

DRG.NO: 3-VAD 3395

IF IN DOUBT, ASK

LIST OF STANDARD DRAWINGS APPLICABLE FOR 245kV IVT

SR. NO.	DESCRIPTION	DRG./DOC.NO.	APP. CAT.	REMARKS
01	GENERAL ARRANGEMENT	3-VAD 3396/R0		
02	RATING/SCHEMATIC PLATE	3-VAD 3397/R0		
03	SECONDARY TERMINAL BOX G.A.	3-VAD 3398/R0		

LIST OF VARIABLE DRAWINGS APPLICABLE FOR 245 kV IVT

SR. NO.	DESCRIPTION	DRAWING NO.
01	COVER SHEET	AS APPLICABLE
02	RATING/SCHEMATIC PLATE	AS APPLICABLE

NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS, TO BE CHECKED DURING ACCEPTANCE TESTS.


- 1). Minimum 300 mm Plinth shall be maintained for Current transformers in the substation during foundation works to ensure safe live to ground clearances as per IE rules.
- 2). Since the supply of terminal connectors is not in the scope of CT Manufacturer as mentioned in the drawings, the EPC contractors shall be instructed to supply the same in line with the CT requirement and compatibility.

FOR EPC CONTRACTS ONLY

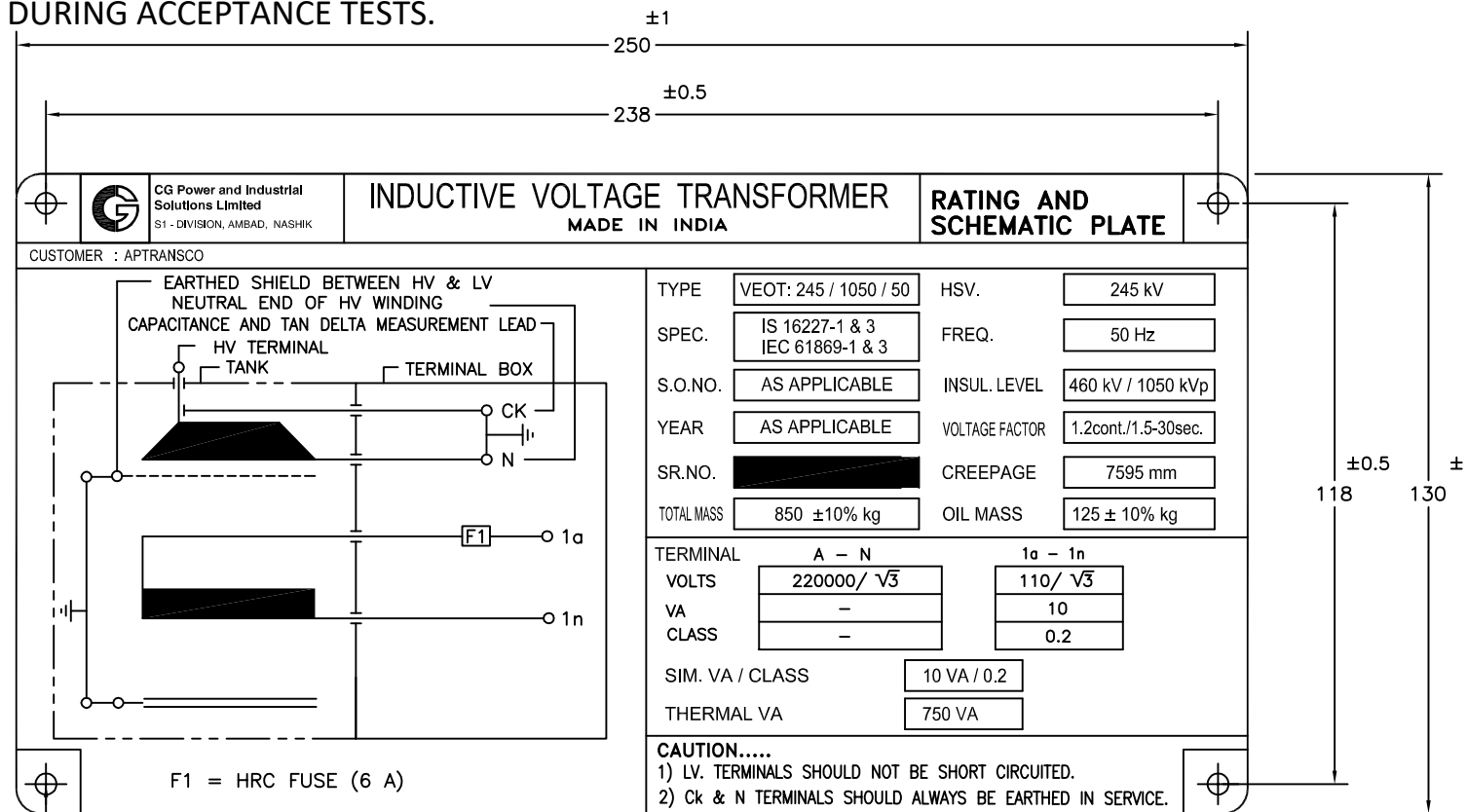
REMARKS	APPROVAL LETTER NO.

