

CENTRAL POWER RESEARCH INSTITUTE
(Member of STL)



TEST REPORT

Test Report Number : CPRI BLSCLMISC22T0631 **Date:** 01 July 2022

Name and Address of the Customer : M/s. Multipower Earthing Solutions Pvt. Ltd.,
Shed No-01, Sr No-35/1, Opp. Jijai Hotel,
Khedekar Ind. Estate, Narhe, Pune-411041,
Maharashtra, India.

Name and Address of the Manufacturer : M/s. Multipower Earthing Solutions Pvt. Ltd.,
Shed No-01, Sr No-35/1, Opp. Jijai Hotel,
Khedekar Ind. Estate, Narhe, Pune-411041,
Maharashtra, India.

Particulars of sample tested : Coper Bonded Earthing Electrode filled with
Conductive Compound

Type : Pipe in Pipe
Description of the sample : Refer Sheet 2 of 6
Serial Number : ---
Number of samples tested : One
Date (s) of Test (s) : 16 June 2022
CPRI sample code no(s) : SCLMISC22S0598
Particulars of tests conducted : Short-time withstand current and peak withstand current

Test in accordance with Standard / specification : Customer's instruction
Sampling plan : Not applicable

Customer's requirement : 30 kA rms for 1.0 s & 75 kA peak
Deviations if any : ---


Name of the witnessing persons
Customer's representatives : Mr. Akash Uttam Pasalkar, Director.
Other than customer's representatives : None

Test subcontracted with
Address of the laboratory : None

Documents constituting this report (in words)
Number of Sheet(s) : Six
Number of Oscillograms(s) : One
Number of Graph(s) : Nil
Number of Photo(s) : Two
Number of Test Circuit Diagram(s) : One
Number of Drawing(s) : One


(Sakthivel. P)
Test Engineer




(Swaraj Kumar Das)
Head of Division
Reviewed and Authorized by

CENTRAL POWER RESEARCH INSTITUTE
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DESCRIPTION OF SAMPLE TESTED
(As assigned by the manufacturer)

- Test sample : Copper Bonded Earthing Electrode filled with Conductive Compound
- Type : Pipe in Pipe
- Size & length of earthing electrode : 70mm (ID) dia with 3mm wall thickness (outer pipe), 35mm (ID) dia with 3mm wall thickness (inner pipe) & 2900 mm long
- Short-time current withstand current & peak withstand current : 30 kA rms for 1.0 s & 75 kA peak


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SUMMARY OF TEST CONDUCTED

- 1 Tests conducted : Short-time withstand current and peak withstand current
- 2 Rating for which tested : 30 kA rms for 1.0 s & 75 kA peak
- 3 Schedule of tests : Refer Sheet 5 of 6
- 4 Oscillogram Numbers : CPRIBLRSCLMISC22T0631S002
- 5 Photograph Numbers : CPRIBLRSCLMISC22T0631P01 &
CPRIBLRSCLMISC22T0631P02
- 6 Test Circuit Diagram Numbers : CRTL/SC/STC-01A
- 7 Drawing Numbers : Refer Sheet 4 of 6
- 8 Criteria for evaluation : No visible damage to Earthing Electrode & Copper bonding shall be intact


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LIST OF DRAWINGS

Drawing Numbers

The manufacturer has guaranteed that the sample submitted for the test(s) has been manufactured in accordance with the following drawing.

Sl. No.	Drawing Number	Sheet Number	Revision Number
1	RV-2	---	---

It is verified that this drawing adequately represent the sample tested. Verification of this drawing by CPRI is limited to dimensional check only wherever possible.


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TEST RESULTS

SHORT-TIME WITHSTAND CURRENT AND PEAK WITHSTAND CURRENT (as per customer's instruction)

TEST CONDITIONS

Source Short-circuit generator
Number of phases Single
Frequency 50 Hz


Test sample
Condition of the sample Good; terminal of the earthing electrode connected to source
Mounting Horizontal, isolated from ground

Test details
Test circuit drawing number CRTL/SC/STC-01A
Short-circuit applied On the end of the earthing electrode
Short-circuit point Grounded
Ambient Temperature: 27°C

Oscillogram Number	Current (kA)		Duration (s)	Observation
	Peak	Rms		
CPRIBLRSCLMISC 22T0631S002	77.80	30.08	1.05	During test: No abnormality

Physical Inspection: No visible damage to earthing electrode, copper bonding intact.

Conclusion: The sample tested complies with the requirement of customer for the test conducted.


