

**TEST REPORT****EMC VERIFICATION SUMMARY****Pursuant to EMC Directive 2014/30/EU**

<b>Report No.:</b>	20120430HKG-001
<b>Applicant:</b>	TECHMADE SRL Zona Industriale ASI - Località Tavernette, 81025 - Marcianise (CE), Italy.
<b>Equipment Under Test (EUT):</b>	
<b>Product Description:</b>	Travel Charger
<b>Model:</b>	TM-TC046AC
<b>Sample Receipt Date:</b>	09 Dec 2020
<b>Test Conducted Date:</b>	09 Dec 2020 to 21 Dec 2020
<b>Issue Date:</b>	22 Dec 2020
<b>Test Site Location:</b>	1. For Radiated Emission Test: Workshop No. 3, G/F., World-Wide Industrial Centre, 43-47 Shan Mei Street, Fo Tan, Sha Tin, N.T., Hong Kong SAR, China. 2. For Other Test: 2nd Floor, Garment Centre, 576 Castle Peak Road, Kowloon, Hong Kong SAR, China.
<b>Relevant Standard(s):</b>	Ref. to P.2 of test report
<b>Conclusion:</b>	Test was conducted by client submitted sample. The submitted sample as received complied with the EMC requirement.

**Prepared and Checked by:****Approved by:****Signed on File****Cheung Hung Ngai, Mark/sc**  
**Senior Lead Engineer**

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**Chow Chi Ming, Billy**  
**Manager**

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The test report only allows to be revised within the retention period unless further standard or the requirement was noticed.

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**TEST REPORT****EMC VERIFICATION SUMMARY****Pursuant to EMC Directive 2014/30/EU****CONT'D****Relevant Standard(s):**

EN 55032:2012  
EN 55032:2015  
EN 61000-3-2:2014  
EN 61000-3-3:2013  
EN 55035:2017 (EN 61000-4-2:2009)  
EN 55035:2017 (EN 61000-4-3:2006+A1+A2)  
EN 55035:2017 (EN 61000-4-4:2012)  
EN 55035:2017 (EN 61000-4-5:2014)  
EN 55035:2017 (EN 61000-4-6:2014)  
EN 55035:2017 (EN 61000-4-11:2004)

## TEST REPORT

### EMC RESULTS CONCLUSION (WITH JUSTIFICATION)

RE: EMC Testing Pursuant to EMC Directive 2014/30/EU Performed On the Travel Charger,  
Model: TM-TC046AC

We tested the Travel Charger, Model: TM-TC046AC, to determine if it was in compliance with the relevant EN standards as marked on the EMC Verification Summary. We found that the unit met the requirement of EN 55032, EN 61000-3-2, EN 61000-3-3 & EN 55035 standards when tested as received.

The production units are required to conform to the initial sample as received when the units are placed on the market.

Decision Rule for compliance: For FCC/IC standard, the measured value must be within the limits of applicable standard without accounting for the measurement uncertainty. For EN/IEC/HKTA/HKTC standard, conformity rules will be used as per standard directly excepted EN/IEC 61000-3-2, EN/IEC 61000-3-3, HKTA1004, HKCA1008, HKTA1019, HKTA1020, HKTA1041 and HKTA1044. For these excepted or not mentioned standards, Cl 4.2.2 of ILAC-G8:09/2019 decision rules will be reference and guard band will be equal to our measurement uncertainty with 95% confidence level (k=2). In case, the measured value is within guard band region, undetermined decision will be used.

Standards against which no testing has been conducted of the captioned model and the engineering judgement is stated as follows:

EN 61000-3-2: According to EN 61000-3-2, equipment (other than lighting equipment) with a rated power less than or equal to 75W is deemed to fulfil all relevant requirement of this standard without any testing.

## TEST REPORT

### LABORATORY MEASUREMENTS

### CONFIGURATION INFORMATION

<b>Equipment Under Test (EUT):</b>	Travel Charger
<b>Model:</b>	TM-TC046AC
<b>Serial No.:</b>	Not Labelled
<b>Support Equipment:</b>	<ol style="list-style-type: none"><li>1. Resistive Load: 1.66Ω, 2.16Ω, 7.18Ω, 8Ω</li><li>2. QC / PD Trigger Board</li></ol>
<b>Cables:</b>	<ol style="list-style-type: none"><li>1. 1 x USB-A cable with length of 1.0 meter long</li><li>2. 1 x USB-C cable with length of 30 cm long</li></ol>
<b>Adaptor:</b>	N/A
<b>Rated Voltage:</b>	100-240VAC 50/60Hz

