

BY HAND/BY POST

केन्द्रीय विद्युत अनुसंधान संस्थान
CENTRAL POWER RESEARCH INSTITUTE
स्विचगियर परीक्षण तथा विकास केन्द्र गोविन्दपुरा, भोपाल - 462023
SWITCHGEAR TESTING & DEVELOPMENT STATION GOVINDPURA BHOPAL- 462023

तार : स्विचपरीक्षण
Gram : Powerresearch
फेक्स (Fax) : 91755 2587774
टेलिफोन (Telephone) : 0755-2586343

संदर्भ क्रमांक (Ref. No): 11(2)/2023/STDS/Stn.2/ 587
सेवा में / To,

दिनांक (Date): 07 December 2023

एवरराइज इंजीनियरिंग
7/19-बी, कीरानाथम पोस्ट। किरणथम,
कोयंबटूर, तमिलनाडु, 641035

Everrise Engineering
7/19-B, Keeranatham Post. Keeranatham,
Coimbatore, Tamil Nadu, 641035

विषय (Sub.): - परीक्षण दस्तावेज (Test document)

Final Report

महोदय / Dear Sir,

हमारी प्रयोगशाला में.....LT Panel

पर / के बीच आपके 31.08.2023 पर संचालित परीक्षण के संबंध में निम्नलिखित दस्तावेज संलग्न हैं।

Please find enclosed the following documents in respect of the test (s) conducted on (equipment) on/ from (dates)at our laboratory.

1:- टेस्ट रिपोर्ट नम्बर, Test report number **CPRIBPLSTNBMISC23T0349**

रिपोर्ट में असंगतियाँ यदि हो तो इस रिपोर्ट के जारी होने की तारीख से 45 दिन के अंदर लिखित रूप में हमारे ध्यान में लायी जावे ताकि आवश्यक संशोधन किया जा सके और इसके लिये रिपोर्ट की सभी मूल प्रतियाँ लौटाई जावें। कृपया नोट करें कि इस तारीख के बाद प्राप्त अनुरोधों पर कोई कारवाई नहीं की जाएगी।

Any discrepancies in the report must be brought to our notice in writing within 45 days of the date of issue of this report for effecting necessary corrections for which all the original copies of the reports must be returned. Please note that request received beyond this date will not be entertained.

दस्तावेजों की प्राप्ति की पावती भेजें।

Please acknowledge receipt of the documents.

सधन्यवाद Thanking you,

भवदीय (Yours faithfully)

प्रयोगशाला प्रभारी

LABORATORY INCHARGE

संलग्न : उपरोक्त
Encl. : as above

सी पी आर आई
भारत

**CPRI
INDIA**

परीक्षण रिपोर्ट
TEST REPORT





परीक्षण रिपोर्ट TEST REPORT

केन्द्रीय विद्युत अनुसंधान संस्थान

(विद्युत मंत्रालय, भारत सरकार के अधीन एक स्वायत्त सोसायटी)

CENTRAL POWER RESEARCH INSTITUTE

(An Autonomous Society under Ministry of Power, Govt. of India)

एस टी एल के सदस्य

Member of STL

स्विचगियर परीक्षण तथा विकास केंद्र

SWITCHGEAR TESTING & DEVELOPMENT STATION

गोविन्दपुरा, भोपाल - 462023

GOVINDPURA BHOPAL - 462023

दूरभाष/Telephone +91 (0) 755 - 2586682 फैक्स/Fax +91 (0) 755-2587774

CENTRAL POWER RESEARCH INSTITUTE

TEST REPORT



CPRI

Test Report Number : CPRIBPLSTNBMISC23T0349 Date: 06 December 2023

Name and Address of the Customer : Everrise Engineering
7/19-B, Keeranatham Post. Keeranatham,
Coimbatore, Tamil Nadu, 641035

Name and Address of the Manufacturer : Everrise Engineering
7/19-B, Keeranatham Post. Keeranatham,
Coimbatore, Tamil Nadu, 641035

Particulars of Sample Tested : 415V, 6300A L.T. Panel (Non Extendable)

Condition of sample(s) on receipt : New

Type : Power Cum Motor Control Centre

Description of test sample : Refer sheet 2 of 6

Serial Number : ERE/70

Number of Samples Tested : One

Date(s) of Test(s) : 31 August 2023

CPRI Sample code Number(s) : STNBMISC23S1606

Particulars of test(s) conducted : Verification of the short circuit withstand strength test.

Test(s) in accordance with Standard/Specification : As per customer's requirement and procedure generally followed as per Cl.10.11.5.3.3 & 10.11.5.3.5 of IS/IEC:61439-1, 2011 & IS/IEC:61439-2, 2011

Sampling Plan : Nil

Customer's Requirement : SCWS test to be conducted on busbar only.

Deviations, if any : SCWS test was conducted on busbar only.

