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Certificate No. : TC-5389

ULR-TC538919000000253F

TEST REPORT

NAME & ADDRESS OF CUSTOMER **EPOXY TERMINAL & EQUIPMENT PVT. LTD.** Plot No : 6B, Phase III, TS-IIC, IDA, Pashamylaram, Sangareddy, Dist, Telangana-502307.	**REPORT NO.**: RP-1819-038449 **DATE** : 02.01.2019 **CUSTOMER REF. NO.** :NIL **DATE** : 19.12.2018

DATE OF SAMPLE RECEIPT	DATE OF TESTING
19.12.2018	21.12.2018 to 01.01.2019

SAMPLE DESCRIPTION
CURRENT TRANSFORMER
MFD. BY : Epoxy Terminal & Equipment Pvt. Ltd

RATIO	: 400-800/5-5 A
BURDEN	: 15 VA/15 VA
CLASS	: 0.5/5P10
ISF	: <10 for 400 A/-
RATED S.V	: 33 kV
HSV	: 36 kV
RATED I.L.	: 36/70/170 kV
STR CURRENT	: 26.3 kA for 3 sec.
FREQUENCY	: 50 Hz.
MODEL	: CT33A

SAMPLE IDENTIFICATION

SR. NO. : 441018001

ERDA SAMPLE CODE NO. :
ERDA-00292026

INSULATION CLASS : B

MFG. YEAR : 2018

ENCLOSURES :
1) Oscillogram No. : 1) 1145/01 to 2) 1145/02
2) Test Circuit Diagram : OLSC/IT/13
3) Photographs of Test sample : As per Annexure-I (As per sheet : 1 of 1)
4) DRAWING NO. : 1) ETE-CT-WP6 SHEET. NO. : 2 OF 2 REV. 00,
2) ETE-CT-WP6 SHEET. NO. : 1 OF 2 REV. 00.

WITNESSED BY :
Mr. M. Palanisamy (Head, Operations, M/s. Epoxy Terminal & Equipment Pvt. Ltd.)

TEST RESULTS : As per sheet no. 3 OF 15 to 15 OF 15.

REMARKS : 1) The sample **conforms** to the requirements of the mentioned standard specification as mentioned in tests no. 1 to 19 on sheet no. 2 OF 15.
2) STC test was carried out only on higher ratio (800/5 A), as per customer's requirement.

PREPARED BY **CHECKED BY** **APPROVED BY (S. B. PATEL)**

Note: 1. This report relates only to the particular sample received in good condition for testing at ERDA, Vadodara
2. This report can not be reproduced in part under any circumstances.
3. Publication of this report requires prior permission in from writing Director, ERDA.
4. Only tests asked for by the customer have been carried out.
5. In case of any dispute, Vadodara will be the exclusive jurisdiction & shall be construed as where the cause has arised.

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REPORT NO. : RP-1819-038449 DATE : 02.01.2019 SHEET : 2 OF 15

TEST DETAILS & TEST SPECIFICATION :

Sr. No.	TESTS	REFERENCE STANDARD
1	Verification of markings.	Cl. No. 7.3.6 of IEC 61869-1 Edition 1.0 2007-10
2	Impulse voltage withstand test on primary terminals.	Cl. No. 7.2.3 of IEC 61869 (Part 1) : 2007 & IEC 61869 (Part 2) : 2012
3	Power frequency voltage withstand tests on primary terminals.	Cl. No. 7.3.1 of IEC 61869-1 Edition 1.0 2007-10
4	Power frequency voltage withstand tests on secondary terminals.	Cl. No. 7.3.4 of IEC 61869-1 Edition 1.0 2007-10
5	Power frequency voltage withstand tests between sections.	Cl. No. 7.3.3 of IEC 61869-1 Edition 1.0 2007-10
6	Partial discharge test.	Cl. No. 7.3.2.2 (procedure-B) of IEC 61869-1 Edition 1.0 2007-10
7	Inter-turn over voltage test.	Cl. No. 7.3.204 of IEC 61869-2 Edition 1.0 2012-09
8	Tests for ratio error and phase displacement of measuring current transformers. (Before STC Test)	Cl. No. 7.3.5.201 & Cl. No. 7.2.6.201 of IEC 61869-2 Edition 1.0 2012-09
9	Tests for ratio error and phase displacement of class P protective current transformers. (Before STC Test)	Cl. No. 7.3.5.202 of IEC 61869-2 Edition 1.0 2012-09
10	Test for composite error of class P protective current transformers. (Before STC Test)	Cl. No. 7.3.5.203 & Cl. No. 7.2.6.203 of IEC 61869-2 Edition 1.0 2012-09
11	Short time current test.	Cl. No. 7.2.201 of IEC 61869-2 : 2012
12	Power frequency voltage withstand tests on primary terminals. (After STC Test)	Cl. No. 7.3.1 of IEC 61869-1 Edition 1.0 2007-10
13	Power frequency voltage withstand tests on secondary terminals. (After STC Test)	Cl. No. 7.3.4 of IEC 61869-1 Edition 1.0 2007-10
14	Power frequency voltage withstand tests between sections. (After STC Test)	Cl. No. 7.3.3 of IEC 61869-1 Edition 1.0 2007-10
15	Partial discharge test. (After STC Test)	Cl. No. 7.3.2.2 (procedure-B) of IEC 61869-1 Edition 1.0 2007-10
16	Tests for ratio error and phase displacement of measuring current transformers. (After STC Test)	Cl. No. 7.2.6.201 of IEC 61869-2 Edition 1.0 2012-09
17	Tests for ratio error and phase displacement of class P protective current transformers. (After STC Test)	Cl. No. 7.3.5.202 of IEC 61869-2 Edition 1.0 2012-09
18	Test for composite error of class P protective current transformers. (After STC Test)	Cl. No. 7.2.6.203 of IEC 61869-2 Edition 1.0 2012-09
19	Temperature-rise test	Cl. No. 7.2.2 of IEC 61869-2 Edition 1.0 2012-09

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REPORT NO. : RP-1819-038449 DATE : 02.01.2019 SHEET : 3 OF 15

1. **Verification of markings.**
(Cl. No. 7.3.6 of IEC 61869-1 Edition 1.0 2007-10)

Primary winding terminals : P1-P2

Secondary windings terminals : 1S1-1S2-1S3, 2S1-2S2-2S3

Terminal marking & polarity was found Ok.

Terminal marking was found marked clearly & indelibly.

