HIGH POWER LABORATORY

TEST REPORT

Central Power Research Institute

(A Govt. Of India Society)
Prof. Sir C. V. Raman Road,
Sadashivanagar S.P.O, P.B. No. 8066,
Bengaluru - 560 080

CENTRAL POWER RESEARCH INSTITUTE

TEST REPORT

CPRI

Test Report Number	:	**CPRIBLRHPL25T0332** **Date: 30 January 2026**
Name and Address of the Customer	:	M/s. Atlas Transformers IndiaLtd., Survey No. 47 & 48, POR, Ramangamdi, Dist. Vadodara – 391 243, Gujarat, India.
Name and Address of the Manufacturer	:	M/s. Atlas Transformers IndiaLtd., Survey No. 47 & 48, POR, Ramangamdi, Dist. Vadodara – 391 243, Gujarat, India.
Particulars of sample tested	:	18 MVA 33/4×0.660 kV Three Phase Inverter Duty Transformer with OCTC
Type	:	Outdoor, ONAN, Aluminium Wound
Description of test sample	:	Refer sheet 2 of 9
Serial Number	:	001
Number of samples tested	:	One
Date(s) of Test(s)	:	07, 08, 09 October and 24 November 2025
CPRI Sample code Number(s).	:	HPL25S0443
Particulars of tests conducted	:	Ability to withstand the Dynamic Effects of short circuit
Test in accordance with Standard/Specification	:	As per Clause 4.2 of IS:2026 (Part-5): 2011 - Reaffirmed 2016
Sampling Plan	:	Nil
Customer's Requirement	:	Nil
Deviations if any	:	Nil
Name of the witnessing persons Customers representative	:	Mr. Shah Rahul, Sr. Eng. and Mr. Dilip Barnwal
Other than customer's representatives	:	Nil
Test subcontracted with address of the laboratory	:	Nil

Documents constituting this report (in words)

Number of Sheets	:	Nine
Number of Oscillogram(s)	:	Nine
Number of Graph(s)	:	Nil
Number of Photograph(s)	:	Six
Number of Test Circuit Diagram(s)	:	One
Number of Drawing(s)	:	Seven

(G Govinda Rao)
Test Engineer

20/2/26
(B. R. Vasudevamurthy)
Head of Division
Reviewed and Authorized by

CENTRAL POWER RESEARCH INSTITUTE

TEST REPORT

Test Report Number: CPRIBLRHPL25T0332 **Date: 30 January 2026**

DESCRIPTION OF SAMPLE TESTED
(As assigned by the manufacturer)

Sample	:	Inverter Duty Transformer		
Type	:	Outdoor, Oil filled, Aluminium Wound		
Rated power KVA	:	18000		
Rated voltage HV (V)	:	33000		
LV (V)	:	LV-1: 660 LV-2: 660 LV-3: 660 LV-4: 660		
Rated current HV (A)	:	314.91		
LV (A)	:	LV-1: 3936.5 LV-2: 3936.5 LV-3: 3936.5 LV-4: 3936.5		
Number of phases	:	Three		
Connection symbol	:	YNd11d11d11d11		
Type of cooling	:	ONAN		
Rated frequency (Hz)	:	50		
Temperature rise of oil/winding	:	50 / 55°C		
Tapping range	:	+5% to -5% in steps of 2.5 % (OCTC-5 taps)		
Tap Position.	:	1(Highest)	3(Principal)	5(Lowest)
Tap variation (%)	:	+5	0	-5
Tap Voltage (Volts)	:	34650	33000	31350
Impedance at 75 °C (%) measured at 18 MVA (HV-LV1+LV2+LV3+LV4)	:	8.495	8.600	8.720
X/R Ratio at 75 °C	:	9.12	9.81	9.64
Winding material	:	Aluminium		
Apparent short circuit power behind transformer (MVA)	:	1000 for highest system voltage of 36kV		
Insulation level				
H.V. Winding	:	170 kV peak / 70 kV RMS		
L.V Winding	:	40 kV peak / 10 kV RMS		
Guaranteed load loss at 75°C (On principal tapping in kW)	:	158.4 (Maximum)		
Guaranteed impedance at 75 °C (On principal tapping)	:	8.15% with IS Tolerance (at 18 MVA base) (HV-LV1+LV2+LV3+LV4)		
Guaranteed no-load loss in kW	:	17.6 (Maximum)		

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Test Engineer

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SUMMARY OF TESTS CONDUCTED

1. Tests conducted : Ability to withstand the dynamic effects of short circuit
2. Rating for which tested : Short-circuit currents determined as per Clause 4.2 of IS: 2026 (Part-5): 2011 - Reaffirmed 2016 using the percentage impedance and X/R ratio as furnished by the customer.

Tapping position	% Z at 75 °C	% X at rated frequency	X/R Ratio at 75 °C	Required short-circuit current on HV winding with rated voltage applied to HV*	
				kA peak	kA RMS
Highest (1)	8.495	8.462	9.12	6.95	2.87
Principal (3)	8.600	8.566	9.81	7.18	2.93
Lowest (5)	8.720	8.6862	9.64	7.29	2.99

* Considering the source impedance based on fault level of 1000MVA and highest system voltage of 36 kV as furnished by the customer.

3. Schedule of tests:

Tests Conducted	Clause Numbers	Sheet
Measurement of Insulation Resistance	--	5 of 9
Measurement of Winding Resistance	10.2 of IS 2026 (Part 1): 2011-Reaffirmed: 2021	5 of 9
Measurement of Voltage ratio and Check of phase displacement	10.3 of IS 2026 (Part 1): 2011-Reaffirmed: 2021	6 of 9
Ability to withstand the dynamic effects of short circuit	4.2 of IS 2026 (Part 5): 2011-Reaffirmed: 2016	7 and 8 of 9

4. Oscillogram Numbers : CPRIBLRHPL25T0332S004, S005, S006, CPRIBLRHPL25T0332S008, S009, S010, CPRIBLRHPL25T0332S012, S013 and S014
5. Graph Numbers : Nil
6. Photograph Numbers : CPRIBLRHPL25T0332P01, P02, P03, P04, P05 and P06
7. Test Circuit Diagram Numbers. : CPRIBLRHPL25T0332TCD01
8. Drawing Numbers : Refer sheet 4 of 9

(G Govinda Rao)
Test Engineer

HIGH POWER LABORATORY
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PROF. SIR.C.V. RAMAN ROAD, BENGALURU-560 080, INDIA
Tele: + 91 (0) 80-22072511

Test Report Number: CPRIBLRHPL25T0332 **Date: 30 January 2026**

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	0077_R&D_R0	--	R0
2	0077_GA OF TRAFO_R0	01 of 02	--
3	0077_GA OF TRAFO_R0	02 of 02	--
4	0077_HV & LV CONN_R0	01 of 01	--
5	0077-HV BUSHING	--	R0
6	0077-LV BUSHING	--	R0
7	0077_OCTC TAP SWITCH_R0	01 of 01	--

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

(G Govinda Rao)
Test Engineer

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TEST REPORT

Test Report Number: CPRIBLRHPL25T0332 **Date: 30 January 2026**

Routine tests conducted to verify condition of transformer before and after short-circuit test

TEST RESULTS

1) Measurement of Insulation Resistance:

Test Condition	Before short-circuit test at 31°C	After short-circuit test at 27.5°C
HV to Earth at 5.0 kV dc/1 minute	5.98 GΩ	4.69 GΩ
HV to LV1 at 5.0 kV dc /1 minute	16.9 GΩ	13.0 GΩ
HV to LV2 at 5.0 kV dc /1 minute	19.3 GΩ	19.1 GΩ
HV to LV3 at 5.0 kV dc /1 minute	17.7 GΩ	13.4 GΩ
HV to LV4 at 5.0 kV dc /1 minute	18.1 GΩ	13.6 GΩ
LV 1 to Earth at 1.0 kV dc /1 minute	8.86 GΩ	17.1 GΩ
LV 2 to Earth at 1.0 kV dc /1 minute	12.4 GΩ	16.3 GΩ
LV 3 to Earth at 1.0 kV dc /1 minute	9.97 GΩ	12.4 GΩ
LV 4 to Earth at 1.0 kV dc /1 minute	9.60 GΩ	8.60 GΩ
LV1 to LV2 at 1.0 kV dc /1 minute	22.5 GΩ	12.4 GΩ
LV3 to LV4 at 1.0kV dc /1 minute	30.0 GΩ	19.6 GΩ

2) Measurement of Winding Resistance

Terminals	Before short-circuit test at 31°C						
	LV winding resistance (μΩ)				HV winding resistance in (mΩ)		
	LV1	LV2	LV3	LV4	Highest	Principal	Lowest
u-v	566.9	515.0	562.10	561.34	404.60	386.31	367.36
u-w	557.1	522.3	567.00	565.75	404.80	386.14	367.39
v-w	561.2	528.1	572.50	570.29	404.00	385.30	366.99

Terminals	After short-circuit test at 27.5°C						
	LV winding resistance (μΩ)				HV winding resistance in (mΩ)		
	LV1	LV2	LV3	LV4	Highest	Principal	Lowest
u-v	564.40	513.95	556.10	555.12	405.40	387.36	368.44
u-w	555.90	520.90	558.00	556.92	406.40	387.90	368.25
v-w	559.30	526.83	562.10	560.89	406.20	387.23	367.42

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TEST REPORT

Test Report Number: CPRIBLRHPL25T0332 **Date: 30 January 2026**

Ability to withstand the Dynamic Effects of short circuit

Test Conditions

Test source : Short Circuit Generator and Station Transformers
- Number of phases : Three
- Frequency : 50 Hz

Condition of sample before test : New; as after the routine tests
Test connections – HV terminals : Connected to source.
– LV terminals : Shorted
Type of short circuit : Preset
Short-circuit applied : On the LV terminals of the transformer under test and short-circuit point grounded through the protection current transformer.
Transformer tank : Isolated and grounded through the protection current transformer.
Test circuit drawing number : CPRIBLRHPL25T0332TCD01

Test Result

Ability to withstand the dynamic effects of short circuit

Oscillogram Number	Short-circuit current on primary side (kA peak)	(kA RMS)			Applied voltage (kV RMS)			Duration (second)
		I_1	I_2	I_3	U_1	U_2	U_3	
Highest tapping, maximum peak on '1U' limb								
CPRIBLRHPL25T0332S004	6.78	2.70	2.74	2.77	15.1	15.2	14.8	0.26
CPRIBLRHPL25T0332S005	6.90	2.74	2.79	2.83	15.4	15.5	15.2	0.26
CPRIBLRHPL25T0332S006	6.93	2.74	2.79	2.83	15.4	15.4	15.2	0.26
Principal tapping, maximum peak on '1V' limb								
CPRIBLRHPL25T0332S008	7.09	2.79	2.85	2.86	14.3	14.5	14.0	0.26
CPRIBLRHPL25T0332S009	7.11	2.80	2.83	2.86	14.4	14.5	14.0	0.26
CPRIBLRHPL25T0332S010	7.05	2.80	2.84	2.86	14.4	14.5	14.0	0.26
Lowest tapping, maximum peak on '1W' limb								
CPRIBLRHPL25T0332S012	7.17	2.90	2.94	2.95	13.6	13.9	13.4	0.25
CPRIBLRHPL25T0332S013	7.19	2.91	2.95	2.96	13.7	14.0	13.5	0.25
CPRIBLRHPL25T0332S014	7.18	2.91	2.96	2.97	13.7	14.0	13.6	0.25

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TEST REPORT

Test Report Number: CPRIBLRHPL25T0332 **Date: 30 January 2026**

Observation during test	:	No abnormalities
Reactance values after cooling to ambient:		
Maximum change in short circuit reactance after Short-circuit test	:	1.05 %
Routine tests before and after Short-circuit test	:	Conducted and found in order
Observation of the transformer :-		
The transformer was inspected after short circuit test. Following are the observations:		
Condition of core and clamping	:	No visible damage or deformation or displacement.
Condition of windings and support structures	:	No visible damage or deformation or displacement.
Condition of the Oil	:	Clear

Conclusion: The sample tested complies with the requirements of Clause 4.2 of IS: 2026 (Part-5): 2011- Reaffirmed: 2016 for the test conducted.

(G Govinda Rao)
Test Engineer

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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) NABL has Accredited this laboratory as per ISO/IEC 17025: 2017, vide certificate no.TC-5452 for the tests carried out.

e) 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.

f) 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

TC-5452

(G Govinda Rao)
Test Engineer

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

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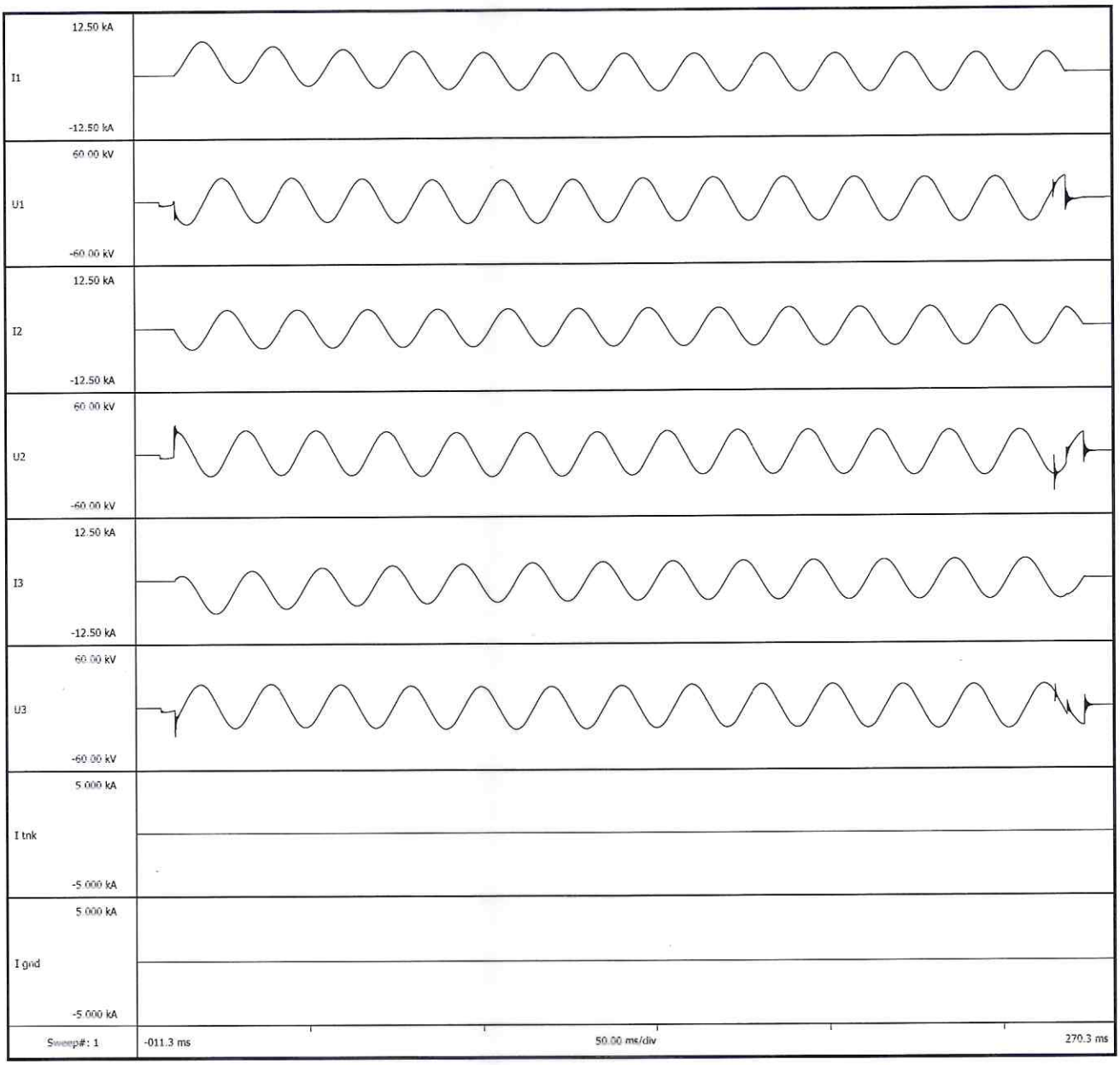
TEST REPORT