Name of the witnessing persons

Customer's representative : Mr. Prashant

Other than Customer's representatives : Nil

Test subcontracted with and address of the laboratory : Nil

Documents constituting this report (in words)

Number of Sheets : Six

Number of Oscillogram(s) : Two

Number of Graph(s) : Nil

Number of Photograph(s) : One

Number of Test Circuit Diagram(s) : Two

Number of Drawing(s) : Four

(Prabakaran T)
Test Engineer



(Himangshu Roy)
Head of Division
Reviewed and Authorized by

CENTRAL POWER RESEARCH INSTITUTE

TEST REPORT

Test Report Number : CPRIBPLSTNBMISC23T0349 Date: 06 December 2023



CPRI

DESCRIPTION OF SAMPLE TESTED

(As assigned by the manufacturer)

Test Sample	:	415V, 6300A L.T. Panel (Non Extendable)
Type	:	Power Cum Motor Control Centre
Designation	:	Main Distribution Panel
Serial number	:	ERE/70
Voltages		
Rated Voltage (U_n) in V	:	415
Rated Insulation Voltage (U_i) in V	:	660
Rated impulse withstand voltage (U_{imp}) in kV	:	NA
Currents		
Rated Current (I_{nA}) in A	:	6300
Rated current of a main outgoing circuit (I_{nc}) in A	:	NA
Rated conditional short-circuit current (I_{cc}) in kA	:	NA
Rated short-time withstand current (I_{cw}) in kA	:	70 kArms for 1.0 Second with initial peak of 154 kApk
Rated frequency (f_n) in hz	:	50
Degree of protection	:	Nil
Material group	:	Nil
Form of separation	:	Nil
Number of Phases	:	Three Phase + Neutral
Extendable	:	No

NA : Not Applicable

(Prabakaran T)
Test Engineer

CENTRAL POWER RESEARCH INSTITUTE

TEST REPORT



CPRI

Test Report Number : CPRIBPLSTNBMISC23T0349 Date: 06 December 2023

SUMMARY OF TESTS CONDUCTED

1. Tests conducted : Verification of short circuit withstand strength
2. Rating for which tested : 70 kArms for 1.0 Second with initial peak of 154 kApk
3. Schedule of tests

Test conducted	Clause Numbers	Sheet
Verification of short circuit withstand strength test (Incoming circuit and main busbars & Neutral conductor)	As per customer's requirement	5 of 6

4. Oscillogram Numbers : CPRIBPLSTNBMISC23T0349S002
CPRIBPLSTNBMISC23T0349S004
5. Graph Numbers : Nil
6. Photograph Numbers : CPRIBPLSTNBMISC23T0349P01
7. Test Circuit Diagram Numbers : OLTS/TCD-STC-01
OLTS/TCD-STC-02
8. Drawing Numbers : Refer sheet 4 of 6


(Prabakaran T)
Test Engineer

CENTRAL POWER RESEARCH INSTITUTE

TEST REPORT

Test Report Number : CPRIBPLSTNBMISC23T0349 Date: 06 December 2023



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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 drawings

Sl. No.	Drawing Number	Sheet Number	Revision Number
1.	ERE/TEST/70	01 of 04	00
2.	ERE/TEST/70	02 of 04	00
3.	ERE/TEST/70	03 of 04	00
4.	ERE/TEST/70	04 of 04	00

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

(Prabakaran T)
Test Engineer

CENTRAL POWER RESEARCH INSTITUTE

TEST REPORT

Test Report Number : CPRIBPLSTNBMISC23T0349 Date: 06 December 2023



CPRI

VERIFICATION OF THE SHORT CIRCUIT WITHSTAND STRENGTH

Test conducted : Verification of the short circuit withstand strength
Test Source : Station Transformers
Number of phases : Three & Neutral
Frequency : 50 Hz
Condition Test Sample before test : New
Test connections : Connected to source
Safety parameter : Test sample was insulated from earth and connected to the neutral of the supply via a fusible element consisting of a copper wire 0.8 mm in diameter and at least 50 mm long for detection of fault.
Transformer neutral & short circuit point : Refer Test Circuit Diagram No.
OLTS/TCD-STC-01 for three phase test and
OLTS/TCD-STC-02 for single phase test.

Test results:

Oscillogram Number	Peak kApk	RMS in kA			Duration (second)	Equivalent current in kArms for said duration
		Ir	Iy	Ib		
CPRIBPLSTNBMISC23T0349S002	158.2 (R-phase)	71.4	71.8	70.2	1.0	71.8
(Three phase Short circuit withstand strength test conducted on busbars consisting of HBB+VBB+HBB)						
CPRIBPLSTNBMISC23T0349S004	90.1	43.7			1.0	43.7
(Single phase short circuit withstand strength test conducted on neutral & nearest phase of busbars consisting of HBB+VBB+HBB)						

Observations

During test : No abnormality observed.
After test : No abnormality observed in visual inspection. Fine wire fuse was found intact. All busbars & supports were found intact.

Remarks : After test, the sample withstood HV test at 1.0kVrms for five second.