REMARK: Conforms

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2. **Impulse voltage withstand test on primary terminals.**
(As per Cl. No. 7.2.3 of IEC 61869 (Part 1):2007 & IEC 61869 (Part 2): 2012)

Atmospheric Condition:
Dry bulb temperature : 28.0°C
Wet bulb temperature : 23.0°C
Atmospheric Pressure : 750.4 mm of Hg

Test Parameters:
H.S.V : 36 kV
Test Voltage : 170 kVp ± 3%
No. of Shots to be applied : 15 +ve &15 –ve Polarity Shots

Test Observation:
Calibration Pulse : 103.048 kVp
Wave Shape : 1.201/53.772 µs
No. of Shots Applied : Calibration Pulse,15 +ve & 15 -ve Polarity Shots
No. of Shots recorded : Calibration Pulse, First & Last shot for Both Polarity

No. of Shot	Test Voltage Applied in kVp	
	Positive Polarity	Negative Polarity
1.	169.023	168.352
2.	169.965	169.853
3.	169.640	169.865
4.	170.911	168.186
5.	169.121	169.293
6.	169.825	168.922
7.	170.991	168.190
8.	170.162	168.024
9.	170.161	168.360
10.	170.602	168.497
11.	170.566	168.684
12.	169.760	170.457
13.	170.234	170.919
14.	169.211	169.991
15.	169.151	171.017

REMARK : Conforms

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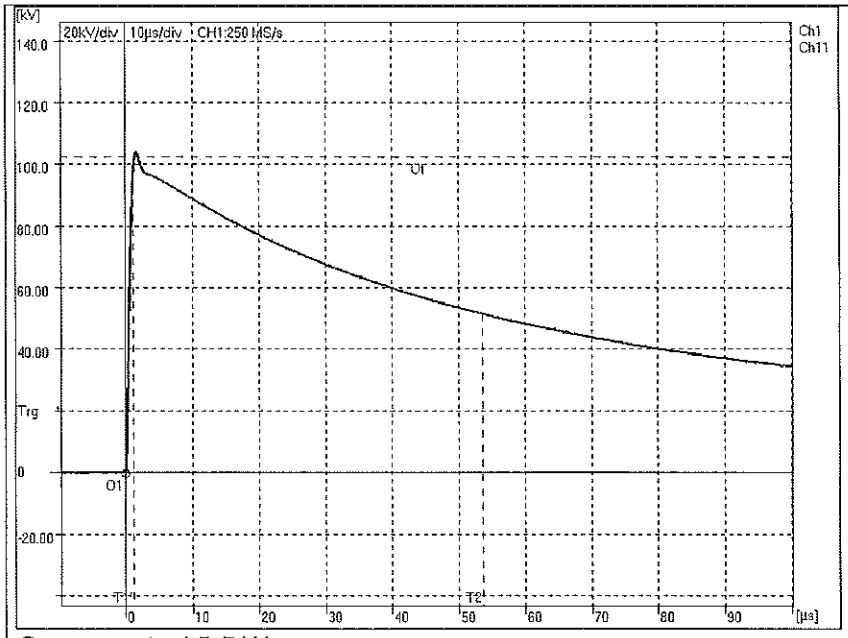
IMPULSE VOLTAGE WITHSTAND TEST ON PRIMARY TERMINALS



Comment: LI RW

CALIBRATION PULSE
U_p = 103.05 kV
T_1 = 1.20 µs
T_2 = 53.77 µs

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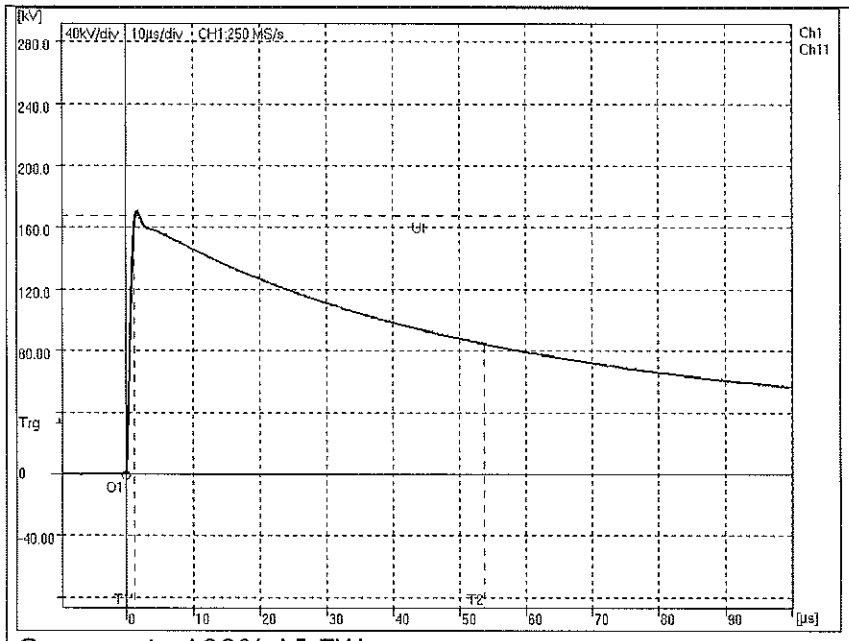
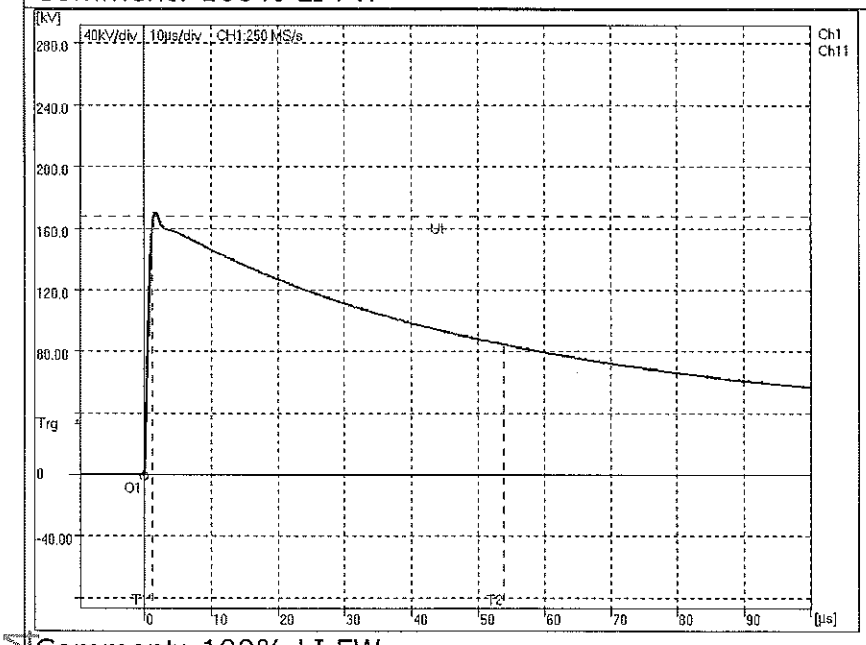
IMPULSE VOLTAGE WITHSTAND TEST ON PRIMARY TERMINALS



