

DRG.NO: 3-KAD 5366

IF IN DOUBT, ASK

LIST OF STANDARD DRAWINGS APPLICABLE FOR 245 kV CT- 31 mm/kV

SR. NO.	DESCRIPTION	DRG./DOC.NO.	APP. CAT.	REMARKS
01	GENERAL ARRANGEMENT	3-KAD 5367/R0		
02	RATING/SCHEMATIC PLATE	3-KAD 5368/R0		
03	SECONDARY TERMINAL BOX G.A.	3-KAD 5369/R0		
04	SECTIONAL VIEW	3-KAD 5370/R0		

LIST OF VARIABLE DRAWINGS APPLICABLE FOR 245 kV CT

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

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

Drawing approval subject to valid vendor registration

REMARKS	APPROVAL LETTER NO.

- 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.

**CHIEF ENGINEER
POWER SYSTEMS, PLANNING & DESIGN
APTRANSCO**

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CUSTOMER : APTRANSCO				TITLE : LIST OF STANDARD DRGS. / DOCUMENTS APPLICABLE (FOR 245 kV CT- 31mm/kV) (400-600-800/1-1-1-1 A)	
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 SHB APPD USS
NO	REVISION	SIGN	DATE	DATE : 26.03.2021	DRG.NO: 3-KAD 5366 REV 0