Chief Engineer
 Planning & Power Systems
 APTransco

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CUSTOMER : APTRANSCO			
4		GEN. TOL.	MATL.: SPEC.:
3		THIRD ANGLE PROJECTION	
2		SCALE: NTS	INITIALS NAME
1		ALL DIMNS. IN MM. UNLESS OTHERWISE SPECIFIED.	ORG NSB CHD PBN APPD USS
NO	REVISION	SIGN	DATE
		DATE : 15.12.2021	
TITLE : LIST OF STANDARD DRGS. / DOCUMENTS APPLICABLE FOR 245 kV IVT (CREEPAGE = 31 mm/ kV)			REV 0
 CG Power and Industrial Solutions Limited S1 - DIVISION, AMBAD, NASHIK			DRG.NO: 3-VAD 3395

NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS, TO BE CHECKED DURING ACCEPTANCE TESTS.



CG Power and Industrial Solutions Limited S1 - DIVISION, AMBAD, NASHIK		INDUCTIVE VOLTAGE TRANSFORMER MADE IN INDIA		RATING AND SCHEMATIC PLATE	
CUSTOMER : APTRANSCO					
TYPE	VEOT: 245 / 1050 / 50	HSV.	245 kV		
SPEC.	IS 16227-1 & 3 IEC 61869-1 & 3	FREQ.	50 Hz		
S.O.NO.	AS APPLICABLE	INSUL. LEVEL	460 kV / 1050 kVp		
YEAR	AS APPLICABLE	VOLTAGE FACTOR	1.2cont./1.5-30sec.		
SR.NO.	[REDACTED]	CREEPAGE	7595 mm		
TOTAL MASS	850 ±10% kg	OIL MASS	125 ± 10% kg		
TERMINAL	A - N	1a - 1n			
VOLTS	220000/ √3		110/ √3		
VA	-		10		
CLASS	-		0.2		
SIM. VA / CLASS	10 VA / 0.2				
THERMAL VA	750 VA				
CAUTION..... 1) LV. TERMINALS SHOULD NOT BE SHORT CIRCUITED. 2) Ck & N TERMINALS SHOULD ALWAYS BE EARTHED IN SERVICE.					

4 HOLES OF Ø4
1 mm THK. ALUMINIUM

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Chief Engineer
Planning & Power Systems
APTRANSCO

CUSTOMER : APTRANSCO					
GEN. TOL.	MATL.:	TITLE : STANDARD DRAWING RATING/SCHEMATIC PLATE OF 245 kV IVT (CREEPAGE = 31 mm/ kV)			
	SPEC.:				
THIRD ANGLE PROJECTION					
SCALE: NTS		INITIALS	NAME		
	ORG		NSB		
	CHD		PBN		
	APPD		USS		
CG Power and Industrial Solutions Limited S1 - DIVISION, AMBAD, NASHIK					DRG.NO: 3-VAD 3397 REV 0
NO	REVISION	SIGN	DATE	DATE : 15.12.2021	