Test Report Number : CPRIBLRHPL25T0332

Date: 30 January 2026

TEST RESULTS



Oscillogram Number : CPRIBLRHPL25T0332S004

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Test Engineer

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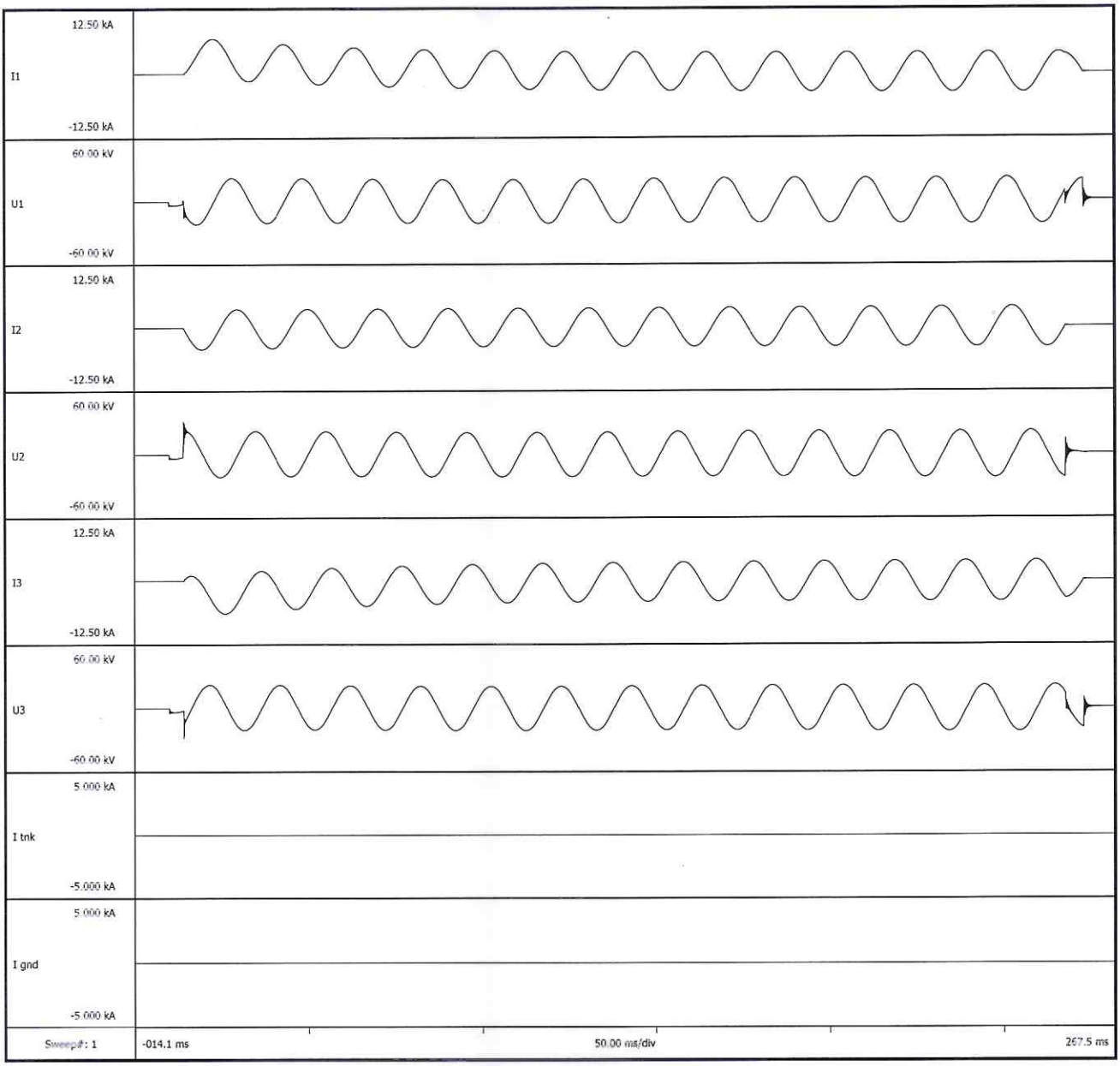
TEST REPORT

Test Report Number : CPRIBLRHPL25T0332

Date: 30 January 2026

TEST RESULTS



Oscillogram Number : CPRIBLRHPL25T0332S005

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Test Engineer

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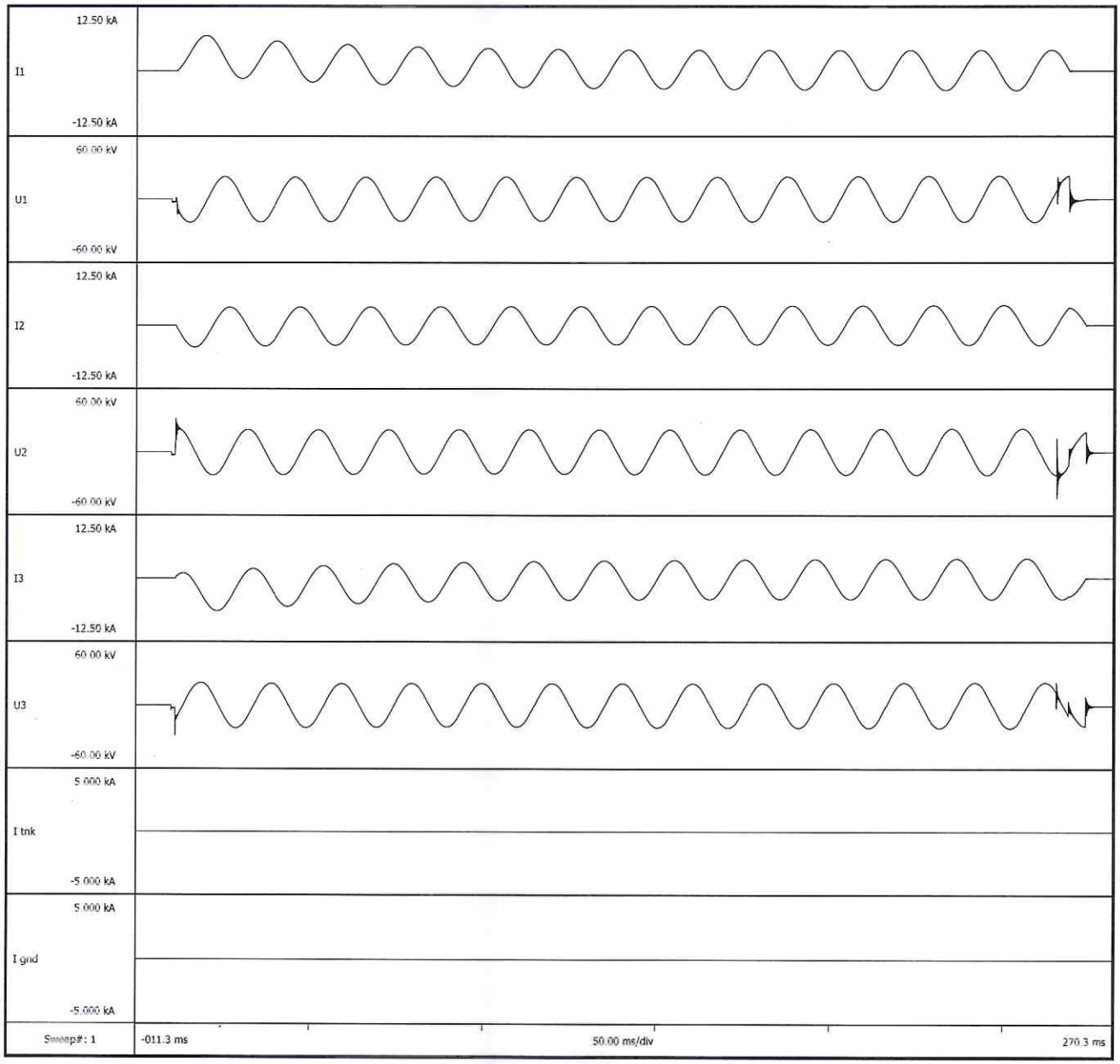
TEST REPORT

Test Report Number : CPRIBLRHPL25T0332

Date: 30 January 2026

TEST RESULTS



Oscillogram Number : CPRIBLRHPL25T0332S006

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Test Engineer

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TEST REPORT

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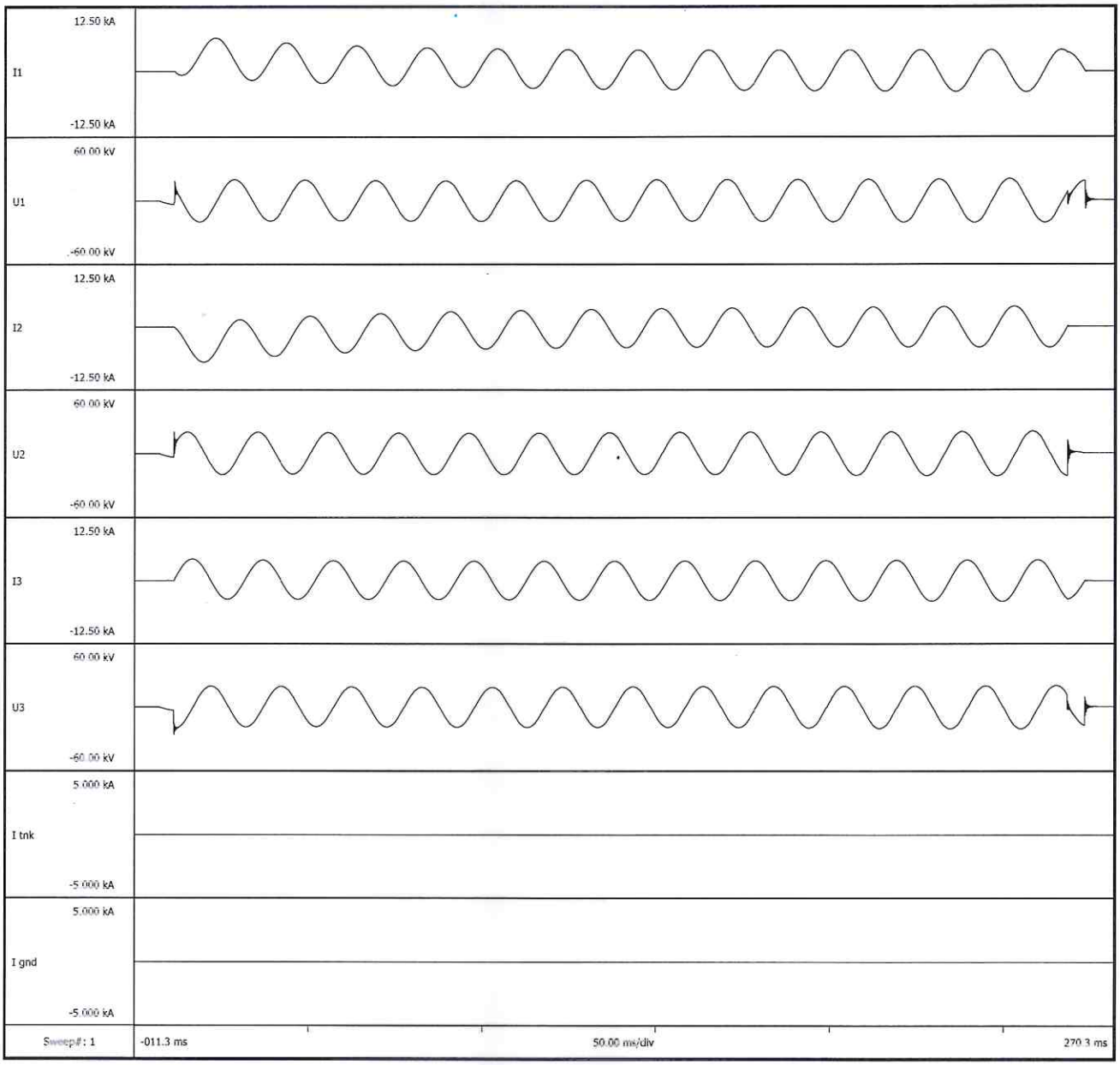
Test Report Number : CPRIBLRHPL25T0332

Date: 30 January 2026

TEST RESULTS



Oscillogram Number : CPRIBLRHPL25T0332S008

(G. Govinda Rao)
Test Engineer

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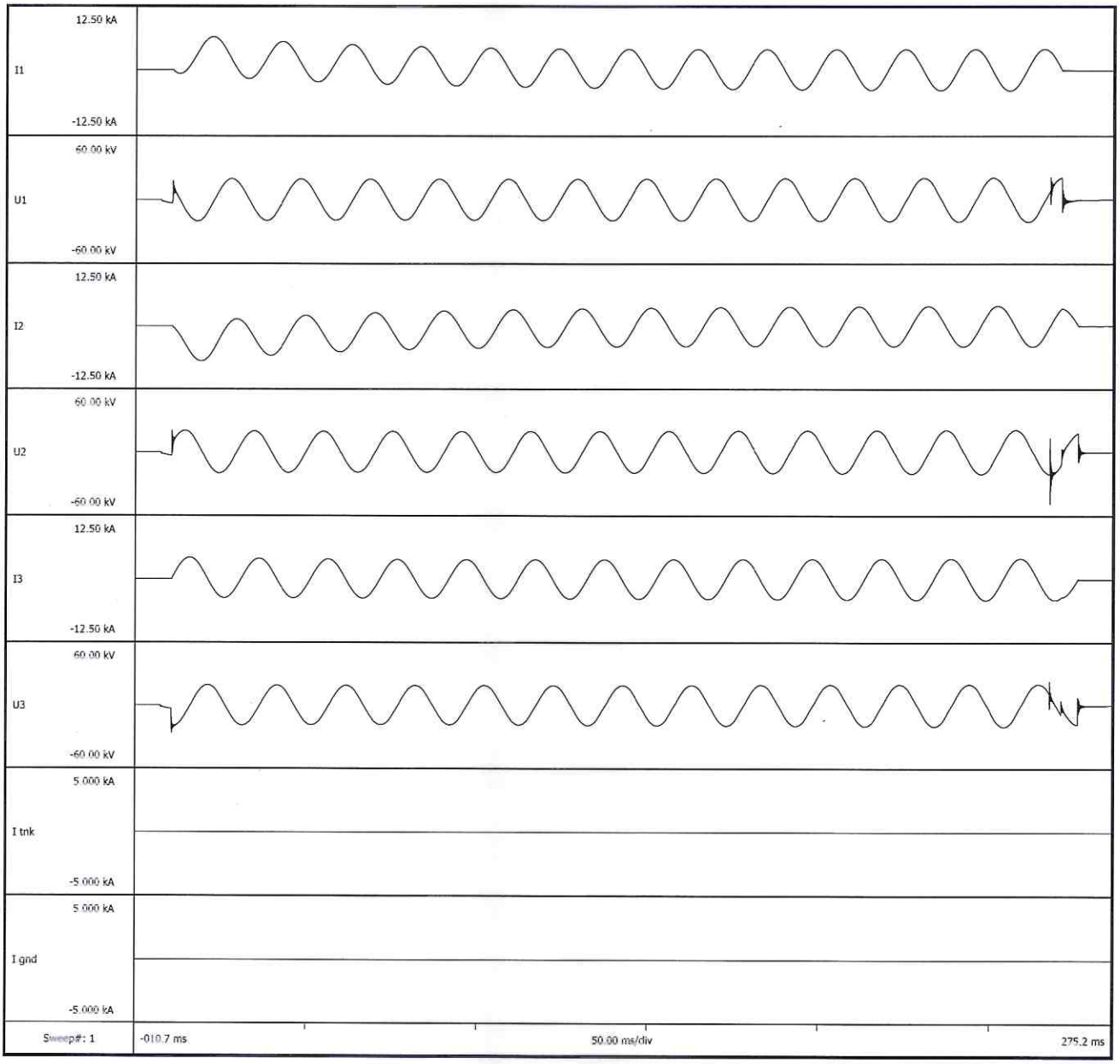
TEST REPORT