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

(Prabakaran T)
Test Engineer

CENTRAL POWER RESEARCH INSTITUTE

TEST REPORT

Test Report Number : CPRIBPLSTNBMISC23T0349 Date: 06 December 2023



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NOTE

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

shre

(Prabakaran T)
Test Engineer

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

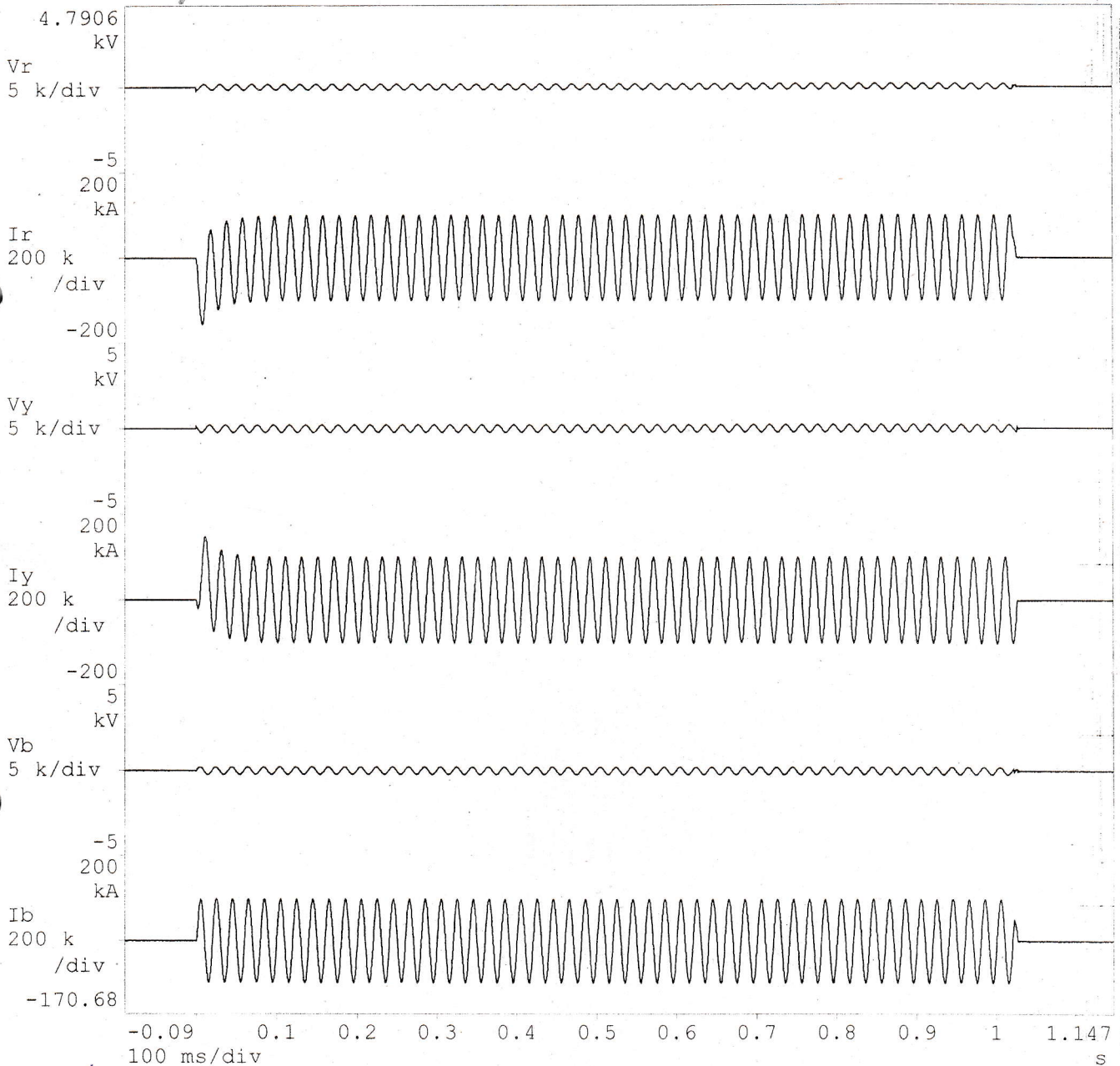
Central Power Research Institute

(Member of STL)



Test Report Number : CPRIBPLSTNBMISC23T0349

TEST RESULTS



Oscillogram Number : CPRIBPLSTNBMISC23T0349S002

Test Engineer

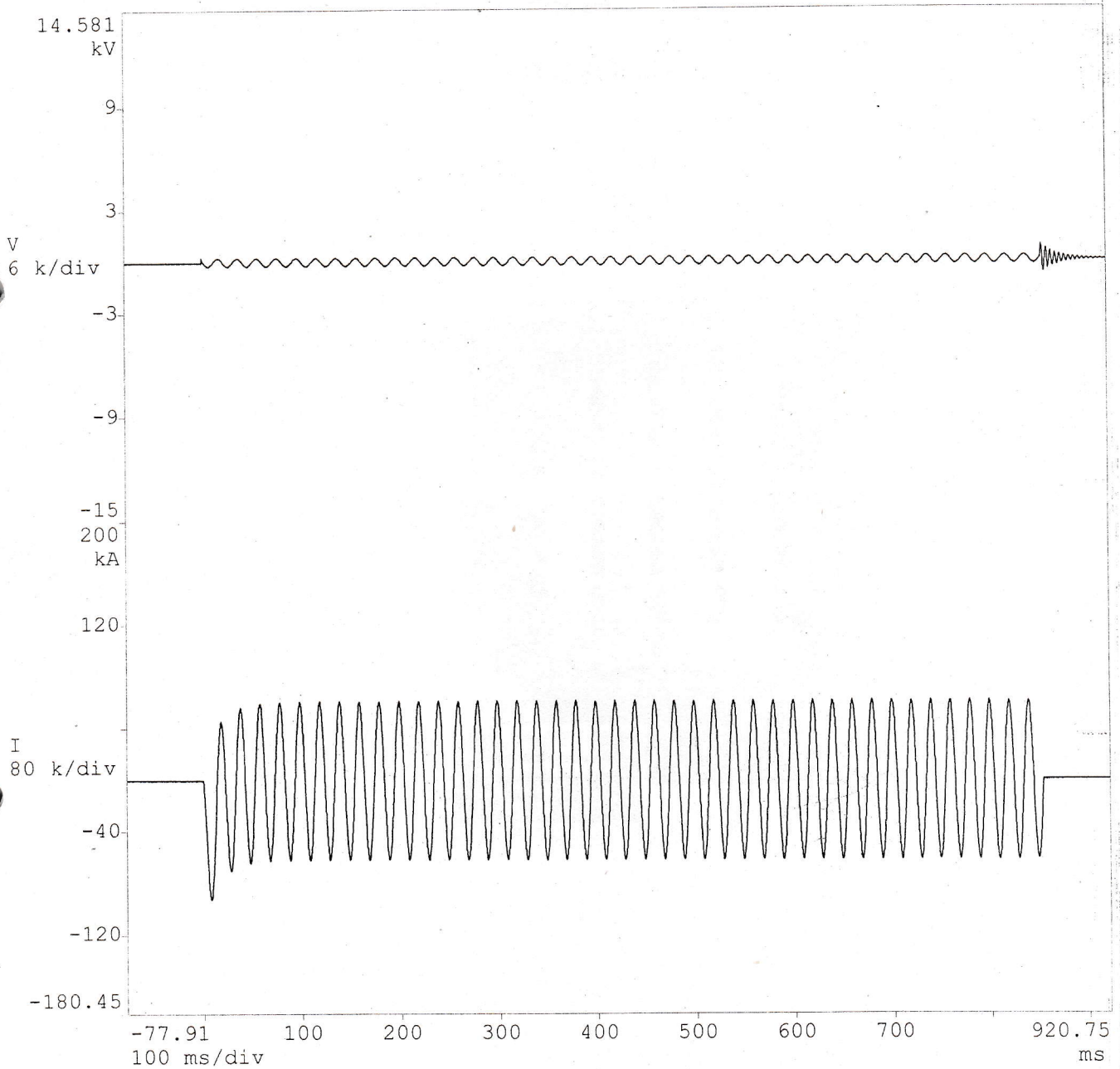
SWITCHGEAR TESTING & DEVELOPMENT STATION
GOVINDPURA, BHOPAL-462023, INDIA.
Phone: +91(0) 755 2586682 Fax: + 91(0) 755 2587774