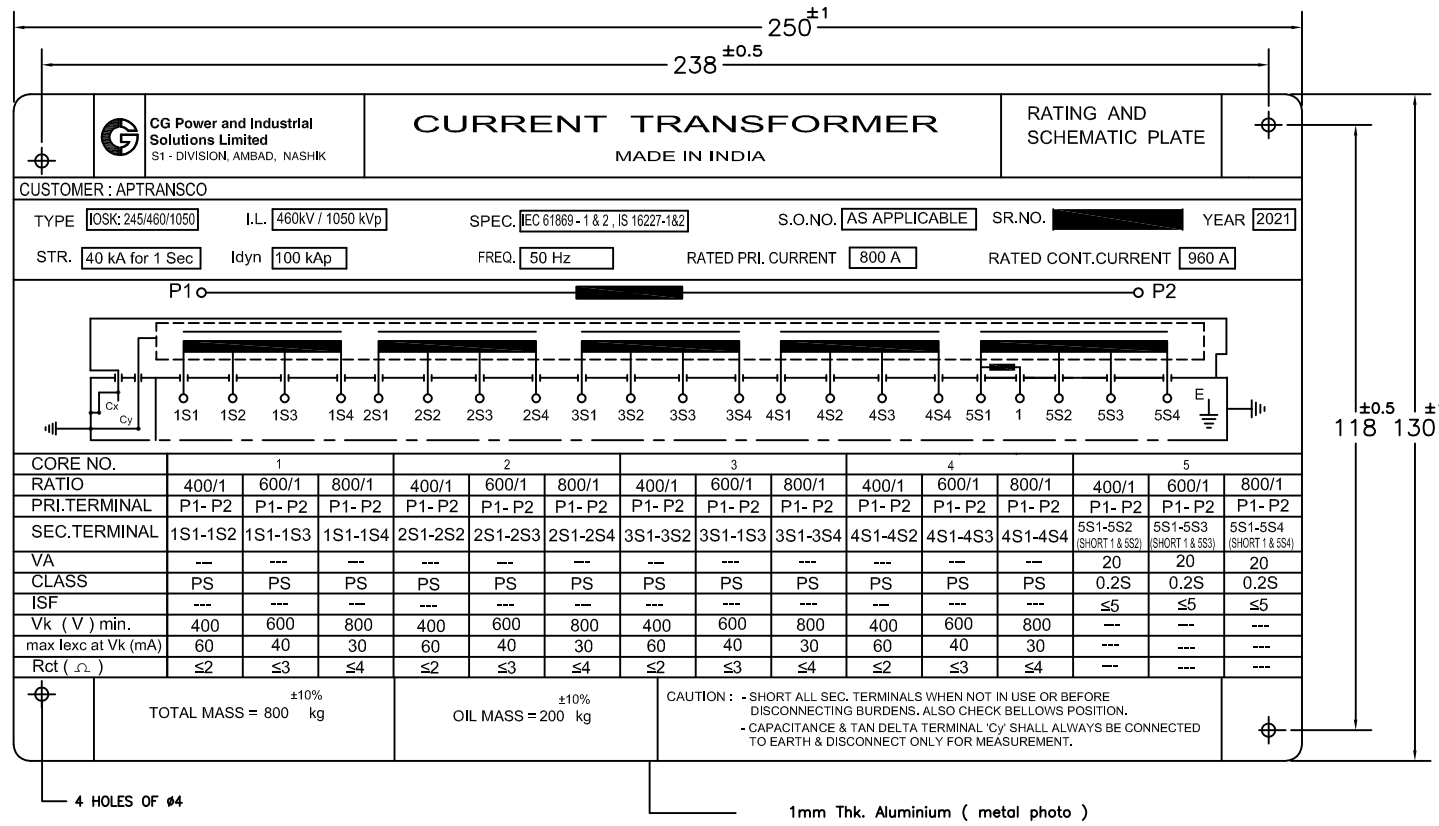


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DRG.NO: 3-KAD 5366 1/7

DRG.NO: 3-KAD 5368

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CUSTOMER : APTRANSCO			
GEN. TOL.	MATL.:	TITLE : STANDARD DRAWINGS RATING/SCHEMATIC PLATE (FOR 245 kV CT-31mm/kV) (400-600-800/1-1-1-1 A)	
	SPEC.:		
THIRD ANGLE PROJECTION			
SCALE: NTS		INITIALS	NAME
ALL DIMNS. IN MM. UNLESS OTHERWISE SPECIFIED.	DRN		NSB
	CHD		SHB
	APPD		USS
DATE : 26.03.2021		DRG.NO: 3-KAD 5368	
		3/7	
NO	REVISION	SIGN	DATE



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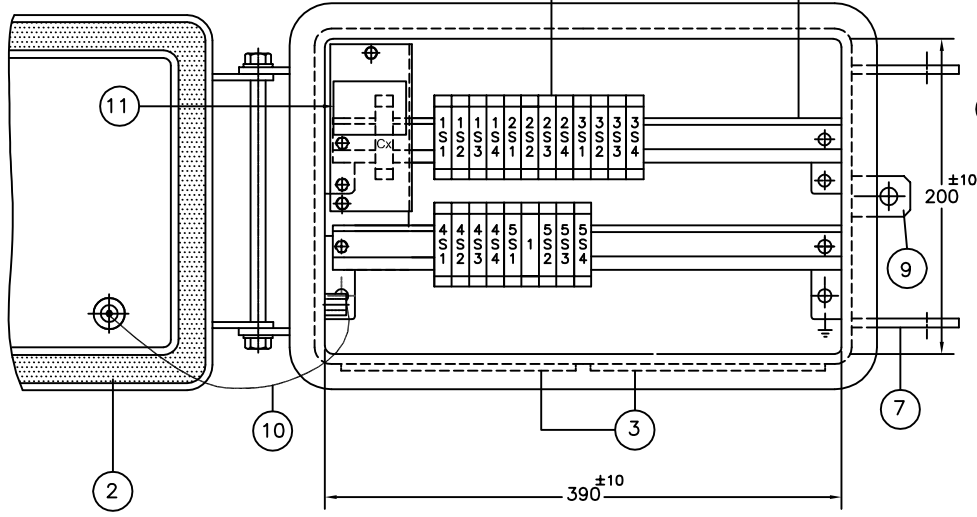
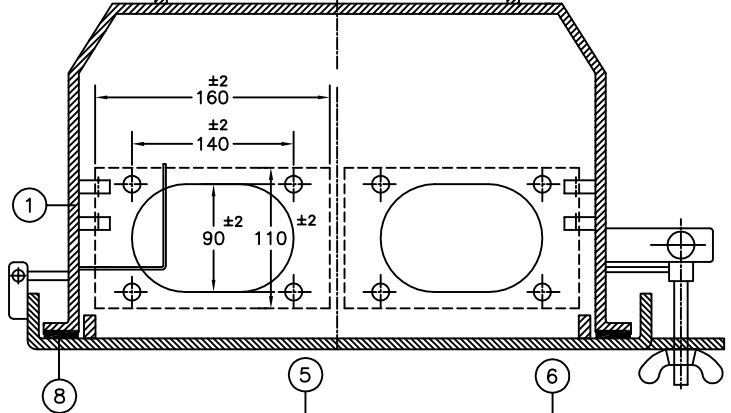
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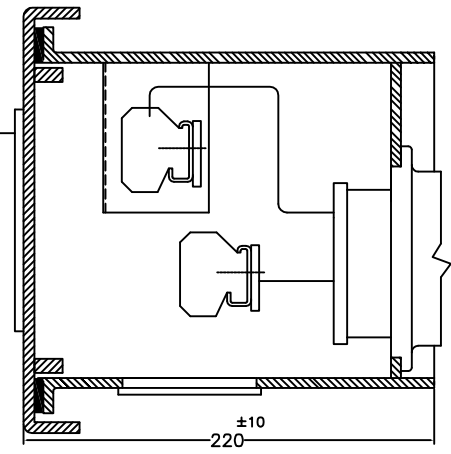
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WARNING
* 'Cx' TERMINAL - DO NOT OPEN WHILE IN SERVICE *