Test Report Number : CPRIBLRHPL25T0332

Date: 30 January 2026

TEST RESULTS



Oscillogram Number : CPRIBLRHPL25T0332S009

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Test Engineer

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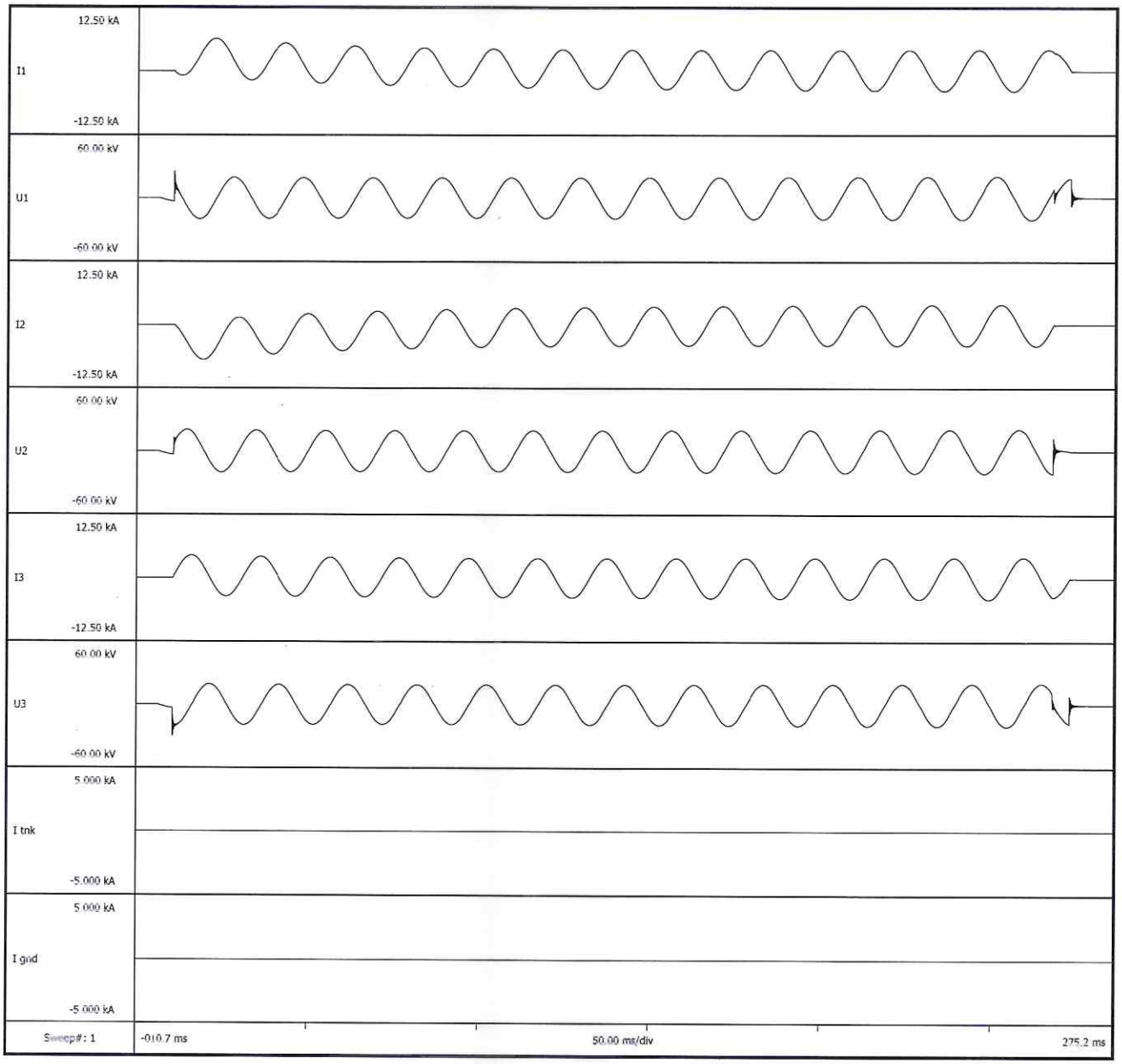
TEST REPORT

Test Report Number : CPRIBLRHPL25T0332

Date: 30 January 2026

TEST RESULTS



Oscillogram Number : CPRIBLRHPL25T0332S010

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Test Engineer

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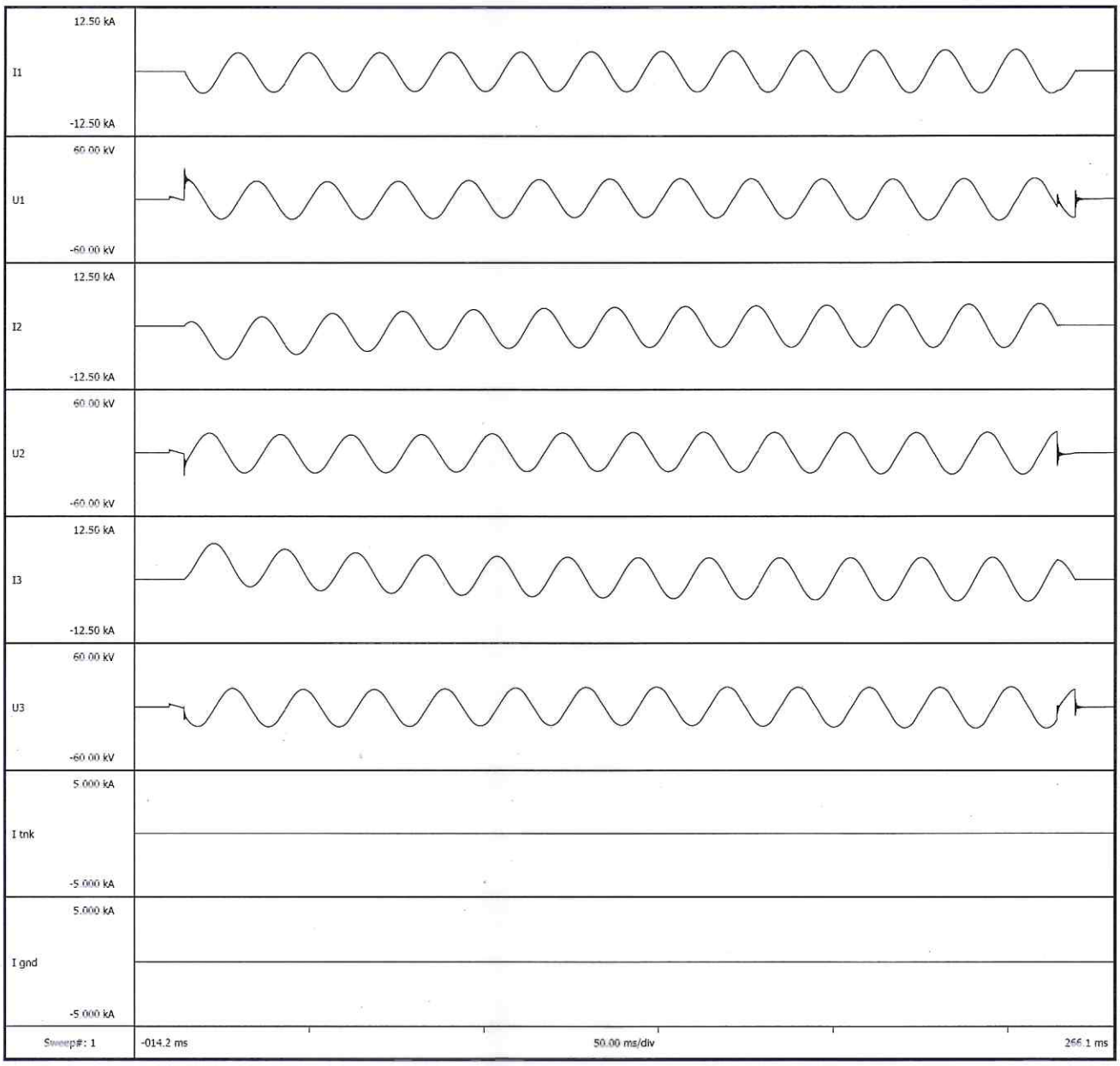
TEST REPORT

Test Report Number : CPRIBLRHPL25T0332

Date: 30 January 2026

TEST RESULTS



Oscillogram Number : CPRIBLRHPL25T0332S012

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Test Engineer

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TEST REPORT

Test Report Number : CPRIBLRHPL25T0332

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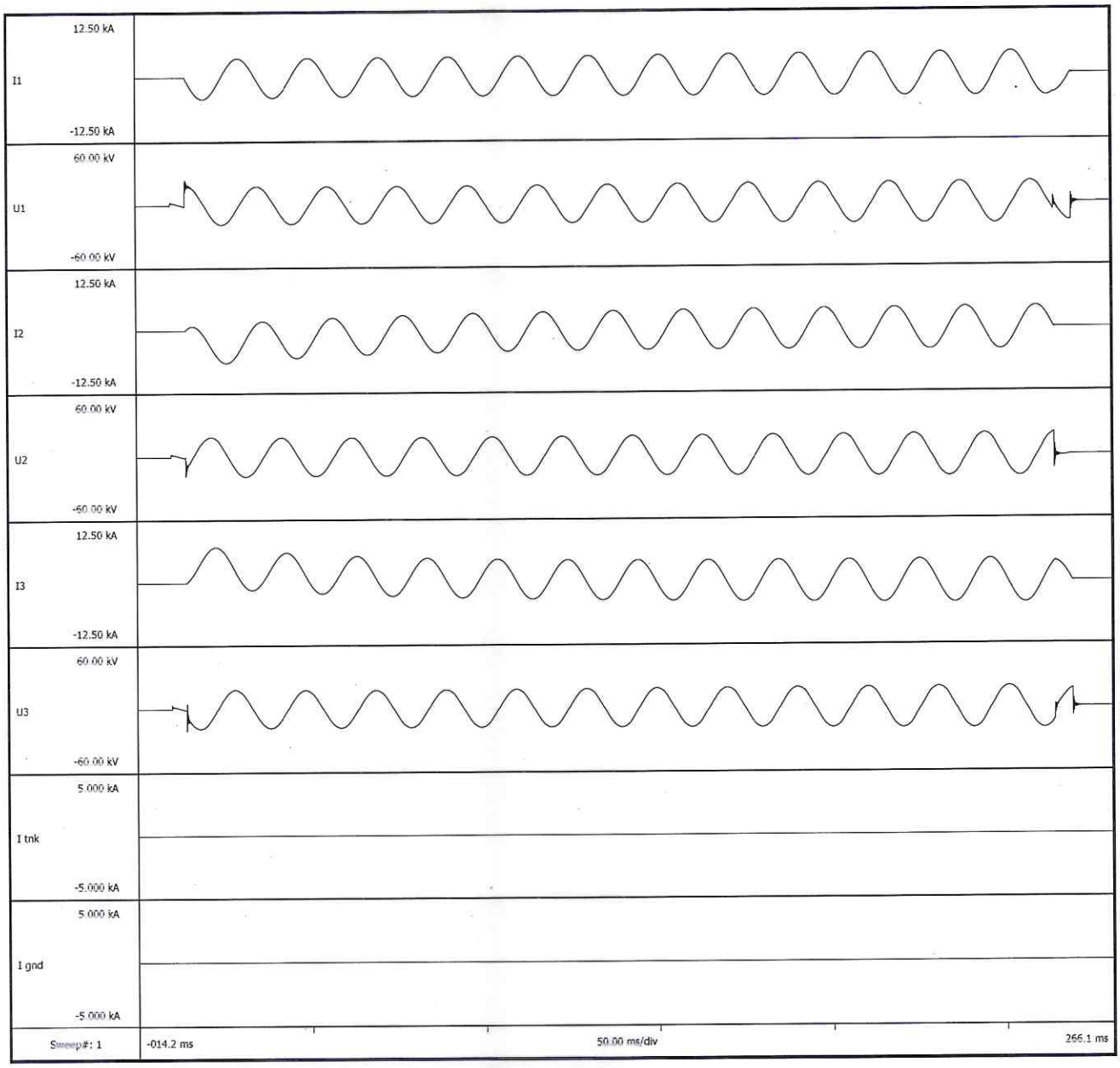
TEST RESULTS



Oscillogram Number : CPRIBLRHPL25T0332S013

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Test Engineer

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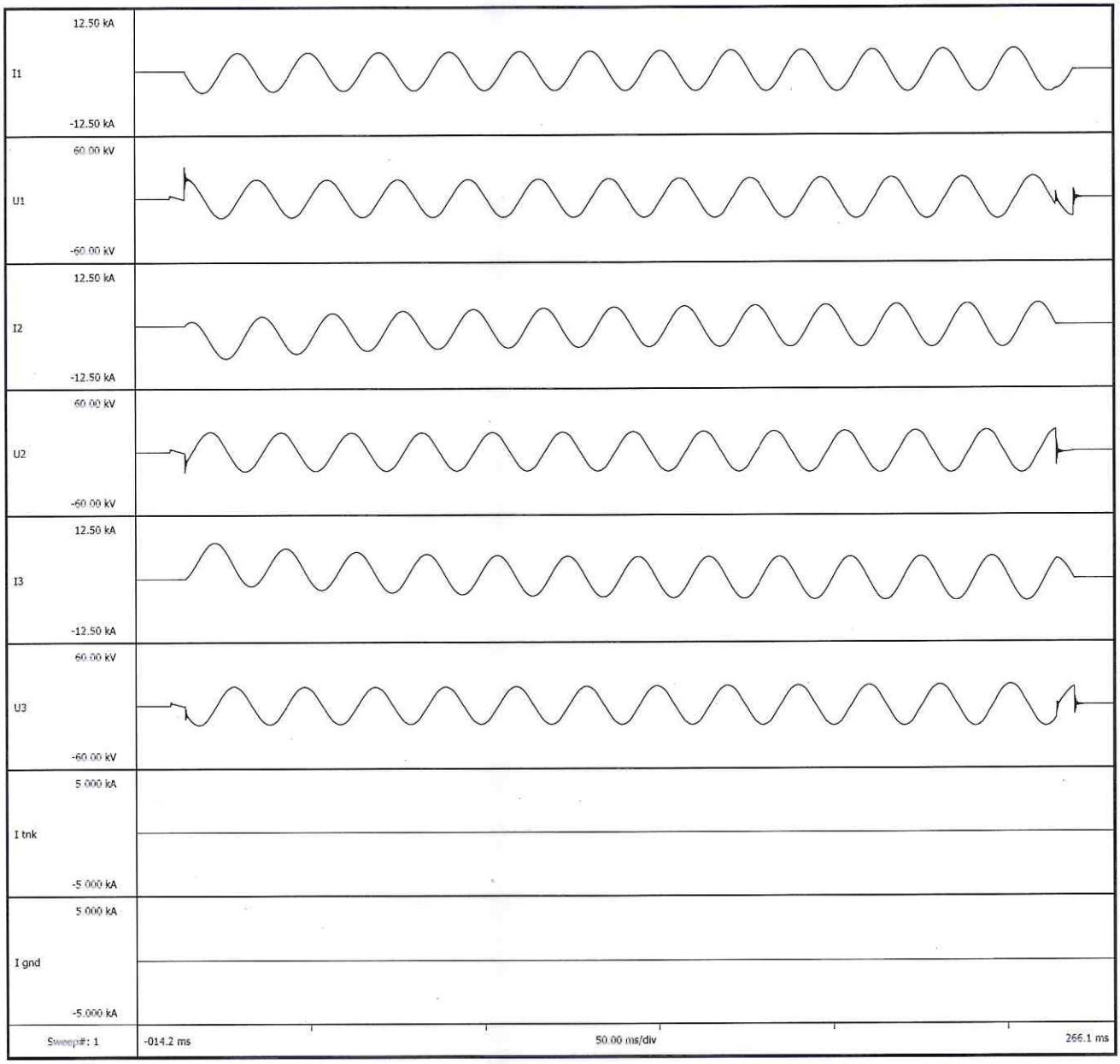
TEST REPORT