Central Power Research Institute (Member of STL)



Test Report Number : CPRIBPLSTNBMISC23T0349

TEST RESULTS



Oscillogram Number : CPRIBPLSTNBMISC23T0349S004

Test Engineer

SWITCHGEAR TESTING & DEVELOPMENT STATION
GOVINDPURA, BHOPAL-462023, INDIA
Phone: +91(0) 755 2586682 Fax: + 91(0) 755 2587774

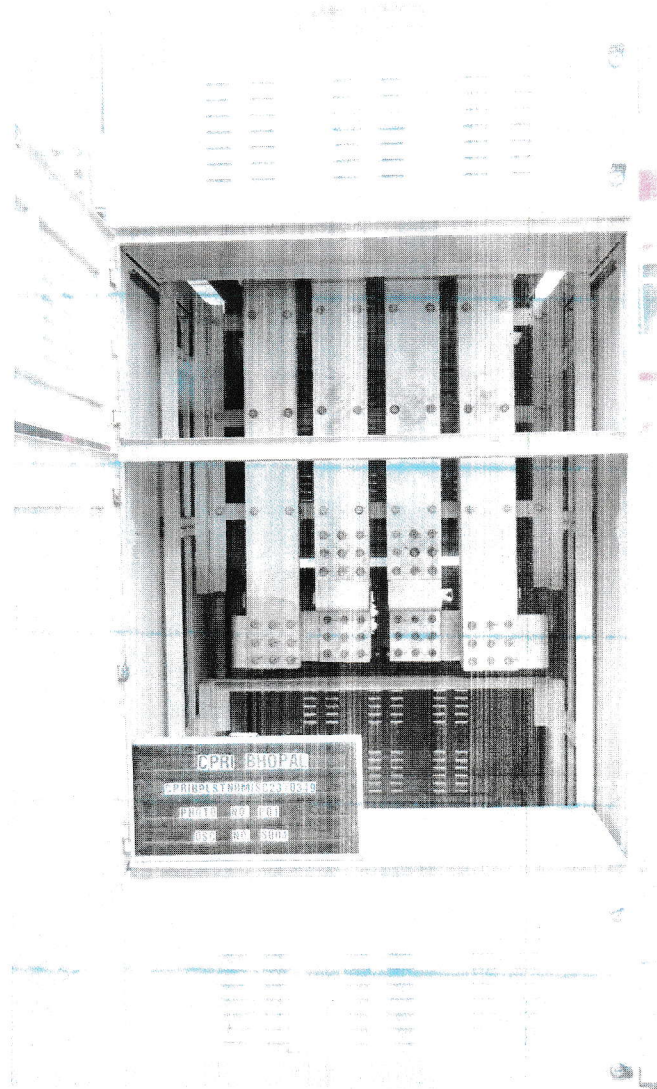
CENTRAL POWER RESEARCH INSTITUTE (MEMBER OF STL)



