



Electronic Test & Calibration Ltd.

Electromagnetic Compatibility Testing

Customer

Sisem Ltd, Stoke House, Church Road,
Ashford, Kent TN23 1RD

Location

Electronic Test & Calibration Ltd., Unit 14
Caddsdwn Industrial Park, Clovelly Road,
Bideford, EX39 3DX

ETC Job Number: D12569

Dates of test: 28th April, 5th, 7th, 11th, 12th and 26th May 2015

Table 1: Equipment under test information

Equipment under test:	SolerImmersion IV - Surplus Energy Manager
Equipment configuration:	The EUT was mains powered with its output connected to a 3kW resistive load. The output of the unit was kept on constantly through out the tests. A current probe was connected to the live output line.
Function:	The EUT detects surplus energy being generated by a solar recovery system.
Characteristics:	Small wall mounted box with LCD screen.
Intended Installation:	Residential
Cable Information:	A standard mains plug was wired onto the input. The resistive load was connected to the output using standard mains cable
Electrical power input lines:	230V, 50Hz AC Mains Supply
Maximum Frequency of Operation:	16 MHz

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<p>Photographs of EUT:</p>	
<p>Failure Criteria:</p>	<p>The EUT was monitored during testing to make sure it kept delivering power to the load, This was indicated by an arrow on the display. No change to the screen was allowed. During Radiated immunity tests a camera was used to monitor the display.</p>
<p>Modifications made:</p>	<p>The EUT was modified before the last day of testing to include additional filtering on the mains supply line and additional capacitors on the circuit board. Any tests that required these modifications to achieve a pass have been identified below. *</p>

Table 2: Standards and Results Summary

Standard	Description	UKAS/non-UKAS	Pass / Fail
EN 61326-1:2013	Electrical Equipment For Measurement, Control & Laboratory Use	UKAS	
EN 55011:2009+A1:2010	Conducted RF Emissions	UKAS	Pass *
EN 55011:2009+A1:2010	Radiated Emissions	UKAS	Pass *

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EN 61000-4-2: 2009	Electrostatic Discharge	UKAS	Fail, meets criteria C
EN 61000-4-3: 2006 + A2	Radiated RF Immunity 80 MHz to 2.7 GHz	UKAS	Pass
EN 61000-4-4: 2004 + A1	Fast Transient and Burst Immunity	UKAS	Pass *
EN 61000-4-5: 2006	Surge Immunity	UKAS	Pass
EN 61000-4-6: 2009	Conducted RF Immunity	UKAS	Pass
EN 61000-4-11: 2004	Mains Dips and Interruptions	UKAS	Pass
EN 61000-4-8: 2010	Power Frequency Magnetic Field Immunity	UKAS	Pass
EN 61000-3-2: 2006 A2	Harmonics	UKAS	Pass
EN 61000-3-3: 2008	Flicker	UKAS	Pass

Disclaimer

The measurements made are valid at the time of measurement and do not represent the EUT characteristics under different operating conditions. Any conclusions drawn from these measurements are based purely on the represented information and are made in good faith. Any recommendations are made without prejudice and any changes in performance must be verified by testing to the appropriate standards. The following results and report are for the EUT tested as stated only and should not be transferred between product families.

Signatory & Head of Laboratory

Becky Scott

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Table 3: Record of Changes

Status	Date	Report Name and Version
Original	26 th May 2015	D12569 EMC Test Certificate_01.pdf
Amended Company name	28 th May 2015	D12569 EMC Test Certificate_02.pdf

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