Comment: 100% LI FW

FIRST SHOT
U_p = 169.02 kV
T_1 = 1.19 µs
T_2 = 53.90 µs



Comment: 100% LI FW

LAST SHOT
U_p = 169.15 kV
T_1 = 1.19 µs
T_2 = 54.00 µs

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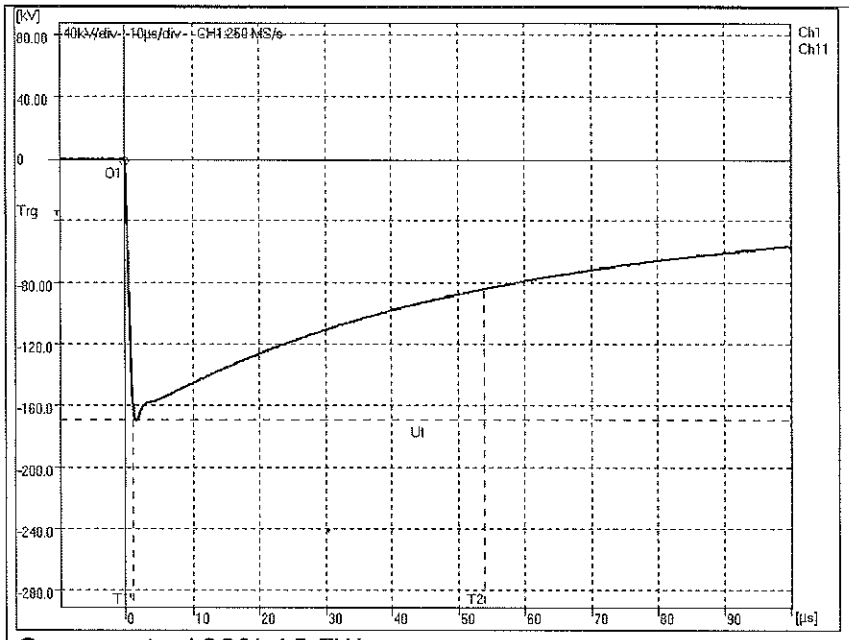
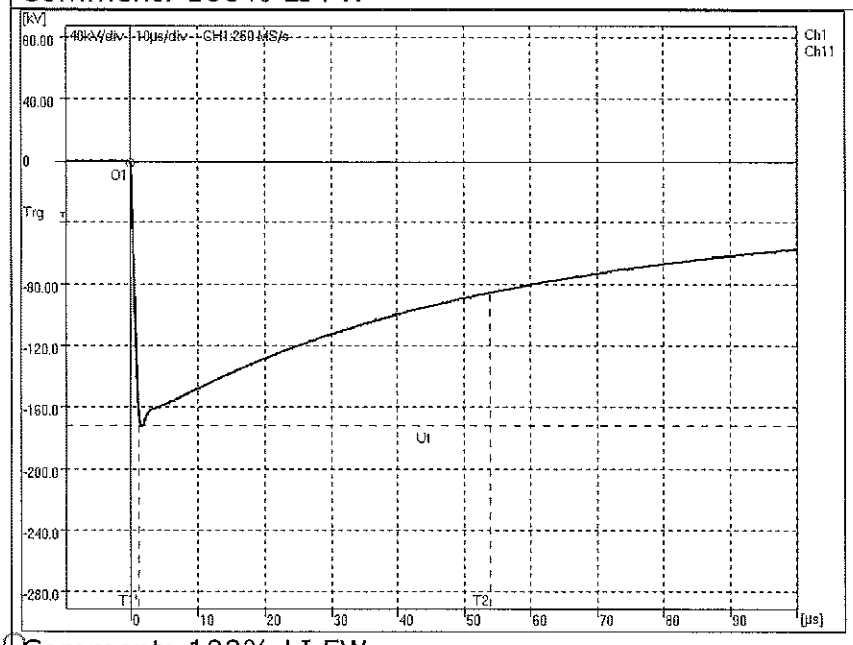
IMPULSE VOLTAGE WITHSTAND TEST ON PRIMARY TERMINALS



Comment: 100% LI FW

FIRST SHOT
U_p = -168.35 kV
T_1 = 1.20 µs
T_2 = 54.03 µs



Comment: 100% LI FW

LAST SHOT
U_p = -171.02 kV
T_1 = 1.19 µs
T_2 = 54.01 µs

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3. **Power frequency voltage withstand tests on primary terminals.**
(Cl. No. 7.3.1 of IEC 61869-1 Edition 1.0 2007-10)

The power frequency voltage of 70 kV (rms) was applied between the primary winding and earth. The secondary winding terminals and base plate were connected to the earth. The test voltage was applied for one minute. There was no disruptive discharge observed. The sample withstood the test voltage satisfactorily.

REMARK: Conforms

4. **Power frequency voltage withstand tests on secondary terminals**
(Cl. No. 7.3.4 of IEC 61869-1 Edition 1.0 2007-10)

The power frequency voltage of 3 kV (rms) was applied between the secondary windings terminals (all) connected together and the earth. The primary winding terminals and base plate were shorted and connected to the earth. The test voltage was applied for one minute. There was no disruptive discharge observed.
The sample withstood the test voltage satisfactorily.

REMARK: Conforms

5. **Power frequency voltage withstand tests between sections.**
(Cl. No. 7.3.3 of IEC 61869-1 Edition 1.0 2007-10)

A) The power frequency voltage of 3 kV (rms) was applied between the secondary windings terminals (1S1-1S2-1S3) and the earth. The primary winding terminals, other secondary windings terminals and base plate were shorted and connected to the earth. The test voltage was applied for one minute. There was no disruptive discharge observed. The sample withstood the test voltage satisfactorily.

B) The power frequency voltage of 3 kV (rms) was applied between the secondary windings terminals (2S1-2S2-2S3) and the earth. The primary winding terminals, other secondary windings terminals and base plate were shorted and connected to the earth. The test voltage was applied for one minute. There was no disruptive discharge observed. The sample withstood the test voltage satisfactorily.

REMARK: Conforms

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6. **Partial discharge test. (Network: Effectively Earthed System)**
(Cl. No. 7.3.2.2 (procedure-B) of IEC 61869-1 Edition 1.0 2007-10)

The partial discharge test is performed after the power-frequency withstand test. The voltage applied to the Current transformer raised up to 80 % of the power-frequency withstand voltage, maintained for 60 sec., then reduced without interruption to the specified partial discharge test voltages. The partial discharge magnitude was measured at these voltage levels in a time within 30 sec.

Applied Voltage	Specified Limit	Measured Partial Discharge Magnitude
Um = 36 kV	50 pC	01 pC
At 1.2 X Um/√3 = 25 kV	20 pC	01 pC

REMARK: Conforms

7. **Inter-turn over voltage test.**
(Cl. No. 7.3.204 of IEC 61869-2 Edition 1.0 2012-09)

With secondary winding connected to oscilloscope, a substantially sinusoidal current at 50 Hz frequency & of rms value equal to rated primary current (i.e. 800 A) was applied for 60 seconds to the primary winding. The sample withstood the test voltage for 1S1-1S3 & 2S1-2S3 of secondary side for 60 seconds.