TEST REPORT

Test Report Number : CPRIBPLSTNBMISC23T0349

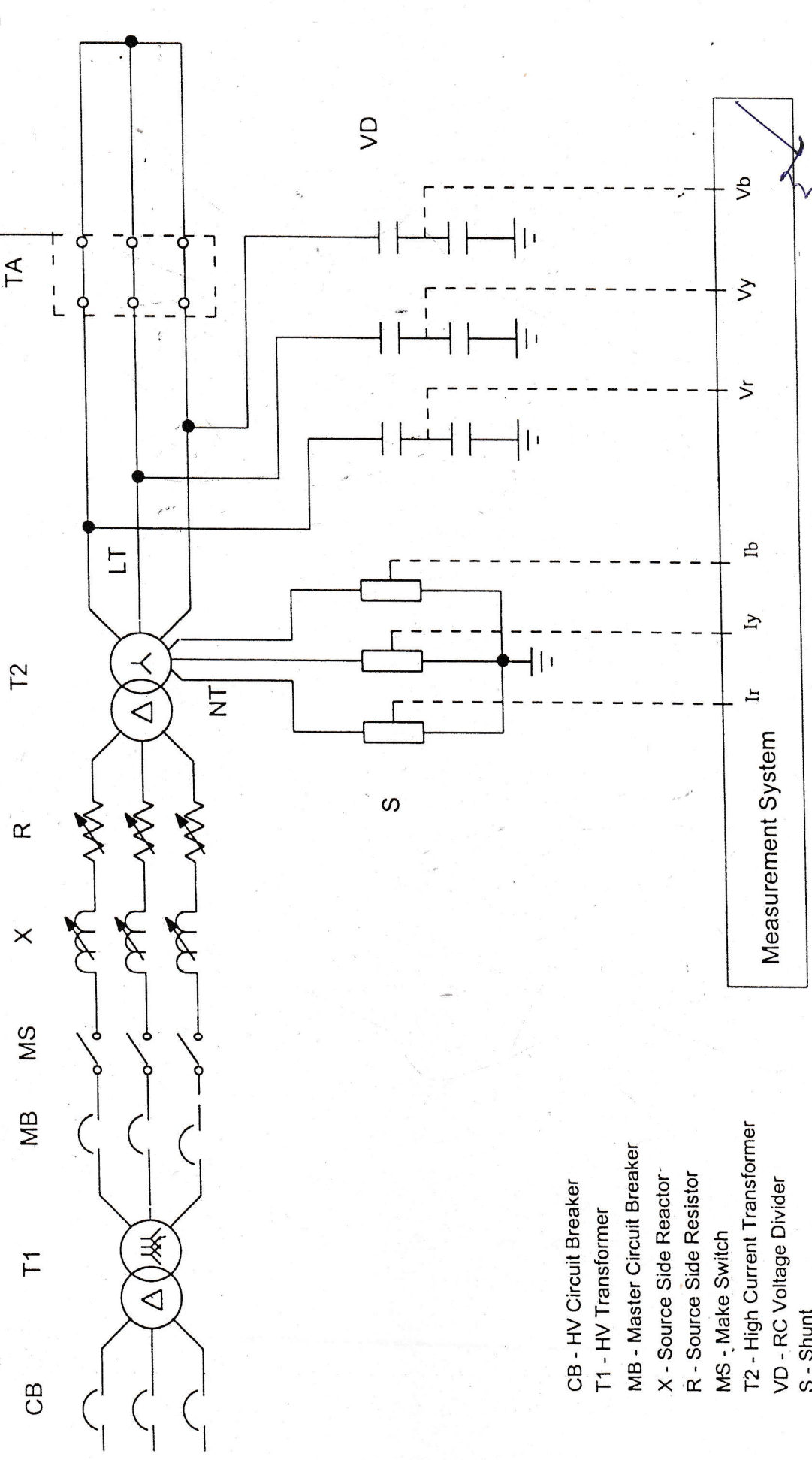
TEST RESULTS



Photograph Number : CPRIBPLSTNBMISC23T0349P01

Test Engineer

CPRI Bhopal



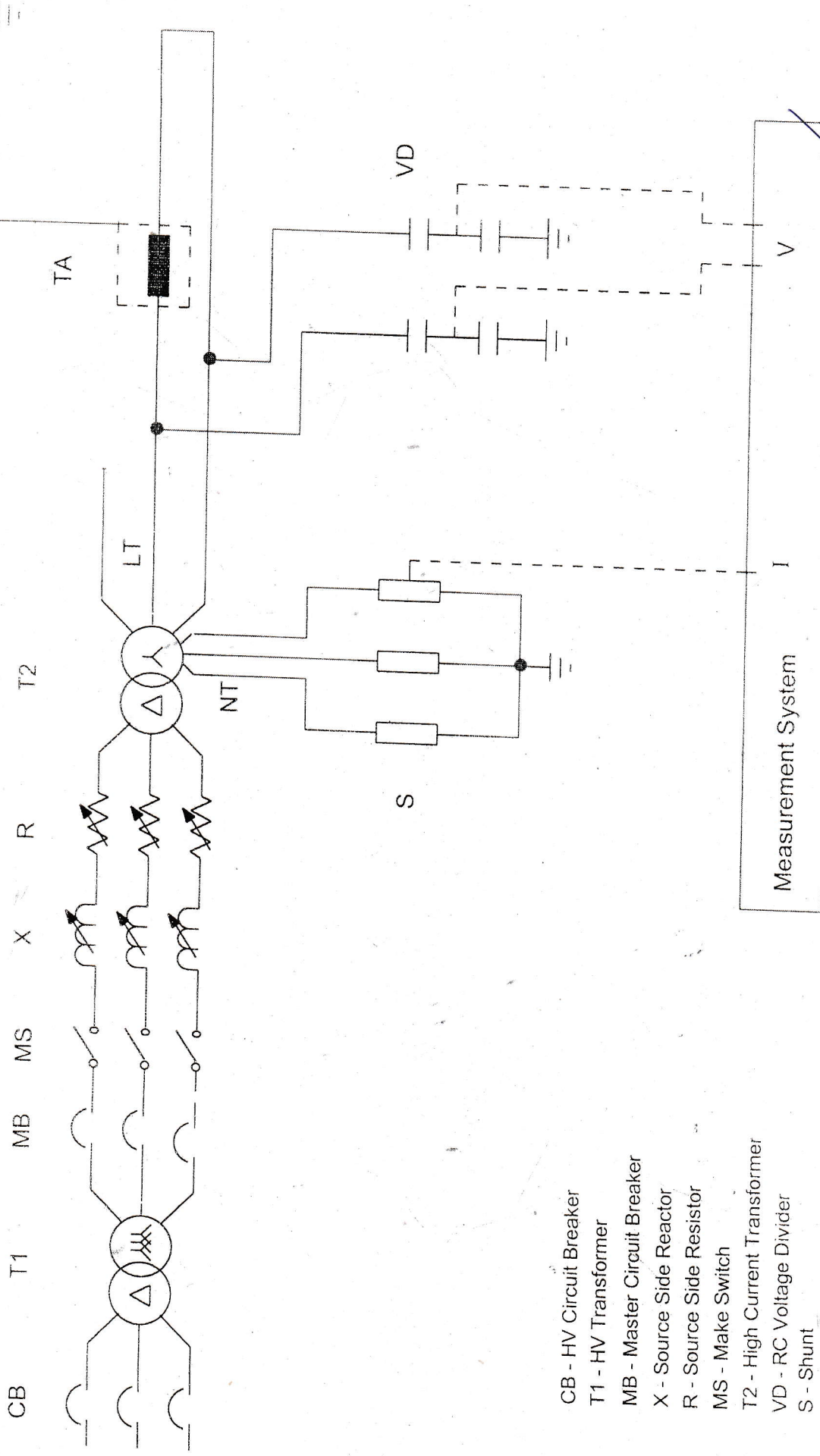
- CB - HV Circuit Breaker
- T1 - HV Transformer
- MB - Master Circuit Breaker
- X - Source Side Reactor
- R - Source Side Resistor
- MS - Make Switch
- T2 - High Current Transformer
- VD - RC Voltage Divider
- S - Shunt
- TA - Test Apparatus
- r - Current Limiting Resistor
- FWF - Fine Wire Fuse
- LT - Line terminals of the secondary windings of T2
- NT - Neutral terminals of the secondary windings of T2

