2/50(8/20) Tr/Th us	L-NNO	OWOB .
IEC/EN 61000-4-5	1.2/50(8/20) Tr/Th us	L-PE N-PE	B
5 Injected Current IEC/EN 61000-4-6	0.15 MHz to 80 MHz, 1000Hz 80 %, AM Modulated 150Ω source impedance	CTL/Signal Port	NON A NO
	0.15 MHz to 80 MHz, 1000Hz 80 % , AM Modulated	AC Power Port	A A A A A A A A A A A A A A A A A A A
	150Ω source impedance 0.15 MHz to 80 MHz, 1000Hz 80 %, AM Modulated 150Ω source impedance	DC Power Port	And
6. Power Frequency Magnetic Field IEC/EN 61000-4-8	50 Hz,	Enclosure	A
7. Volt. Interruptions Volt. Dips IEC/EN 61000-4-11	Voltage dip 100% Voltage dip 30% Interruption 100%	AC Power Port	B C C
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GENERAL PERFORMANCE CRITERIA

According to EN 61000-6-1 standard, the general performance criteria as following:

~ ~	
Criterion A	The equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed below a performance level specified by the manufacturer when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. If the minimum performance level or the permissible performance loss is not specified by the manufacturer, then either of these may be derived from the product description and documentation, and by what the user may reasonably expect from the equipment if used as intended.
Criterion B	After the test, the equipment shall continue to operate as intended without operator intervention. No degradation of performance or loss of function is allowed, after the application of the phenomena below a performance level specified by the manufacturer, when the equipment is used as intended. The performance level may be replaced by a permissible loss of performance. During the test, degradation of performance is allowed. However, no change of operating state or stored data is allowed to persist after the test.
Criterion C	Loss of function is allowed, provided the function is self-recoverable, or can be restored by the operation of the controls by the user in accordance with the manufacturer's instructions. Functions, and/or information stored in non-volatile memory, or protected by a battery backup, shall not be lost.

GENERAL PERFORMANCE CRITERIA TEST SETUP

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The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.



ESD TESTING

TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-2
Discharge Impedance:	330 ohm / 150 pF
Required Performance	B NOW O ON NOW
Discharge Voltage:	Air Discharge : 2kV/4kV/8kV (Direct)
	Contact Discharge : 2kV/4kV (Direct/Indirect)
Polarity:	Positive & Negative
Number of Discharge:	Air Discharge: min. 20 times at each test point Contact Discharge: min. 200 times in total
Discharge Mode:	Single Discharge
Discharge Period:	1 second minimum

TEST PROCEDURE

The test generator necessary to perform direct and indirect application of discharges to the EUT in the following manner:

a. Contact discharge was applied to conductive surfaces and coupling planes of the EUT. During the test, it was performed with single discharges. For the single discharge time between successive single discharges was at least 1 second. The EUT shall be exposed to at least 200 discharges, 100 each at negative and positive polarity, at a minimum of four test points. One of the test points shall be subjected to at least 50 indirect discharges to the center of the front edge of the horizontal coupling plane. The remaining three test points shall each receive at least 50 direct contact discharges.

If no direct contact test points are available, then at least 200 indirect discharges shall be applied in the indirect mode. Test shall be performed at a maximum repetition rate of one discharge per second.

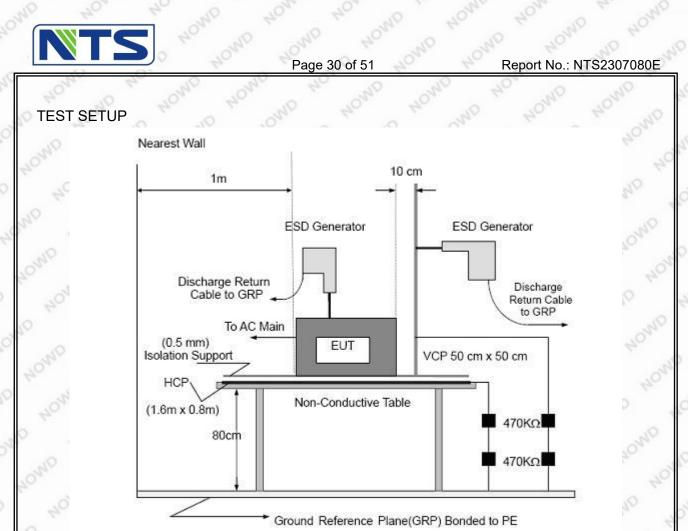
Vertical Coupling Plane (VCP):