REPORTS, TO BE CHECKED DURING ACCEPTANCE TESTS
2. FOR EPC CONTRACTS ONLY




NO.	QTY.	DESCRIPTION	MTRL./RATING
1	1	SECONDARY TERMINAL BOX	M.S HDG
2	1	SECONDARY TERMINAL BOX COVER	M.S HDG
3	2	GLAND PLATE	M.S HDG
4	1	RATING & SCHEMATIC PLATE	ALUMINIUM
5	22	STUD TYPE SECONDARY TERMINAL BLOCK	ELMEX MAKE,
6	2	TERMINAL MOUNTING BRACKET	M.S POWDER COATED
7	1	LOCKING ARRANGEMENT	S.S, BRASS
8	1	GASKET	EPDM SPONGE RUBBER
9	1	BRACKET FOR PAD LOCK	M.S HDG
10	1	COPPER CABLE FOR BOX DOOR EARTHING	COPPER
11	1	WARNING PLATE FOR 'Cx' TERMINAL	ALUMINIUM



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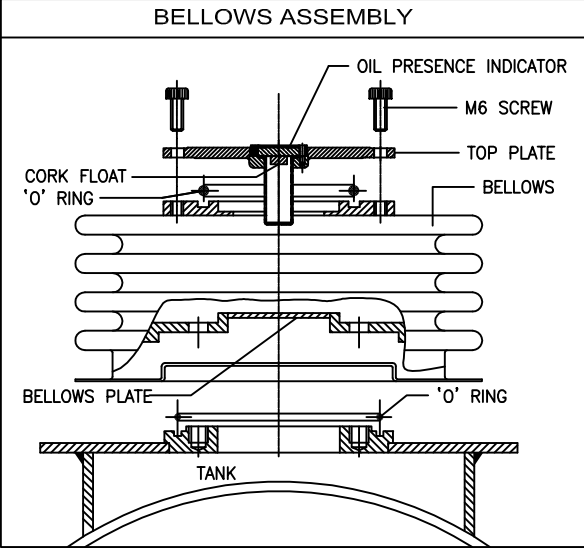
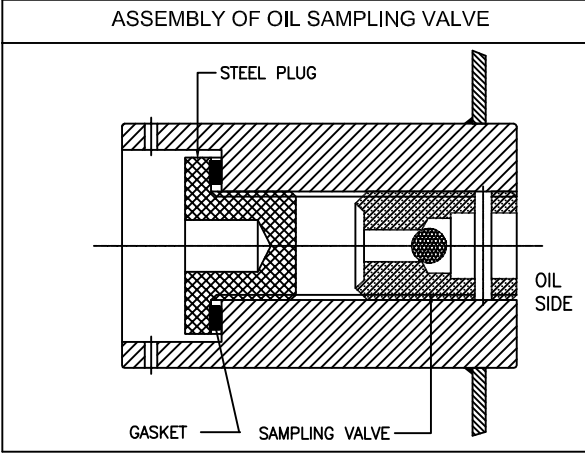
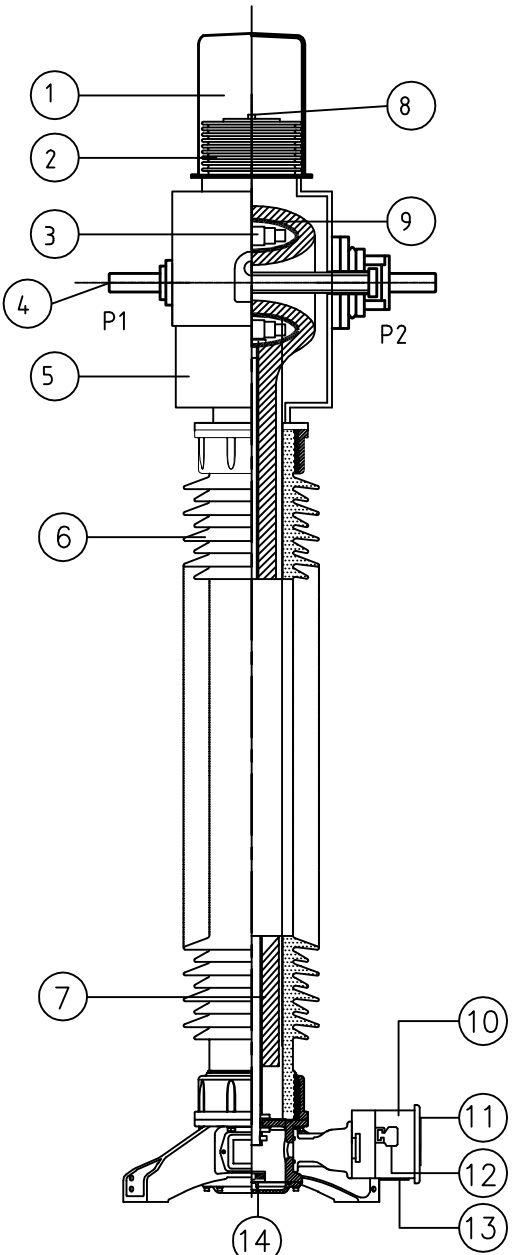
DEGREE OF PROTECTION : IP55