TEST ENGINEER

OLTS/TCD-STC-01

Measurement System

CPRI Bhopal



- CB - HV Circuit Breaker
- T1 - HV Transformer
- MB - Master Circuit Breaker
- X - Source Side Reactor
- R - Source Side Resistor
- MS - Make Switch
- T2 - High Current Transformer
- VD - RC Voltage Divider
- S - Shunt
- TA - Test Apparatus
- r - Current Limiting Resistor
- FWF - Fine Wire Fuse
- LT - Line terminals of the secondary windings of T2
- NT - Neutral terminals of the secondary windings of T2

TEST ENGINEER

OLTS/TCD-STC-02

EVERRISE ENGINEERING

7/19-B, KEERANATHAM, SARAVANAMPATTIPOST,
COIMBATORE, TAMIL NADU-641035

EQUIPMENT : LT PANEL
SR.NO. : ERE/70
RATED VOLTAGE : 415V
RATED CURRENT : 6300A
RATED FREQUENCY : 50HZ
SHORT TIME WITHSTAND CURRENT: 70KA for 1s

NAME PLATE

के.वि.अ.सं. द्वारा रेखाचित्र का सत्यापन
जहाँ तक भी संगत हो सिर्फ विमीय
जांच तक ही संभव है।

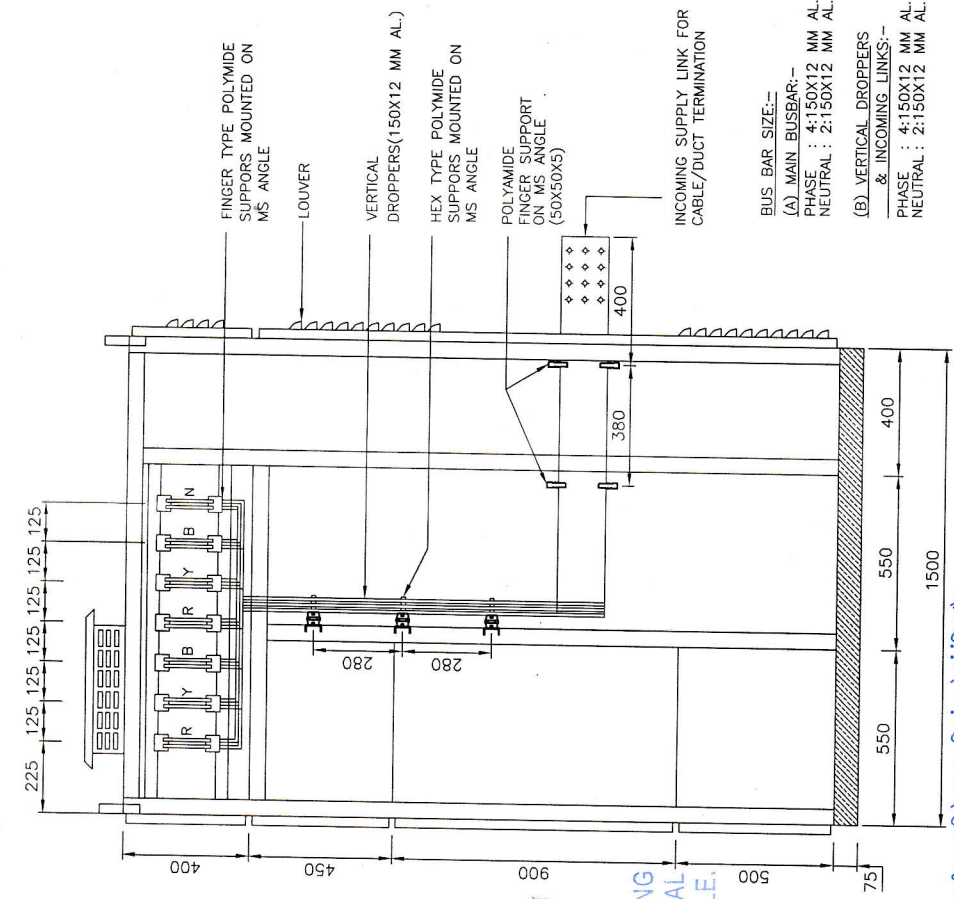
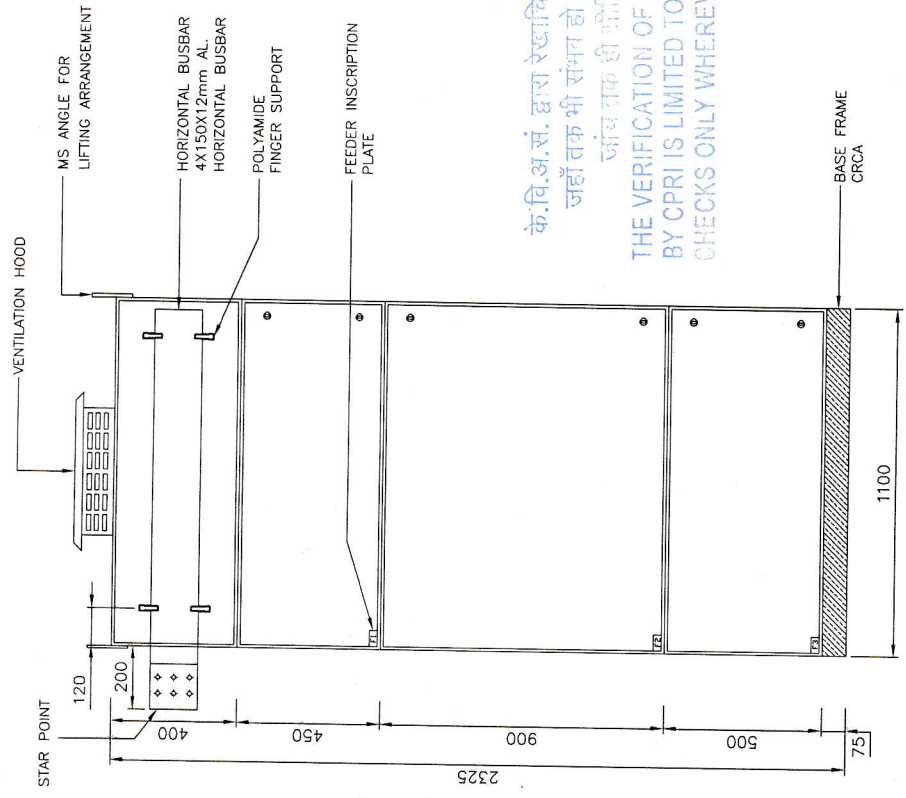
THE VERIFICATION OF THIS DRAWING
BY CPRI IS LIMITED TO DIMENSIONAL
CHECKS ONLY WHEREVER POSSIBLE.

