



TC-13518

HI PHYSIX
testing & calibration laboratory**HI PHYSIX LABORATORY INDIA PVT. LTD.**

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Page No. 01 of 04

TEST REPORT**TEST REPORT AS PER: IS/IEC 60529:2001****SRF No.:24070237**

Name & Contact Information of Customer:		ULR-TC1351824000000456F	
M/s. Duncan Engineering Limited		Discipline: Electrical Testing	
F33,MIDC, Ranjangaon, Karegaon, Tal-Shirur, Pune-412220, Maharashtra, India.		Group: Environmental Test Facility	
Contact Person:Mr. Amit A Karogal		Test Report No: HPLI/Test/2407023701	
Contact No: 9561092034		Date of Issue:18/07/2024	
		Test Performed: At Lab	
		Customer Ref. & Date: 09/07/2024	
		Date of Sample Receipt: 09/07/2024	Start of Test Date: 10/07/2024
			End of Test Date: 10/07/2024

**PART A - PARTICULARS OF THE SAMPLE SUBMITTED**

Sample description	Limit Switch Box
Grade/ variety/ type/ class/ size etc.	Size. : (120 X 105 X 140)MM (L x W x H)
Declared values, if any	Nil
Code no., BIS seal and IO's sign. if any	Nil
Batch no., date of manufacture and Brand name	Brand Name: "Duncan" Model No. : "DLSB-WP-X-XX-X-X-XX-X-XX" (see remark on page no 4)
Quantity	01 No.
Condition of the sample	OK
Reference specification (s)	IS/IEC 60529:2001
Environmental conditions	Temperature (25±4) °C & Relative Humidity<70%

Statement of Conformity	Not requested by customer
Decision Rule	Not Applicable

PART B - SUPPLEMENTARY INFORMATION

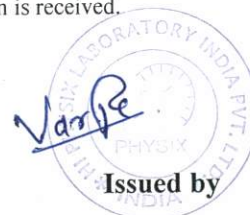
- a) Deviations from the test methods as per relevant specification/ work instructions, if any: Nil.
- b) Details of the drawings, graphs, tables, sketches or Photographs as referred in the test report, if any: Photograph Attached.
- c) Testing procedure according to work instructions: HPLI 03/Test-Appl/WI-807.
- d) The Management System is maintained in accordance with ISO/IEC 17025:2017 and testing Standards/Instruments are traceable to National/International Standards.

- Notes:** i) This report is not to be reproduced wholly or in part without our special permission in writing.
- ii) This report refers only to the particular sample detailed above.
- iii) The results reported in this certificate are valid at the time of and under the stipulated conditions of measurement.
- iv) Remnants of the sample will be disposed off after 30 days of issue of test report, if no any further information is received.

Tested by

Checked by

HI PHYSIX LABORATORY INDIA PVT. LTD.

Ashutosh Pathak
(Chief Technical Manager)
Approved by

Format No. HPLI 04 F31-00

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TC-13518

PART C- TEST RESULT

ULR-TC135182400000456F
TEST REPORT NO.: HPLI/Test/2407023701
IS/IEC 60529:2001

S. No.	TESTS WITH CLAUSE REFERENCE		SPECIFIED REQUIREMENTS	Covered under our NABL Scope (Yes/No)	RESULTS
1.	IP6X Test (As per cl. No. 5 & 13.4, 13.6 IS/IEC 60529:2001)	i)	<p>Tests for protection against access to hazardous parts indicated by the first characteristic numeral. (Test for first characteristic numeral 6X):</p> <p>The access probe of 1.0 mm is pushed against or inserted through any openings of the enclosure with the force $1.0N \pm 10\%$. The test wire of 1.0mm shall not penetrate and adequate clearance shall be kept between the access probe and hazardous parts. (Cl. 12.2 of IS/IEC 60529:2001)</p> <p>The protection is satisfactory if adequate clearance is kept between the access probe and hazardous parts</p>	Yes	Satisfactory
			<p>Tests for protection against solid foreign objects indicated by the first characteristic numeral. (Test for first characteristic numeral 6X Dust-tight):</p> <p>The test is made using a dust chamber incorporating the basic principles. 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. (Cl. 13.4 of IS/IEC 60529:2001)</p> <p>The protection is satisfactory if no deposit of dust is observable inside the enclosure at the end of the test.</p>		Satisfactory (No ingress of dust observed inside the enclosure)

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Page No.02 of 04

Checked by



TC-13518

PART C- TEST RESULT

ULR- TC1351824000000456F
TEST REPORT NO.: HPLI/Test/2407023701
IS/IEC 60529:2001

S. No.	TESTS WITH CLAUSE REFERENCE		SPECIFIED REQUIREMENTS	Covered under our NABL Scope (Yes/No)	RESULTS
2.	IPX5 Test (As per Clause No.6 & Cl.14.2.5 of IS/IEC 60529:2001)	ii)	<p>Test for second characteristic numeral X5:</p> <p>The test is made by spraying the enclosure from all practicable directions with a stream of water from a standard test nozzle.</p> <ul style="list-style-type: none"> - 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 area likely to be sprayed 1 min. approximately 40 mm diameter at 2.5 m distance from nozzle. -Test duration per square metre 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. <p>(Cl. 14.2.6 of IS/IEC 60529:2001)</p> <p>After testing, if any water has entered, it shall not-</p> <ul style="list-style-type: none"> - 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. 	Yes	Satisfactory (No water observed inside the enclosure.)

