



SIRIM QAS International Sdn. Bhd. (Company No.: 410334-X)
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TEST REPORT

REPORT NO.: 2013EE1096

PAGE : 1 OF 6

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Applicant : METRONICS MANUFACTURING SDN. BHD.
NO. 63-1, JALAN 1/149J
BANDAR BARU SERI PETALING
57000 KUALA LUMPUR

Manufacturer : -SAME AS ABOVE-

Product : AC SURGE PROTECTION DEVICE

Reference Standard / Method of test : MS IEC 61643-1: 2006
(Clause 7.9.8 – dielectric withstand) only

Description of sample: Brand : RAYTON
Model : RT 80-3P415-N
Rating :
Serial no.

Date received : 24 Jul. 2013

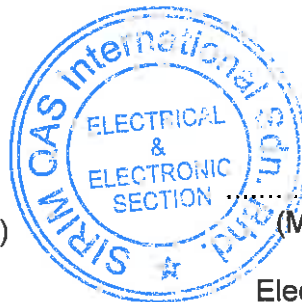
Job No. : J20131421010

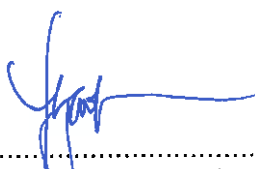
Description of overall Test report : COMPLY TO DIELECTRIC TEST ONLY

Issue date : 24 OCT 2013

Approved Signatories :


.....
(RAVINDRAN CHINATHAMBY)
Testing Executive




.....
(M. ZAMRI BIN MUSTAFFA)
Head
Electrical & Electronic 1 Section
Testing Services Department

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SUMMARY OF TESTS:

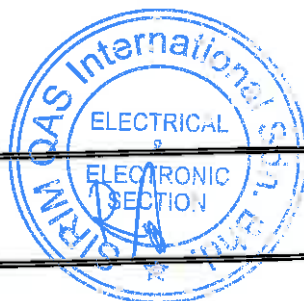
1. This is a partial test report, as requested by the applicant.
2. The test was carried out for the dielectric withstand test at AC voltage of 2.2 kV, as requested by the client.
3. Test were conducted at an ambient temperature of $25^{\circ}\text{C} \pm 5^{\circ}\text{C}$, unless otherwise specified.
4. The abbreviation used in this test report denotes as follows;
PASS: Complied with the requirement
N/A: Not Applicable with the requirement
FAIL: Did Not Comply with the requirement

SUMMARY OF RESULT/S:

The sample complied to the requested test conducted.

ADDITIONAL INFORMATION:

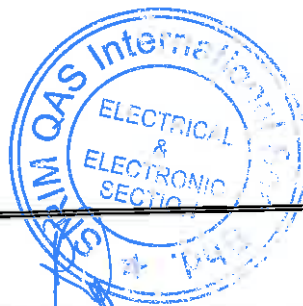
1. Tested by: Hasbar Rafeq b Abd Rahim
2. Checked by: En. Ravindran Chinathamby
3. Date of test sample(s) received;
 - a) 1st submission : 24 Jul. 2013
 - b) 2nd submission : nil
 - c) 3rd submission : nil



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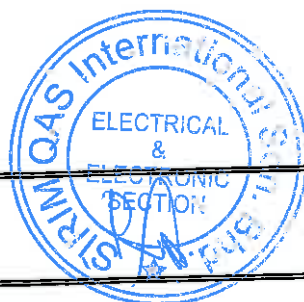
Clause	Requirement	Remark	Result
8.3.1.2	Metal parts		
	Metal parts which are accessible when the SPD is wired and mounted as for normal use are connected to earth through a low resistance connection, except of small screws and the like, isolated from live parts, for fixing bases and covers or cover plates of socket-outlets.		Pass
	A current (derived from an a.c. source having a no-load voltage not exceeding 12 V) equal to 1,5 times the rated load current or 25 A, whichever is the greater, is passed between the earthing terminal and each of the accessible metal parts in turn.	25A ac	Pass
	The voltage drop between the earthing terminal and the accessible metal part is measured and the resistance is calculated from the current and this voltage drop. The resistance shall not exceed 0,05 Ω .	0.039 Ω	Pass



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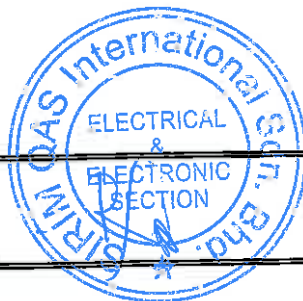
Clause	Requirement	Remark	Result
7.2.7/8.3.7	Dielectric withstand		
	The dielectric withstand of the SPD shall be sufficient with respect to insulation breakdown and protection against direct contact.		
	SPDs classified for outdoor use are tested between the terminals with the internal parts removed. During this test, the SPD is subjected to sprinkling according to 9.1 of IEC 60060-1.		Pass
	SPDs classified for indoor are tested as indicated in a) and b) of 8.3.6.		Pass
	SPDs are tested with an a.c. voltage according to Table 9. Starting with not more than half the required a.c. voltage, this voltage is increased to the full value within 30 s which is maintained for 1 min.		Pass
	a) between all interconnected live parts and the SPDs body accessible to accidental contact. The express "body" in the sense of this test means		Pass
	<ul style="list-style-type: none"> all touchable metal parts and a metal foil on surfaces of insulating material, which are touchable after installation as for normal use, 		Pass



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Clause	Requirement	Remark	Result
	<ul style="list-style-type: none"> the surface on which the SPD is mounted, if necessary covered with metal foil, 		Pass
	<ul style="list-style-type: none"> screws and other facilities for fastening the SPD on its support <p>Fore these measurements, the metal foil is put on in such a way, that perhaps existing casting mass is effectively tested.</p> <p>Protective components connected to PE may be disconnected for this test.</p>		Pass
	b) between the live parts of the SPD main circuit and live parts of separate isolated circuits, if there are any.		Pass
	Pass criteria		
	Arcing or puncturing shall not occur, however, partial discharges are accepted if the voltage change the discharge is less than 5%.		
	The power transformer used for testing shall be designed in such a way that after having been adjusted to the test voltage at its open terminals it will generate a short-circuit current of at least 200 mA after short-circuiting the terminals. An overcurrent relay, if any, shall only react if the test circuit current exceeds 100 mA. The device for measuring the test voltage shall have a precision of $\pm 3\%$.		



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PHOTOGRAPH OF TEST SAMPLE



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