REMARK: Conforms

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8. **Tests for ratio error and phase displacement of measuring current transformer. (Before STC Test)**
(Cl. No. 7.3.5.201 & Cl. No. 7.2.6.201 of IEC 61869-2 Edition 1.0 2012-09)

CURRENT TRANSFORMER:

Ratio: 800/5 A, Burden: 15 VA, Class: 0.5, Secondary Winding Terminals: 1S1-1S3

PHASE ANGLE ERROR IN MIN.	RATIO ERROR IN %	% OF RATED CURRENT	RATIO ERROR IN %	PHASE ANGLE ERROR IN MIN.
BURDEN : 100 % at 0.8 Lag P.F.			BURDEN : 25 % at U.P.F.	
2.67	0.007	120	0.139	3.16
2.84	-0.001	100	0.138	3.29
4.81	-0.076	20	0.106	4.99
7.09	-0.229	5	0.046	8.92

Ratio: 400/5 A, Burden: 15 VA, Class: 0.5, Secondary Winding Terminals: 1S1-1S2

BURDEN : 100 % at 0.8 Lag P.F.			BURDEN : 25 % at U.P.F.	
4.19	-0.215	120	0.227	8.27
5.19	-0.245	100	0.221	8.57
11.09	-0.474	20	0.151	12.65
17.35	-0.857	5	0.012	20.96

REMARK: Conforms

9. **Tests for ratio error and phase displacement of class P protective current transformers. (Cl. No. 7.3.5.202 of IEC 61869-2 Edition 1.0 2012-09) (Before STC Test)**

Ratio: 800/5 A, Class: 5P, Secondary Winding Terminals: 2S1-2S3

RATED BURDEN: P.F:0.8 Lag	% OF RATED CURRENT	RATIO ERROR IN %	PHASE ANGLE ERROR IN MIN.
15 VA	100	-0.157	2.18

Ratio: 400/5 A, Class: 5P, Secondary Winding Terminals: 2S1-2S2

RATED BURDEN: P.F:0.8 Lag	% OF RATED CURRENT	RATIO ERROR IN %	PHASE ANGLE ERROR IN MIN.
15 VA	100	-0.472	3.29

REMARK: Conforms

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10. **Test for composite error of class P protective current transformers.**
(Cl. No. 7.3.5.203 & Cl. No. 7.2.6.203 of IEC 61869-2 Edition 1.0 2012-09)
(Before STC Test)

Secondary winding terminals	:	2S1-2S3	2S1-2S2
RATIO	:	800/5 A	400/5 A
Rct @75 °C	:	277.06 mΩ	128.11 mΩ
SLV Computed	:	41.91 V	35.33 V
Excitation Current measured	:	39.4 mA	140.1 mA
Composite Error	:	0.079 %	0.280 %

REMARK: Conforms

11. **Short time current test.**
(Cl. No. 7.2.201 of IEC 61869-2 Edition 1.0 2012-09)

Pre test: As tests mentioned in sheet no. 2 OF 15, 10 OF 15 to 11 OF 15 (i.e. Sr. No. 8 to 10)

The short time current test was performed on primary winding connected to source as per circuit diagram no.: OLSC/IT/13 and secondary winding short circuited through a copper link of negligible impedance.

CT Ratio: 800/5 A. Supply frequency: 50 Hz.

Test No.	Oscillogram No.	Short circuit current (kA)		Duration (sec.)	Remarks	Observation during test
		Peak	RMS			
1.	1145/01	-	26.347	3.001	Short time Thermal Current test	No abnormality observed
2.	1145/02	65.894	-	0.060	Dynamic current test	No abnormality observed

Observation after the test: - No visible damage was observed.
- C.T. body was intact.

Post test: As tests mentioned in sheet no. 2 OF 15, 12 OF 15 to 14 OF 15. (i.e. Sr. No. 12 to 18)

REMARK: Conforms

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REPORT NO. : RP-1819-038449 DATE : 02.01.2019 SHEET : 12 OF 15

TEST RESULTS AFTER SHORT TIME CURRENT TEST

12. **Power frequency voltage withstand tests on primary terminals.**
(Cl. No. 7.3.1 of IEC 61869-1 Edition 1.0 2007-10)

The power frequency voltage of 63 kV (rms) (i.e. 90 % of 70 kV(rms)) was applied between the primary winding and earth. The secondary winding terminals and base plate were connected to the earth. The test voltage was applied for one minute. There was no disruptive discharge observed. The sample withstood the test voltage satisfactorily.

REMARK: Conforms

13. **Power frequency voltage withstand tests on secondary terminals**
(Cl. No. 7.3.4 of IEC 61869-1 Edition 1.0 2007-10)

The power frequency voltage of 2.7 kV (rms) (i.e. 90 % of 3 kV(rms)) was applied between the secondary windings terminals (all) connected together and the earth.
The primary winding terminals and base plate were shorted and connected to the earth.
The test voltage was applied for one minute.
There was no disruptive discharge observed.
The sample withstood the test voltage satisfactorily.

REMARK: Conforms

14. **Power frequency voltage withstand tests between sections.**
(Cl. No. 7.3.3 of IEC 61869-1 Edition 1.0 2007-10)

A) The power frequency voltage of 2.7 kV (rms) (i.e. 90 % of 3 kV(rms)) was applied between the secondary windings terminals (1S1-1S2-1S3) and the earth.
The primary winding terminals, other secondary windings terminals and base plate were shorted and connected to the earth. The test voltage was applied for one minute.
There was no disruptive discharge observed.
The sample withstood the test voltage satisfactorily.

B) The power frequency voltage of 2.7 kV (rms) (i.e. 90 % of 3 kV(rms)) was applied between the secondary windings terminals (2S1-2S2-2S3) and the earth.
The primary winding terminals, other secondary windings terminals and base plate were shorted and connected to the earth. The test voltage was applied for one minute.
There was no disruptive discharge observed.
The sample withstood the test voltage satisfactorily.

REMARK: Conforms

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15. **Partial discharge test. (Network: Effectively Earthed System)**
(Cl. No. 7.3.2.2 (procedure-B) of IEC 61869-1 Edition 1.0 2007-10)

The partial discharge test is performed after the power-frequency withstand test.

The voltage applied to the Current transformer raised up to 0.9*(80 % of the power-frequency withstand voltage), maintained for 60 sec., then reduced without interruption to the specified partial discharge test voltages. The partial discharge magnitude was measured at these voltage levels in a time within 30sec.