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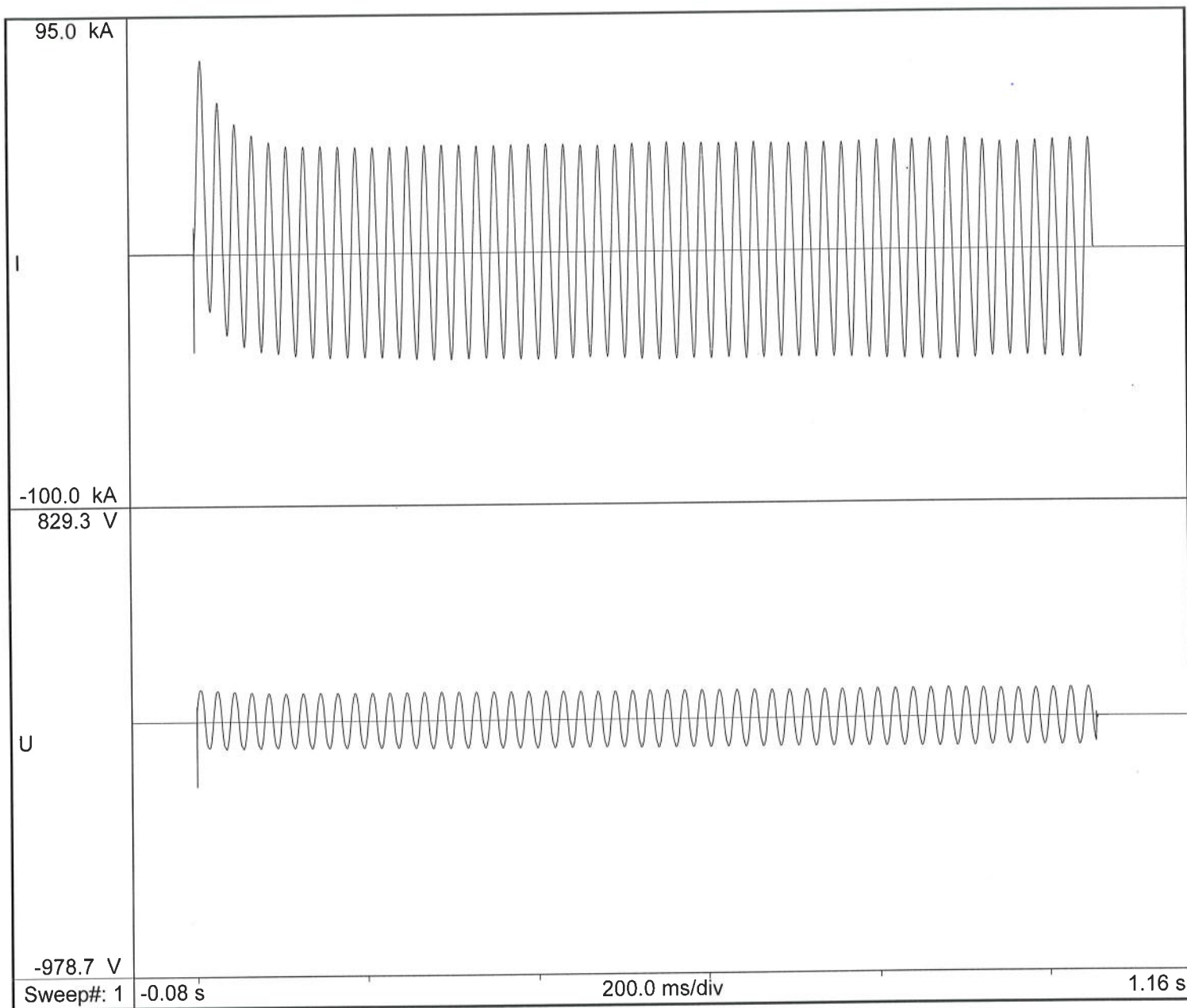
NOTE


- a) The Test results relate only to the item(s) tested.
- b) Publication or reproduction of this report in any form other than by complete set of the whole test report and in the language written is not permitted without the written consent of CPRI.
- c) Any Corrections / erasure invalidate the test report.
- d) Any anomaly / discrepancy in the test report should be brought to notice of CPRI within 45 days from the date of issue.
- e) All the documents consisting the test report are stitched together with a continuous silk thread, the two ends of which have been brought over the front sheet of the test report and seal with a CPRI logo printed paper sticker.


(Sakthivel. P)

Test Engineer

-----End of Test Report -----




(P. Sakthivel)
Test Engineer

16-06-2022

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TEST REPORT



Mounting arrangement (Before test)

CPRI BLRSCL MISC22T0631 P01


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TEST REPORT



Condition of the sample (After test)

