

**CPRI**

## **TEST REPORT**



## **Central Power Research Institute**

**(A Govt. of India Society)**

**P.B.No. 8066, Sadashivanagar Post Office,**




**Sir C.V. Raman Road,**

**Bengaluru - 560 080 (INDIA)**

**CENTRAL POWER RESEARCH INSTITUTE**  
(Member of STL)



**TEST REPORT**

<b>Test Report Number</b>	SC171473	<b>Dated:</b> 17 <sup>th</sup> August, 2017
<b>Name &amp; Address of the Customer</b>	M/s. Infinite Electro Tech Pvt. Ltd., # 29, Dhankodi Raja Street, Ekattuthangal, Chennai – 600 097, Tamil Nadu, India.	
<b>Name &amp; Address of the Manufacturer</b>	M/s. Infinite Electro Tech Pvt. Ltd., # 29, Dhankodi Raja Street, Ekattuthangal, Chennai – 600 097, Tamilnadu, India.	
<b>Particulars of sample tested</b>	Copper Bonded MS Earth Rod	
<b>Condition of the sample on Receipt</b>	New	
Type	---	
Description of test sample	25 mm dia & 3000 mm Long Copper Bonded MS Earth Rod	
Serial Number(s)	---	
Number of samples tested	One	
Date (s) of test (s)	10 <sup>th</sup> August, 2017	
CPRI sample code no(s).	SC17S0597	
<b>Particulars of tests conducted</b>	Short-time withstand current and peak withstand current	
Test in accordance with Standard / specification	Customer's instruction	
Sampling plan	Not applicable	
Customer's requirement	25 kA rms for 1.0 s & 63 kA peak	
Deviations if any	---	
<b>Name of the witnessing persons</b>		
Customer's representative	Mr. Anirudha Basu, GM	
Other than customer's representative	None	
Test subcontracted with address of the laboratory	None	
<b>Documents constituting this report (In words)</b>		
Number of sheets	Four	
Number of oscillograms	One	
Number of graphs	Nil	
Number of photos	Two	
Number of test circuit diagrams	One	
Number of drawings	One	
 (Sakthivel.P) <b>Test Engineer</b>		 (Swaraj Kumar Das) <b>Joint Director</b>

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**Dated:** 17<sup>th</sup> August, 2017

**Description of sample tested (ratings as assigned by the manufacturer)**

Test sample	Copper Bonded MS Earth Rod
Type	---
Serial Number	---
Size & Length of Earth electrode	25 mm dia & 3000 mm Long Copper Bonded MS Earth Rod
Short-time withstand current and peak withstand current	25 kA rms for 1.0 s & 63 kA peak

**Documents attached to this report**

Oscillogram number(s)	SC171473.S01
Photograph number(s)	SC171473.PB1 & SC171473.PA1
Test circuit diagram number(s)	CRTL/SC/STC-01A
Drawing number (s)	CP25003

  
Test Engineer

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**Schedule of test**

**SHORT-TIME WITHSTAND CURRENT AND PEAK WITHSTAND CURRENT**

**TEST CONDITIONS**

<u>Source</u>	Short-circuit generator
Number of phases	Single
Frequency	50 Hz
<u>Test sample</u>	
Condition of the sample	In clean & new condition; one end of the earth rod connected to source
Mounting	Horizontal, isolated from ground
<u>Test details</u>	
Test circuit drawing number	CRTL/SC/STC-01A
Short-circuit applied	On the other end of the earth rod
Short-circuit point	Grounded

**TEST RESULTS**

Oscillogram Number	Current (kA)		Duration (s)	Observation
	peak	rms		
SC171473.S01	63.51	24.44*	1.12	<b>During test:</b> No Abnormality <b>After test:</b> No visible damage to earth rod.

\*Equivalent to 25.86 kA rms for 1.0 s

Physical Inspection: No visible damage.

  
Test Engineer

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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 / Certificate and in the language written is not permitted without the written consent of CPRI.
- c) Any Corrections / erasure invalidate the test Report/Certificate.
- d) Any anomaly / discrepancy in the test report / Certificate should be brought to notice of CPRI within 45 days from the date of issue.

**Additional Information:**

This is not a certificate of rating. A certificate of rating is not issued as only limited tests as requested by the customer were carried out.

CPRI issues following types of reports/certificates:

**Test Report:**

The test report contains the record of the values of test parameters as obtained during testing, the physical condition of the sample during / after the test(s) and copy of oscillogram(s). Test report is issued when partial tests are performed as against the complete test requirement for proving specific ratings.

