

## LIST OF STANDARD DRAWINGS

145 KV CURRENT TRANSFORMER				CT RATIO : 800-600-500/1-1A, 800-600-500-300/1A			
SR.NO.	TITLE	DRAWING.NO.	REV.	RECORD			
				APPLICATION		RETURN	
				KIND	DATE	DATE	CC
01	GENERAL ARRANGEMENT DRAWING	145CT 800-600-500-1A GA	R0	AA	21.02.2023		
02	RATING & SCHEMATIC DIAGRAM	145CT 800-600-500-1A RS	R0	AA	21.02.2023		
03	SECONDARY BOX ASSEMBLY	145CT 800-600-500-1A SB	R0	AA	21.02.2023		

5VA Burden at 0.5 class only  
 Factory acceptance test for 0.5 class at 5VA and PX for core 1

- AA : Application for Approval
- RA : Reapplication for Approval
- FD : Final Drawing
- RD : Reference Drawing
- AP : Approved
- AC : Approved with Corrections
- RC : Return for Corrections
- CC : Customer Comments

**Chief Engineer/Projects**  
**APTRANSCO/VS/Vijayawada.**

Drawing approval subject to valid vendor registration

PACKING DIMENSIONS : L-2850 x W-760 x H-985 mm.  
 NET WEIGHT : 400 Kg. (Approx.)  
 GROSS WEIGHT : 550 Kg. (Approx.)

**SURFACE FINISH.....**  
 FINISH. :- PU. PAINTED, PAINT SHADE 631 OF IS:5.

Customer : APTRANSCO  
 Customer Order Ref. :  
 QUANTITY :

IF IN DOUBT ASK

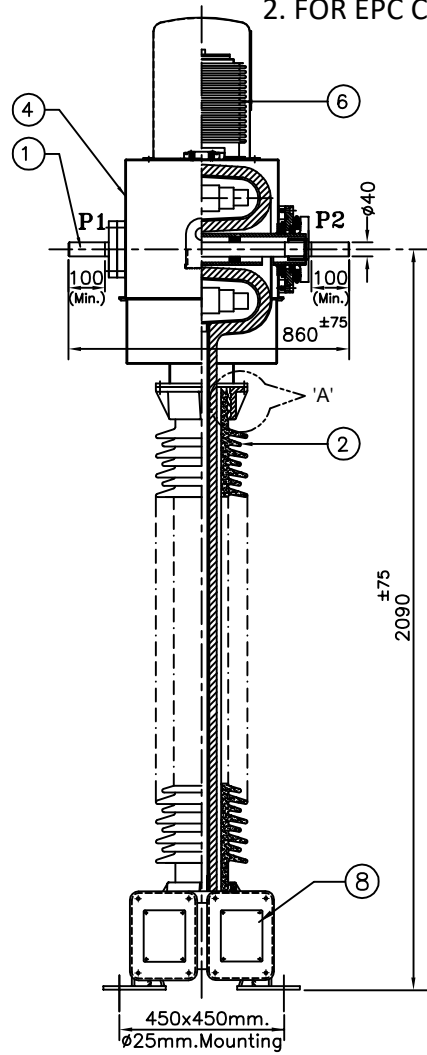
R6				R4				R2				SIGN	NAME	<b>LIST OF DRAWINGS</b> <b>145 KV CURRENT TRANSFORMER</b>		
R5				R3				R1				DRN	NVN			
												CHD	YGW			
NO	REVISION	SIGN	DATE	NO	REVISION	SIGN	DATE	NO	REVISION	SIGN	DATE	SCALE	N.T.S.	DATE: 21.02.2023	ALL DIMENSIONS ARE IN mm	DRG.NO: 145CT 800-600-500-1A LD/R0