CPRI BLSCL MISC22T0631 P02

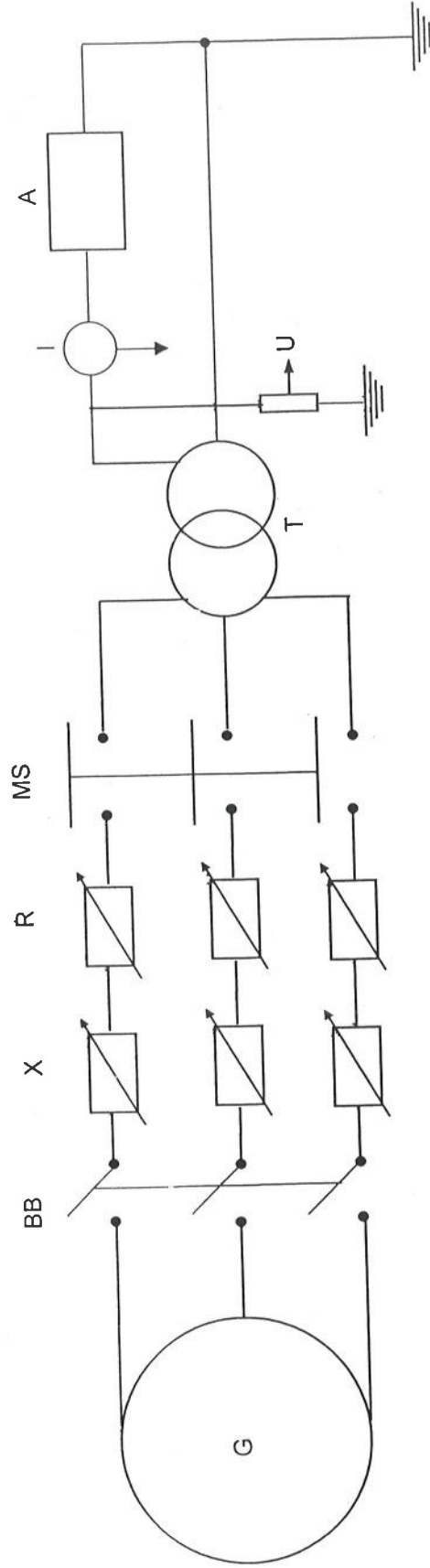

(Sakthivel. P)
Test Engineer



CPRI

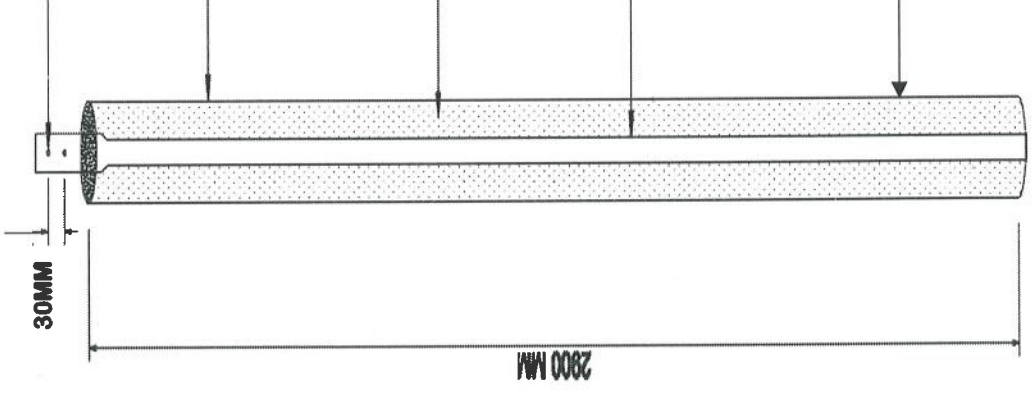
Schematic of main & measurement circuits - Single phase test

Circuit Number: CRTL/SC/STC-01A



- | | | | |
|----|-------------------------|----|-----------------------|
| G | Short-circuit Generator | MS | Make Switch |
| BB | Back up Circuit Breaker | T | Step-down transformer |
| X | Reactance | A | Sample under test |
| R | Resistors | I | Current Sensor |
| | | U | Voltage divider |

Sakthivel P
 (Sakthivel. P)
 Test Engineer



Terminal Size 60mm X 6 mm X 100mm & Hole 2xØ10mm Copper Bonded

Copper Bonded Mild Steel Outer Pipe

2900mm Long

OD: - 76mm & ID: 70mm

Thickness: - 3 mm

Conductive Compound

Mild Steel Inner Pipe

3000 MM Long

OD: -41mm

ID: - 35mm

Thickness: - 3mm

Copper Plating 250Mc

इति आसी. इम इय रेखाचित्र आ संस्करण जेणे करी भी संभव हो शिके विधीय जाचें तक ही सीमित है।
 THE VERIFICATION OF THIS DRAWING BY CPRI IS LIMITED TO DIMENSIONAL CHECKS ONLY WHEREVER POSSIBLE.

परीक्षण रिपोर्ट सं सीपीआरआईविएलआरएससीएलएनआई
एससी से संबंधित दस्तावेज़
 Document Pertaining to Test Report
 No: CPRI/RLSCLMISC.22A0631

Mfg. Address	Multipower Earthing Solutions Pvt. Ltd.
Title	Shed No-01, Sr No-35/1, Opp Jijai Hotel, Khedekar Ind Estate, Narhe, Pune 411041
Drawing No.	Copper Bonded Pipe in Pipe MS Earthing Electrode RV -2

(Signature)
 परीक्षण अभियन्ता / Test Engineer
 ल.प. प्रयोगशाला / S. C. LAB
 सी. पी. आर. आई. / CPRI
 बंगलूरु / Bengaluru

**Note: - 1) All Dimension are in mm
 2) Tolerance +/- 5%**

Copper Bonded Earthing electrode 76mm OD X 3mtr long – Pipe in Pipe