## TEST REPORT

### EN 55032 : Class B Radiated Emission Test

Model No.: TM-TC046AC  
Worst Case Operating Mode: Full Load with PD USB-C 5V 3A

#### Used Test Equipment

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.
EW-2500	EMI Test Receiver	ROHDESCHWARZ	ESCI	100847
EW-3281	Spectrum Analyzer	ROHDESCHWARZ	FSV40	101229
EW-0571	Biconical Antenna	EMCO	3104C	9504-4685
EW-0447	Log Periodic Antenna	EMCO	3146	9905-5218
EW-0194	Double Ridged Guide Antenna	EMCO	3115	9208-3911
EW-2107	14m Double Shield RF Cable (20MHz -26GHz)	RADIALL	nm / br5d / sma 14m	Nil

#### Test Data

Polarization	Frequency (MHz)	Net at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	60.676	36.7	40	-3.3
V	80.076	24.6	40	-15.4
V	122.393	30.7	40	-9.4
V	141.550	24.7	40	-15.3
V	160.708	28.7	40	-11.3
V	434.975	36.8	47	-10.2

- Notes:
1. Quasi-Peak Detector Data
  2. Negative sign (-) in the margin column signify levels below the limit.
  3. Frequency range scanned: 30 MHz to 1000 MHz.
  4. Only emissions significantly above equipment noise floor are reported.
  5. Uncertainty :  $\pm 6.61$ dB at a Level of Confidence of 95%.

## TEST REPORT

### EN 55032 : Class B Radiated Emission Test

Model No.: TM-TC046AC  
Worst Case Operating Mode: Full Load with PD USB-C 12V 1.67A

#### Used Test Equipment

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.
EW-2500	EMI Test Receiver	ROHDESCHWARZ	ESCI	100847
EW-3281	Spectrum Analyzer	ROHDESCHWARZ	FSV40	101229
EW-0571	Biconical Antenna	EMCO	3104C	9504-4685
EW-0447	Log Periodic Antenna	EMCO	3146	9905-5218
EW-0194	Double Ridged Guide Antenna	EMCO	3115	9208-3911
EW-2107	14m Double Shield RF Cable (20MHz -26GHz)	RADIALL	nm / br5d / sma 14m	Nil

#### Test Data

Polarization	Frequency (MHz)	Net at 3m (dB $\mu$ V/m)	Limit at 3m (dB $\mu$ V/m)	Margin (dB)
V	56.796	37.2	40	-2.8
V	70.255	25.7	40	-14.4
V	127.606	28.6	40	-11.4
V	158.889	26.7	40	-13.3
V	265.953	33.5	47	-13.5
H	386.839	35.5	47	-11.6

- Notes:
1. Quasi-Peak Detector Data
  2. Negative sign (-) in the margin column signify levels below the limit.
  3. Frequency range scanned: 30 MHz to 1000 MHz.
  4. Only emissions significantly above equipment noise floor are reported.
  5. Uncertainty :  $\pm 6.61$ dB at a Level of Confidence of 95%.

## TEST REPORT

### EN 55032 : Class B Terminal Disturbance Voltage

Model No.: TM-TC046AC  
Worst Case Operating Mode: Full Load with QC USB-A 6.5V 3A

#### Used Test Equipment

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.
EW-2500	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100847
EW-2501	Artificial Mains Network	ROHDE & SCHWARZ	ENV-216	100483