7000620/2023/GENRO-ENE51

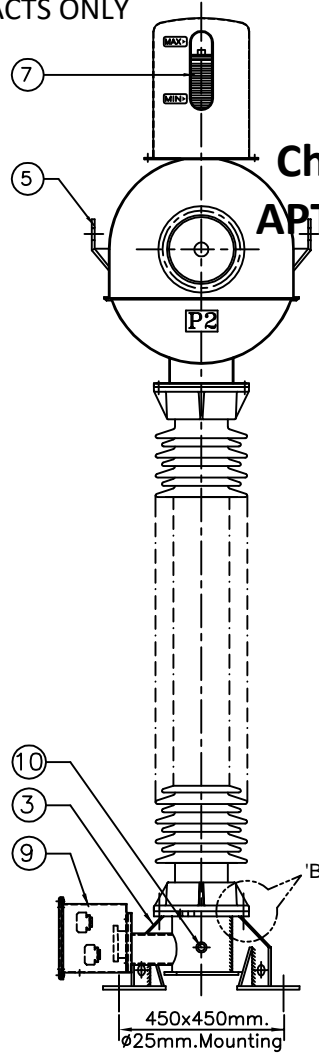
NOTE: 1. DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS, TO BE CHECKED DURING ACCEPTANCE TESTS  
2. FOR EPC CONTRACTS ONLY

LC2 SHELL

IF IN DOUBT ASK



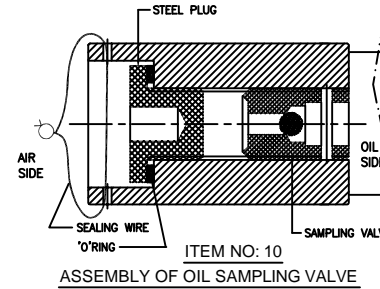
SIDE VIEW



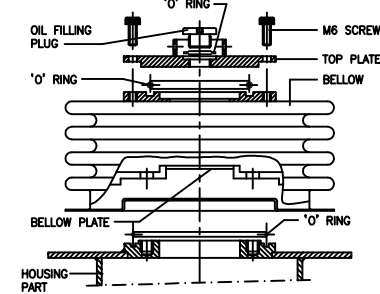
FRONT VIEW

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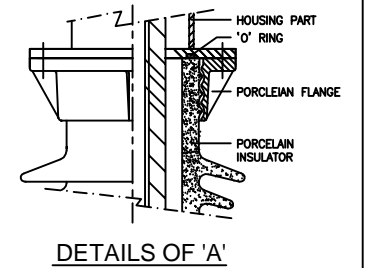
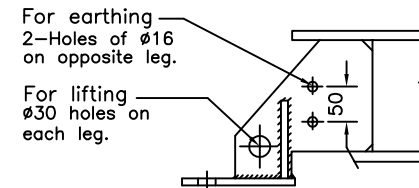
ITEM	QTY.	DESCRIPTION	MATERIAL
1	2	PRIMARY TERMINAL- $\phi 40 \times 100L$ (Min.)	ALUMINIUM
2	1	PORCELAIN INSULATOR	PORCELAIN COLOUR-BROWN
3	1	BASE	MILD STEEL
4	1	HOUSING	MILD STEEL
5	2	LIFTING LUG- $\phi 35$ HOLE	MILD STEEL
6	1	BELLOWS	STAINLESS STEEL
7	1	BELLOWS LEVEL INDICATOR	POLYCARBONATE
8	1	RATING & SCHEMATIC DIAGRAM	ALUMINIUM
9	1	SECONDARY BOX	MILD STEEL
		OIL FILLING/SAMPLING VALVE	STEEL PLATED



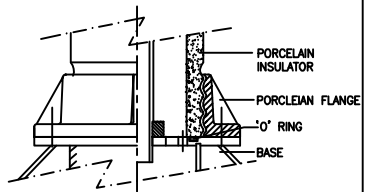
ASSEMBLY OF BELLOWS




EARTHING & LIFTING DETAILS



DETAILS OF 'B'