Test Report Number : CPRIBLRHPL25T0332

Date: 30 January 2026

TEST RESULTS



Oscillogram Number : CPRIBLRHPL25T0332S014

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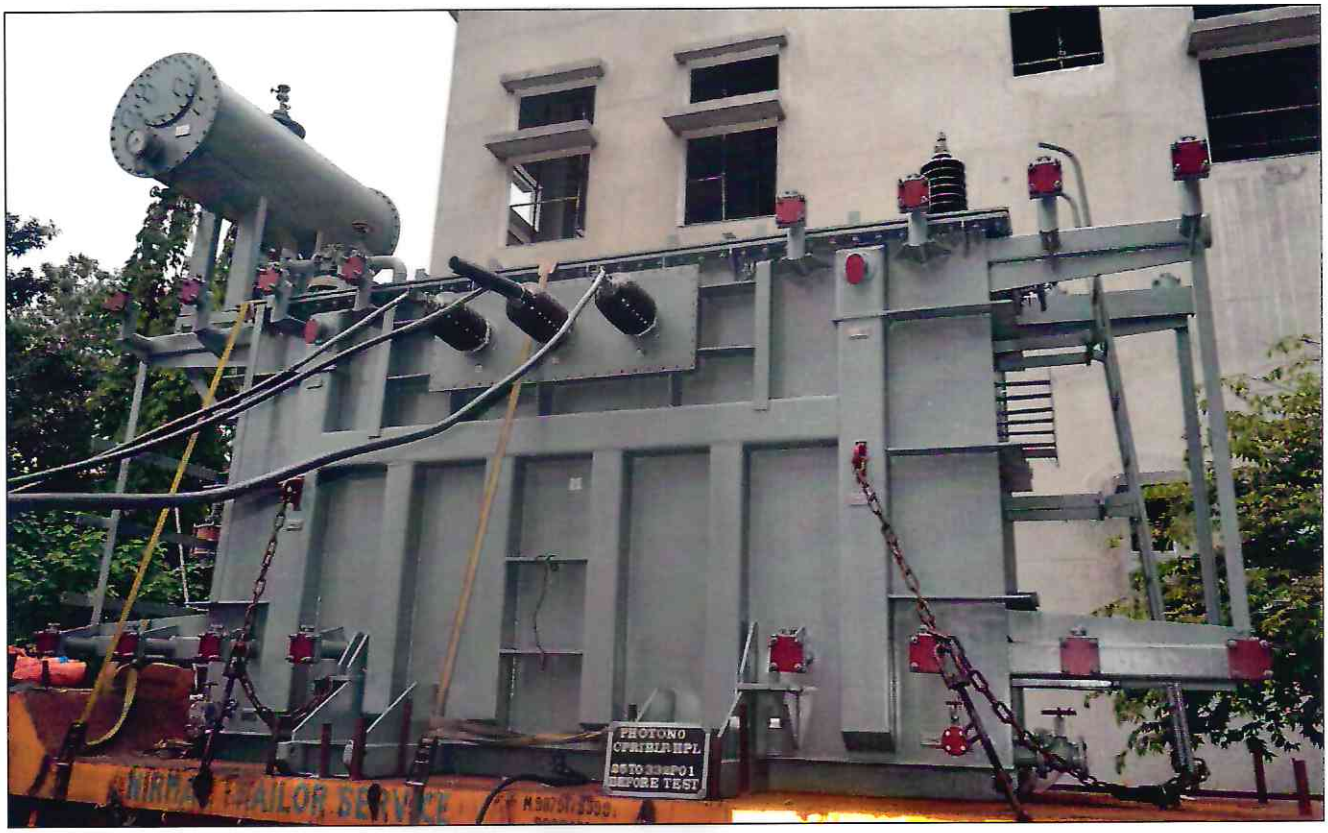
Test Report Number: CPRIBLRHPL25T0332 **Date: 30 January 2026**



Photograph Number: CPRIBLRHPL25T0332P01
Mounting arrangement before short circuit test

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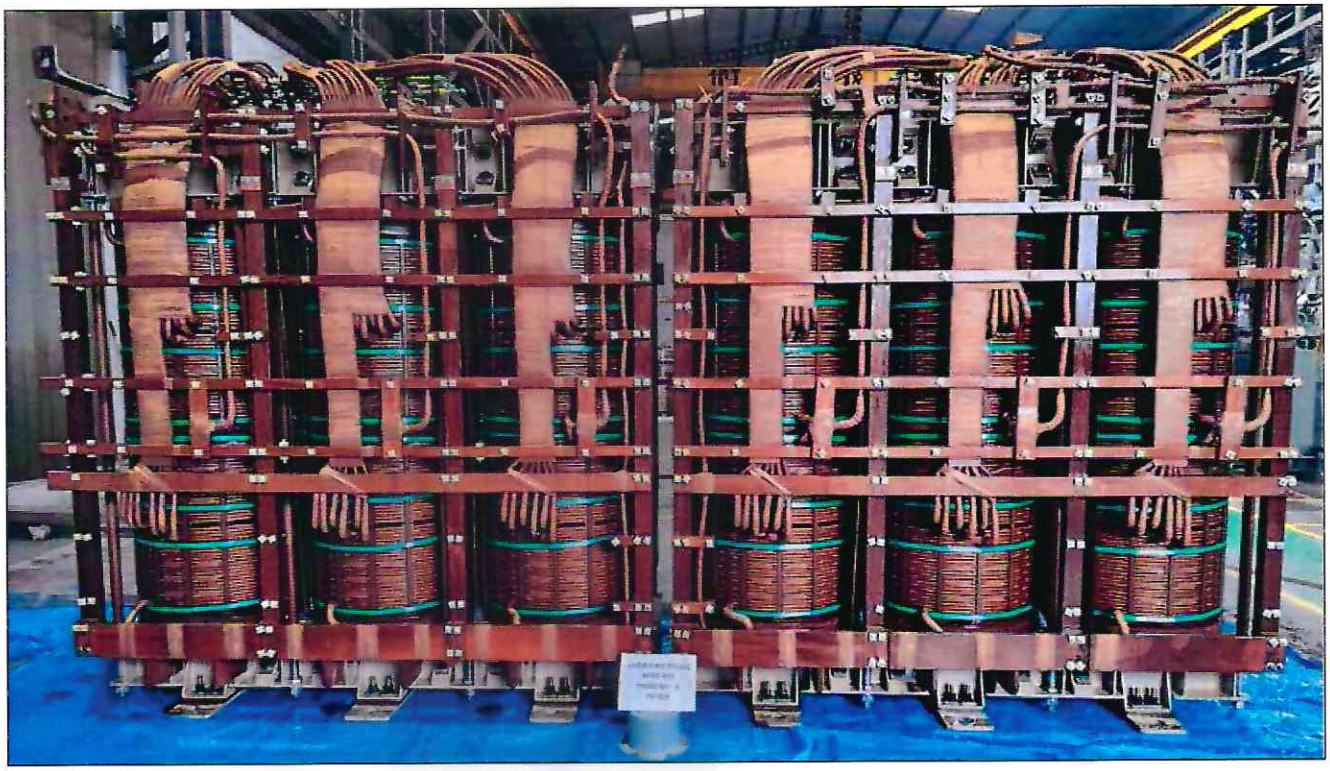

Photograph Number: CPRIBLRHPL25T0332P02
Condition of the Core & coil assembly, after short circuit test (view from HV terminals side)

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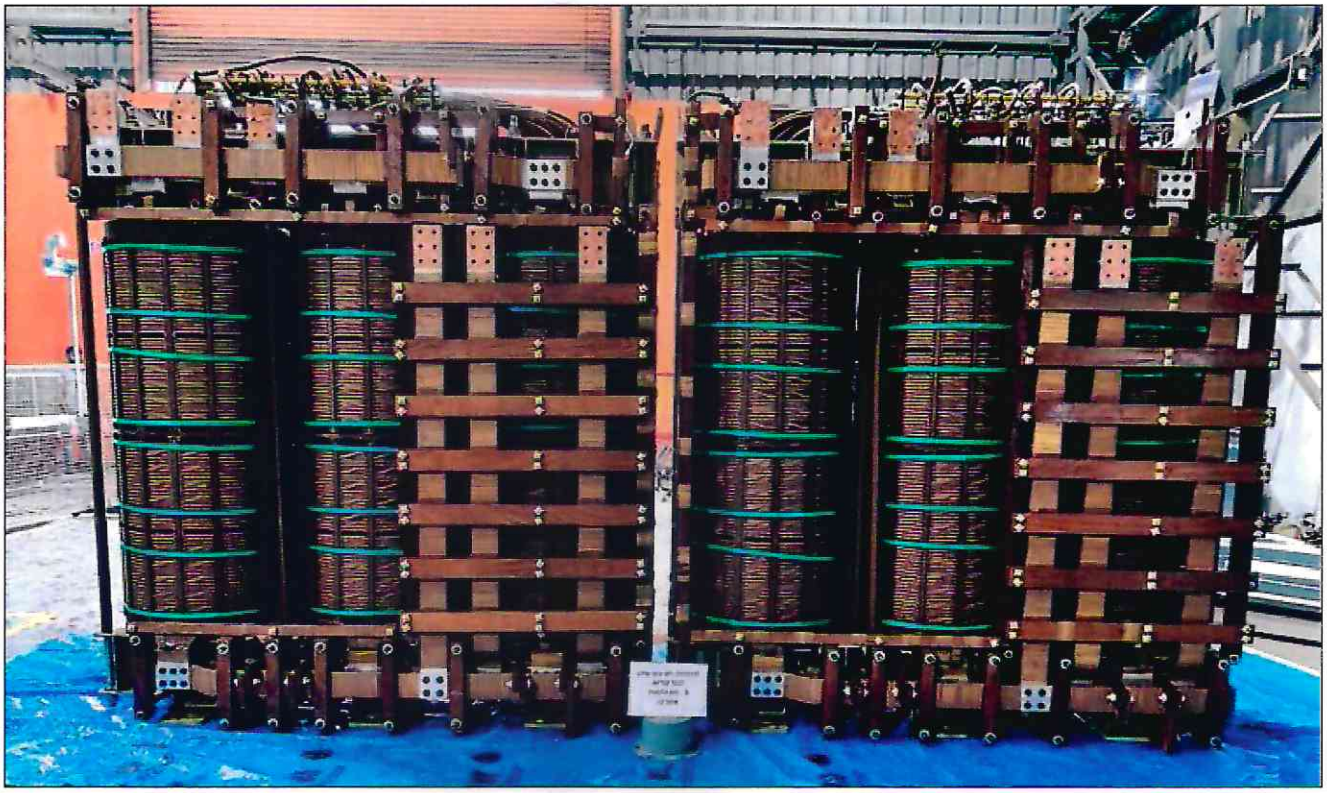
TEST REPORT

Test Report Number: CPRIBLRHPL25T0332 **Date: 30 January 2026**



Photograph Number: CPRIBLRHPL25T0332P03
Condition of the Core & coil assembly, after short circuit test (view from LV terminals side)

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Test Engineer

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Photograph Number: CPRIBLRHPL25T0332P04
Condition of the Core & coil assembly, after short circuit test (view from OCTC side)

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Test Engineer

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Test Report Number: CPRIBLRHPL25T0332 **Date: 30 January 2026**



Photograph Number: CPRIBLRHPL25T0332P05
Condition of the Core & coil assembly, after short circuit test (view from opposite side of OCTC)

(G Govinda Rao)
Test Engineer

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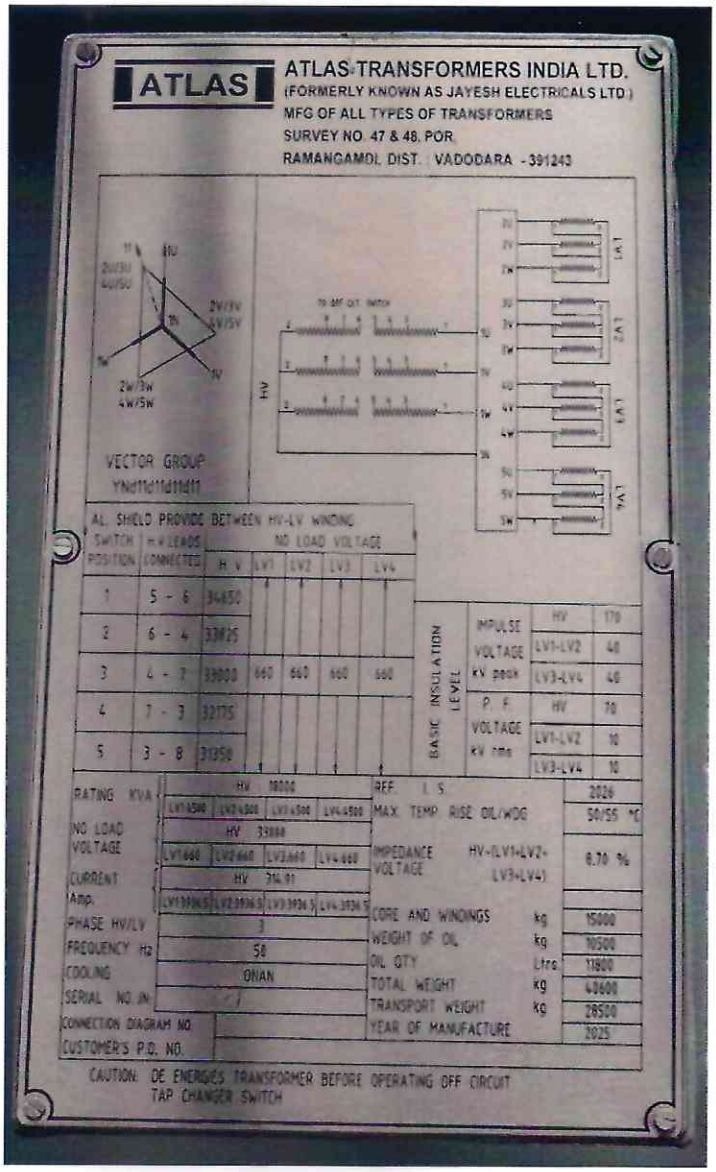
TEST REPORT

Test Report Number: CPRIBLRHPL25T0332 **Date: 30 January 2026**



Photograph Number: CPRIBLRHPL25T0332P06
Name plate of Test Sample

(G Govinda Rao)
Test Engineer

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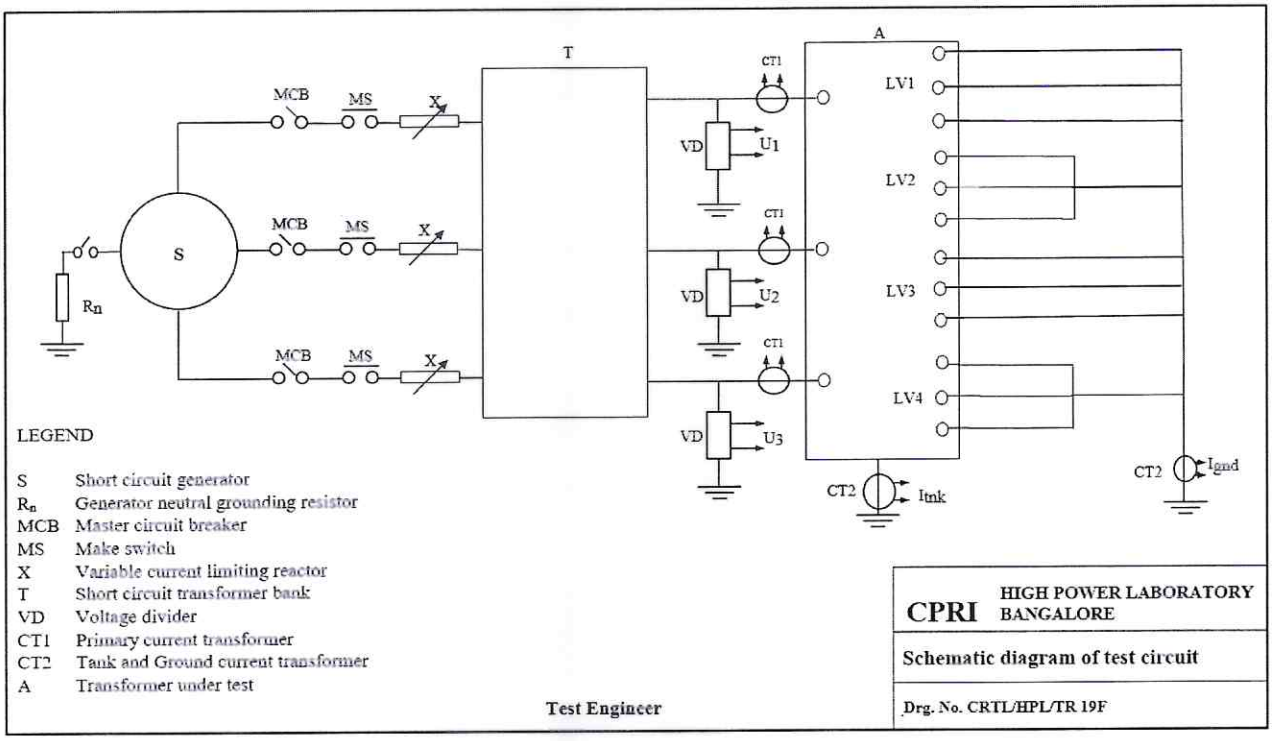
TEST REPORT