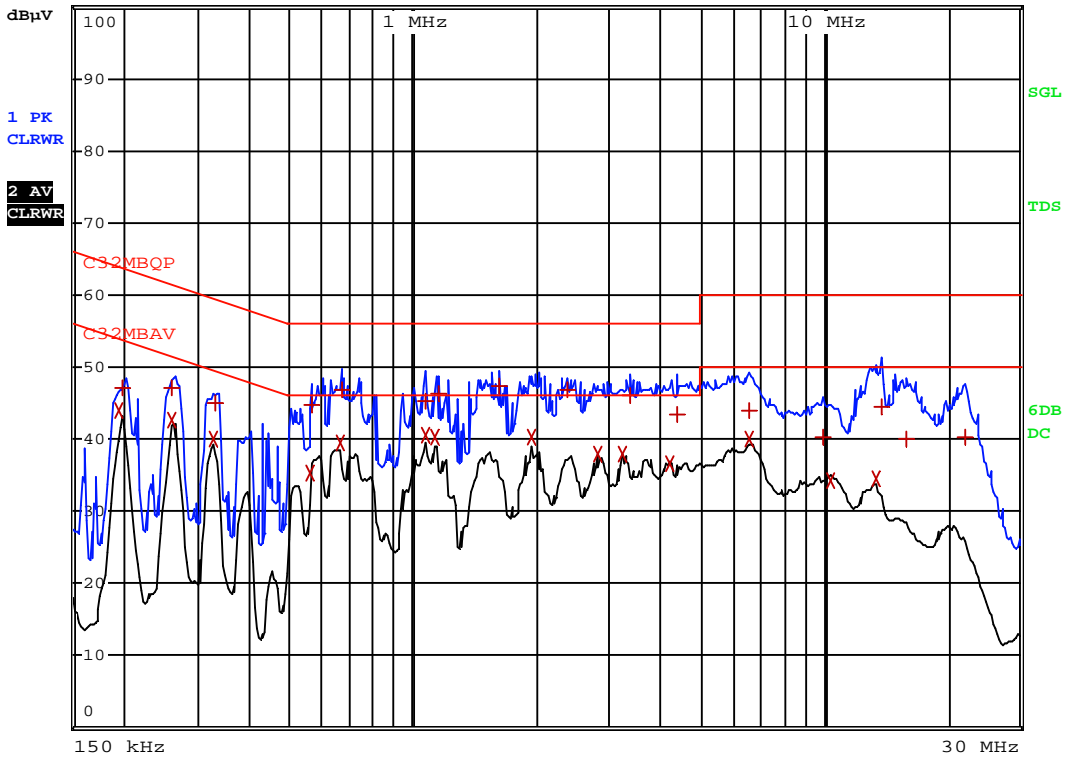
- Notes:
1. The following graph and table were recorded for the tests on the mains terminal.
  2. A graph of Ctrl. No.: 3.2.1 consisting of one page and a data table of Ctrl. No.: 3.2.2 & 3.2.3 consisting of two pages are attached.
  3. Uncertainty:  $\pm 3.46\text{dB}$  at a Level of Confidence of 95%.

**TEST REPORT**

Model No.: TM-TC046AC  
Worst Case Operating Mode: Full Load with QC USB-A 6.5V 3A



RBW 9 kHz  
MT 1 s  
Att 10 dB AUTO PREAMP OFF



USB-A 6.5V 3A

Date: 11.DEC.2020 17:05:06



**TEST REPORT**

Model No.: TM-TC046AC  
Worst Case Operating Mode: Full Load with QC USB-A 6.5V 3A

EDIT PEAK LIST (Final Measurement Results)					
Trace1:		C32MBQP			
Trace2:		C32MBAV			
Trace3:		---			
	TRACE	FREQUENCY	LEVEL dB $\mu$ V		DELTA LIMIT dB
2	CISPR Average	195 kHz	43.87 L1		-9.94
1	Quasi Peak	199.5 kHz	47.20 L1		-16.42
1	Quasi Peak	262.5 kHz	47.00 L1		-14.35
2	CISPR Average	262.5 kHz	42.73 L1		-8.61
2	CISPR Average	325.5 kHz	40.06 L1		-9.49
1	Quasi Peak	334.5 kHz	44.92 L1		-14.41
1	Quasi Peak	564 kHz	44.65 L1		-11.34
2	CISPR Average	564 kHz	35.30 L1		-10.69
2	CISPR Average	663 kHz	39.40 L1		-6.59
1	Quasi Peak	672 kHz	46.96 L1		-9.03
2	CISPR Average	1.0725 MHz	40.52 L1		-5.47
1	Quasi Peak	1.077 MHz	45.14 L1		-10.85
2	CISPR Average	1.1355 MHz	40.30 L1		-5.69
1	Quasi Peak	1.149 MHz	46.37 L1		-9.62
1	Quasi Peak	1.6215 MHz	47.31 L1		-8.68
2	CISPR Average	1.9545 MHz	40.25 L1		-5.74
1	Quasi Peak	2.373 MHz	46.78 L1		-9.21
2	CISPR Average	2.814 MHz	37.95 L1		-8.04
2	CISPR Average	3.237 MHz	37.90 L1		-8.09
1	Quasi Peak	3.372 MHz	45.93 L1		-10.06

USB-A 6.5V 3A

Date: 11.DEC.2020 17:03:07

**TEST REPORT**

Model No.: TM-TC046AC  
Worst Case Operating Mode: Full Load with QC USB-A 6.5V 3A