**Sealed Certificate:**

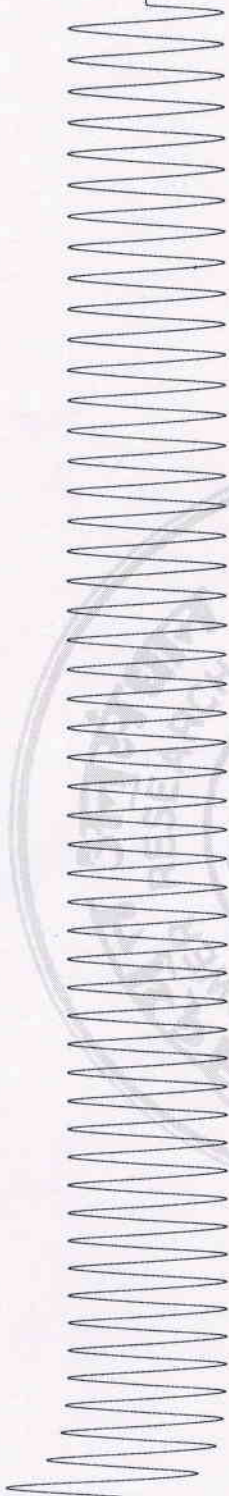
The sealed certificate is issued, on request and payment of the prescribed charges thereof only when the sample of particular type and rating has satisfactorily passed all the specified tests in compliance with the condition stipulated in a published National / International standard.

**CPRI issues the following type test certificates based generally on STL Guidelines:**

- I. Type test certificate of Short Circuit Performance.
- II. Type test certificate of Switching Performance.
- III. Type test certificate of Temperature Rise Performance.
- IV. Type test certificate of Dielectric Performance.
- V. Type test certificate of complete type test.

  
**Test Engineer**

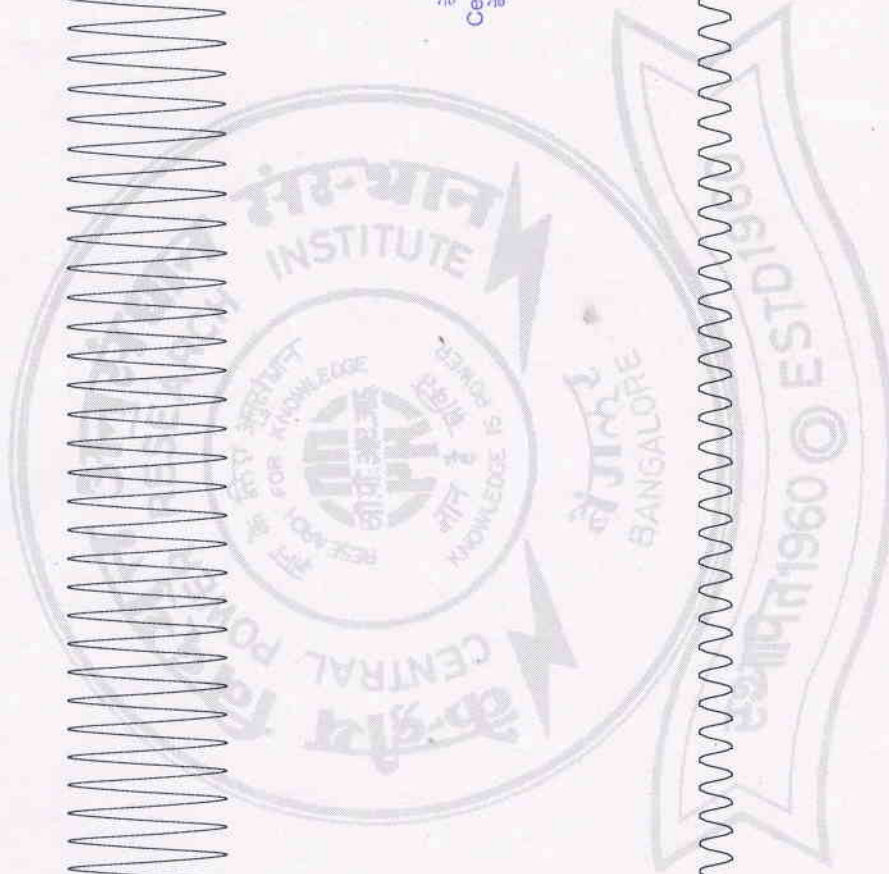
33.86 kA



462.88 V



लघु पथन प्रयोगशाला  
Short-Circuit Laboratory  
केन्द्रीय विद्युत अनुसंधान संस्थान  
Central Power Research Institute  
बंगलूरु / Bengaluru - 560 080



