



UL INDIA PVT. LTD.
LABORATORY BUILDING, KALYANI PLATINA CAMPUS,
SY.NO.129/4, EPIP ZONE, PHASE II, WHITEFIELD,
BANGALORE – 560 066, INDIA
TEL NO. 91-80-41384400,
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Certificate No: - T-1432

Test Report

Test Report No: **ULI-NABL (ELE)-NABL -0062/2013**

Name of the Customer: **Schneider Electric India Pvt Ltd,**
Global Technology Centre, #88-P, II floor,
Sahasra shree, EPIP Industrial Area,
Whitefield road, Bangalore-560066

Scope of Work: **Testing of mechanical Enclosure as per IEC 60529, Degree of Protection Required by Enclosure – Edition 2.1 – Revision Date 2009/10/01**

Product type: **1.2W Portable LED Lamp,**
1. Product Description : **Portable Solar LED Lighting System-1.2W**
Product reference no : **AEP-LB-SU12W/Z120S**
2. Product Description : **Portable Solar LED Lamp-1.2W**
Product reference no : **AEP-LB-U12W/Z120L**
3. Product Description : **Portable Solar LED Lighting System-1.2W**
Product reference no : **AEP-LB-SU12W-T/Z120ST**

Model Name: **TS 120S and TS 120**

Number of sample Tested: **Three**

Particulars of Tests Conducted: **IP 65 test**

Test dates: **2013-07-02 & 2013-07-03**

Report Issue Date: **2013-07-04**


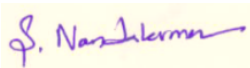
Condition of sample on receipt: **Good**

Sampling Plan: **No**

Test Results: **Refer Annexure A.**

Enclosure: **Page No. 2 of 5 – Annexure A: Test Results & photos.**
Page No. 3 & 4 of 5 -- Annexure B: Test Method and Conditions.
Page No.5 of 5 – Annexure C: Instrument Calibration Details.

Total Pages – 5

Test Engineer	Authorized signatory
	
M. Karthikeyan	S.Nandakumar



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Annexure A

Results:

Test No.	Test Name	Results
1	Visual Inspection Test (Before IP65)	Satisfactory, no deposits of dust & water was found inside.
2	Visual Inspection Test (After IP65)	satisfactory; IP X5: There was no water particles found inside the product. IP 6X: Dust particles were not found inside the product.

Photos:

Sample no: (Dust test)



Sample no: (Rain test)





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Annexure B

Test Method and Conditions:

IP65 Test:-

Test Sequence -

- i. Visual inspection.
- ii. IP 6X
- iii. IP X5
- iv. Visual inspection

A) Dust test for first characteristic Numerical '6'

Test Date: 2013-07-02

Test samples:

Two sample of 1.2W LED portable Lamp was submitted for testing.

Considered Category 2 enclosures as per manufacturer declaration:

The enclosure under test is supported in its normal operating position inside the test chamber, but is not connected to a vacuum pump. Any drain-hole normally open shall be left open for the duration of the test. The test shall be continued for a period of 8 h.

Test conditions for first characteristic Numeral 6

The talcum powder used shall be able to pass through a square-meshed sieve the nominal wire diameter of which is 50 μm and the nominal width of a gap between wires 75 μm . The amount of talcum powder to be used is 2 kg per cubic meter of the test chamber volume. It shall not have been used for more than 20 tests.

Acceptance conditions for first characteristic Numeral 6

The protection is satisfactory if, on inspection, talcum powder has not accumulated in a quantity or location such that, as with any other kind of dust, it could interfere with the correct operation of the equipment or impair safety. The protection is satisfactory if no deposit of dust is observable inside the enclosure at the end of the test.

Compliance Criteria

The Visual inspection talcum powder has not accumulated in a quantity or location such that, as with any other kind of dust, it could interfere with the correct operation of the equipment or impair safety. Operation of the equipment or impair safety. Except for special cases to be clearly specified in the relevant product standard, no dust shall deposit where it could lead to tracking along the creepage distances.

Result: Visual inspection after the test was Satisfactory; **No deposits of dust particles were found inside the product.**



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B) Second Numeral “5”

Test Date: 2013-07-03

Test samples:

Two sample of 1.2W LED portable Lamp sample was submitted for testing.

Test for second characteristic numeral 5: Protected against water jets with the 6.3 mm nozzle

Test Condition:

The test is made by spraying the enclosure from all practicable directions with a stream of water from a standard test nozzle as shown in figure 6 in IEC 60529.

The conditions to be observed are as follows:

- Internal diameter of the nozzle: 6.3 mm;
- Delivery rate: 12, 5 l/min \pm 5 %;
- Water pressure: to be adjusted to achieve the specified delivery rate;
- Core of the substantial stream: circle of approximately 40 mm diameter at 2.5 m distance from nozzle;
- Test duration per square meter of enclosure surface area likely to be sprayed: 1 min;
- Minimum test duration: 3 min;
- Distance from nozzle to enclosure surface: between 2.5 m and 3 m.

Acceptance conditions

After testing in accordance with the appropriate requirements mentioned above the enclosure shall be inspected for ingress of water. It is the responsibility of the relevant technical committee to specify the amount of water which may be allowed to enter the enclosure and the details of a dielectric strength test, if any.

In general, if any water has entered, it shall not:

- Be sufficient to interfere with the correct operation of the equipment or impair safety;
- Deposit on insulation parts where it could lead to tracking along the creepage distances;
- Reach live parts or windings not designed to operate when wet;
- Accumulate near the cable end or enter the cable if any.

If the enclosure is provided with drain-holes, it should be proved by inspection that any water which enters does not accumulate and that it drains away without doing any harm to the equipment.

For enclosures without drain-holes, the relevant product standard shall specify the acceptance conditions if water can accumulate to reach live parts.

Result: Water particles were not found inside the product after the test.

Note: The water tests satisfy the IP X5 Code of conduct.



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Annexure C

Instrument Calibration Details

Inst. ID No.	Instrument Type	Function Range	Last Cal. Date	Next Cal. Date
SW05	STOPWATCH	(0-1Hr)	2012-08-12	2013-08-12
*DTC01	DUST CHAMBER	--	--	--
*T06	DUST TEST CHAMBER TIMER	(0-24Hr)	--	--
*T07	RAIN TEST TIMER	(0-1Hr)	--	--
*RTC01	RAIN TEST CHAMBER	--	--	--
WC01	Wall Clock	24hr	2012-09-18	2013-09-18

- * Support Equipment's.