EDIT PEAK LIST (Final Measurement Results)				
TRACE		FREQUENCY	LEVEL dBµV	DELTA LIMIT dB
Trace1:	C32MBQP			
Trace2:	C32MBAV			
Trace3:	---			
2	CISPR Average	4.2135 MHz	36.55 L1	-9.44
1	Quasi Peak	4.389 MHz	43.45 L1	-12.54
2	CISPR Average	6.5895 MHz	39.94 L1	-10.05
1	Quasi Peak	6.6165 MHz	43.86 L1	-16.13
1	Quasi Peak	9.9645 MHz	40.34 N	-19.65
2	CISPR Average	10.3605 MHz	34.38 L1	-15.61
2	CISPR Average	13.371 MHz	34.48 L1	-15.51
1	Quasi Peak	13.9065 MHz	44.51 N	-15.48
1	Quasi Peak	15.864 MHz	40.08 L1	-19.91
1	Quasi Peak	22.1685 MHz	40.17 N	-19.82

USB-A 6.5V 3A

Date: 11.DEC.2020 17:03:46

## TEST REPORT

### EN 55032 : Class B Terminal Disturbance Voltage

Model No.: TM-TC046AC  
Worst Case Operating Mode: Full Load with QC USB-A 12.0V 1.5A

#### Used Test Equipment

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.
EW-2500	EMI Test Receiver	ROHDE & SCHWARZ	ESCI	100847
EW-2501	Artificial Mains Network	ROHDE & SCHWARZ	ENV-216	100483

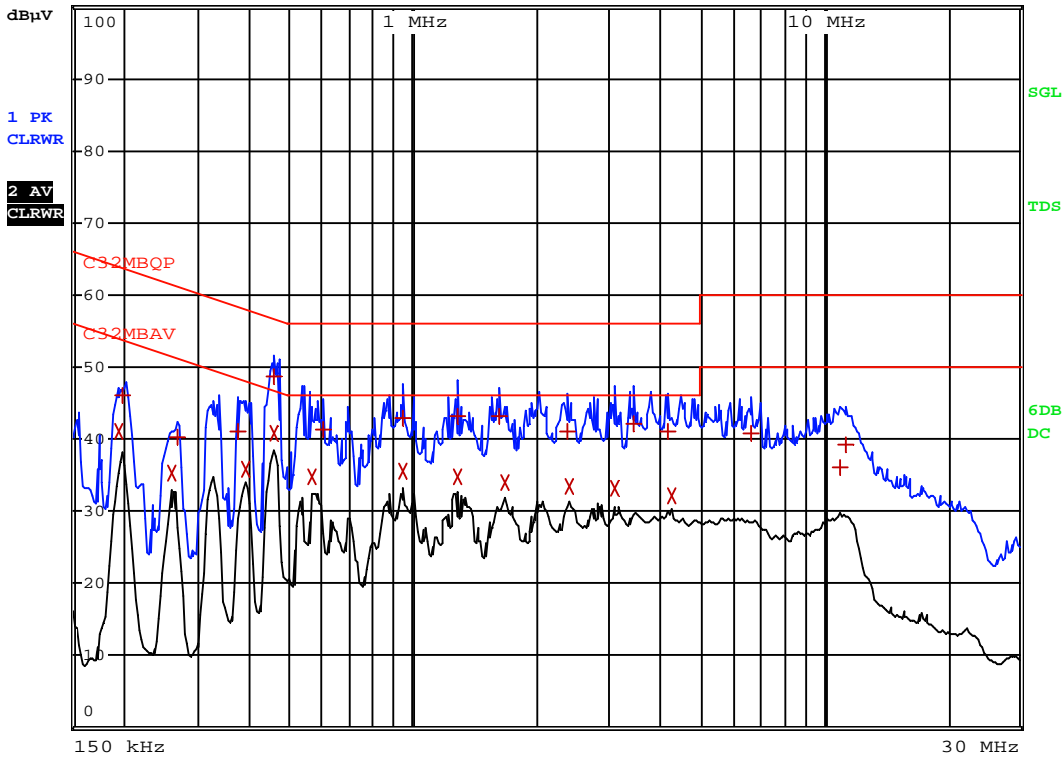
- Notes:
1. The following graph and table were recorded for the tests on the mains terminal.
  2. A graph of Ctrl. No.: 3.2.4 consisting of one page and a data table of Ctrl. No.: 3.2.5 & 3.2.6 consisting of two pages are attached.
  3. Uncertainty:  $\pm 3.46\text{dB}$  at a Level of Confidence of 95%.