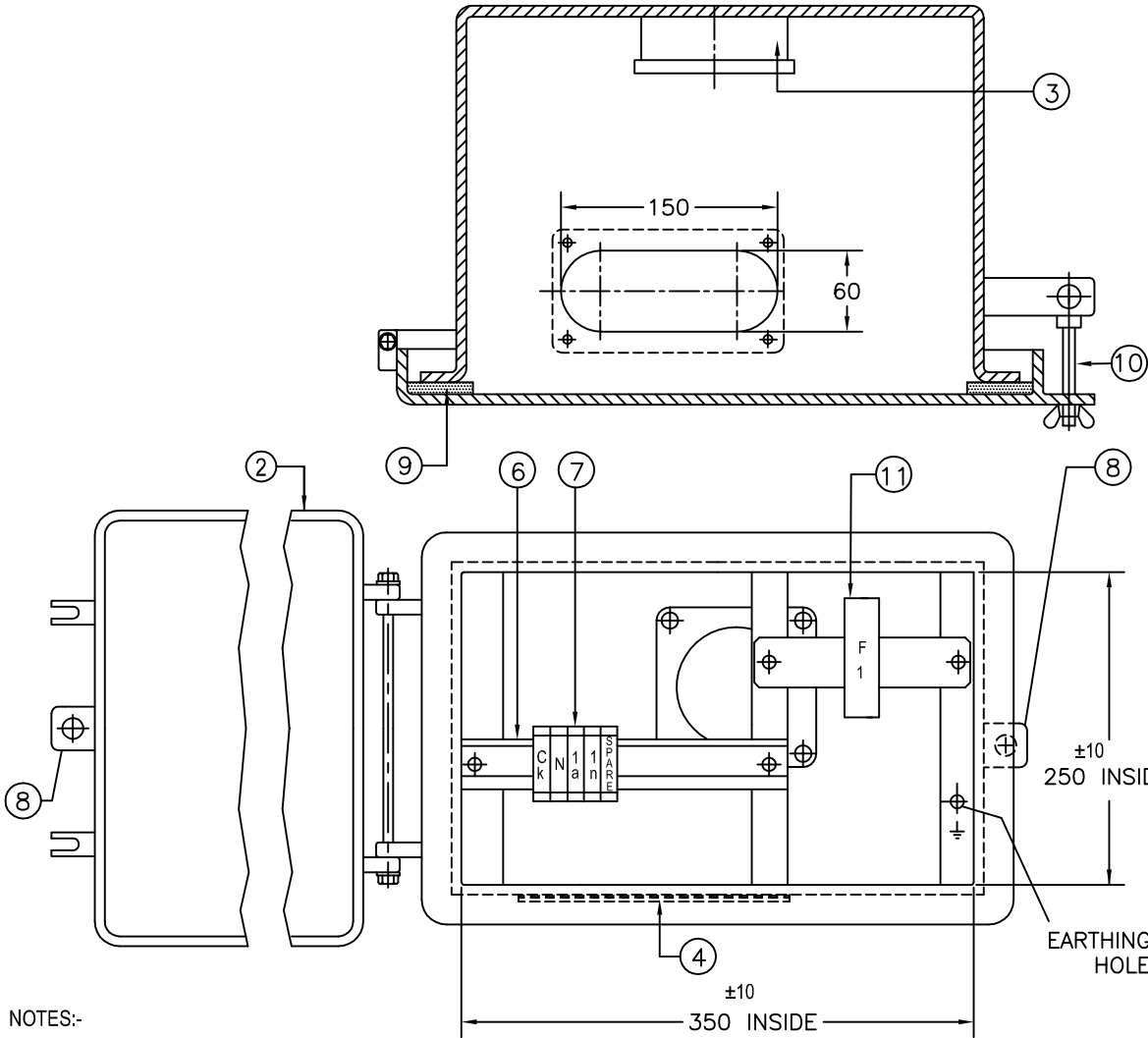
2			
1			

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ITEM NO.	QTY.	DESCRIPTION	MATERIAL / RATING
1	1	SECONDARY TERMINAL BOX	STEEL HDG
2	1	SECONDARY TERMINAL BOX COVER	STEEL HDG
3	1	MONOBLOCK	EPOXY
4	1	REMOVABLE GLAND PLATE	STEEL HDG
5	1	RATING/SCHEMATIC PLATE	ALUMINIUM
6	1	TERMINAL MOUNTING BRACKET	M.S POWDER COATED
7	4+1 SPARE	STUD TYPE SECONDARY TERMINAL	ELMEX
8	1	PAD LOCK / SEALING ARRANGEMENT	STEEL HDG
9	1	DOOR GASKET	EPDM SPONGE RUBBER
10	2	HINGE ARRANGEMENT	S.S, BRASS
11	1	HRC FUSE	F1