170.10 milli seconds

  
TEST ENGINEER

SC171473.S01 Dt: 8/10/2017

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Mounting arrangement (Before test)

SC171473.PB1

  
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Condition of the sample (After test)

SC171473.PA1

  
Test Engineer

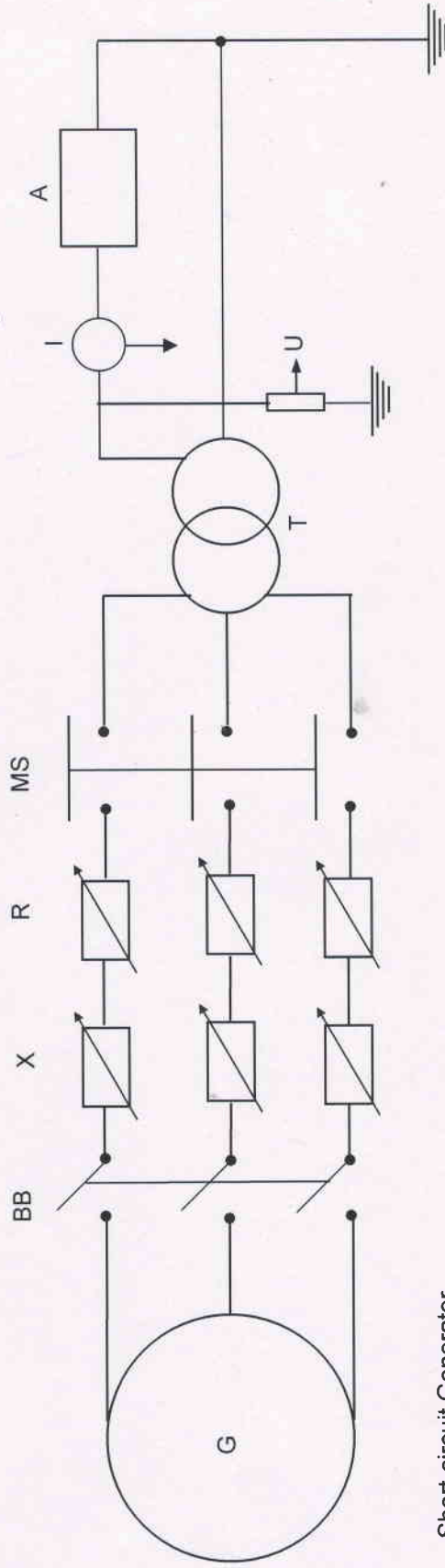




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### Schematic of main & measurement circuits - Single phase test

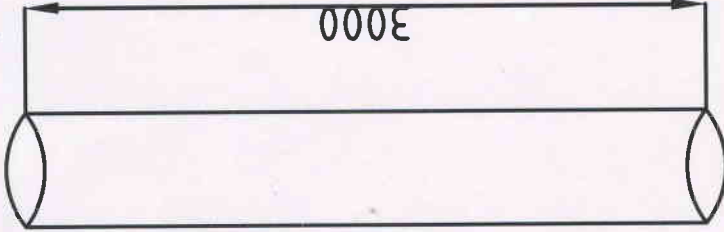
Circuit Number: CRTL/SC/STC-01A



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

*[Signature]*  
Test Engineer

Ø25



के.वि.अ.स. द्वारा इस रेखाचित्र का सत्यापन जहाँ  
कहीं भी संभव हो सके विषयीय जांच तक ही सीमित है।  
THE VERIFICATION OF THIS DRAWING  
BY CPRI IS LIMITED TO DIMENSIONAL  
CHECKS ONLY WHEREVER POSSIBLE

रिपोर्ट क्रमांक.....  
से संबंधित दस्तावेज  
Document Pertaining to  
Report No. SC13-14-22

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

NOTE :

ALL DIMENSIONS IN MM  
GENERAL TOLERANCES +/-5%  
COPPER COATING THICKNESS 250 MICRONS

TITLE:	Ø25 COPPER BONDED MS EARTH ROD		
	M/s INFINITE ELECTRO TECH PVT LTD #29, DHANKODI RAJA STREET, EKKATTUTHANGAL CHENNAI-600097		
DATE	SCALE	DRAWING NO	
20-07-2017	NTS	CP25003	