The coupling plane, of dimensions 0.5m x 0.5m, is placed parallel to, and positioned at a distance 0.1m from, the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge. Horizontal Coupling Plane (HCP):

The coupling plane is placed under to the EUT. The generator shall be positioned vertically at a distance of 0.1m from the EUT, with the Discharge Electrode touching the coupling plane. The four faces of the EUT will be performed with electrostatic discharge.

b. Air discharges at insulation surfaces of the EUT.

It was at least ten single discharges with positive and negative at the same selected point.



Note:

TABLE-TOP EQUIPMENT

The configuration consisted of a wooden table 0.8 meters high standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum at least 0.25mm thick, and 2.5 meters square connected to the protective grounding system. A Horizontal Coupling Plane (1.6m x 0.8m) was placed on the table and attached to the GRP by means of a cable with 940k total impedance. The equipment under test, was installed in a representative system as described in section 7 of IEC /EN 61000-4-2, and its cables were placed on the HCP and isolated by an insulating support of 0.5mm thickness. A distance of1-meter minimum was provided between the EUT and the walls of the laboratory and any other metallic structure.

FLOOR-STANDING EQUIPMENT

The equipment under test was installed in a representative system as described in section 7 of IEC/EN 61000-4-2, and its cables were isolated from the Ground Reference Plane by an insulating support of0.1-meter thickness. The GRP consisted of a sheet of aluminum that is at least 0.25mm thick, and 2.5meters square connected to the protective grounding system and extended at least 0.5 meters from the EUT on all sides.



TEST RESULTS

EUT :	Single Phase Din Rail Energy Meter	Model Name. :	DDSU1218-1P
Temperature :	23.5 ℃	Relative Humidity :	45%
Pressure :	1010 hPa	Test Date :	2023-08-04
Test Mode :	Mode 1	40m 40.	NO NOW MOR
Test Power :	220V~	24 and	N 0 0 0

Mode			Air	[.] Dis	cha	rge				Contact Discharge								
Test level (kV)	2	1	8	8	1	0	1	5		2		4	(5		8	Criterion	Result
Test Location	+	-	+	-	+	-	+	-	+	-	+	-	+	-	+	-		
HCP		20	-	- 0	20		0		Α	А	Α	Α		.0		-	244 20	PASS
VCP	20		and and	0		20		50	A	Α	A	Α	20	2.0	.0		04	PASS
Slot	А	А	А	В	0		2º			20	- 0	0		2	200		40 ⁴⁰ .0	PASS
Panel	А	Α	Α	В		20		-S	0		20		0			0	10001	PASS
Metal Part		2	8	1	40			1	Α	Α	Α	Α	2		20		B	PASS
Display	А	Α	Α	В		6st	~		20		20		3	0		20	.10	PASS
who' on	2		20			-	3	0		420			200		0		2010	40
40 14	õ.	20		os		_	20	-	ND		.03	9		10		NO	ano	400

Note:

1) +/- denotes the Positive/Negative polarity of the output voltage.

2) Test condition:

Direct / Indirect (HCP/VCP) discharges: Minimum 50 times (Positive/Negative) at each point. Air discharges: Minimum 10 times (Positive/Negative) at each point.

3) Test location(s) in which discharge (Air and contact discharge) to be applied illustrated by photos shown in next page(s)

4) The Indirect (HCP/VCP) discharges description of test point as following:1.left side 2.right side 3.front side 4.rear side

5) N/A - denotes test is not applicable in this test report



RS TESTING

TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-3					
Required Performance	A					
Frequency Range:	80 MHz - 1000 MHz					
Field Strength:	3 V/m					
Modulation:	1kHz Sine Wave, 80%, AM Modulation					
Frequency Step:	1 % of fundamental					
Polarity of Antenna:	Horizontal and Vertical					
Test Distance:	3 m					
Antenna Height:	1.5 m					
Dwell Time:	at least 3 seconds					

TEST PROCEDURE

The EUT and support equipment, which are placed on a table that is 0.8 meter above ground and the testing was performed in a fully-anechoic chamber.