Applied Voltage	Specified Limit	Measured Partial Discharge Magnitude
Um X 0.9 = 32.4 kV	50 pC	01 pC
At 1.2 X Um/√3 X 0.9 = 22.4 kV	20 pC	01 pC

REMARK: Conforms

16. **Tests for ratio error and phase displacement of measuring current transformer. (Cl. No. 7.2.6.201 of IEC 61869-2 Edition 1.0 2012-09)**

CURRENT TRANSFORMER:

Ratio: 800/5 A, Burden: 15 VA, Class: 0.5, Secondary Winding Terminals: 1S1-1S3

Sr. No.	% OF RATED CURRENT	RATED BURDEN (IN %)	Power factor = 100 % VA @ 0.8 Lag P.F & 25 % VA @ U.P.F		Difference in errors after Short time current test.	
			RATIO ERROR IN %	PHASE ANGLE ERROR IN MIN.	RATIO ERROR IN %	PHASE ANGLE ERROR IN MIN.
1.	120	100	-0.001	2.55	0.008	0.12
2.	100	100	-0.007	2.79	0.006	0.05
3.	20	100	-0.088	4.75	0.012	0.06
4.	5	100	-0.242	8.08	0.013	-0.99
5.	120	25	0.139	3.30	0.000	-0.14
6.	100	25	0.136	3.42	0.002	-0.13
7.	20	25	0.096	4.96	0.010	0.03
8.	5	25	0.048	9.24	-0.002	-0.32

REMARK: Conforms

PREPARED BY CHECKED BY

TC 26078

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REPORT NO. : RP-1819-038449 DATE : 02.01.2019

17. **Tests for ratio error and phase displacement of class P protective current transformers. (Cl. No. 7.3.5.202 of IEC 61869-2 Edition 1.0 2012-09)**

Ratio: 800/5 A, Burden: 15 VA, Class: 5P, Secondary Winding Terminals: 2S1-2S3

Sr. No.	% OF RATED CURRENT	RATED BURDEN (IN %)	Power factor = 100 % VA @ 0.8 Lag P.F		Difference in errors after Short circuit withstand capability test.	
			RATIO ERROR IN %	PHASE ANGLE ERROR IN MIN.	RATIO ERROR IN %	PHASE ANGLE ERROR IN MIN.
1.	100	100	-0.140	1.72	-0.017	0.46

REMARK: Conforms

18. **Test for composite error of class P protective current transformers.**
(Cl. No. Cl. No. 7.2.6.203 of IEC 61869-2 Edition 1.0 2012-09)

Secondary winding terminals : 2S1-2S3
RATIO : 800/5 A
Rct @75 °C : 268.03 mΩ
SLV Computed : 41.51 V
Excitation Current measured : 39.3 mA
Composite Error : 0.079 %
Difference : 0.000 %

REMARK: Conforms

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TC 269059

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19. **Temperature rise test.**
(Cl. No. 7.2.2 of IEC 61869-2 Edition 1.0 2012-09)

A Continuous rated thermal current equals to 100% of the rated primary current (i. e. 800*1.0= 800 A) at rated frequency was circulated in the primary winding of the CT. Rated burdens (i.e. 15/15 VA) were connected to the secondary winding terminals (i.e. 1S1-1S3, 2S1-2S3) of the CT. At steady state, the temperature of Primary terminals, body and ambient temperature were recorded. The resistance of secondary windings was measured immediately after shut down and temperature rise calculated.

The temperature rises so obtained were as follows:

Sr. no.	Temperature rise of :	Specified limit for Temperature rise test.	Obtain value
1.	Primary winding terminals (Thermocouple method)	85 °C	P1 : 16.3 °C
		85 °C	P2 : 16.2 °C
2.	Secondary winding (Resistance method)	85 °C	1S1-1S3 : 12.77 °C
		85 °C	2S1-2S3 : 11.30 °C
3.	Body (Thermocouple method)	85 °C	6.0 °C
4.	Ambient temperature	30 °C	24.5 °C

REMARK: Conforms

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TC 269060

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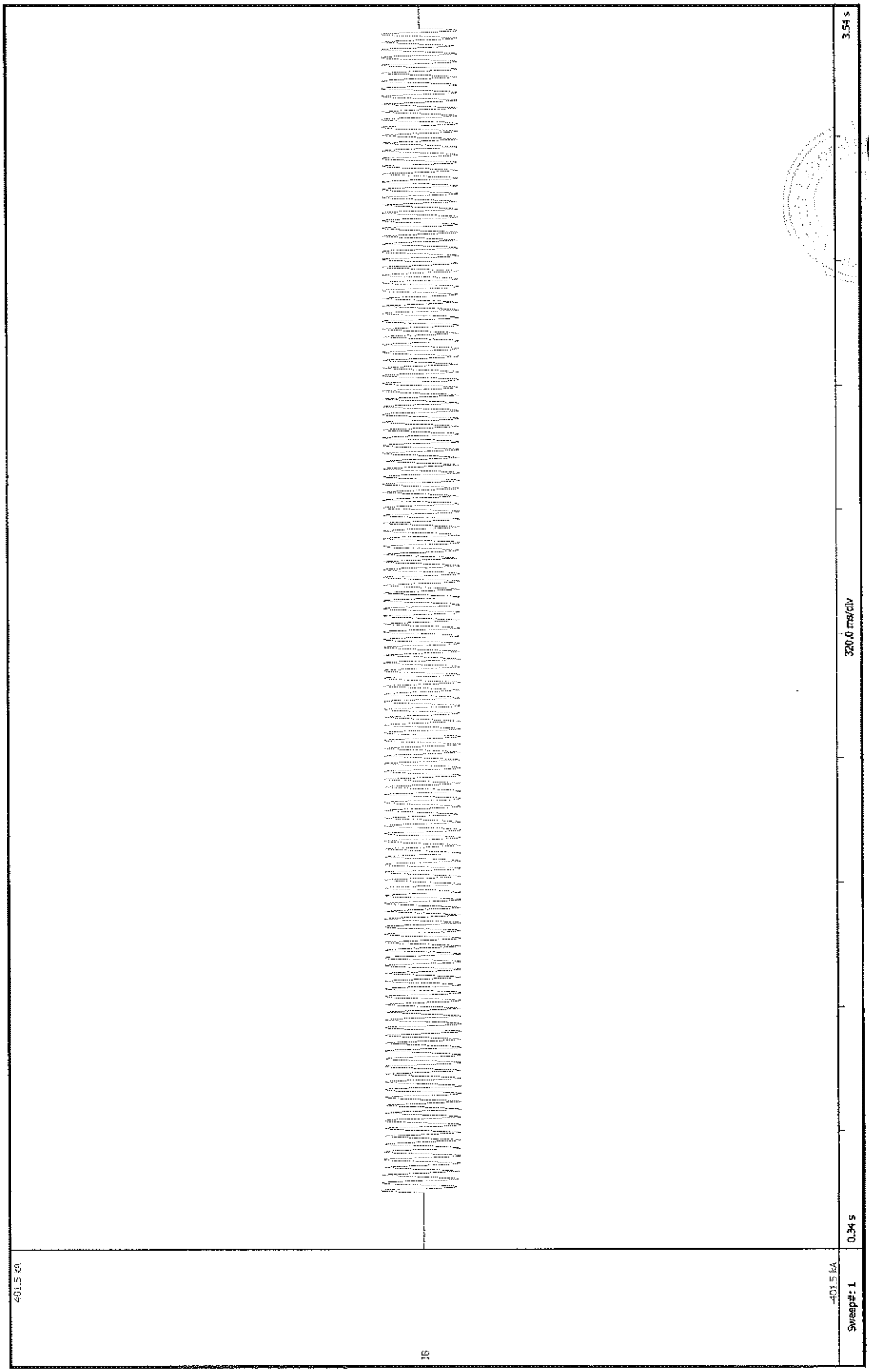
TEST REPORT NO.: RP-1819-038449 DATE : 02.01.2019