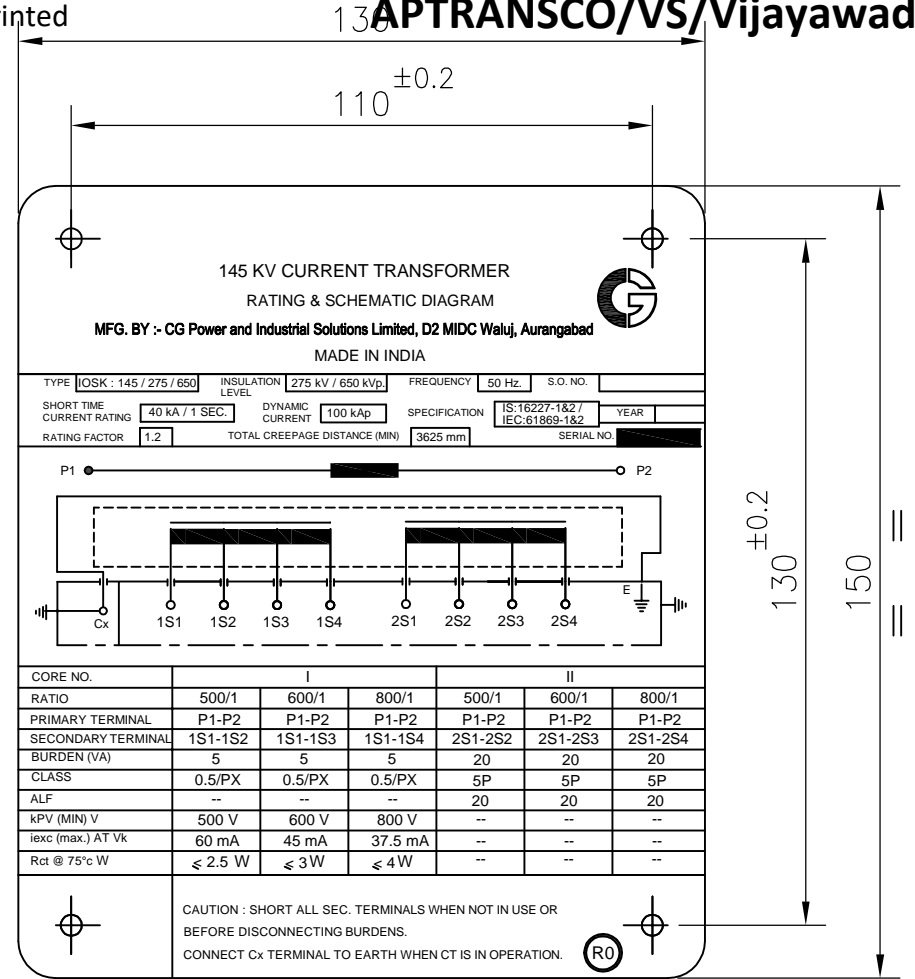
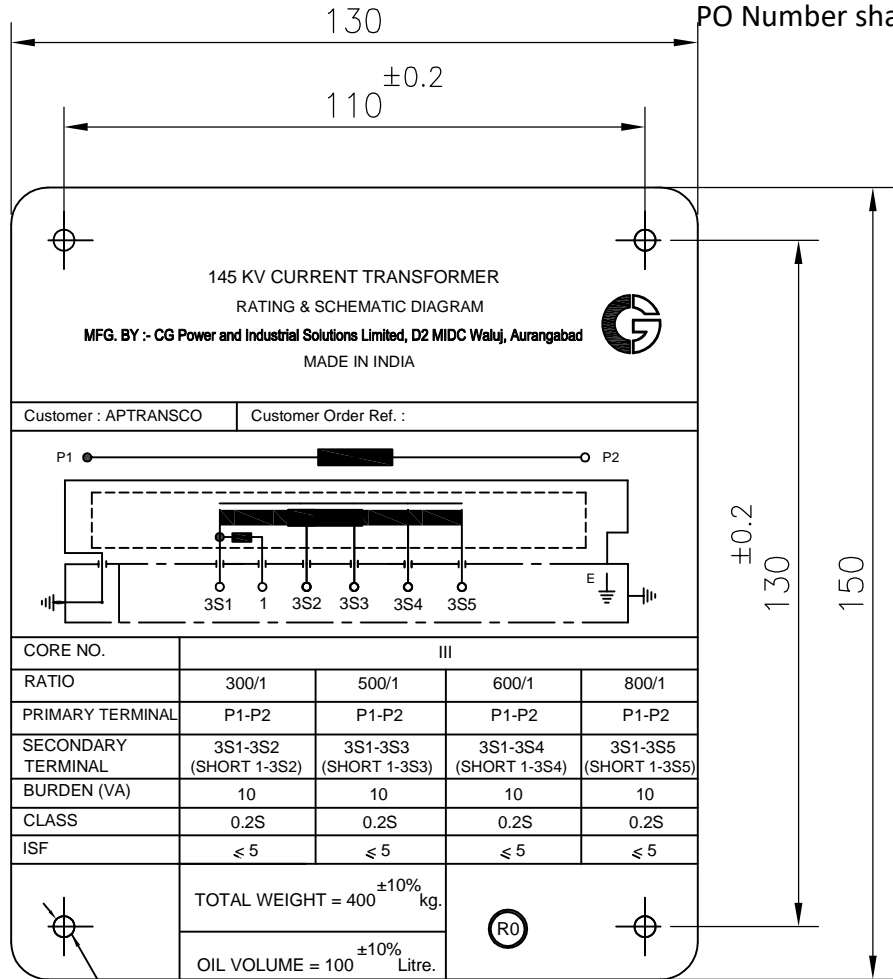