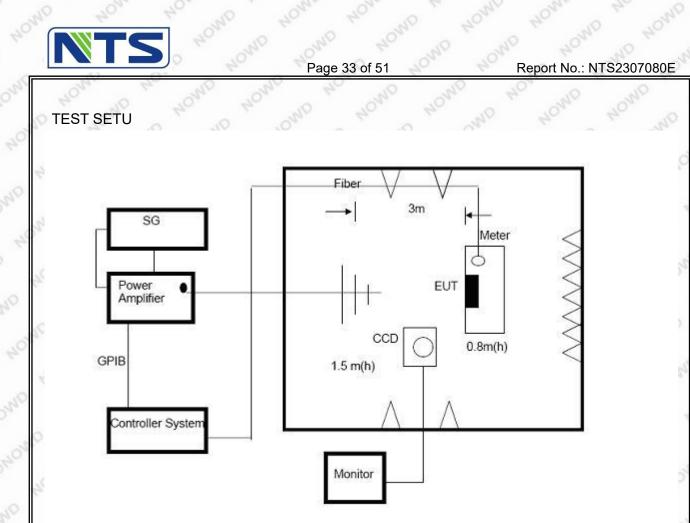
The testing distance from antenna to the EUT was 3 meters.

The other condition as following manner:

a. The frequency range is swept from 80 MHz to 1000 MHz, & 1400MHz - 2700MHz with the signal 80% amplitude modulated with a 1kHz sine wave. The rate of sweep did not exceed 1.5x 10-3 decade/s. Where the frequency range is swept incrementally, the step size was 1% of fundamental.

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- b. Sweep Frequency 900 MHz, with the Duty Cycle:1/8 and Modulation: Pulse 217 Hz(if applicable)
- c. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.
- d. The test was performed with the EUT exposed to both vertically and horizontally polarized fields on each of the four sides.



Note:

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TABLE-TOP EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive table 0.8 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-3 was placed on a non-conductive wood support 0.1 meters in height. The system under test was connected to the power and signal wire according to relevant installation instructions.

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TEST RESULTS

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EUT :	Single Phase Din Rail Energy Meter	Model Name. :	DDSU1218-1P
Temperature :	23.5 ℃	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2023-08-04
Test Mode :	Mode 1	404 40°	NO NOWL NOW
Test Power :	220V~	24 and	and and an

10	0		- 19 C	1000			
Frequency Range	RF Field	R.F.	Azimuth	Perform.	Populto	ludamont	
(MHz)	Position	Field Strength	Azimum	Criteria	Results	Judgment	
OWL HOW OND	H HOMO	NOW ND 13	Front	NOWO IL	120, 70		174
NOWL MP NO	NO NONO	3 V/m (rms)	Rear	10 HOW	OWD .		
80MHz - 1000MHz	H/V	0	WD Loff HO	A	A	PASS	
MD 40 0	NUC . OWD	1000112, 00 /0	Len	4000	40°		5
HOWN HOW	O NO LOW	D MONU	Right	JOWD	140%		
		(MHz) Position	(MHz) Position Field Strength 3 V/m (rms)	(MHz) Position Field Strength Azimuth 80MHz - 1000MHz H / V 3 V/m (rms) Rear 1000Hz, 80% Left	(MHz)PositionField StrengthAzimuthCriteria(MHz)PositionField StrengthFrontFront80MHz - 1000MHzH / V3 V/m (rms) AM Modulated 1000Hz, 80%RearA	(MHz)PositionField StrengthAzimuthCriteriaResults(MHz)PositionField StrengthFrontFrontFrontA80MHz - 1000MHzH / VAM Modulated 1000Hz, 80%RearAAA	(MHz)PositionField StrengthAzimuthCriteriaResultsJudgment(MHz)PositionField StrengthFront <td< td=""></td<>

Note:

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- 1) N/A denotes test is not applicable in this test report.
- 2) Criteria A: There was no change operated with initial operating during the test.
- 3) Criteria B: The EUT function loss during the test, but self-recoverable after the test.

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4) Criteria C: The system shut down during the test.