Test Report Number: CPRIBLRHPL25T0332 **Date: 30 January 2026**

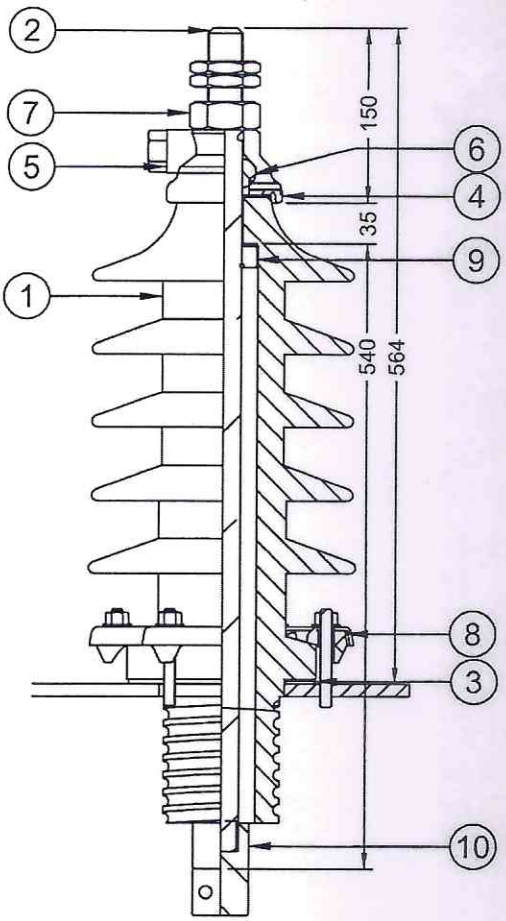


Test Circuit Diagram Number: CPRIBLRHPL25T0332TCD01

(G Govinda Rao)
Test Engineer

सीपीआरआई ...
कहींभी संभव ...
THE VERIFIC... DRAWING
BY CPRI IS ... DIMENSIONAL
CHECKS ONLY WHEREVER POSSIBLE

CUSTOMER	-
PO.NO./DATE	-
CONSULTANTS	-
PROJECT	-
TR.DETAILS	KVA : 18000, KV:33/4*0.66,YNd11d11d11d11



रिपोर्ट क्रमांक.....
से संबंधित दस्तावेज
Document Pertaining to
Report No. CPRIBLRHPL25T0332
30 January 2026

परीक्षण अभियंता / Test Engineer
उच्च शक्ति प्रयोगशाला / H.P. LAB
सी. पी. आर. आई. / CPRI
बेंगलुरु / Bangaluru

ATLAS TRANSFORMERS INDIA LTD. Ramangamdi Por

CHARACTERISTICS

I. BUSHING PORCELAIN CONFORMS TO IEC-60137

1. RATED VOLTAGE	36 KV
2. RATED PHASE TO EARTH VOLTAGE	21 KVrms
3. WET WITHSTAND (P.F VOLTAGE)	70 KVrms
DRY WITHSTAND (P.F VOLTAGE)	77 KVrms
4. LIGHTING IMPULSE WITHSTAND VOLTAGE	170 k.v.p
5. RATED CURRENT	1000 Amp
6. CREEPAGE	31 mm/kV
7. MAKE :-	CJI

Item Number	Title	Material
1	Insulator	Porcelain
2	Stem	Copper
3	Bott. sealing washer	Nitrile Rubber
4	Cap	Brass
5	Spark gap horn carrier	Brass
6	Sealing washer for stem	Nitrile Rubber
7	Hex-Nut	Brass
8	Clamping arrangement	Aluminum
9	Collar	Brass
10	Connector	Copper

REV NO	DATE & SIGN	BRIEF RECORD

DRN	BONIL	12.09.2024
CHD	CYM	
APPRD	CYM	

H.V./H.V.N.
BUSHING ASSEMBLY
(36 KV/ 1000 Amp)

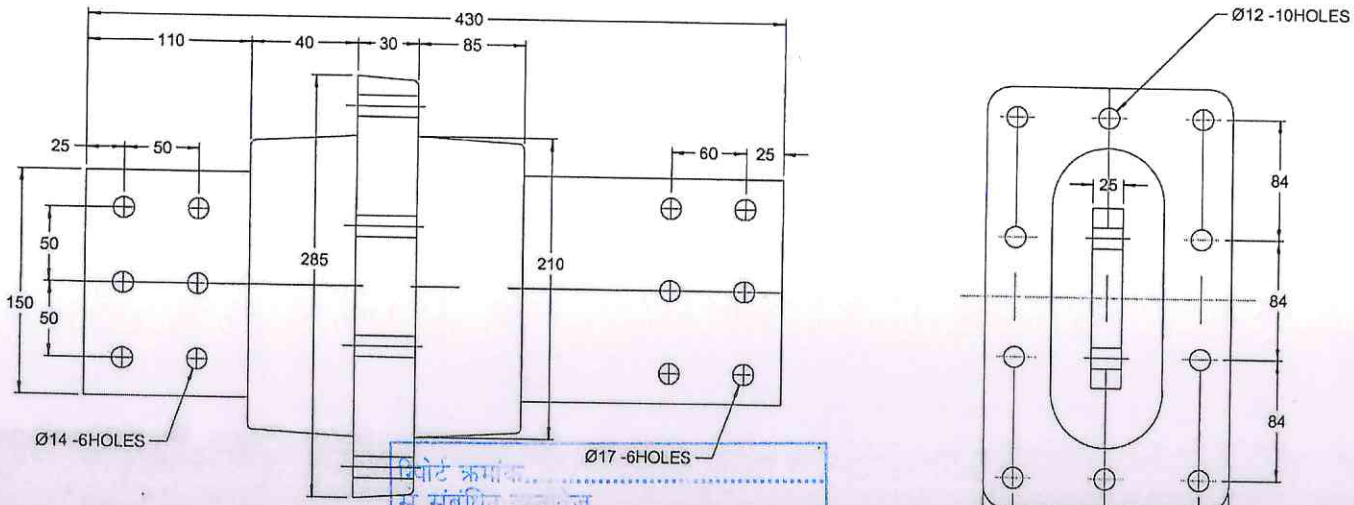
ATLAS TRANSFORMERS INDIA LTD
MFG OF ALL TYPES OF TRANSFORMERS
SURVEY NO. 47 & 48, POR,
RAMANGAMDI,
DIST. : VADODARA - 391243

SCALE
NTS

WO NO : 0077 | REV. NO

DRG.NO:0077-HV BUSHING | R0

सीपीआरआई
कहींभी संभाव
THE VERIFIC
BY CPRI IS LIMITED TO DIMENSIONAL
CHECKS ONLY, WHEREVER POSSIBLE



रिपोर्ट क्रमांक
से संबंधित दस्तावेज
Document Pertaining to
Report No. CPRIBLRHPL25T0332
30 January 2026

परीक्षण अभियंता / Test Engineer
उच्च शक्ति प्रयोगशाला / H.P. LAB
सी. पी. आर. आई. / CPRI
बेंगलुरु / Bengaluru

ELECTRICAL SPECIFICATION IS: IEC - 60137-2017

1) RATED VOLTAGE.....3.6kV.
2) DRY POWER FREQUENCY WITH STAND VOLTAGE TEST (ONE MINUTE)....11kV.
3) MAXIMUM CURRENT CAPACITY.....5000 AMP.
3) LIGHTING IMPULS WITHSTAND VOLTAGE.....40kV peak.
5) MINIMUM CREEPAGE DISTANCE.....112MM.
6) MAKE :- BARODA BUSHING

NOTE :

1) END COPPER PALM WITH BE ELECTROTINNED 12 TO 15 MICRONS.
2) ELECTROLYTIC COPPER WITH HIGH ELECTRICAL CONDUCTIVITY.
3) COLOUR BRICK RED.
4) ALL DIMENSIONS ARE IN mm.

ATLAS TRANSFORMERS INDIA LTD. Ramangamdi Por

CUSTOMER	-
PO.NO./DATE	-
CONSULTANTS	-
PROJECT	-
TR.DETAILS	KVA : 18000, KV:33/4*0.66,YNd11d11d11d11

DRN	LHD	17.09.2024
CHD	CYM	17.09.2024
APPRD	CYM	17.09.2024

ATLAS TRANSFORMERS INDIA LTD
MFG OF ALL TYPES OF TRANSFORMERS
SURVEY NO. 47 & 48, POR,
RAMANGAMDI,
DIST. : VADODARA - 391243

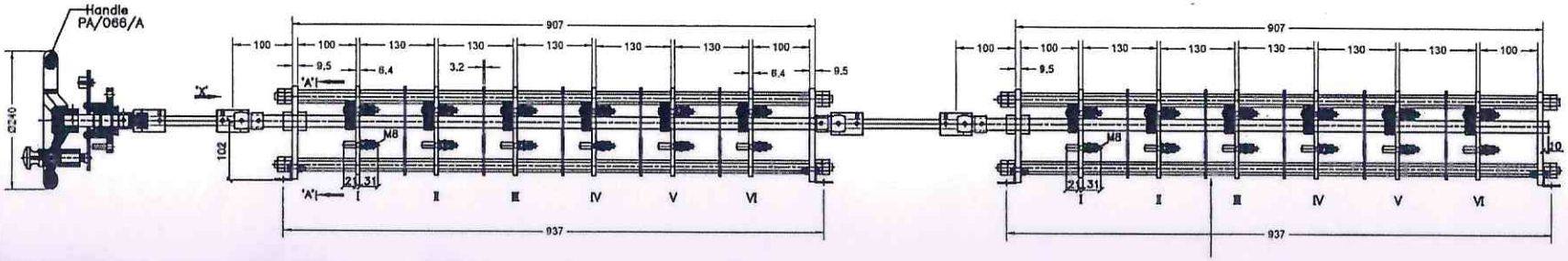
G.A. OF LV BUSHING
3.6 kV/5000 Amps.

SCALE NTS

REV NO	DATE & SIGN	BRIEF RECORD

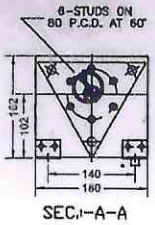
WO NO : 0077
DRG.NO: 0077-LV BUSHING
REV. NO R0

सीपीआरआई
केंद्रीय संख्या
THE VERIFICATION OF THIS DRAWING
BY CPRI IS LIMITED TO DIMENSIONAL
CHECKS ONLY WHEREVER POSSIBLE





DECK VIEW FROM DIRECTION 'X' (IN 3rd POSITION)



रिपोर्ट क्रमांक .....
से संबंधित ड्रॉइंग
Document Pertaining to
Report No. CPRIBLRHPL25T0332
30 January 2026

परीक्षण अभियंता / Test Engineer
उच्चतर प्रयोगशाला / H.P. Lab
सी. पी. आर. आई./CPRI
बेंगलुरु / Bengaluru

NOTE

ALL DIMENSIONS ARE IN MM.(±5 % tolerance)

MAKE :– PARAGON

CUSTOMER	-
PO.NO./DATE	-
CONSULTANTS	-
PROJECT	-
TR.DETAILS	KVA : 18000, KV:33/4*0.66,YNd11d11d11d11,ONAN

REV NO	DATE & SIGN	BRIEF RECORD

DRN	C88	10.07.2025
CHD		
APPRD		

OFF CIRCUIT TAP CHANGER
33 KV 100 AMPS 5 POS.
6 DECK X 2 BRIDGE TYPE

ATLAS TRANSFORMERS INDIA LTD
MFG OF ALL TYPES OF TRANSFORMERS
SURVEY NO. 47 & 48, PCR,
RAMANGAMDI,
DIST. : VADODARA - 391243

SCALE NTS

WO NO :

SHEET 01 OF 01

DRG.NO :

ATLAS TRANSFORMERS INDIA LTD

SURVEY NO 47-48,RAMANGAMDI,POR,DIST. VADODARA

F:QAS.03.

REPORT NO.: WO NO - ATLAS-954

TEST REPORT

Customer	:				Date	:	24.11.2025
Transformer Sr No.	:		001		Winding material	:	Aluminium
Customer P.O. No.	:				No. of Phases	:	Three
			18000				
KVA :	4500	4500	4500	4500	Vector Group	:	Ynd11d11d11d11
H.V. Voltage (Volts)			33000		Frequency	:	50 Hz.
L.V. Voltage (Volts)	660	660	660	660	Cooling	:	ONAN
H.V. Current (Amp.)			314.93		Otd. Temp. Rise Oil	:	50 ° C
L.V. Current (Amp.)	3936.59	3936.59	3936.59	3936.59	Otd.Temp Rise Windings	:	55 ° C
% Tapping on HV Side	+ 5 % TO - 5 % In Step of 2.5 % ON H.V SIDE				IS NO.	:	2026

Average HV Winding Resistance at 75 °C at principal Tap	No:	3 (100%)	:	0.215	Ohms
Average LV Winding Resistance at 75 °C			:	0.9295	milli-ohms

No Load Loss at Rated Voltage & Frequency applied to L. V. Winding IN WATT		17600 (MAX)	11896.63 Watts
No Load Current at Rated Voltage & Frequency applied to L.V. Winding			16.99 Amps
Full load losses at 75°C on principal Tap IN WATT		158400 (MAX)	152055.06 Watts
% Impedance at Rated Current applied to H.V. Winding on principal Tap AT 18 MVA		8.15 (± IS TOL)	8.61 %
Separate Source Voltage Withstand : Test (With Stood for 60 Sec.) :	Applied Between H.V. & (L.V. + Earth)		70 KV
	Applied Between L.V-1 & (H.V. + Earth)		10 KV
	Applied Between L.V-2 & (H.V. + Earth)		10 KV
	Applied Between L.V-3 & (H.V. + Earth)		10 KV
	Applied Between L.V-4 & (H.V. + Earth)		10 KV
Induced Over Voltage Withstand Test : (Stood for 60 Sec.)	Voltage Applied to L.V. Wdg. At 100 Hz.		1320 V

Test witnessed by

(T.V.Nagaraj)
Engg Officer
CPRI, Bangalore

Central Power Research Institute
Bangalore

Tested by

(SHAH RAHUL)
ATLAS TRANSFORMERS INDIA LTD

ATLAS TRANSFORMERS INDIA LIMITED
P.T. Plant Por

ATLAS TRANSFORMERS INDIA LIMITED

SURVEY NO 47-48,RAMANGAMDI,POR,DIST. VADODARA

TRANSFORMER ROUTINE TEST REPORT

F:QAS:03.