- NOTES:-
- 1) SECONDARY BOX ASSEMBLY CONFORMS TO IP55
 - 2) CK : TERMINAL FOR CAPACITANCE & TAN DELTA MEASUREMNT ONLY.
IT SHOULD ALWAYS BE EARTHED IN SERVICE & DISCONNECT ONLY FOR MEASUREMENT.

Chief Engineer

2 Planning & Power Systems

1 APTranco

NO	REVISION	SIGN	DATE

CUSTOMER : APTRANSCO			
GEN. TOL.	MATL. SPEC.	TITLE : STANDARD DRAWING SECONDARY BOX GA OF 245 kV IVT (CREEPAGE = 31 mm/ kV)	
THIRD ANGLE PROJECTION			
SCALE: NTS	INITIALS	NAME	
ALL DIMNS. IN MM. UNLESS OTHERWISE SPECIFIED.	ORG	NSB	
	CHD	PBN	
	APPD	USS	
DATE : 15.12.2021			REV 0



CG Power and Industrial Solutions Limited
S1 - DIVISION, AMBAD, NASHIK

DRG.NO: 3-VAD 3398

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A-3, MIDC, Ambad,
Nashik – 422 010. INDIA



APTRANSCO
Our ref: GTP 245kV IVT GTP/ 1 winding/Metering/31mm/kV

Date:17.12.2021

SCHEDULE OF TECHNICAL & GUARANTEED PARTICULARS
FOR 245kV POTENTIAL TRANSFORMER

Sr. No.	Type:	Oil filled, Outdoor, Hermetically sealed, single phase IVT.
1.	Manufacturer's type/designation:	VEOT: 245/1050/50.
2.		Mounting of tank (Bottom): - Dead tank.
3.	Conforming to standard	IS: 16227 & IEC:61869-1&3
4.	System rated voltage/highest voltage(kV)	220 kV/ $\sqrt{3}$ / 245/ $\sqrt{3}$
5.	Rated primary voltage (kV)	220 kV/ $\sqrt{3}$.
6.	Secondary voltage details	
	a. No. of secondary windings b. Rated secondary voltage (VA) c. Rated burden (VA) d. Class of accuracy	a. Winding-I b. 110 V/ $\sqrt{3}$ c. 10 VA d. 0.2
7.	Temperature rise at 1.1 times rated voltage with rated burden (deg C):	Less than 50 deg C.
8.	Rated voltage factor and time	1.2 for continuous & 1.5 for 30Sec.
9.	Temperature rise for item-10 above (deg C)	Not Applicable.
10.	Impulse withstand test voltage (kV) peak: -	1050kVp.
11.	One minute power frequency withstands test voltage on primary (kV rms)	460kV rms.
12.	One minute power frequency withstands test voltage on secondary (kV rms)	3 kV rms
13.	Porcelain bushing (make)	IEC/CJI/Ravi Kiran
14.	Total creepage distance of the bushing (mm)	7595mm.
15.	Protected creepage distance of the bushings (mm)	Not Applicable.
16.	Quantity of insulating oil (litres)	In the event of order.
17.	Weight of OIL (Kg)	As per attached GA drawing
18.	Total weight including OIL (Kg)	As per attached GA drawing
19.	Mounting details	Kindly refer our tender purpose GA drawings.
20.	Whether V.T. is sealed construction with nitrogen at top	Our VT is hermetically sealed with stainless steels below at the top, hence nitrogen is not provided.
21.	Tan-delta	< 0.005
22.	Grade of oil: -	IS335.
23.	RIV at 1.1 x Um/Root3 (micro volts)	<1000 μ V
24.	Partial discharge	<10 pC @ Um <5 pC @ 1.2 Um/ $\sqrt{3}$
25.	Terminal Connectors	Not In CGPISL scope of Supply in case of EPC contractors
26.	Support Structures & Marshalling Boxes	Not In CGPISL scope of Supply in case of EPC contractors

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