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EFT/BURST TESTING

TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-4
Required Performance	B
Test Voltage:	Power Line : 1 kV
	Signal/Control Line:0.5 KV
Polarity:	Positive & Negative
Impulse Frequency:	5 kHz
Impulse Wave shape :	5/50 ns
Burst Duration:	15 ms
Burst Period:	300 ms
Test Duration:	Not less than 1 min.

TEST PROCEDURE

The EUT and support equipment, are placed on a table that is 0.8 meter above a metal ground plane measured 1m*1m min. and 0.65mm thick min. The other condition as following manner:

- a. The length of power cord between the coupling device and the EUT should not exceed 1 meter.
- b. Both positive and negative polarity discharges were applied.

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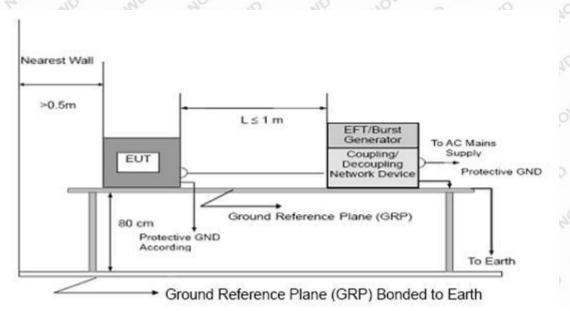
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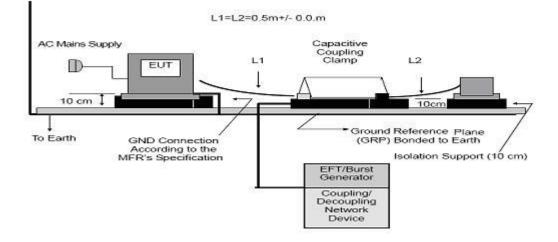
c. The duration time of each test sequential was 1 minute

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Report No.: NTS2307080E

TEST SETUP





Note:

TABLE-TOP EQUIPMENT

The configuration consisted of a wooden table (0.8m high) standing on the Ground Reference Plane. The GRP consisted of a sheet of aluminum (at least 0.25mm thick and 2.5m square) connected to the protective grounding system. A minimum distance of 0.5m was provided between the EUT and the walls of the laboratory or any other metallic structure.

FLOOR-STANDING EQUIPMENT

The EUT installed in a representative system as described in section 7 of IEC/EN 61000-4-4 and its cables, were isolated from the Ground Reference Plane by an insulating support that is 0.1-meter thick. The GRP consisted of a sheet of aluminum (at least 0.25mm thick and 2.5m square) connected to the protective grounding system.



TEST RESULTS

EUT :	Single Phase Din Rail Energy Meter	Model Name. :	DDSU1218-1P
Temperature :	23.5 ℃	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2023-08-04
Test Mode :	Mode 1	404° 40°	up work wow
Test Power :	220V~	on on a	Da all all a

-		Test level (kV)									
Col	Ipling Line	0	.5		1		2		4	Criterion	Result
		+	-	+	-	+	-	+	-		
140	anto	A	A	A	А	NOWL	205	20	12- 25	MO NC	PASS
	N OW	A	А	А	A	.034	2	201	an	owo	PASS
0	PE	A	А	A	A	2	OWD	14	.0	and and	PASS
AC line	L+N	A	А	A	A	ola.	20	2	10%	10 12	PASS
	L+PE	A	Α	A	А	0	10-	No	40	A	PASS
	N+PE	А	A	А	A	420			0	1200	PASS
2	L+N+PE	A	A	А	A	14 e	O'S'	4	own	JOND	PASS
Prio.	DC Line	ano	12	544	0	NO	205	.0	12.	0 .0	and a
Się	gnal Line	Ph.	NO.	400	2		0	2010	1200	10	Josh

Note:

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- 1) +/- denotes the Positive/Negative polarity of the output voltage.
- 2) N/A denotes test is not applicable in this test report
- 3) Criteria A: There was no change operated with initial operating during the test.
- 4) Criteria B: The EUT function loss during the test, but self-recoverable after the test.

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5) Criteria C: The system shut down during the test.