Transformer Sr No	001							Date of Testing :	24.11.2025		
Customer								Sr No	001		
Customer's PO. NO.											
KVA	18000 /	4500	4500	4500	4500						
VOLTAGE RATIO	33000	660	660	660	660			VECTOR GROUP	Ynd11d11d11d11		
% TAPPING	+ 5 % TO - 5 % In Step of 2.5 % ON H.V.SIDE							IS NO	2026		
1 Open Circuit Test	On LV Side							W.M.S.M	1.00		
C. T. Ratio(C)	25/5	5	P.T Ratio(P)	1100/110	10	Total MF	5 X 10		50		

Tap No : 3	Voltage (X P)			Current(x C)			Wattmeter Reading			Total Wattmeter	No Load Loss
	Vry	Vyb	Vbr	Ir	Iy	Ib	W1	W2	W3	W	(W1+W2+W3)*M.F
LV 1	665.1	676.0	637.8	16.242	15.113	19.815	75.8	67.8	94.7	50	11915.50
LV 2	671.1	663.7	643.9	15.971	17.942	19.500	77.8	66.1	93.8	50	11881.50
LV 3	642.4	676.6	660.9	16.083	17.966	19.586	75.0	62.7	100.2	50	11891.50
LV 4	655.1	669.4	655.9	16.005	17.944	19.536	76.5	63.9	97.6	50	11898.00
									Corrected no load loss		11896.63

2. Winding resistance test — 29.5 °C — LEAD RESISTANCE: Nil

HV WINDING RESISTANCE IN OHMS

Tap No	1U1V	1V1W	1W1U
1	0.4003	0.4007	0.4010
2	0.3901	0.3922	0.3929
3	0.3831	0.3829	0.3837
4	0.3739	0.3738	0.3744
5	0.3649	0.3648	0.3649

LV WINDING RESISTANCE m ohms

LV1) 2U2V	2V2W	2W2U
0.5212	0.5247	0.5312
LV2) 2U2V	2V2W	2W2U
0.465	0.4632	0.4680
LV3) 2U2V	2V2W	2W2U
0.5087	0.5056	0.5250
LV4) 2U2V	2V2W	2W2U
0.4780	0.4782	0.4859

3 Short Circuit Test : — Tested At 23.7 °C

C. T. Ratio(C) 600/5 | 120 | P.T Ratio(P) 3300/110 | 30 | Total MF | 120 X 30 | 3600

Tap No	Current(x C)			Imp. Voltage (X P)			Wattmeter			Total Wattmeter	Load Loss
	Ir	Iy	Ib	Vry	Vyb	Vbr	W1	W2	W3	W	(W1+W2+W3)*M.F
1 (100%)	2.520	2.510	2.471	100.64	96.37	97.14	14.69	11.23	10.94	3600	132696.00
3 (100%)	2.646	2.635	2.599	96.82	94.10	93.12	15.05	11.56	11.30	3600	136476.00
5 (100%)	2.750	2.801	2.739	91.86	91.80	90.02	15.24	12.48	11.76	3600	142128.00

4 Induced Over Voltage Test

(a) Tested on LV Side : Applied 1320 volts across each phase to phase at 100 Cycles / sec for 60 Sec.(Ref As Per IS 2026 Part - -- Withstood.

5. Separate Source Voltage Test

(a) Applied 70 kVrms between H. V Winding to LV Winding & Earth ---- Withstood for 60 Sec.

(b) Applied 10 kVrms between L. V -1 Winding to HV Winding & Earth ---- Withstood for 60 Sec.

Applied 10 kVrms between L. V -2 Winding to HV Winding & Earth ---- Withstood for 60 Sec.

Applied 10 kVrms between L. V -3 Winding to HV Winding & Earth ---- Withstood for 60 Sec.

Applied 10 kVrms between L. V -4 Winding to HV Winding & Earth ---- Withstood for 60 Sec.

Test Witnessed By

(V.Nagaraj)
Engg Officer
CPRI, Bangalore

Central Power Research Institute Bangalore

Tested By

(SHAH RAHUL)
ATLAS TRANSFORMERS INDIA LTD

ATLAS TRANSFORMERS INDIA LTD P.T. Plant Por

ATLAS TRANSFORMERS INDIA LTD

SURVEY NO 47-48,RAMANGAMDI,POR,DIST. VADODARA

F:QAS:03. 0 001

CALCULATION SHEET ON 100 % LOADING

Customer : -

Customer Ref : -

VectorGroup : Ynd11d11d11d11 H.V/L.V(Amps.) : 3936.6 / 314.93

KVA : 33000 Tap No. 3 Tr.Sr.No. 001 Temp. : 29.50 ° C

Date : 24.11.2025

1	Measured No load losses at Rated Voltage & Frq.	=	***11896.63***	Watts	
2	Measured No load Current at Rated Voltage & Frq.	=	16.990	Amps.	
3	% No load Current at rated Voltage & Freq.	=	0.432		
4	Ambient Temp Rt1	=	23.7 °C		
5	Lead resi. Measured at ambient temp	=	-		
6	(A)Average H.V. Resi Measured	=	0.3832	Ohms	
	(B)Actual H.V. Resi Measured	=	0.1916	Ohms	
	(B) HV R / phase at 75 ° C	=	0.2259	Ohms	
7.1	(A)Average L.V-1. Resi Measured	=	0.5257	MilliOhms	
	(B)Actual L.V. Resi Measured	=	0.526	MilliOhms	
	(B) LV R / phase at 75 ° C	=	0.9295	mOhms	
7.2	(A)Average L.V-2. Resi Measured	=	0.4654	MilliOhms	
	(B) LV R / phase at 75 ° C	=	0.8229	mOhms	
7.3	(A)Average L.V-3. Resi Measured	=	0.5131	MilliOhms	
	(B) LV R / phase at 75 ° C	=	0.9072	mOhms	
7.4	(A)Average L.V-4. Resi Measured	=	0.4807	MilliOhms	
	(B) LV R / phase at 75 ° C	=	0.8500	mOhms	
8	HV I^2R Losses at Rt1	=	3 X (314.93)² X 0.19		
		=	57012.77	Watts	
9	LV-1 I2R Losses at Rt1	=	1.5 X (3936.6)² X 0.526 / 1000		
		=	12219.98	Watts	
	LV-2 I2R Losses at Rt1	=	1.5 X (3936.6)² X 0.465 / 1000		
		=	10818.30	Watts	
	LV-3 I2R Losses at Rt1	=	1.5 X (3936.6)² X 0.513 / 1000		
		=	11927.09	Watts	
	LV-4 I2R Losses at Rt1	=	1.5 X (3936.6)² X 0.481 / 1000		
10	Total I^2R Losses at Rt1	=	11173.95	Watts	
11	Load losses Measured at Rt1	=	103152.09	Watts	
12	Stray losses at Rt1	=	136476.00	Watts	
13	Total I^2R Losses at 75 ° C	=	33323.91	Watts	
		=	(225 + 75) / (225 + 23.7) X 103152.09		
14	Stray losses at 75 ° C	=	124429.55	Watts	
		=	(225 + 23.7) / (225 + 75) X 33323.91		
15.1	Total load losses at 75°C	=	27625.52	Watts	
15.2	Guaranteed load losses at 75°C	=	***152055.06*** **Watts**		
16.1	Total Losses at 100 % Load.	=	***158400.00*** **Watts**		
16.2	Guaranteed total Losses at 100 % Load.	=	***0.00*** **Watts**		
17	Impedence volts at Rt1 Vm	=	2840.39	volts	
18	% impedence at Rt1 %Z	=	Vm X 100 / V_L		
	VL =H.V.line Voltage	=	2840.3934 X 100 / 33000	=	8.61
19	% R at Rt1 %R	=	136476.00 / 10 X 33000	=	0.414
20	% X = $\sqrt{Z^2 - R^2}$	=	$\sqrt{74.085 - 0.171}$		
		=	8.60	%	
21	% R at 75 °C %R1	=	152055.06 / 10 X 33000	=	0.461
22	% Impedance at 75 ° C = $\sqrt{X^2+R1^2}$ %Z	=	$\sqrt{73.914 + 0.212}$		
		=	8.610	%	

Test witnessed by

(V.Nagaraj)
Engg Officer
CPRI, Bangalore

Central Power Research Institute ★ Bangalore ★ HPL

Tested by

(SHAH RAHUL)
ATLAS TRANSFORMERS INDIA LTD

ATLAS TRANSFORMERS INDIA LIMITED P.T. Plant Por

ATLAS TRANSFORMERS INDIA LTD

SURVEY NO 47-48,RAMANGAMDI,POR,DIST. VADODARA

F:QAS:03. 0 001

CALCULATION SHEET ON 100 % LOADING

Customer : -
Customer Ref : -
VectorGroup : Ynd11d11d11d11 H.V/L.V(Amps.) : 3936.6 / 299.93

KVA : 33000 Tap No. 1 Tr.Sr.No. 001 Temp. : 29.50 ° C

Date : 24.11.2025

1	Measured No load losses at Rated Voltage & Frq.	=	***11896.63***	Watts	
2	Measured No load Current at Rated Voltage & Frq.	=	16.990	Amps.	
3	% No load Current at rated Voltage & Freq.	=	0.432		
4	Ambient Temp Rt1	=	23.7 °C		
5	Lead resi. Measured at ambient temp	=	-		
6	(A)Average H.V. Resi Measured	=	0.4007	Ohms	
	(B)Actual H.V. Resi Measured	=	0.200	Ohms	
	(B) HV R / phase at 75 ° C	=	0.2362	Ohms	
7.1	(A)Average L.V-1. Resi Measured	=	0.5257	MilliOhms	
	(B)Actual L.V. Resi Measured	=	0.526	MilliOhms	
	(B) LV R / phase at 75 ° C	=	0.9295	mOhms	
7.2	(A)Average L.V-2. Resi Measured	=	0.4654	MilliOhms	
	(B) LV R / phase at 75 ° C	=	0.8229	mOhms	
7.3	(A)Average L.V-3. Resi Measured	=	0.5131	MilliOhms	
	(B) LV R / phase at 75 ° C	=	0.9072	mOhms	
7.4	(A)Average L.V-4. Resi Measured	=	0.4807	MilliOhms	
	(B) LV R / phase at 75 ° C	=	0.8500	mOhms	
8	HV I^2R Losses at Rt1	=	$3 \times (299.93)^2 \times 0.20$		
		=	54066.56	Watts	
9	LV-1 I2R Losses at Rt1	=	$\frac{1.5 \times (3936.6)^2 \times 0.526}{1000}$		
		=	12219.98	Watts	
	LV-2 I2R Losses at Rt1	=	$\frac{1.5 \times (3936.6)^2 \times 0.465}{1000}$		
		=	10818.30	Watts	
	LV-3 I2R Losses at Rt1	=	$\frac{1.5 \times (3936.6)^2 \times 0.513}{1000}$		
		=	11927.09	Watts	
	LV-4 I2R Losses at Rt1	=	$\frac{1.5 \times (3936.6)^2 \times 0.481}{1000}$		
10	Total I^2R Losses at Rt1	=	11173.95	Watts	
11	Load losses Measured at Rt1	=	100205.89	Watts	
12	Stray losses at Rt1	=	132696.00	Watts	
13	Total I^2R Losses at 75 ° C	=	32490.11	Watts	
		=	$\frac{225 + 75}{225 + 23.7} \times 100205.89$		
14	Stray losses at 75 ° C	=	120875.62	Watts	
		=	$\frac{225 + 23.7}{225 + 75} \times 32490.11$		
15.1	Total load losses at 75°C	=	26934.30	Watts	
15.2	Guaranteed load losses at 75°C	=	***147809.92*** **Watts**		
16.1	Total Losses at 100 % Load.	=			
16.2	Guaranteed total Losses at 100 % Load.	=			
17	Impedence volts at Rt1	=	***0.00*** **Watts**		
18	% impedence at Rt1 Vm	=	2961.49	volts	
	VL =H.V.line Voltage %Z	=	$\frac{Vm \times 100}{V_L}$		
		=	$\frac{2961.49484 \times 100}{34650}$	=	8.55
19	% R at Rt1 %R	=	$\frac{132696.00}{10 \times 34650}$	=	0.383
20	$\% X = \sqrt{Z^2 - R^2}$	=	$\sqrt{73.049 - 0.147}$		
21	% R at 75 °C %R1	=	8.54 %		
		=	$\frac{147809.92}{10 \times 34650}$	=	0.427
22	% impedance at 75 ° C $= \sqrt{X^2+R1^2}$ %Z	=	$\sqrt{72.903 + 0.182}$		
		=	**8.549** %		

Test witnessed by

(V.Nagaraj)
Engg Officer
CPRI, Bangalore

Tested by

(SHAH RAHUL)
ATLAS TRANSFORMERS INDIA LTD

ATLAS TRANSFORMERS INDIA LTD

SURVEY NO 47-48,RAMANGAMDI,POR,DIST. VADODARA

F:QAS:03. 0 001

CALCULATION SHEET ON 100 % LOADING

Customer : -

Customer Ref : -

VectorGroup : Ynd11d11d11d11 H.V/L.V(Amps.) : 3936.6 / 331.50

KVA : 33000 Tap No. 5 Tr.Sr.No. 001 Temp. : 29.50 ° C

Date : 24.11.2025

1	Measured No load losses at Rated Voltage & Frq.	=	***11896.63***	Watts	
2	Measured No load Current at Rated Voltage & Frq.	=	16.990	Amps.	
3	% No load Current at rated Voltage & Freq.	=	0.432		
4	Ambient Temp Rt1	=	23.7 °C		
5	Lead resi. Measured at ambient temp	=	-		
6	(A)Average H.V. Resi Measured	=	0.3648	Ohms	
	(B)Actual H.V. Resi Measured	=	0.182	Ohms	
	(B) HV R / phase at 75 ° C	=	0.2150	Ohms	
7.1	(A)Average L.V-1. Resi Measured	=	0.5257	MilliOhms	
	(B)Actual L.V. Resi Measured	=	0.526	MilliOhms	
	(B) LV R / phase at 75 ° C	=	0.9295	mOhms	
7.2	(A)Average L.V-2. Resi Measured	=	0.4654	MilliOhms	
	(B) LV R / phase at 75 ° C	=	0.8229	mOhms	
7.3	(A)Average L.V-3. Resi Measured	=	0.5131	MilliOhms	
	(B) LV R / phase at 75 ° C	=	0.9072	mOhms	
7.4	(A)Average L.V-4. Resi Measured	=	0.4807	MilliOhms	
	(B) LV R / phase at 75 ° C	=	0.8500	mOhms	
8	HV I^2R Losses at Rt1	=	$3 \times (331.50)^2 \times 0.18$		
		=	60140.73	Watts	
9	LV-1 I2R Losses at Rt1	=	$\frac{1.5 \times (3936.6)^2 \times 0.526}{1000}$		
	LV-2 I2R Losses at Rt1	=	12219.98	Watts	
		=	$\frac{1.5 \times (3936.6)^2 \times 0.465}{1000}$		
	LV-3 I2R Losses at Rt1	=	10818.30	Watts	
		=	$\frac{1.5 \times (3936.6)^2 \times 0.513}{1000}$		
	LV-4 I2R Losses at Rt1	=	11927.09	Watts	
		=	$\frac{1.5 \times (3936.6)^2 \times 0.481}{1000}$		
10	Total I^2R Losses at Rt1	=	11173.95	Watts	
11	Load losses Measured at Rt1	=	106280.06	Watts	
12	Stray losses at Rt1	=	142128.00	Watts	
13	Total I^2R Losses at 75 ° C	=	35847.94	Watts	
		=	$\frac{225 + 75}{225 + 23.7} \times 106280.06$		
14	Stray losses at 75 ° C	=	128202.73	Watts	
		=	$\frac{225 + 23.7}{225 + 75} \times 35847.94$		
15.1	Total load losses at 75°C	=	29717.94	Watts	
15.2	Guaranteed load losses at 75°C	=	***157920.67*** **Watts**		
16.1	Total Losses at 100 % Load.	=			
16.2	Guaranteed total Losses at 100 % Load.	=	***0.00*** **Watts**		
17	Impedence volts at Rt1 Vm	=	2736.79	volts	
18	% impedence at Rt1 %Z	=	$\frac{Vm \times 100}{V_L}$		
	VL =H.V.line Voltage	=	$\frac{2736.78516 \times 100}{31350}$	=	8.73
19	% R at Rt1 %R	=	$\frac{142128.00}{10 \times 31350}$	=	0.453
20	$\% X = \sqrt{Z^2 - R^2}$	=	$\sqrt{76.209 - 0.206}$		
		=	8.72	%	
21	% R at 75 °C %R1	=	$\frac{157920.67}{10 \times 31350}$	=	0.504
22	% impedance at 75 ° C $= \sqrt{X^2+R1^2}$ %Z	=	$\sqrt{76.003 + 0.254}$		
		=	**8.733**	%	

