



EMC Test Certificate

This certificate of compliance is hereby issued by Laird Technologies to the named manufacturer and is valid only for the equipment identified below.

Product Description: Leland Legacy
Manufacturer: SKC, Inc.
Address: 863 Valley View Road
City, State Zip Code: Eighty-Four, PA 15330
Phone: 724-941-9704 **Fax:** 724-941-2184
Contact Name: Peter Hall
Order Number: 217471 **Purchase Order Number:** PO-60907
Test Period: 16 April 2004 and 15, 16, 22 July 2004

EMC Tests Performed:

Product Standard: EN 61326 Table A.1				
Description	Test Specification	Test Requirement	Power Tested	Status
Conducted Emissions	EN 55011: 1998 + A1 August 1999	Class B	230 VAC/ 50 Hz	Complied
Radiated Emissions	EN 55011: 1998, + A1 August 1999	Class B	230 VAC/ 50 Hz	Complied
Electrostatic Discharge	EN 61000-4-2:1995, +A1 April 1998	2, 4, 8 kV	230 VAC/ 50 Hz	Complied
Radiated Immunity	EN 61000-4-3:2002, +A1 October 2002	10 V/m from 80 MHz to 1.0 GHz and 1.4 to 2 GHz	230 VAC/ 50 Hz	Complied
Electrical Fast Transient	EN 61000-4-4:1995, +A1: February 2001, +A2: August 2001	2 kV on AC mains	230 VAC/ 50 Hz	Complied
Fast Surges	EN 61000-4-5: 1995 + Corrigendum October 1995	0.5, 1, 2 kV CM and 0.5, 1 kV DM on AC mains	230 VAC/ 50 Hz	Complied
Conducted RF Disturbances	EN 61000-4-6: 1996, + A1 and A2 2001 Corrigendum No.1 December 2001	3 V/rms	230 VAC/ 50 Hz	Complied
Power Frequency Magnetic Field	EN 61000-4-8 +A1 October 2001	30 A/m	230 VAC/ 50 Hz	Complied
Voltage Variations	EN 61000-4-11: 1994 +A1 February 2001	-100%, 10 ms positive/negative polarity	230 VAC/ 50 Hz	Complied

Product Modifications:

Leland Pump main PCB was revised to Issue 5, incorporating the following modifications:

1. Added Capacitor C32 (0.22µF) and Resistor R33 (4.7K) to the microprocessor rest line to eliminate spurious resetting from ESD events.
2. Added ground plane and a metal shielding can to cover sensitive components around IC2 (flow sensor amplifier). This eliminated problems with radiated immunity testing.

Single Li-Ion batter charge main PCB was revised to Issue 6, incorporating the following modifications:

1. Added capacitors C8 (1µF), C9 (47 nF) and C10 (47 nF), to eliminate radiation from the switch mode charging circuit.

Test Details

The EUT was tested at 230 VAC/ 50 Hz with a rated current of 0.4 amps. The crystal operating oscillator frequencies were 32.768 kHz and 4.19 MHz. The air sampling pump was set up to run continuously to maintain a preset level of 10 liter per minute (LPM) of air flow while the AC power/charging plug was attached to the EUT.

Test Summary Statement

Testing was performed by the Laird Technologies facility in Delaware Water Gap, PA. The test sample as tested was found to be in compliance with the standards listed above. In correspondence concerning this certificate, please refer to the date, manufacturer name and order number 217471.

Authorized By J. Fred Gardner Date 7 December 2004
 J. Fred Gardner, EMC Quality Manger