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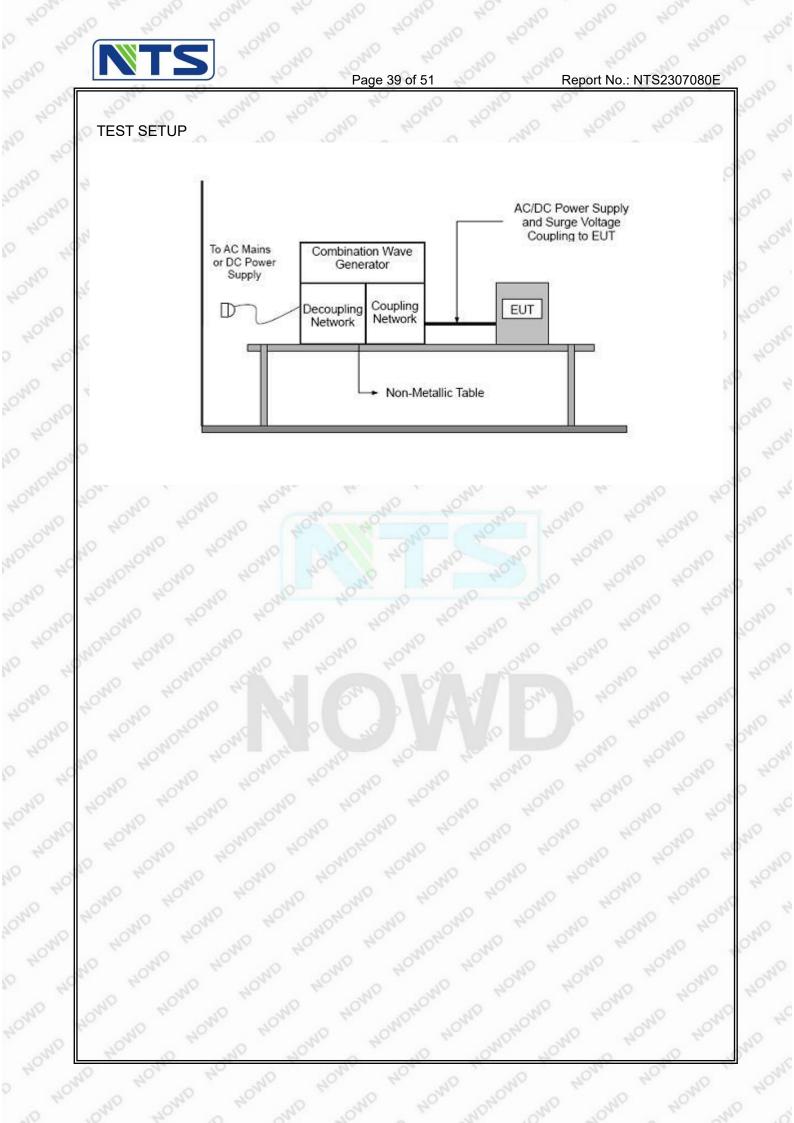
SURGE TESTING

TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-5
Required Performance	B
Wave-Shape:	Combination Wave 1.2/50 us Open Circuit Voltage 8 /20 us Short Circuit Current
Test Voltage:	Power Line: 0.5 kV, 1 kV, 2 kV
Surge Input/Output:	L-N, L-PE, N-PE
Generator Source:	2 ohm between networks
Impedance:	12 ohm between network and ground
Polarity:	Positive/Negative
Phase Angle:	0 /90/180/270°
Pulse Repetition Rate:	1 time / min. (maximum)
Number of Tests:	5 positive and 5 negative at selected points

TEST PROCEDURE

- a. For EUT power supply:
 - The surge is to be applied to the EUT power supply terminals via the capacitive coupling network. Decoupling networks are required in order to avoid possible adverse effects on equipment not under test that may be powered by the same lines, and to provide sufficient decoupling impedance to the surge wave. The power cord between the EUT and the coupling/decoupling networks shall be 2meters in length (or shorter).
- b. For test applied to unshielded unsymmetrically operated interconnection lines of EUT: The surge is applied to the lines via the capacitive coupling. The coupling /decoupling networks shall not influence the specified functional conditions of the EUT. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).
- c. For test applied to unshielded symmetrically operated interconnection /telecommunication lines of EUT:
- d. The surge is applied to the lines via gas arrestors coupling. Test levels below the ignition point of the coupling arrestor cannot be specified. The interconnection line between the EUT and the coupling/decoupling networks shall be 2 meters in length (or shorter).