NOTE : PLEASE REFER INSTRUCTION MANUAL FOR HANDLING & TRANSPORTATION OF CT.  
SECONDARY WINDING ENAMEL INSULATION SHALL BE OF CLASS 'H' TYPE  
Dimensions shown are tentative and may change during detailed design/engineering.

R4			R2				SIGN	NAME	GENERAL ARRANGEMENT DRAWING FOR 145 KV CURRENT TRANSFORMER	 CG Power and Industrial Solutions Limited, Aurangabad DRG.NO: 145CT 800-600-500-1A GA/RO	
R3			R1			DRN	NVN				
NO	REVISION	SIGN	DATE	NO	REVISION	SIGN	DATE	SCALE			N.T.S.

NOTE: 1. DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS, TO BE CHECKED DURING ACCEPTANCE TESTS  
2. FOR EPC CONTRACTS ONLY

Chief Engineer/Projects  
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IF IN DOUBT ASK

∅4.5 Holes,4Nos.  
Material- AL. (Photo metallic)

CT SR.NOs :

Drawing approval subject to valid vendor registration

R6			R4			R2			SIGN	NAME	RATING & SCHEMATIC DIAGRAM FOR 145 KV CURRENT TRANSFORMER	
R5			R3			R1		DRN	NVN			
NO	REVISION	SIGN	DATE	NO	REVISION	SIGN	DATE	NO	REVISION	SIGN		

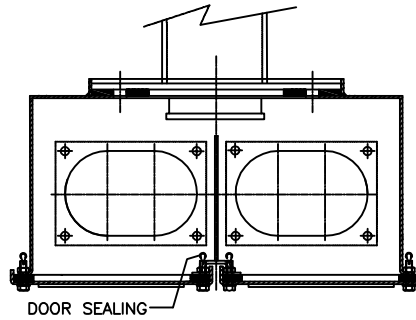
SCALE N.T.S. DATE: 21.02.2023  
APPD YGW SDS