OSCILLOGRAM NO.: 1145/01

TC 2691808

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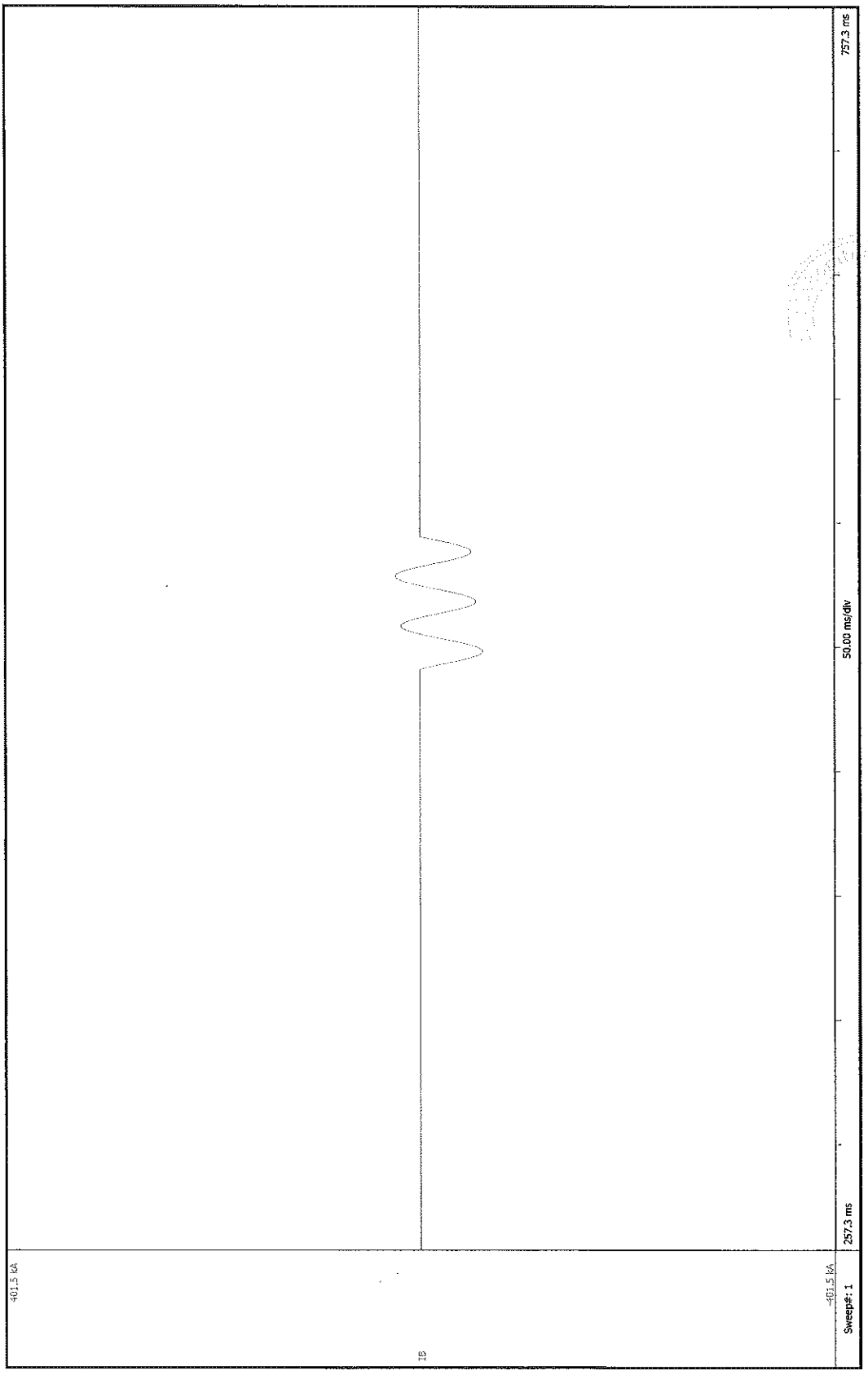
ULR-TC538919000000253F

TEST REPORT NO.: RP-1819-038449 DATE : 02.01.2019



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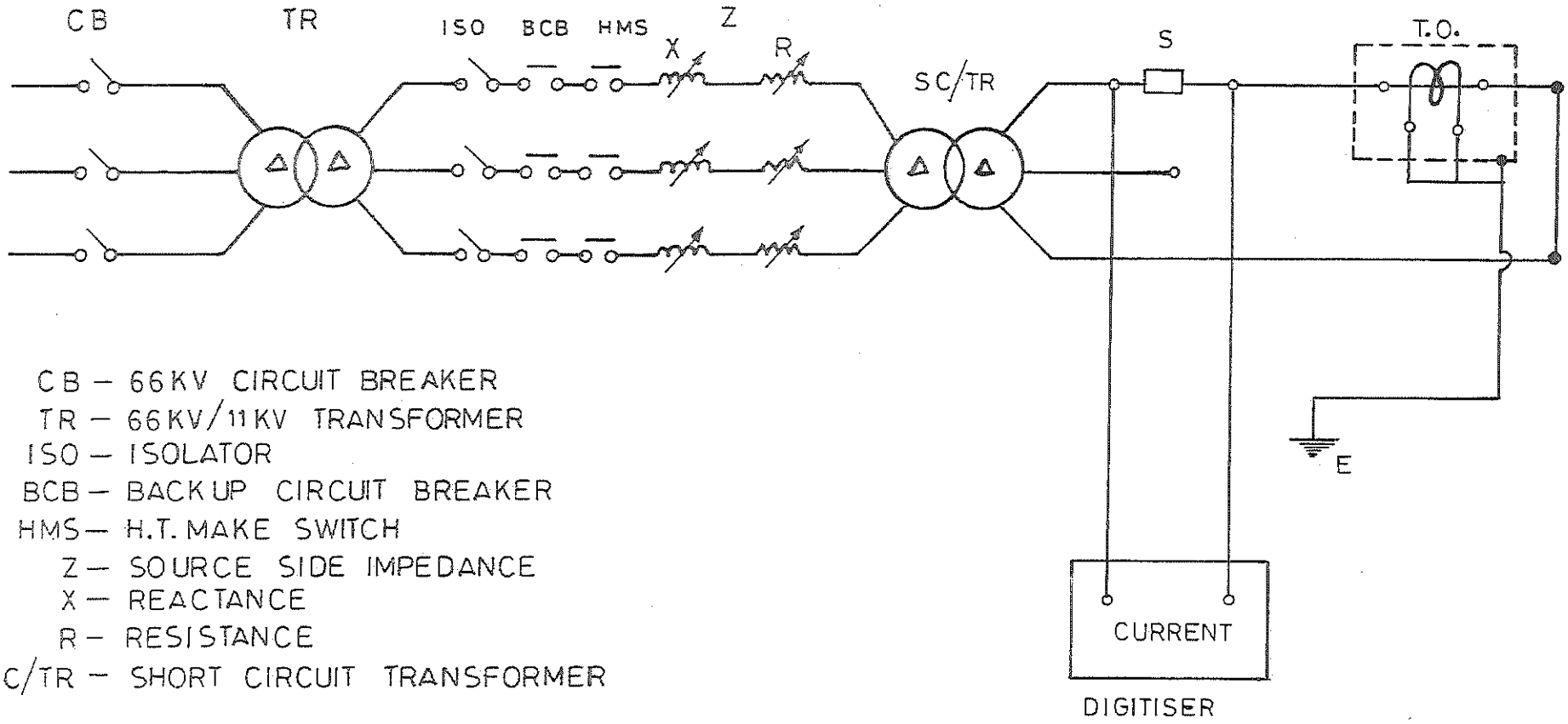
TC 2691807