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TEST RESULTS

EUT :	Single Phase Din Rail Energy Meter	Model Name. :	DDSU1218-1P
Temperature :	23.5 ℃	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2023-08-04
Test Mode :	Mode 1	40 40°	up work wow
Test Power :	220V~	on one	in an an

						Test	level					
C	oupling	Line	0.5	kV	1	kV	21	٢V	4	kV	Criterion	Result
	-		+	-	+	-	+	-	+	-		
.0	NO	0°	А	A	В	В	.0		0	JOWE	0	7 0.
1 m	L-N	90°	A	Α	В	B	0	40	20	2	one the	PASS
~	-I-IN	180°	А	Α	В	В	ano		01	NO.	ano	FA33
OWN	4	270°	А	Α	В	В	12	JUD .	120		NO. NO	2
3	D'L'AL	0°	А	A	В	B	4	-	0	OND	40.	ale.
AC		90°	Α	A	В	В	12	3			В	DASS
line	L-PE	180°	A	A	В	В	NO.	3	030-	4	OWD	PASS
10°20'	20	270°	А	A	Во	В	14	10	05	N	40	12
	ND	0°	A	A	В	В	20	4-	0 5	own	20191	2 120
,040	N-PE	90°	A	Α	Bo	В	9	20%	.0	· ·	0 0	PASS
10	N-GE	180°	A	Α	В	В	2		10m	20	0	FA35
ano	2	270°	A	А	В	В	0	35	612		NOW	20
4	DC Lin	e mo	N.			2	4			0	2000	120
	Signal Li	ine	and a					1			ND .	10

Note:

- 1) Polarity and Numbers of Impulses : 5 Pst / Ngt at each tested mode
- 2) N/A denotes test is not applicable in this Test Report
- 3) Criteria A: There was no change operated with initial operating during the test.
- 4) Criteria B: The EUT function loss during the test, but self-recoverable after the test.
- 5) Criteria C: The system shut down during the test.

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INJECTION CURRENT TESTING

TEST SPECIFICATION

Basic Standard:	IEC/EN 61000-4-6
Required Performance	A
Frequency Range:	0.15 MHz - 80 MHz
Field Strength:	3 Vr.m.s.
Modulation:	1kHz Sine Wave, 80%, AM Modulation
Frequency Step:	1 % of fundamental
Dwell Time:	at least 3 seconds

TEST PROCEDURE

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The EUT and support equipment, are placed on a table that is 0.8 meter above a metal ground plane measured 1m*1m min. and 0.65mm thick min.

The other condition as following manner:

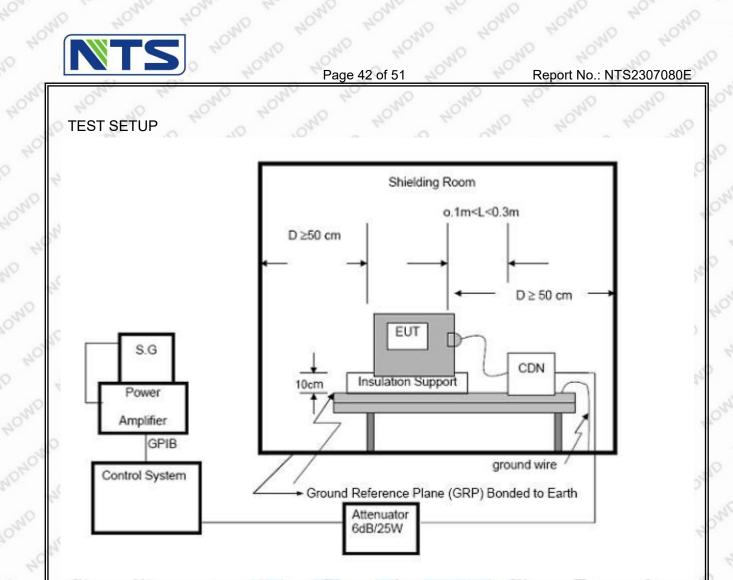
a. The frequency range is swept from 150 KHz to 80 MHz, with the signal 80% amplitude modulated with a 1kHz sine wave. The rate of sweep did not exceed 1.5x 10-3 decade/s. Where the frequency range is swept incrementally, the step size was 1% of fundamental.