Test witnessed by

(V.Nagaraj)
Engg Officer
CPRI, Bangalore

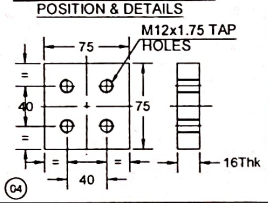
Tested by

(SHAH RAHUL)
ATLAS TRANSFORMERS INDIA LTD

MIN ELECT. CLEARANCES AS PER C.B.I.P.		
	PH TO PH	PH TO ER
H.V.	351	222
L.V.	50	50

TRANSPORT DIMENSION	
LENGTH	6650 ± 3%
BREADTH	2800 ± 3%
HEIGHT	3450 ± 3%

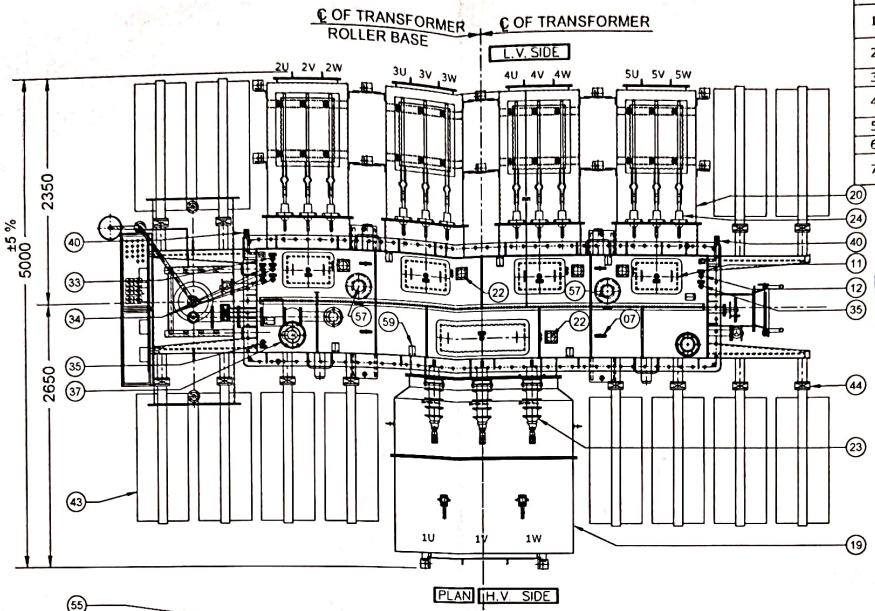
EARTHING TERMINAL PAD POSITION & DETAILS

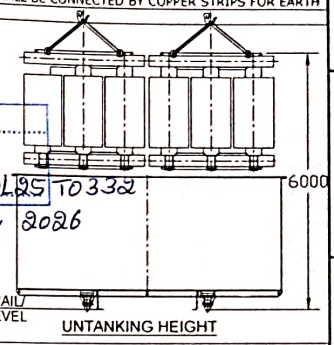


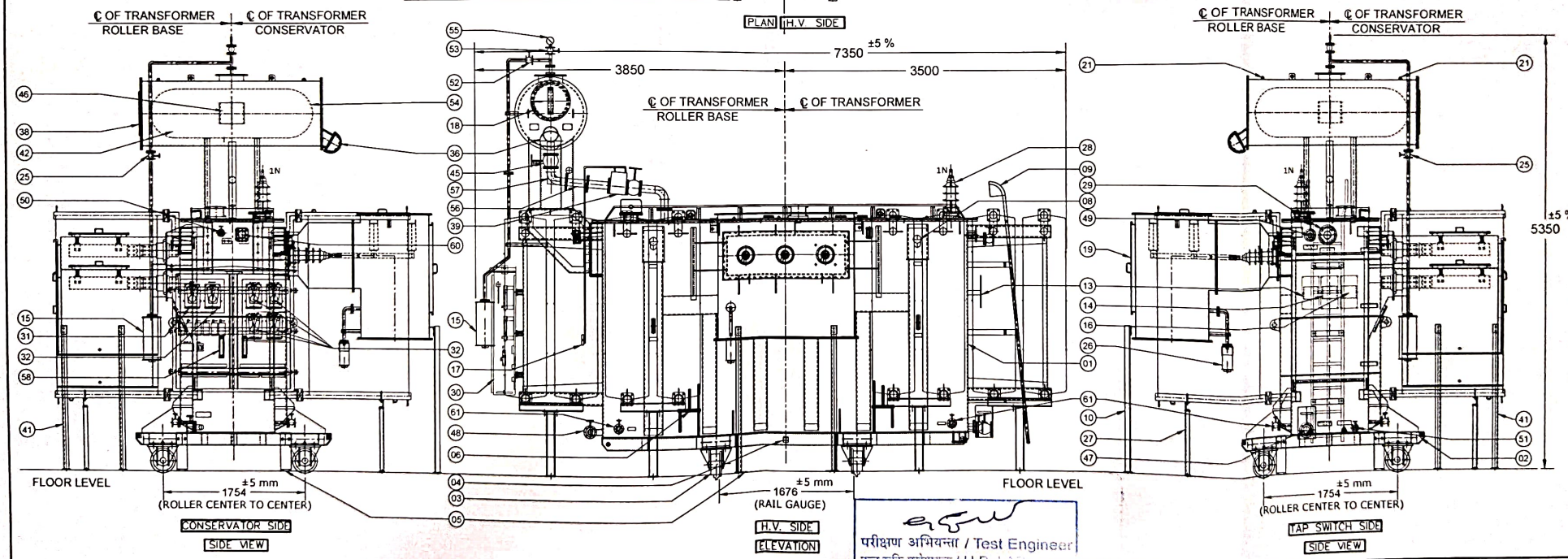
APPROXIMATE WEIGHT	
CORE & COIL	15000 KG.
OIL WEIGHT	10500 KG.
OIL QUANTITY	11800 LTR.
TOTAL WEIGHT	40600 KG.
TRANSFORMER WT. WITH OIL	28500 KG.

NOTES:-

1	ALL DIMENSION ARE IN mm UNLESS OTHERWISE STATED (ALL DIMENSIONS & WEIGHTS ARE IN ±5 % TOL)
2	TAPPINGS ON H.V. FOR H.V. VARIATION OF +5% TO -5% IN STEP OF 2.5% BY OFF CIRCUIT TAP SWITCH.
3	PAINT : POLYURETHANE, SHADE 631 AS PER IS:5
4	POSITION OF FITTINGS, TANK SHAPE ARE ONLY INDICATIVE MAY CHANGE DURING FINAL ENGINEERING.
5	* THUS MARKED ITEMS WILL BE DISMANTLED AT TIME OF TRANSFORMER DISPATCH.
6	TRANSFORMER TOP SURFACE SHALL BE SLOPPED.
7	DIFFERENT PARTS OF TRANSFORMER SHALL BE CONNECTED BY COPPER STRIPS FOR EARTH CONTINUITY PURPOSE.







CUSTOMER	-
PO.NO./DATE	-
CONSULTANTS	-
PROJECT	-
TR.DETAILS	KVA : 18000, KV:33/4*0.66,YNd11d11d11d11,ONAN

REV NO	DATE & SIGN	BRIEF RECORD

DRN	CBB	27.11.2025
CHD		
APPRD		

GENERAL ARRANGEMENT OF TRANSFORMER

ATLAS TRANSFORMERS INDIA LTD
MFG OF ALL TYPES OF TRANSFORMERS
SURVEY NO. 47 & 48, POR,
RAMANGAMDI,
DIST. : VADODARA - 391243

SCALE NTS

WO NO : 0077 | SHEET:01 OF 02

DRG.NO. 0077_GA OF TRAFO_R0

रिपोर्ट क्रमांक.....
से संबंधित दस्तावेज
Document Pertaining to
Report No. CPRI/BLR/HPL/25/10332
30 January 2026

परीक्षण अभियन्ता / Test Engineer
उच्च शक्ति प्रयोगशाला / H.P. LAB
सी. पी. आर. आई./ CPRI
बेंगलुरु / Bengaluru

सीपीआरआई द्वारा इस रेखाचित्र का सत्यापन
कहींभी संभव
THE VERIFICATION OF THIS DRAWING
BY CPRI IS LIMITED TO DIMENSIONAL
CHECKS ONLY WHEREVER POSSIBLE

DGN/F/33

220

208

194

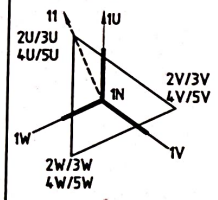
400

194

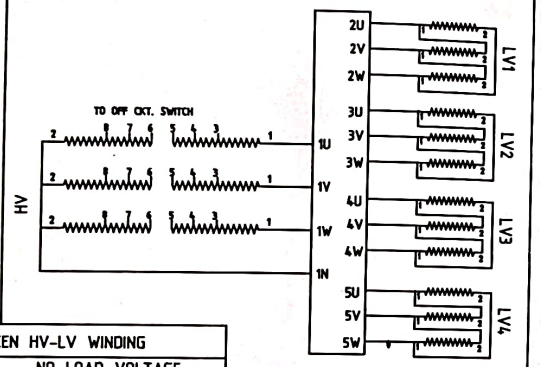
ATLAS

ATLAS TRANSFORMERS INDIA LTD.

(FORMERLY KNOWN AS JAYESH ELECTRICALS LTD.)
MFG OF ALL TYPES OF TRANSFORMERS
SURVEY NO. 47 & 48, POR,
RAMANGAMDI, DIST. : VADODARA - 391243



VECTOR GROUP
YNd11d11d11d11



AL. SHIELD PROVIDE BETWEEN HV-LV WINDING

SWITCH POSITION	H.V.LEADS CONNECTED	NO LOAD VOLTAGE H V	LV1	LV2	LV3	LV4
1	5 - 6	34650				
2	6 - 4	33825				
3	4 - 7	33000	660	660	660	660
4	7 - 3	32175				
5	3 - 8	31350				

BASIC INSULATION LEVEL			
IMPULSE VOLTAGE kV peak	HV	170
	LV1-LV2	40
	LV3-LV4	40
P. F. VOLTAGE kV rms	HV	70
	LV1-LV2	10
	LV3-LV4	10

RATING KVA	HV : 18000			
	LV1: 4500	LV2: 4500	LV3: 4500	LV4: 4500
NO LOAD VOLTAGE	HV : 33000			
	LV1:660	LV2:660	LV3:660	LV4:660
CURRENT Amp.	HV : 314.91			
	LV1:3936.5	LV2:3936.5	LV3:3936.5	LV4:3936.5
PHASE HV/LV	3			
FREQUENCY Hz	50			
COOLING	ONAN			
SERIAL NO. JN:	001			
CONNECTION DIAGRAM NO.				
CUSTOMER'S P.O. NO.				

REF. I. S.		2026
MAX. TEMP. RISE OIL/WDG		50/55 °C
IMPEDANCE VOLTAGE	HV-(LV1+LV2+LV3+LV4)	8.61 %
CORE AND WINDINGS	kg	15000
WEIGHT OF OIL	kg	10500
OIL QTY	Ltrs.	11800
TOTAL WEIGHT	kg	40600
TRANSPORT WEIGHT	kg	28500
YEAR OF MANUFACTURE		2025

CAUTION: DE ENERGIES TRANSFORMER BEFORE OPERATING OFF CIRCUIT TAP CHANGER SWITCH

6 HOLES 6 ø

NOTES:-

(1) ALL DIMENSIONS ARE IN mm.
× (2) R & D PLATE SUPPLIERS'S SYMBOL SHOULD APPEAR AT BOTTOM OF RIGHT CORNER OF BORDER FOR A.T.I.L. REFERANCE ONLY.
(3) RATING AND DIAGRAM PLATE REQUIRED IN ORIGINAL METAL FINISHED BACK GROUND WITH LETTERS AND FIGURE ETCHED AND PAINTED BLACK.
(4) MATERIAL:-22 SWG STAINLESS STEEL (SS-304)
(5) THE VALUE OF % IMPEDANCE VOLTAGE WILL BE INCORPORATED AFTER TRANSFORMER TESTING.

रिपोर्ट क्रमांक.....
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Document Pertaining to
Report No. CPRIBLRHPL25T0332
30 January 2026

परीक्षण अभियन्ता / Test Engineer
उच्च शक्ति प्रयोगशाला / H.P. LAB
सी. पी. आर. आई. / CPRI
बेंगलुरु / Bengaluru

CUSTOMER	-
PO.NO./DATE	-
CONSULTANT	-
PROJECT	-
TR.DETAILS	KVA : 18000, KV:33/4*0.66, YNd11d11d11d11, ONAN

DRN.	CBB	10.07.2025
CHD.		
APPRD.		

ATLAS TRANSFORMERS INDIA LTD
MFG OF ALL TYPES OF TRANSFORMERS
SURVEY NO. 47 & 48, POR,
RAMANGAMDI,
DIST. : VADODARA - 391243

Rev. No.	Date & Sign	Brief Record

RATING AND DIAGRAM PLATE

SCALE N.T.S

WO NO : 0077

REV. NO

DRG.NO: 0077_R&D_R0

R0

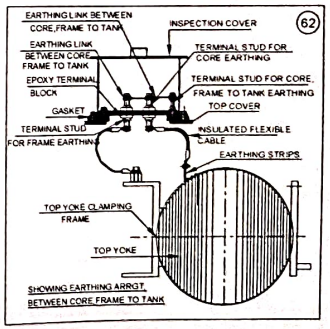
	51	BOTTOM OIL SAMPLING VALVE (15mmØ,D.S.F.) WITH BLANKING PLATE	1
	50	TOP OIL SAMPLING VALVE (15mmØ,D.S.F.) WITH BLANKING PLATE	1
	49	TOP FILTER VALVE (50mmØ,D.S.F.) WITH BLANKING PLATE	1
	48	BOTTOM FILTER VALVE (50mmØ,D.S.F.) WITH BLANKING PLATE	1
	47	BOTTOM DRAIN VALVE (80mmØ,D.S.F.) WITH BLANKING PLATE	1
	46	LOGO PLATE	1
	45	SHUT-OFF VLAVE (80mmØ,D.S.F.) G.M. GATE VALVE FOR B'ERELAY	2
	44	RADIATOR VALVE (BUTTERFLY TYPE)	24
* *	43	DETACHABLE TYPE P.S.RADIATOR WITH AIR RELEASE PLUG, LIFTING LUGS & DRAIN PLUG	12
* *	42	AIRCELL TYPE CONSERVATOR WITH LIFTING LUGS	1
* *	41	L.V. CABLE BOX GROUND SUPPORT	4 SET
	40	SHIELD EARTHING BUSHING(3.6 kV) WITH EARTHING FLAT & SUPPORTING INSULATOR	1+1
	39	DOUBLE FLOAT BUCHHOLZ RELAY WITH ALARM & TRIP CONTACT	1
	38	PRISMATIC TYPE OIL LEVEL GAUGE	2
	37	PRESSURE RELIEF VALVE FOR TRANSFORMER	1
	36	DIAL TYPE MAGNETIC OIL LEVEL GAUGE LLA CONTACT	1
	35	THERMOMETER POCKET WITH MERCURY IN GLASS THERMOMETER	1+1
	34	POCKET FOR W.T.I	5
	33	POCKET FOR O.T.I	1
* *	32	DIAL TYPE W.T.I. WITH M.R.P.,R.S.D. AND ALARM & TRIP CONTACT	5
* *	31	DIAL TYPE O.T.I. WITH M.R.P.,R.S.D. AND ALARM & TRIP CONTACT	1
* *	30	MARSHALLING BOX	1
	29	OFF CIRCUIT TAP SWITCH	1
	28	HV NEUTRAL BUSHING (PORCELAIN: 36 kV, 1000 A)	1
* *	27	RADIATOR GROUNDING SUPPORT	6
* *	26	DEHYDRATING SILICA GEL BREATHER FOR HV CABLE BOX	1
	25	CONSERVATOR DRAIN VALVE (25mm.Ø,D.S.F.)WITH BLANKING PLATE	1
	24	LV BUSHING (EPOXY: 3.6kV, 5000 A)	12
	23	HV BUSHING (PORCELAIN: 36 kV, 1000 A)	3
* *	22	C.T. TERMINAL BOX (LV-4, HV-1)	4+1
	21	AIR RELEASE PLUG FOR CONSERVATOR	2
* *	20	L.V. CABLE BOX	4
* *	19	H.V. CABLE BOX	1
	18	INSPECTION COVER FOR CONSERVATOR	1
* *	17	GAS SAMPLING PIPE WITH TEST COCK (S.S. FLEXIBLE TYPE)	2
* *	16	OIL FILLING PROCEDURE PLATE	1
	15	SILICA GEL BREATHER FOR TRANSFORMER	1
	14	VALVE LOCATION PLATE	1
	13	RATING AND DIAGRAM PLATE	1
	12	AIR RELEASE PLUG	1
	11	INSPECTION COVER FOR TOP COVER WITH AIR RELEASE PLUG	4+1
* *	10	H.V. CABLE BOX GROUND SUPPORT	2
*	9	LADDER WITH ANTI-CLIMBING LOCK ARRANGEMENT	1
	8	LIFTING LUGS FOR COMPLETE TRANSFORMERS	4
	7	LIFTING LUGS FOR TOP COVER	4
	6	JACKING PAD WITH HAULING HOLES	4
*	5	ANTI EARTH QUAKE CLAMPING ARRANGEMENT	4
	4	EARTHING TERMINAL PAD	2
*	3	FLANGED ROLLER (250Ø, BI-DIRECTIONAL) WITH LOCKING ARRANGEMENT	4
	2	BASE CHANNEL WITH HAULING HOLES	2
	1	TRANSFORMER TANK (CONVENTIONAL TYPE)	1
	SR.NO	DESCRIPTION	QTY