ALL DIMENSIONS ARE IN mm

NOTE: 1. DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS, TO BE CHECKED DURING ACCEPTANCE TESTS

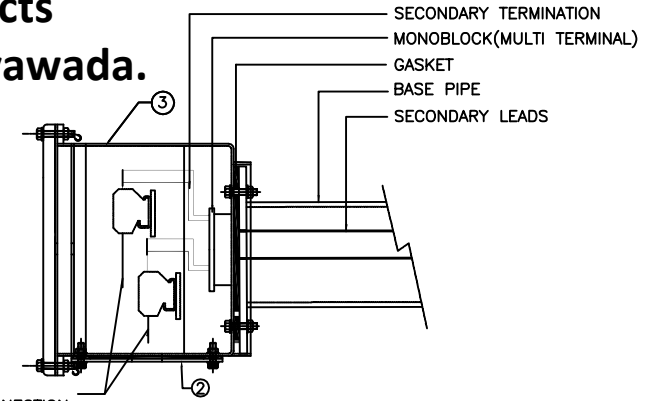
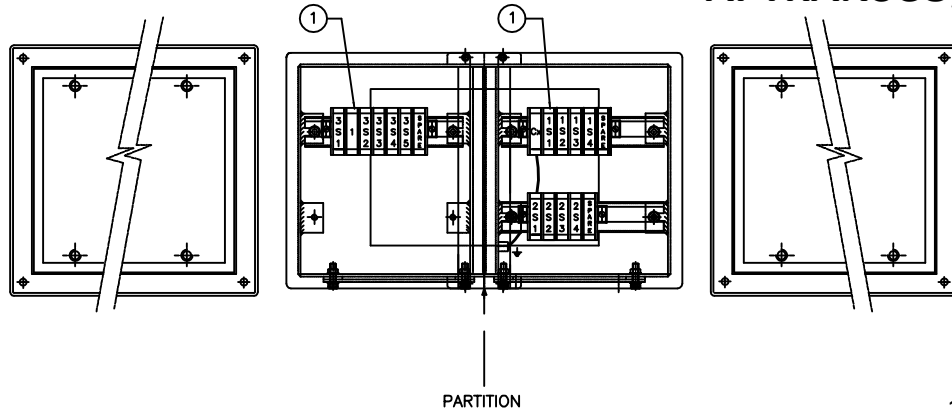
7000690/2023/EEPRO-ENE51

2. FOR EPC CONTRACTS ONLY



3	1	SECONDARY BOX.	MILD STEEL
2	2	GLAND PLATE	MILD STEEL
1	15+3	SECONDARY TERMINAL BLOCK WITH MARKER	MAKE: ELMEX OR EQUIV.
SL.NO.	QTY	ITEM	RM SIZE/SPECIFICATION

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SECONDARY CONNECTION FOR CUSTOMER

IF IN DOUBT ASK

- NOTES :**
- 1) SECONDARY BOX ASSEMBLY TO CONFIRM IP55 AS PER IS:13947
  - 2) Cx:TERMINAL FOR CAPACITANCE & TAN DELTA MESUREMENT ONLY. SHOULD BE KEPT EARTHED WHEN NOT IN USE.
  - 3) Dimensions shown are tentative and may change during detailed design/engineering.

1. Minimum 300mm plinth shall be maintained for CT/PT/CVT/ Isolators/IVT in the substation during foundation works to ensure Safe live to ground clearance as per IE rules.
2. since the supply of terminal connectors is not in the scope of Manufacturer as mentioned in the drawings. The EPC contractor Shall be instructed to supply the same in line with CT/PT/CVT/Isolator/IVTs requirement and compatibility.

R6		R4		R2		DRN	NVN	SIGNATURE NAME <b>SECONDARY BOX ASSEMBLY</b> <b>FOR 145 KV CURRENT TRANSFORMER</b>	 CG Power and Industrial Solutions Limited, Aurangabad				
R5		R3		R1	CHD	YGW							
						APPD	SDS						
NO	REVISION	SIGN DATE	NO	REVISION	SIGN DATE	NO	REVISION	SIGN DATE	SCALE	N.T.S.	DATE: 21.02.2023	ALL DIMENSIONS ARE IN mm	DRG.NO: 145CT 800-600-500-1A SB/RO

**CG Power and Industrial Solutions Limited**  
**Vacuum Interrupters and Instrument Transformers Division: Power Systems**  
 D-2, MIDC, Waluj, Aurangabad 431 136, Maharashtra, India  
 T: +91 240 255 8000 F: +91 240 255 4697