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b. The dwell time at each frequency shall be not less than the time necessary for the EUT to be able to respond.



NOTE:

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FLOOR-STANDING EQUIPMENT

The equipment to be tested is placed on an insulating support of 0.1 meters height above a ground reference plane. All relevant cables shall be provided with the appropriate coupling and decoupling devices at a distance between 0.1 meters and 0.3 meters from the projected geometry of the EUT on the ground reference plane.

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TEST RESULTS

EUT :	Single Phase Din Rail Energy Meter	Model Name. :	DDSU1218-1P
Temperature :	23.5 ℃	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2023-08-04
Test Mode :	Mode 1	404 40°	NO NOWL NOW
Test Power :	220V~	and and	2 9. 0 N

		7.4	100 2	All when the second sec	S
Test Ports (Mode)	Freq. Range MHz)	Field Strength	Perform. Criteria	Results	Judgment
Input/ Output AC. Power Port	0.1580	3V (rms)	AND HAND	HOMD A HO	PASS
Input/ Output DC. Power Port	0.15 80	AM Modulated	A COMP	N/A N/A	N/A
Signal Line	0.15 80	1000Hz, 80%	AD NO NO	N/A	N/A

Note:

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- 1) N/A denotes test is not applicable in this Test Report.
- 2) Criteria A: There was no change operated with initial operating during the test.
- 3) Criteria B: The EUT function loss during the test, but self-recoverable after the test. HOND

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4) Criteria C: The system shut down during the test.

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POWER FREQUENCY MAGNETIC FIELD TESTING

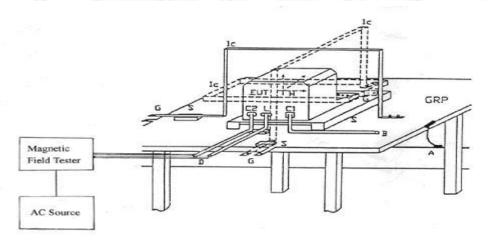
Basic Standard:	IEC/EN 61000-4-8
Required Performance	A
Frequency Range:	50Hz
Field Strength:	1 A/m
Observation Time:	1 minute
Inductance Coil:	Rectangular type, 1mx1m

TEST PROCEDURE

The EUT and support equipment, are placed on a table that is 0.8 meter above a metal ground plane measured 1m*1m min. and 0.65mm thick min. The other condition as following manner:

- a. The equipment cabinets shall be connected to the safety earth directly on the GRP via the earth terminal of the EUT.
- b. The cables supplied or recommended by the equipment manufacturer shall be used. 1 meter of all cables used shall be exposed to the magnetic field.





Note:

TABLE-TOP EQUIPMENT

The equipment shall be subjected to the test magnetic field by using the induction coil of standard dimension (1 m x 1 m). The induction coil shall then be rotated by 90 degrees in order to expose the EUT to the test field with different orientations.

FLOOR-STANDING EQUIPMENT

The equipment shall be subjected to the test magnetic field by using induction coils of suitable dimensions. The test shall be repeated by moving and shifting the induction coils, in order to test the whole volume of the EUT for each orthogonal direction. The test shall be repeated with the coil shifted to different positions along the side of the EUT, in steps corresponding to 50 % of the shortest side of the coil. The induction coil shall then be rotated by 90 degrees in order to expose the EUT to the test field with different orientations.



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TEST RESULTS

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EUT :	Single Phase Din Rail Energy Meter	Model Name. :	DDSU1218-1P
Temperature :	23.5 ℃	Relative Humidity :	60%
Pressure :	1010 hPa	Test Date :	2023-08-04
Test Mode :	N/A	40m 40°	NO NOWL NOW
Test Power :	N/A	and the	the and an an

Test Mode	Test Level	COMPUTE R CASE aspect	Duration (s)	Perform Criteria	Results	Judgment
Enclosure	1 A/m	X	60 s	Alowe	A DINO	Pass
Enclosure	1 A/m	Y NO	60 s	AO	- AND	Pass
Enclosure	1 A/m	z e	60 s	ANON	AONIC	Pass

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- 1) N/A denotes test is not applicable in this test report
- 2) Criteria A: There was no change operated with initial operating during the test.
- 3) Criteria B: The EUT function loss during the test, but self-recoverable after the test.