यह रेखा चित्र सीपीआरआई के परीक्षण प्रतिवेदन क्र. दिनांक से संबंधित है।
THIS DRAWING PERTAINS TO CPRI TEST REPORT
क्र./No. CPRIPLSTNB MISC 23703H9

दिनांक/Dated

परीक्षण इंजीनियर / Test Engineer

REV	DATE	ISSUED FOR TESTING	DESCRIPTION	V C	BY	CHKD.	APPD.	415V 6300A LT PANEL	MFD. BY:	PROJECT :	CONSULTANT:	SCALE	SR.NO.	DRAWING NO.	SHEET NO.	REV
0	23.08.23			V C				415V 6300A LT PANEL	EVERRISE ENGINEERING 7/19-B, KEERANATHAM, SARAVANAMPATTIPOST, COIMBATORE, TAMIL NADU-641035	CPRI TESTING 6300A, 70KA		NIS	ERE/70	ERE/TEST/70	01 OF 04	00



यह रेखा चित्र सीपीआरआई के परीक्षण प्रतिवेदन क्र. वि.अ.सं. द्वारा रेखाचित्र का सत्यापन
 किया गया है।
 THIS DRAWING PERTAINS TO CPRI BUSBAR ARRANGEMENT
 No. CPRIPLSTNB/MISC.237034.9

NOTES:-

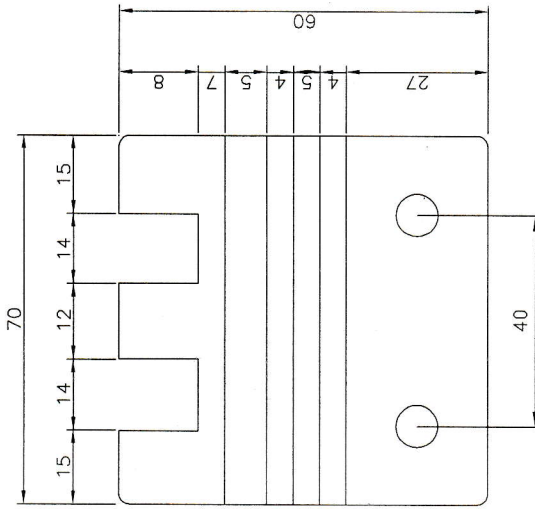
1. PAINT SHADE ENCL.:- SIEMENS GREY (RAL 7032);
2. SHEET ENCL. :- 2MM THICK CRCA SHEET.
3. CABLE ENTRY :- TOP AND BOTTOM

TOLERANCE ± 2%

कै.वि.अ.सं. द्वारा रेखाचित्र का सत्यापन
 जहाँ तक भी संभव हो सिर्फ विषय
 जांच तक ही सीमित है।
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परिक्षण इंजीनियर / Test Engineer
 [Signature]