**TEST REPORT**

Model No.: TM-TC046AC  
Worst Case Operating Mode: Full Load with QC USB-A 12.0V 1.5A



RBW 9 kHz  
MT 1 s  
Att 10 dB AUTO PREAMP OFF



USB-A 12V 1.5A

Date: 11.DEC.2020 17:20:28

**TEST REPORT**

Model No.: TM-TC046AC  
Worst Case Operating Mode: Full Load with QC USB-A 12.0V 1.5A

EDIT PEAK LIST (Final Measurement Results)					
Trace1:		C32MBQP			
Trace2:		C32MBAV			
Trace3:		---			
	TRACE	FREQUENCY	LEVEL	dB $\mu$ V	DELTA LIMIT
2	CISPR Average	195 kHz	41.14	N	-12.67
1	Quasi Peak	199.5 kHz	46.04	N	-17.58
2	CISPR Average	262.5 kHz	35.23	N	-16.11
1	Quasi Peak	267 kHz	40.18	N	-21.02
1	Quasi Peak	375 kHz	41.09	N	-17.29
2	CISPR Average	388.5 kHz	35.86	N	-12.23
1	Quasi Peak	456 kHz	48.64	N	-8.12
2	CISPR Average	456 kHz	40.93	N	-5.83
2	CISPR Average	568.5 kHz	34.66	N	-11.34
1	Quasi Peak	604.5 kHz	41.43	N	-14.56
1	Quasi Peak	942 kHz	42.96	N	-13.03
2	CISPR Average	942 kHz	35.44	N	-10.55
2	CISPR Average	1.2795 MHz	34.86	N	-11.13
1	Quasi Peak	1.284 MHz	43.16	N	-12.83
1	Quasi Peak	1.6215 MHz	43.15	N	-12.84
2	CISPR Average	1.6845 MHz	34.00	N	-11.99
1	Quasi Peak	2.3685 MHz	41.18	N	-14.81
2	CISPR Average	2.409 MHz	33.39	N	-12.60
2	CISPR Average	3.102 MHz	33.26	N	-12.73
1	Quasi Peak	3.4395 MHz	42.07	N	-13.92

USB-A 12V 1.5A

Date: 11.DEC.2020 17:17:49

**TEST REPORT**

Model No.: TM-TC046AC  
Worst Case Operating Mode: Full Load with QC USB-A 12.0V 1.5A

EDIT PEAK LIST (Final Measurement Results)				
Trace1: C32MBQP				
Trace2: C32MBAV				
Trace3: ---				
	TRACE	FREQUENCY	LEVEL dB $\mu$ V	DELTA LIMIT dB
1	Quasi Peak	4.182 MHz	41.00 N	-14.99
2	CISPR Average	4.2495 MHz	32.16 N	-13.83
1	Quasi Peak	6.6795 MHz	40.93 N	-19.07
1	Quasi Peak	10.9275 MHz	35.96 L1	-24.03
1	Quasi Peak	11.2785 MHz	39.21 L1	-20.78

USB-A 12V 1.5A

Date: 11.DEC.2020 17:18:45

## TEST REPORT

### EN 61000-3-3 Voltage Fluctuations and Flicker

Model No.: TM-TC046AC  
Worst Case Operating Mode: Full Load with PD USB-C 12.0V 1.67A

#### Used Test Equipment

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.
EW-3125	5 kVA single Phase Harmonics & Flicker Measuring System and single phase Coupling unit	Teseq	ProfLine 2105-400 and CCN 1000-1	A00550

#### Test Result

	Result	Limit
$d_{max}$ (%)	0	4.0
$d_c$ (%)	0	3.3
$d(t) > 3.3\%$ (ms)	0	500
$P_{st}$	0.064	1.0
$P_{It}$	N/A	0.65

Note: Uncertainty:  $\pm 7.5\%$  at a Level of Confidence of 95%.

**TEST REPORT**

**EN 61000-4-2 Electrostatic Discharge**

**Test Summary (Pursuant to EN 55035)**

Basic Standard:	EN 61000-4-2
Port:	Enclosure
Level:	±8.0 kV (Air Discharge) ±4.0 kV (Contact Discharge) ±4.0 kV (Indirect Contact Discharge)
Required Performance Criterion:	B
Time Between Each Discharge:	1 second
Temperature:	21.0°C
Relative Humidity:	50.0%
Atmospheric Pressure:	100.1kPa
Test Mode:	Full Load
Test Setup:	Table-Top
Test of Post-installation:	N/A
Test Point:            Air Discharge:	All accessible insulated enclosure and seams All accessible points where contact discharge cannot be applied
Contact:	All conductive surfaces of the EUT
HCP:	All sides of the EUT (Floor-stand product excluded)
VCP:	Four faces of the EUT

**Used Test Equipment**

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.
EW-2282	ESD Gun	SCHAFFNER	NSG435	5888



**TEST REPORT****EN 61000-4-2 Electrostatic Discharge****Test Results**

<b>Discharge Type</b>	<b>No. of Discharge</b>	<b>Applied Voltage</b>	<b>Result (Pursuant to EN 55035 criterion B)</b>
Contact Discharge	10	+4kV	OK
	10	-4kV	OK
Air Discharge	10	+8kV	OK
	10	-8kV	OK
Indirect HCP Discharge	10	+4kV	OK
	10	-4kV	OK
Indirect VCP Discharge	10	+4kV	OK
	10	-4kV	OK

There was no observable degradation in performance.