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Page No.03 of 04

Checked by

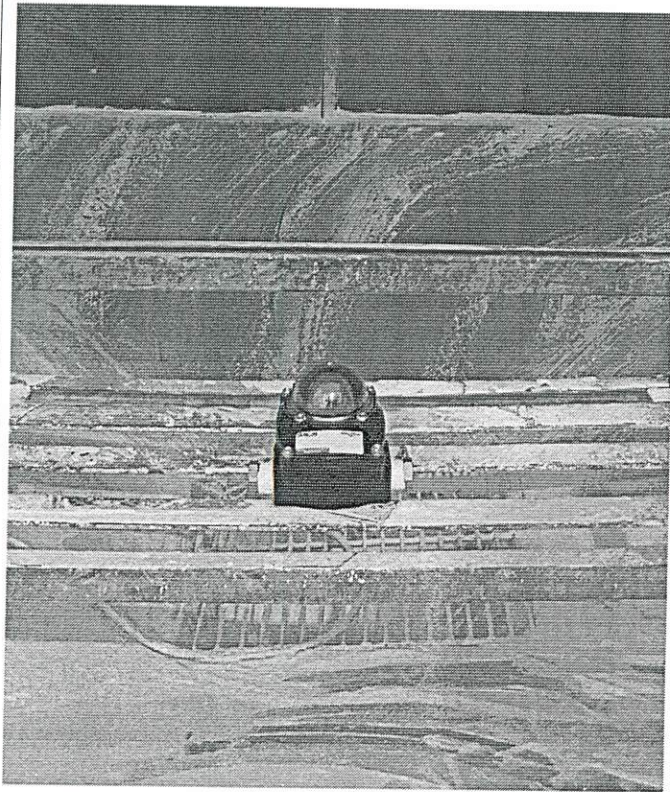


TC-13518

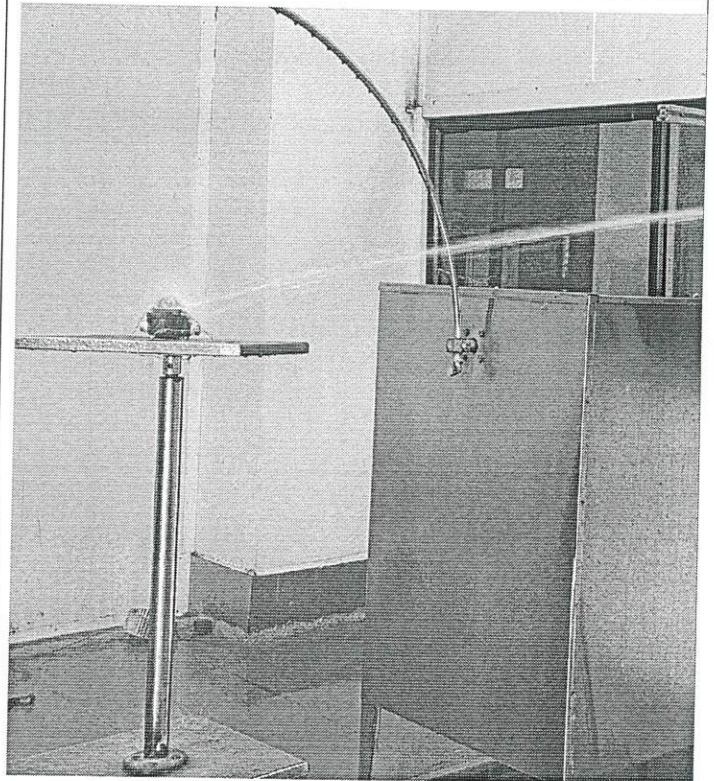
PART C- TEST RESULT

Sample Photographs:-

ULR- TC1351824000000456F
TEST REPORT NO.: HPLI/Test/2407023701
IS/IEC 60529:2001



SAMPLE UNDER TEST (IP6X)



SAMPLE UNDER TEST (IPX5)

PART-D:

- Remarks:**
1. The Information given in part A of the cover page of the test report are taken from the specification given by the customer.
 2. Test has been carried out on model no. DLSB-WP-1-01-4-A-MS-A-OS only.
 3. XXXX Will be vary according to changes of internal componants of the product but enclosure remains same as per the declearation by the customer.

**** END OF THE TEST REPORT ****

HI PHYSIX LABORATORY INDIA PVT. LTD.

Tested by

Checked by

Ashutosh Pathak
(Chief Technical Manager)

Approved by

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