CB – 66KV CIRCUIT BREAKER
TR – 66KV/11KV TRANSFORMER
ISO – ISOLATOR
BCB – BACK UP CIRCUIT BREAKER
HMS – H.T. MAKE SWITCH
Z – SOURCE SIDE IMPEDANCE
X – REACTANCE
R – RESISTANCE
SC/TR – SHORT CIRCUIT TRANSFORMER

T.O – TEST OBJECT
S – SHUNT
E – EARTH

REPORT NO.: RP-1819-038449
DATE : 02.01.2019

ELECTRICAL RESEARCH AND DEVELOPMENT ASSOCIATION

SCHEMATIC CIRCUIT DIAGRAM

DRN. BY	CK D.	DATE	DRG. NO.
S.B.S.	A.V.B.	29-10-99	OLSC/IT/13

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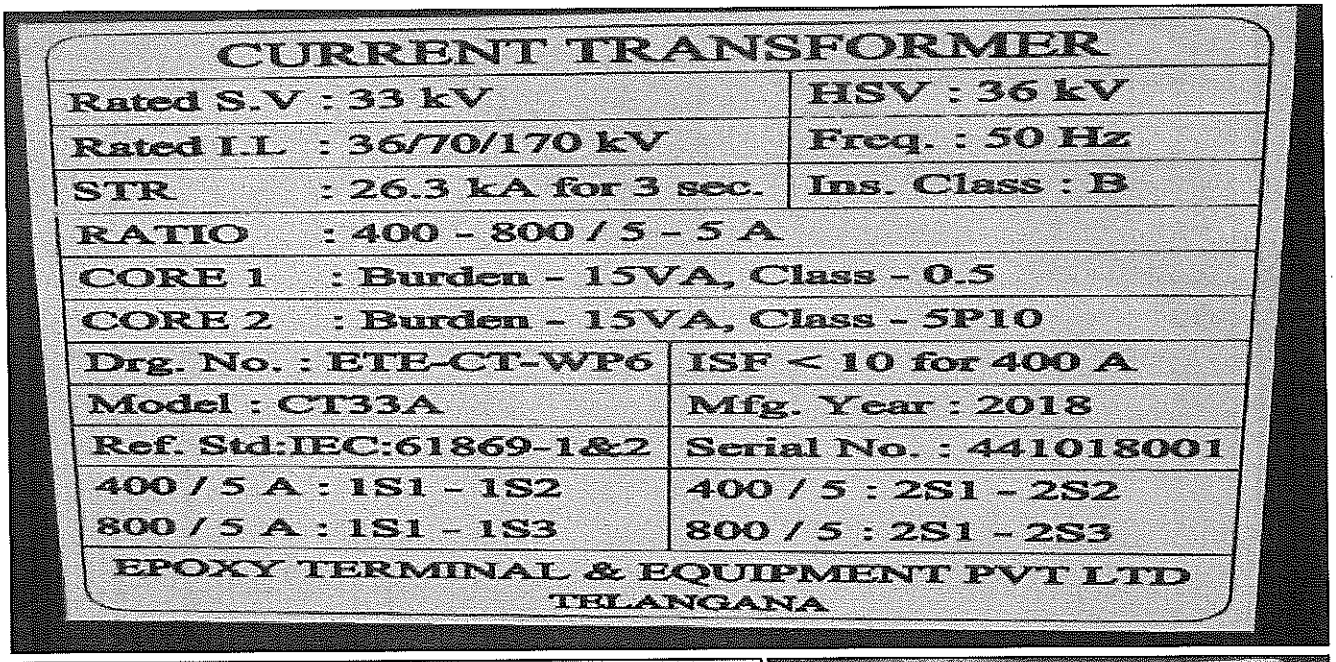
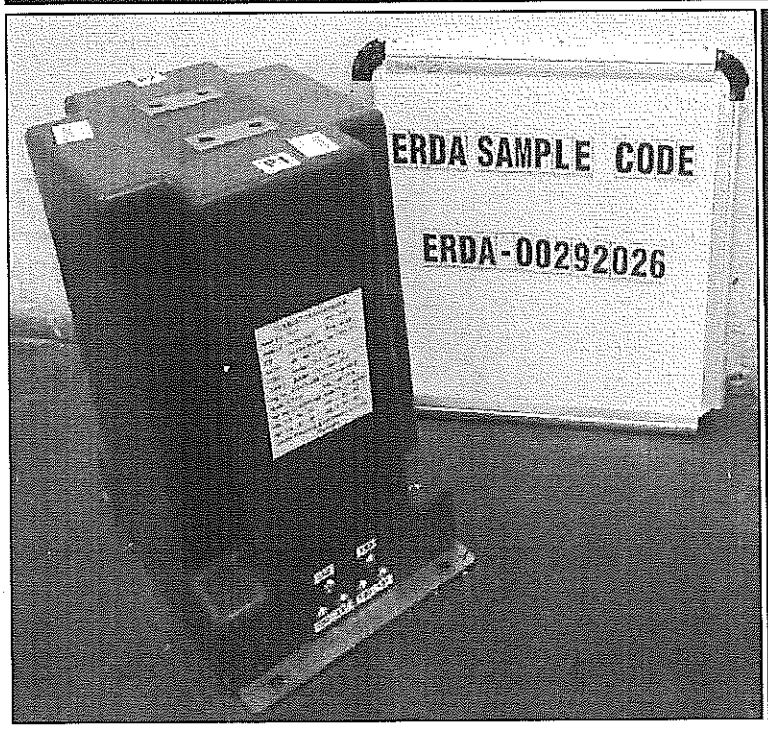
Annexure-I