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4) Criteria C: The system shut down during the test.

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VOLTAGE INTERRUPTION/DIPS TESTING

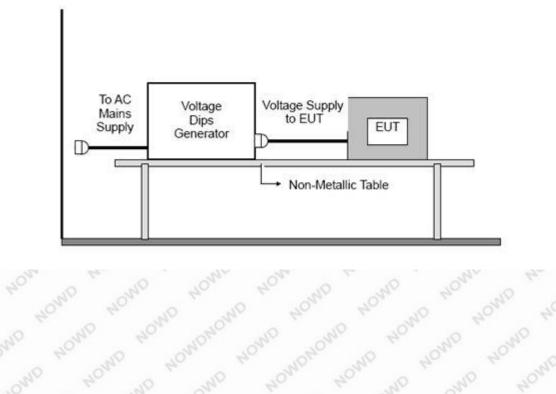
TEST SPECIFICATION	NOWD NOW NOWD NOWD NOWD		
Basic Standard:	IEC/EN 61000-4-11		
Required Performance	B (For 100% Voltage Dips)		
	C (For 30% Voltage Dips)		
	C (For 100% Voltage Interruptions)		
Test Duration Time:	Minimum three test events in sequence		
Interval between Event:	Minimum ten seconds		
Phase Angle:	0°/45°/90°/135°/180°/225°/270°/315°/360°		
Test Cycle:	3 times		

TEST PROCEDURE

The EUT shall be tested for each selected combination of test levels and duration with a sequence of three dips/interruptions with intervals of 10 s minimum (between each test event). Each representative mode of operation shall be tested. Abrupt changes in supply voltage shall occur at zero crossings of the voltage waveform.

TEST SETUP

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TEST RESULTS

EUT :	Single Phase Din Rail Energy Meter	Model Name. :	DDSU1218-1P	
Temperature :	23.5 ℃	Relative Humidity :	60%	
Pressure :	1010 hPa	Test Date :	t Date : 2023-08-04	
Test Mode :	Mode 1	40m 40.	NO NOWN NOW	
Test Power :	220V~	of an a	N. 92 0	

0	and the second s	5° (*)	Y and	0, 7
Test Level	Voltage Dips & Voltage Interruptions	Duration (in periods)	Criterion □ A ⊠ B	Result P=PASS
% U⊤	% U _T			F=FAIL
0	100	0.5P	NON BOND	HCP NO
40	60	10P	C	Own Powe
70	30	25P	С	NOME B NO N
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Note:

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- 1). N/A denotes test is not applicable in this test report.
- 2) Criteria A: There was no change operated with initial operating during the test.
- 3) Criteria B: The EUT function loss during the test, but self-recoverable after the test.

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4) Criteria C: The system shut down during the test.

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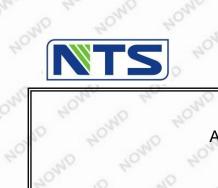
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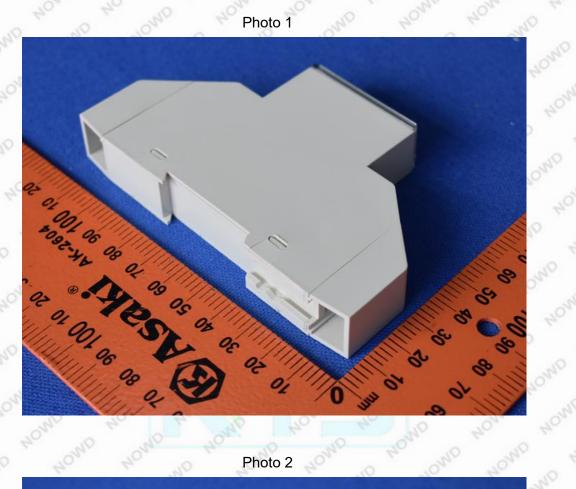


Photo 2