## TEST REPORT

### EN 61000-4-3 Radiated Immunity

#### Test Summary (Pursuant to EN 55035)

Basic Standard:	EN 61000-4-3
Port:	Enclosure
Required Performance Criterion:	A
Limit:	3.0 V/m (rms)
Test Modulation:	1kHz, 80% AM
Frequency:	80 MHz to 1000 MHz, 1800MHz, 2600MHz, 3500MHz, 5000MHz
Dwell Time:	1s
Frequency Step:	1%
Temperature:	21.0°C
Relative Humidity:	51.0%
Test Facility:	Full Anechoic Chamber
Antenna Polarization:	Horizontal and Vertical
Type of Antenna:	Biconical / Log-periodic
Test Distance:	3m
Test Mode:	Full Load
Test Setup:	Table-Top
Size of the EUT	L: 3.8 (cm) × W: 2.5 (cm) × H: 8.3 (cm)

#### Used Test Equipment

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.
EW-1568	Anechonic Chamber	Universal Shielding Corp.	IEC/EN 61000-4-3	Nil
EW-2110	RF Power Amplifier	OPHIR RF	5127FE	1011
EW-3332	RF Amplifier (80MHz to 1000MHz)	AMPRESARCH	150W1000	307008
EW-3290	High Frequency Antenna	SCHWARZBECK	STLP9149	Nil

## TEST REPORT

### EN 61000-4-3 Radiated Immunity

#### Test Results

Frequency (MHz)	Exposed Side	Field Strength (V/m)	Result (Pursuant to EN 55035 criterion A)
80 to 1000	Front	3V/m (rms)	OK
80 to 1000	Left	3V/m (rms)	OK
80 to 1000	Rear	3V/m (rms)	OK
80 to 1000	Right	3V/m (rms)	OK
1800, 2600, 3500, 5000	Front	3V/m (rms)	OK
1800, 2600, 3500, 5000	Left	3V/m (rms)	OK
1800, 2600, 3500, 5000	Rear	3V/m (rms)	OK
1800, 2600, 3500, 5000	Right	3V/m (rms)	OK

Additional Information

No observable change

EUT stopped operation and could / could not be reset by operator.

EUT was in abnormal operation:  
- operation mode was changed from \_\_\_ to \_\_\_ at \_\_\_ V/m.

\_\_\_\_\_

**TEST REPORT**

**EN 61000-4-4 Electrical Fast Transient/Burst**

**Test Summary (Pursuant to EN 55035)**

Basic Standard:	EN 61000-4-4	
Port:	A.C. Power Ports	D.C. Power Ports, Signal Ports, Control Ports, Analogue / Digital Signal Data Ports and Telecommunication Ports
Required Performance Criterion:	B	
Limit:	±1.0kV	±0.5kV
Test Duration:	1 minute	
Test Mode:	Full Load	
Test Setup:	Table-Top	
Generator Drive:	Internal	
Sequence of Application:	Each One	

**Used Test Equipment**

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.
EW-3167	CE Immunity Compact Tester : EN61000-4-X	TESEQ	NSG3060	1821

**TEST REPORT**

**EN 61000-4-4 Electrical Fast Transient/Burst**

**Test Results**

Port	Level	Result (Pursuant to EN 55035 criterion B)
A.C. Power Ports	±1.0kV	OK
D.C. Power Ports	±0.5kV	N/A
Signal Ports	±0.5kV	N/A
Control Ports	±0.5kV	N/A
Analogue / Digital Signal Data Ports	±0.5kV	N/A
Telecommunication Ports	±0.5kV	N/A

Additional Information

No observable change

EUT stopped operation and could / could not be reset by operator at \_\_\_ kV of Burst.

EUT was in abnormal operation:  
- operation mode was changed from \_\_\_ to \_\_\_ at \_\_\_ kV of Burst.