REPORT NO. : RP-1819-038449 DATE : 02.01.2019

PHOTOGRAPHS OF TEST SAMPLE





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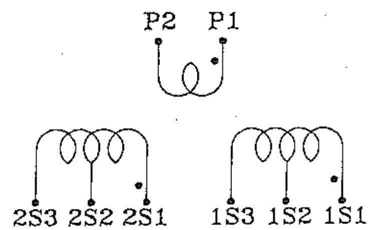
TC 292061

CURRENT TRANSFORMER	
Rated S.V : 33 kV	HSV : 36 kV
Rated I.L : 36/70/170 kV	Freq. : 50 Hz
STR : 26.3 kA for 3 sec.	Ins. Class : B
RATIO : 400 - 800 / 5 - 5 A	
CORE 1 : Burden - 15VA, Class - 0.5	
CORE 2 : Burden - 15VA, Class - 5P10	
Drg. No. : ETE-CT-WP6	ISF < 10 for 400 A
Model : CT33A	Mfg. Year : 2018
Ref. Std:IEC:61869-1&2	Serial No. : 441018001
400 / 5 A : 1S1 - 1S2	400 / 5 : 2S1 - 2S2
800 / 5 A : 1S1 - 1S3	800 / 5 : 2S1 - 2S3
EPOXY TERMINAL & EQUIPMENT PVT LTD TELANGANA	

CONNECTION DIAGRAM



Test Report No. RD-1819-038449
Date 02.01.2019
Product 33 KV CT
Verified by

All dimensions in mm

REV.	DATE	DESCRIPTION	APPROVED

GENERAL TOLERANCES ±2.0mm	SCALE : NTS	RATING PLATE RESIN CAST 33 KV CURRENT TRANSFORMER MODEL: CT33A		SIGN	DATE
			DRAWN	PALANI	20/09/2018
			CHD.	PALANI	21/09/2018
			APPD.	RAGHU	28/09/2018

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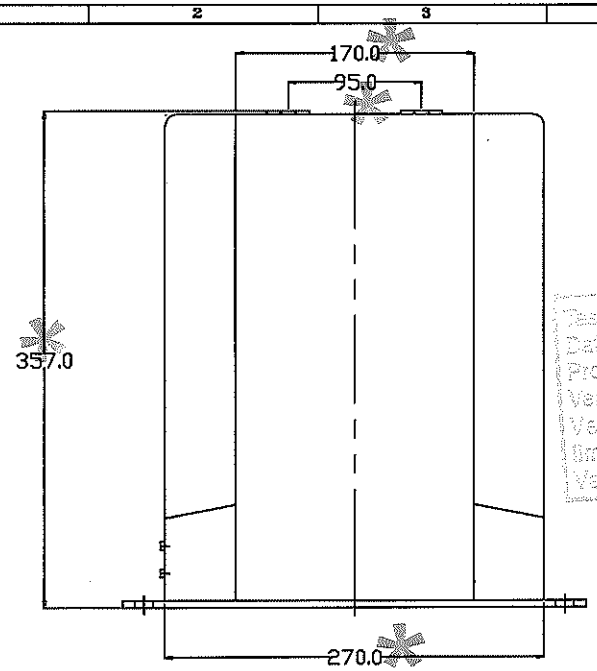
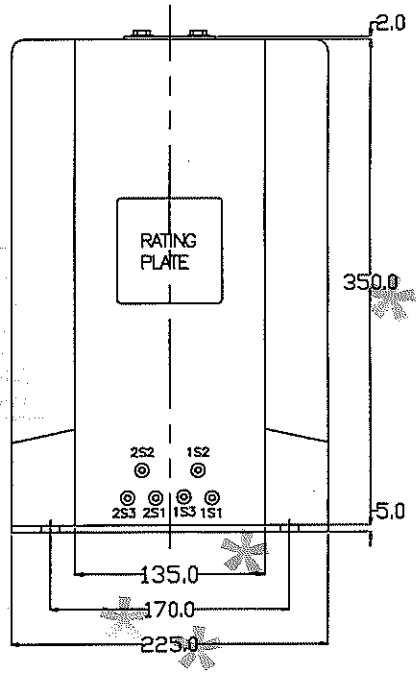
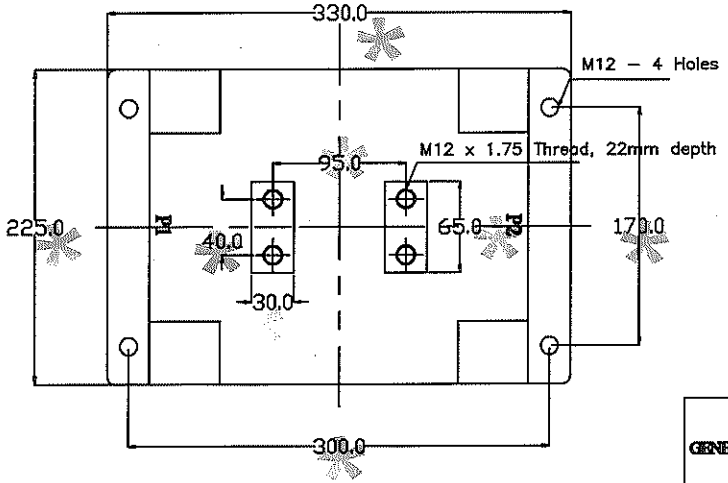
PATANCHERU, SANGAREDDY (DIST), TELANGANA.

DRG. NO. : ETE-CT-WP6
SHEET. NO. : 2 OF 2
REV. 00







WINDING DETAILS :–

PRIMARY WINDING:–

No. of turns = 1 Turn

Cross section area : (40 x 0.3)mm x 41 parallel = 492 sq.mm

Material : Copper strip

SECONDARY WINDING:–

No. of turns : 80 T + 80 T for both core

Cross section area :

Core 1 : 19 SWG x 3 parallel + 16 SWG = 2.43 sq.mm + 2.07 sq.mm

Core 2 : 18 SWG x 2 parallel + 16 SWG = 2.33 sq.mm + 2.07 sq.mm

Material : Super Enamelled copper wire

All dimensions in mm

GENERAL TOLERANCES ±2.0mm	SCALE: NTS	GENERAL ARRANGEMENT RESIN CAST 33 KV CURRENT TRANSFORMER MODEL: CT33A		SIGN	DATE
			DRAWN	PALANI	20/09/2018
			CHD.	PALANI	21/09/2018
			APPD.	RAGHU	28/09/2018

REV.	DATE	DESCRIPTION	APPROVED

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DRG.NO.: ETE-CT-WP6

SHEET.NO.: 1 OF 2

REV.00