2. FOR EPC CONTRACTS ONLY



**GUARANTEED TECHNICAL PARTICULARS FOR  
 CURRENT TRANSFORMERS**

REF.	145 KV CT	800-600-500/1-1A & 800-600-500-300/1A	Normal Creepage.	Revision:	R0
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Sr#	Particulars	Unit	Values
1	Type/ Installation		Single Phase, Oil impregnated, Hermetically sealed, Outdoor Current Transformer. LIVE Tank Type
2	Manufacturer's Name and Country of Manufacture		CG Power and Industrial Solutions Limited Aurangabad, India
3	Manufacturers Type designation		IOSK:145/275/650
4	Highest System Voltage (Phase to phase)	kV	145
5	Type of insulation used		Class A (Oil Impregnated Paper)
6	Rated Frequency	Hz	50
7	Suitable for Altitude (Max)	Meters	1000
8	Conforming to Standard		IS: 16227-1&2 / IEC: 61869-1&2
9	Rated System Voltage (Phase to Earth)	kV	132/√3
10	Rated Primary Current	Amps	Refer Table on Page-2
11	Rated Secondary Current	Amps	Refer Table on Page-2
12	Details of Cores		Refer Table on Page-2
13	Rated Continuous current rating		120% of Rated Current
14	Ratio selection (taps) by		Secondary Taps Only.
15	No. of Secondary Cores		3
16	Rated Short Time withstand Current & duration	kAmps/secs	40 kA for 1 Sec.
17	Dynamic peak withstand current	kA peak	100
18	One minute Power Frequency (Wet & Dry) withstand Voltage on Primary Winding	kV rms	275
19	1.2/50 micro sec. Lightning Impulse withstand Voltage	kV peak	650
20	One minute Power Frequency withstand Voltage on Secondary Winding	kV rms	3
21	Total Creepage distance	mm (mm/kV)	3625 (25 mm/kV)
22	Primary Terminal material & details		Aluminium, φ 40 x 100 mm long
23	Surface Finish of MS components exposed to atmosphere		PU. Painted.
24	Secondary Terminal Box arrangement		Single Door Box.
25	Volume of Oil	Litres	100 +/-10%
26	Total weight of equipment	kg	400 +/-10%
27	Mounting details	mm	4 Holes of Dia. 25 mm. @ 450x450 mm.
28	Material of Tank/Housing		Mild Steel
29	Dielectric Dissipation Factor ( Tan-Delta )		< 0.005
30	Measurement of Partial Discharge @ 1.2 UM/ √3	pC	< 5
31	Measurement of Partial Discharge @ UM	pC	< 10

145LTC2ALFF

Registered Office:  
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 Corporate Identity Number: L99999MH1937PLC002641

5VA Burden at 0.5 class only

Factory acceptance test for 0.5 class at 5VA and PX for core 1

PO Number shall be printed

**Chief Engineer/Projects**  
**APTRANSCO/VIS/Vijayawada.**

2. FOR EPC CONTRACTS ONLY

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REF.	145 KV CT	800-600-500/1-1A & 800-600-500-300/1A	Normal Creepage.	Revision:	R0
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TABLE - CORE DETAILS

CORE NO.	I	II	III			
PRIMARY CURRENT	500-600-800	500-600-800	300-500-600-800			
SEC. CURRENT (Amps)	1	1	1			
PRIMARY TERMINALS	P1 - P2	P1 - P2	P1 - P2			
SEC. TERMINALS	1S1 - 1S2 - 1S3 - 1S4	2S1 - 2S2 - 2S3 - 2S4	3S1 - 3S2 - 3S3 - 3S4 - 3S5			
ACCURACY CLASS	0.5 / PX	5P	0.2S			
BURDEN (VA)	5	20	10			
ISF (for METERING)	-		≤ 5			
ALF (For PROTECTION)	-	20				
KNEE POINT VOLTAGE	500-600-800					
I <sub>exc</sub> (MAX), mA	60-45-37.5 @ V <sub>k</sub>					
RCT @ 75 Deg. Cel.	≤ 2.5-3-4					

1. Minimum 300mm plinth shall be maintained for CT/PT/CVT/ Isolators/IVT in the substation during foundation works to ensure Safe live to ground clearance as per IE rules.
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