\_\_\_\_\_

**TEST REPORT**

**EN 61000-4-5 Surge Immunity**

**Test Summary (Pursuant to EN 55035)**

Basic Standard:	EN 61000-4-5		
Port:	A.C. Power Ports		
	Phase and Neutral	Phase and Earth	Neutral and Earth
Limit:	5 Positive and 5 Negative Surges		
	±1kV	±2kV	±2kV
Generator Impedance:	2 ohm	12 ohm	12 ohm
Required Performance Criterion:	B		
Repetition Rate:	1 minute		
Test Mode:	Full Load		
Test Setup:	Capacitive coupling		
Surge Generator Trigger:	Internal		
Installation Condition:	Class 3: Electrical environment where cables run in parallel.		
Phase Angle:	0°, 90°, 180°, 270°		

**Used Test Equipment**

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.
EW-3167	CE Immunity Compact Tester : EN61000-4-X	TESEQ	NSG3060	1821

## TEST REPORT

### EN 61000-4-5 Surge Immunity

#### Test Results

Level		Result (Pursuant to EN 55035 criterion B)
Between Phase and Neutral:	±1kV	OK
Between Phase and Earth:	±2kV	N/A
Between Neutral and Earth:	±2kV	N/A

Additional Information

No observable change

EUT stopped operation and could / could not be reset by operator at \_\_\_ V of Surge.

EUT was in abnormal operation:  
- operation mode was changed from \_\_\_ to \_\_\_ at \_\_\_ V of Surge.

\_\_\_\_\_

**TEST REPORT**

**EN 61000-4-6 Injected Current**

**Test Summary (Pursuant to EN 55035)**

Basic Standard:	EN 61000-4-6		
Port:	A.C. Power Ports		
Required Performance Criterion:	A		
Level:	3.0V (rms)	3.0V to 1.0V (rms)	1.0V (rms)
Frequency:	0.15 MHz to 10 MHz	10 MHz to 30 MHz	30 MHz to 80 MHz
Cable Length between CDN and EUT:	30cm		
Test Modulation:	1 kHz, 80% AM		
Dwell Time:	1s		
Frequency Step:	1%		
Temperature:	22.0°C		
Relative Humidity:	50.0%		
Coupling Factor of CDN:	-1.0dB ~ -1.7dB		
Test Mode:	Full Load		
Test Setup:	Table-Top		
Size of the sample:	L: 3.8 (cm) × W: 2.5 (cm) × H: 8.3 (cm)		
Equipment Under Test (EUT):	Single Unit		

**Used Test Equipment**

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.
EW-1454	Coupling Decoupling Network	SCHWARZBECK	L801/M2/M3	1904
EW-0190	AM/FM Signal Generator	MARCONI	2022D	119156/029
EW-2502	Conduct Immunity Test Site	UNKNOWN	EN/IEC 61000-4-6	Nil



**TEST REPORT**

**EN 61000-4-6 Injected Current**

**Test Results**

Port	Frequency (MHz)	Level	Result (Pursuant to EN 55035 criterion A)
A.C. Power Ports	0.15 to 10	3.0V (rms)	OK
D.C. Power Ports	0.15 to 10	3.0V (rms)	N/A
Digital Data Ports	0.15 to 10	3.0V (rms)	N/A
Analogue Data Ports	0.15 to 10	3.0V (rms)	N/A

Port	Frequency (MHz)	Level	Result (Pursuant to EN 55035 criterion A)
A.C. Power Ports	10 to 30	3.0V to 1.0V (rms)	OK
D.C. Power Ports	10 to 30	3.0V to 1.0V (rms)	N/A
Digital Data Ports	10 to 30	3.0V to 1.0V (rms)	N/A
Analogue Data Ports	10 to 30	3.0V to 1.0V (rms)	N/A

Port	Frequency (MHz)	Level	Result (Pursuant to EN 55035 criterion A)
A.C. Power Ports	30 to 80	1.0V (rms)	OK
D.C. Power Ports	30 to 80	1.0V (rms)	N/A
Digital Data Ports	30 to 80	1.0V (rms)	N/A
Analogue Data Ports	30 to 80	1.0V (rms)	N/A

Additional Information

No observable change

EUT stopped operation and could / could not be reset by operator at \_\_\_\_ V of Injected Current.

EUT was in abnormal operation:  
- operation mode was changed from \_\_\_\_ to \_\_\_\_ at \_\_\_\_ V of Injected Current.