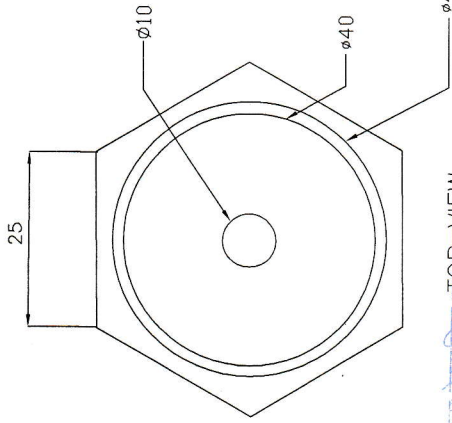
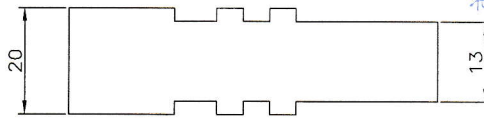
MFD. BY: EVERRISE ENGINEERING 7/19-B, KEERANATHAM, SARAVANAMPATTI POST, COIMBATORE, TAMIL NADU-641035		PROJECT : CPRI TESTING 6300A, 70KA		CONSULTANT:	
415V 6300A LT PANEL		TITLE GENERAL ARRANGEMENT DRAWING FOR 415V, 6300A, LT PANEL		SCALE NTS	SR.NO. ERE/70
REV	DATE	DESCRIPTION	BY	CHKD.	APPD.
0	22.08.23	ISSUED FOR TESTING	V C	V C	V C
				DRAWING NO. ERE/TEST/70	SHEET NO. 02 OF 04
				REV.	00



DETAIL DRAWING

FINGER TYPE SUPPORT

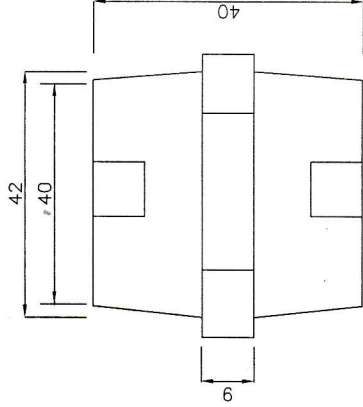
FOR PH & N
 MATERIAL : POLYIMIDE
 TOLERANCE = ±1MM
 MAKE : POWERMAT



FOR VIEW

के.वि.अ.सं. द्वारा रेखाचित्र तैयार करने पर
 जहाँ तक भी संभव हो सके विमीय
 जांच तक ही सीमित है।

THE VERIFICATION OF THIS DRAWING
 BY CPRI IS LIMITED TO DIMENSIONAL
 CHECKS ONLY WHEREVER POSSIBLE.



SIDE VIEW

DETAIL DRAWING

HEX TYPE SUPPORT

FOR PH & N
 MATERIAL : POLYIMIDE
 TOLERANCE = ±1MM
 MAKE : POWERMAT

यह रेखा चित्र सीपीआरआई के परीक्षण प्रतिवेदन क्र. दिनांक से संबंधित है।
 THIS DRAWING PERTAINS TO CPRI TEST REPORT

क्र./No. CPRI/PLSTNB/MISC/2870349

दिनांक/Dated

[Signature]

परीक्षण इंजीनियर / Test Engineer

MFD. BY: EVERRISE ENGINEERING 7/19-B, KEERANATHAM, SARAVANAMPATTI POST, COIMBATORE, TAMIL NADU-641035		PROJECT : CPRI TESTING 6300A, 70KA TITLE GENERAL ARRANGEMENT DRAWING FOR 415V, 6300A, LT PANEL		CONSULTANT:	
REV	DATE	ISSUED FOR TESTING DESCRIPTION	BY	CHKD.	APPD.
0	23.08.23	V C	V C	V C	V C
SCALE NTS			SR.NO. ERE/70	DRAWING NO. ERE/TEST/70	SHEET NO. 04 OF 04
REV. NO.			REV.	REV.	

सी. पी. आर. आई. इकाइयाँ

केन्द्रीय विद्युत अनुसंधान संस्थान
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2586997, 2586944, 2586344
फैक्स : +91 (0) 755-2587774
ई-मेल : stds@cpri.in

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ई-मेल : uhvrl@cpri.in

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दूरभाष : +91 (0) 07109-262251, 262252, 262255
फैक्स : +91 (0) 07109-262170
ई-मेल : trc@cpri.in

क्षेत्रीय परीक्षण प्रयोगशाला
नं. 3 ए, इंस्टीट्यूशनल एरिया
सेक्टर 62, नोएडा : 201309 (उत्तर प्रदेश)
दूरभाष : +91 (0) 0120-2402823, 2402058
फैक्स : +91 (0) 0120-2402824
ई-मेल : rtlnoida@cpri.in

क्षेत्रीय परीक्षण प्रयोगशाला
प्रथम तल, सी टी डी कार्यशाला
डब्ल्यू बी एस ई डी सी एल, अभीक्षण कैम्पस,
'बी एन' ब्लॉक, सेक्टर-5
साल्ट लेक सिटी, कोलकाता-700 091
फैक्स : +91 (0) 033-23671477
ई-मेल : maiti@cpri.in

क्षेत्रीय परीक्षण प्रयोगशाला
नं. 4. टाइप III (ओल्ड ए टी)
ए.एस.ई.बी. कॉलोनी, फोरेस्ट गेट, नारंगी
गुवाहाटी - 781 026 (असम)
टेली फैक्स : +91 (0) 0361-2650299
ई-मेल : rtlg@cpri.in

CPRI UNITS

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