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

##	61	VALVE FOR NITROGEN INJECTION (25mm.Ø,D.S.F.)WITH BLANKING PLATE FOR PNT FIRE SYSTEM (3NOS. ON H.V. SIDE & 3NOS. ON L.V. SIDE)	4
##	60	DRAIN VALVE(80mm, BUTTERFLY TYPE)WITH BLANKING PLATE FOR PNT FIRE SYSTEM	1
##	59	FIRE DETECTOR CLAMP	7
##	58	FIXING BRACKET FOR SIGNAL BOX PNT FIRE SYSTEM	1
##	57	CORE EARTHING EPOXY TERMINAL BOARD	2
##	56	DISTANCE PIECE FOR TCIV FOR N2 SYSTEM	1
* *	55	PRESSURE GAUGE	1
* *	54	RUBBER DIAPHRAGM	1
	53	PRESSURE GAUGE VALVE (15mmØ,D.S.F.)	1
	52	AIR FILLING VALVE (25mmØ,D.S.F.)	1
	SR.NO	DESCRIPTION	QTY

* * MARKED ITEM NOT FITTED DURING SHORT CIRCUILT TEST

PROVISION FOR NIFPS SYSTEM SHALL BE AS PER CTR MAKE



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Document Pertaining to
Report No. CPRIBLRHPL25.10332
30 January 2026

परीक्षण अभियन्ता / Test Engineer
उच्च शक्ति प्रयोगशाला / H.P. LAB
सी. पी. आर. आई. / CPRI
बेंगलुरु / Bengaluru

CUSTOMER	-
PO.NO./DATE	-
CONSULTANTS	-
PROJECT	-
TR.DETAILS	KVA : 18000, KV:33/4*0.66,YNd11d11d11d11,ONAN

REV NO	DATE & SIGN	BRIEF RECORD

DRN CBB 27.11.2025
CHD
APPRD

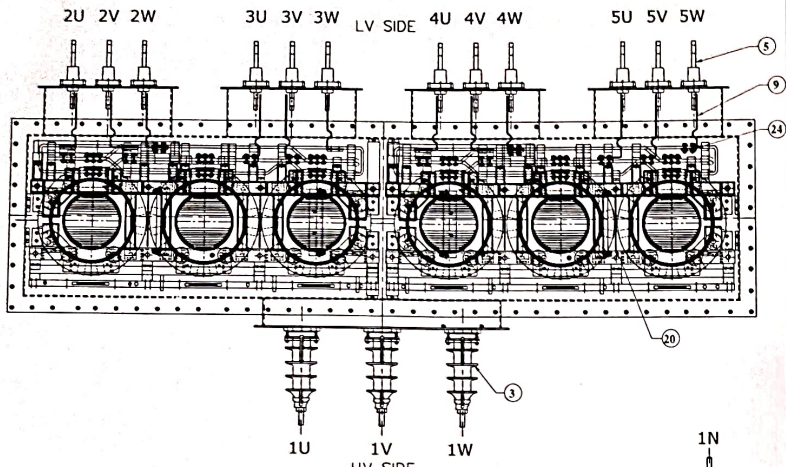
GENERAL ARRANGEMENT OF TRANSFORMER

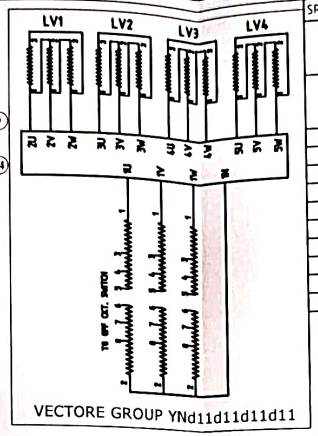
ATLAS TRANSFORMERS INDIA LTD
MFG OF ALL TYPES OF TRANSFORMERS
SURVEY NO. 47 & 48, POR,
RAMANGAMDI,
DIST. : VADODARA - 391243

SCALE NTS

WO NO : 0077 SHEET:02 OF 02

DRG.NO: 0077_GA OF TRAFO_R0





SR NO	DESCRIPION	MAT/DRG NO	QTY
1	H V MAIN & TAP LEAD SIZE 2.00x10 4.0/0.5 mm PC NO OF PARALLEL CONDUCTOR 2 NO OF COILS / PHASE 2	ALUMINIUM	AS REQD
2	L V FOIL SIZE 185x650mm NO OF PARALLEL FOIL 1 NO OF COILS / PHASE 2	ALUMINIUM	AS REQD
3	H V BUSHING 36 KV/1000A	-	3
4	H V (N) BUSHING 36 KV/1000A	-	1
5	L V BUSHINGS 36 KV/5000A	-	12
6	OCTC 33kv 100 AMPS 5 POS, 6+6DECK, COMBO BRIDGE TYPE	-	1
7	LEAD SUPPORT	-	1 SET
8	L V CONNECTION BUSBAR(HORIZONTAL/VERTICAL)	100x16THK/100x20THK	1 SET
9	L V CONNECTION JUMPER	-	1 SET
10	JOB LOCKING BRACKET (TOP)	M S	6
11	CORE CLAMPING BELT (5THKx60WIDE)	M S	16
12	TIE ROD M30x3.5	M S	8+8

SR NO	DESCRIPION	MAT/DRG NO	QTY
13	FRAME TO TANK EARTHING	CU STRIPS	2
14	CORE TO FRAME EARTHING	CU STRIPS	2
15	CORE	CRGO	1SET
16	SHEILD BUSHING 36 KV/630A	-	1+1
17	PRESSURE RING (TOP)	PERMA WOOD	3
18	H V & L V BTM FRAME	M S	1+1
19	CROSS PLATE FIXING BOLT M20x2.5	M S	12
20	PHASE BARRIER (3mm THK)	PR PN	4
21	PRESSURE SEGMENT AT BTM	PERMA WOOD	1SET
22	LOCKING PIN FOR BOTTOM BLOCK	M S	16
23	H V & L V FRAME	M S	1+1
24	BI-METALIC STRIP BTWN LV BUSBAR & JUMPER		6+6
25	JOB LOCKING PIN (BOTTOM)	M S ROD	4
26	TAPPING LEADS	24 SQ MM	AS REQD
27	HV MAIN LEADS	70 SQ MM	AS REQD
28	HV (N) LEADS	24 SQ MM	AS REQD

रिपोर्ट क्रमांक.....
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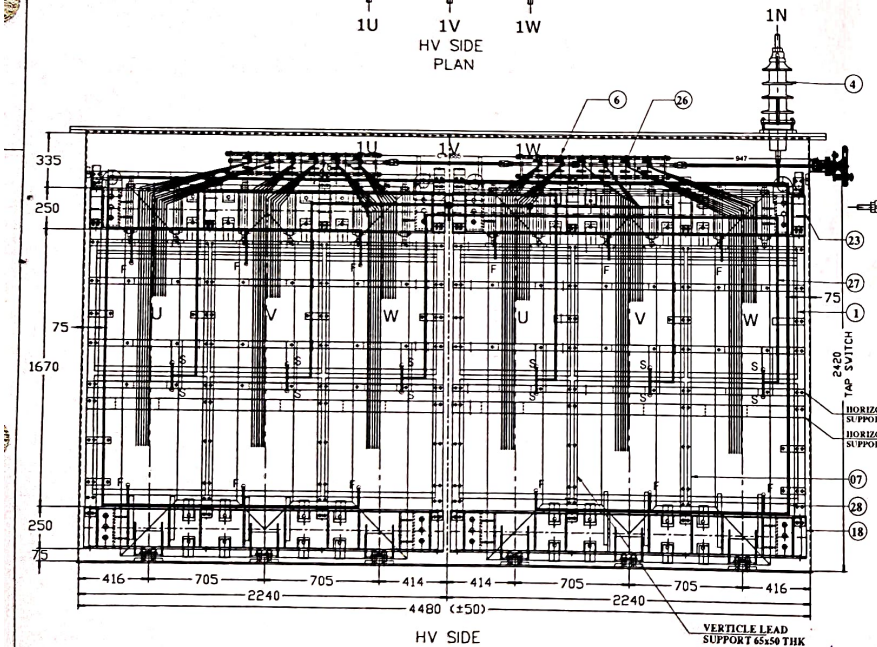
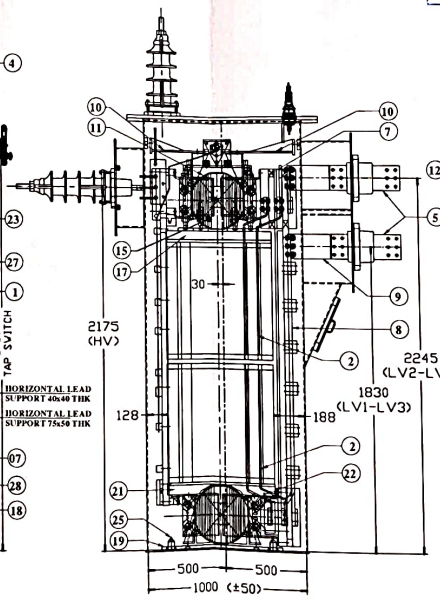
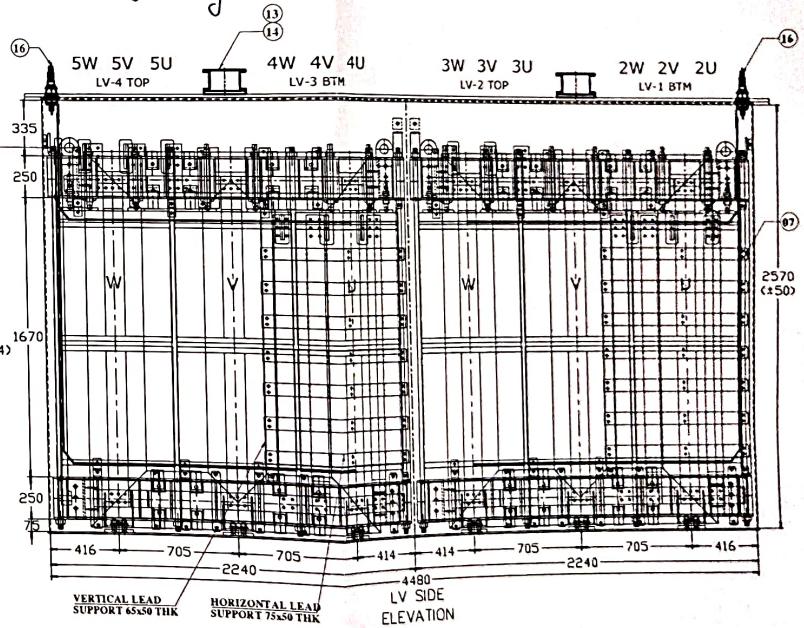


HV SIDE
ELEVATION



SIDE VIEW



LV SIDE
ELEVATION

SHORT CIRCUIT JOB

परीक्षण अभियन्ता / Test Engineer
उच्च शक्ति प्रयोगशाला / H.P. LAB
सी. पी. आर. आई / CPRI
बेंगलुरु / BANGALORE

NOTES :
(1) ALL DIMENSIONS ARE IN mm.
(2) ALL DIMENSIONS ARE IN ±5% TOL.

CUSTOMER	-
PO.NO./DATE	-
CONSULTANTS	-
PROJECT	-
TR.DETAILS	KVA : 18000, KV:33/4*0.66,YNd11d11d11d11,ONAN

REV. NO.	DATE & SIGN	BRIEF RECORD

DRN.	CBB	27.11.2025
CHD.		
APPRD.		

ATLAS TRANSFORMERS INDIA LTD
MFG OF ALL TYPES OF TRANSFORMERS
SURVEY NO. 47 & 48, POR,
RAMANGAMDI,
DIST.: VADODARA - 391243

H.V. CONNECTION
18 MVA 33/0.66-0.66-0.66-0.66 KV
VECTOR GROUP: YNd11d11d11d11

SCALE NTS

WO NO : 0077

SHEET.:1 OF 1

DRG.NO. 0077_HV & LV CONN_R0

ATLAS Transformers India Limited, Vadodara

WO NO.	KVA	VOTAGE	FILE NO.	TYPE TEST DETAIL	Report No. & Date
1289	200	22/0.433 KV	1	Lightning Impulse Test	RP-2122-040972, DT:29.03.2022
			2	Temp rise & others Test	RP-2223-009223, DT:20.06.2022
			3	Short circuit test	RP-2223-009365, DT:23.06.2022
			4	Paint Adhesion Test	
			5	Coating Thickness Test	RP-2223-009277, DT:21.06.2022
1290 001	500	22 / 0.433 KV	1	Lightning Impulse Test	RP-2122-035289, DT:18.02.2022
			2	Temp rise & others Test	RP-2223-003899, DT:09.05.2022
			3	Short circuit test	RP-2223-002613, DT:25.04.2022
			4	Paint Adhesion Test	RP-2223-003885, DT:30.04.2022
			5	Coating Thickness Test	RP-2223-003938, DT:02.05.2022
1313	315	11 / 0.415 KV	1	Lightning Impulse Test	RP-2122-040306, DT:25.03.2022
			2	Temp rise & others Test	RP-2223-005865, DT:24.05.2022
			3	Short circuit test	RP-2223-003456, DT:30.05.2022
1366	100	11 / 0.433 KV	*1*	Lightning Impulse Test	RP-2223-005830, DT:23.05.2022
			2	Temp rise & others Test	RP-2223-009029, DT:17.06.2022
			3	Short circuit test	RP-2223-008664, DT:16.06.2022
			4	Paint Adhesion Test	RP-2223-006405, DT:27.05.2022
1368 001	500	11 / 0.433 KV(GEB)	*1*	Lightning Impulse Test	RP-2223-005176, DT:16.05.2022
			2	Temp rise & others Test	RP-2223-07579, DT:03.06.2022
			3	Short circuit test	
			4	Paint Adhesion Test	RP-2223-006406, DT:27.05.2022
			5	Coating Thickness Test	
1711	630	11000/415 V	1	IMPULSE TEST REPORT	RP-2324-007562 DT: 10.06.2023
			2	ROUTINE & TEMPERATURE RISE	RP-2324-014385 DT: 11.08.2023
			3	SHORT CURCUIT TEST REPORT	RP-2324-009908 DT: 04.07.2023
1713	100	11000/433 V	1	IMPULSE TEST REPORT	RP-2324-014729 DT: 17.08.2023
			2	ROUTINE & TEMPERATURE RISE	RP-2324-022056 DT: 26.10.2023
			3	SHORT CURCUIT TEST REPORT	RP-2324-022055 DT: 26.10.2023
1771	100	11000/433 V	1	IMPULSE,SKT,T-R. TEST REPORT	RP-2324-026024 DT: 13.09.2023
			2	COATING THICKNESS TEST REPORT	RP-2324-025338 DT: 01.12.2023
1772	200	11000/433 V	1	SHORT CIRCUIT TEST REPORT	RP-2324-029949 DT: 28.12.2023
1824	500	11000/433 V	1	IMPULSE TEST REPORT	RP-2324-025859 DT: 08.12.2023
			2	ROUTINE & TEMPERATURE RISE TEST	RP-2324-028284 DT: 01.01.2024
			3	SHORT CIRCUIT TEST REPORT	RP-2324-029015 DT: 09.01.2024
001	18 MVA	33000 / 4 x 660 V	1	SHORT CIRCUIT TEST REPORT	CPRIBLRHPL25T0332 DT: 30.01.2026
			2	ROUTINE & TEMPERATURE RISE TEST	CPRIBLRHPL25T0332 DT: 30.01.2026