\_\_\_\_\_

**TEST REPORT**

**EN 61000-4-11 Voltage Dips and Interruptions**

**Test Summary (Pursuant to EN 55035)**

Basic Standard:	EN 61000-4-11		
Port:	A.C. Power Ports		
Limit:	Test level in %U <sub>T</sub>	Duration(s)	Required Performance Criterion
	0	0.01	B
	70	0.5	C
	0	5	C
No. of dips/interruptions:	3		
Test Mode:	Full Load		
Test Setup:	Test generator causes the interference to the EUT AC mains		

U<sub>T</sub> is the rated voltage for the equipment.

**Used Test Equipment**

Equipment No.	Equipment	Manufacturer	Model No.	Serial No.
EW-3167	CE Immunity Compact Tester : EN61000-4-X	TESEQ	NSG3060	1821

**TEST REPORT**

**EN 61000-4-11 Voltage Dips and Interruptions**

**Test Results**

Test condition		Result
Test Level in %U <sub>T</sub>	Duration(s)	(Pursuant to EN 55035 criterion B)
0	0.01	OK

Test condition		Result
Test Level in %U <sub>T</sub>	Duration(s)	(Pursuant to EN 55035 criterion C)
70	0.5	OK
0	5	OK

U<sub>T</sub> is the rated voltage for the equipment.

- Additional Information
  - No observable change
  - EUT stopped operation and could be resumed to normal at 0%U<sub>T</sub> Test Level of 5s duration.
  - EUT was in abnormal operation:  
- operation mode was changed from \_\_\_\_ to \_\_\_\_ at \_\_\_\_ %U<sub>T</sub> Test Level.
  - \_\_\_\_\_

**TEST REPORT**

**APPENDIX PHOTO OF EUT**



## **Guidelines On Issuing EC Declaration Of Conformity Pursuant To EMC Directive**

To attest the compliance of apparatus with the relevant EMC Directive, an EC Declaration of Conformity shall be issued by the manufacturer or his authorised representative in the European Community, and the attached EC Declaration of Conformity template contains all mandatory requirements pursuant to EMC Directive 2014/30/EU. Please follow the steps listed below when preparing an EC Declaration of Conformity:

1. Provide the name and address of the manufacturer;
2. Provide the name and address of the authorised representative in the European Community, where applicable;
3. For Apparatus' Description, specify the brand name and any other information allowing for the description of the apparatus to which the EC Declaration of Conformity refers;
4. For Apparatus' Identification, specify the type, batch, serial number or any other information allowing for the identification of the apparatus to which the EC Declaration of Conformity refers;
5. Specify the relevant EMC Directive with which the apparatus are in compliance;
6. List all dated specifications under which conformity is declared to ensure the conformity of the apparatus with the relevant EMC Directive, you may refer the standards shown in the Test Verification of Conformity issued by Intertek;
7. Sign the EC Declaration of Conformity by the person empowered to bind the manufacturer or his authorised representative in the European Community. The Name, Position and Company of this person shall be specified for identification;
8. State the date of issuing the EC Declaration of Conformity.

### **NOTES:**

- a. The EC Declaration of Conformity shall be held by the manufacturer or his authorised representative in the European Community at the disposal of the competent authorities for a period of at least ten years after the date on which such apparatus was last manufactured. If neither the manufacturer nor his authorised representative is established within the European Community, the obligation to hold the EC Declaration of Conformity at the disposal of the competent authorities shall lie with the person who places the apparatus on the European Community market.
- b. If EMC Directive 2014/30/EU is applied, the manufacturer shall draw up technical documentation according to Annex IV of this EMC Directive; and in addition to CE Marking, the apparatus shall also meet other marks and information as stated in Article 9 of the same EMC Directive.
- c. The EC Declaration of Conformity guidelines and template are for your reference only, you shall ensure that the EMC Directive 2014/30/EU are applied correctly.

## EU DECLARATION OF CONFORMITY (No Xxxx) <sup>(1)</sup>

1. Apparatus model/Product (product, type, batch or serial number):

.....

2. Name and address of the manufacturer or his authorised representative:

.....

3. This declaration of conformity is issued under the sole responsibility of the manufacturer.

.....

4. Object of the declaration (identification of apparatus allowing traceability; it may include a colour image of sufficient clarity where necessary for the identification of the apparatus):

.....

5. The object of the declaration described above is in conformity with the relevant Union harmonisation legislation:

.....

6. References to the relevant harmonised standards used, including the date of the standard, or references to the other technical specifications, including the date of the specification, in relation to which conformity is declared:

.....

7. Where applicable, the notified body (name, number) performed (description of intervention) and issued the certificate:

.....

8. Additional information:

Signed for and on behalf of: .....

(place and date of issue): .....

(name, function) (signature): .....

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<sup>(1)</sup> It is optional for the manufacturer to assign a number to the declaration of conformity.