CUSTOMER : APTRANSCO			
GEN. TOL.	MATL.:	TITLE : STANDARD DRAWINGS SECONDARY BOX G.A. (FOR 245 kV CT-31mm/kV) (400-600-800/1-1-1-1-1 A)	
	SPEC.:		
THIRD ANGLE PROJECTION			
SCALE: NTS	INITIALS	NAME	
ALL DIMNS. IN MM. UNLESS OTHERWISE SPECIFIED.	DRN	NSB	 CG Power and Industrial Solutions Limited S1 - DIVISION, AMBAD, NASHIK
	CHD	SHB	
	APPD	USS	
NO	REVISION	SIGN	DATE
DATE : 26.03.2021		4/7	
DRG.NO: 3-KAD 5369			REV 0

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SR.NO.	DESCRIPTION	MATERIAL
1	HOOD	ALUMINIUM
2	BELLOWS	STAINLESS STEEL
3	CORE WITH SECONDARY WINDING *	
4	PRIMARY TERMINAL	ALUMINIUM
5	HOUSING	ALUMINIUM
6	INSULATOR	PORCELAIN
7	CONDENSER BUSHING	KRAFT PAPER (OIP)
8	OIL PRESENCE INDICATOR	POLY CARBONATE
9	SHELL	ALUMINIUM
10	SECONDARY TERMINAL BOX	M.S. HDG.
11	RATING/SCHEMATIC PLATE	ALUMINIUM
12	SECONDARY TERMINALS	STUD TYPE
13	GLAND PLATE	M.S. HDG.
14	AUXILIARY CORE	NANO-CRYSTALLINE

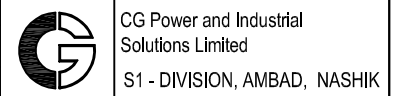
NOTE.....
 INSULATING OIL SHALL BE EHV GRADE AS PER IS 335, IEC 296
 * CORE - CRGO Si-Fe/EQUIVALENT HIGH PERMEABILITY MATERIAL, MU-METAL, NANO-CRYSTALLINE
 * SEC. WINDING - ENAMELLED COPPER

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CUSTOMER : APTRANSCO			
GEN. TOL.	MATL. SPEC.	TITLE : STANDARD DRAWINGS SECTIONAL VIEW (FOR 245 kV CT-31mm/kV) (400-600-800/1-1-1-1 A)	
THIRD ANGLE PROJECTION			
SCALE: NTS	INITIALS	NAME	
ALL DIMNS. IN MM. UNLESS OTHERWISE SPECIFIED.	DRN	NSB	
	CHD	SHB	
	APPD	USS	
DATE : 26.03.2021		DRG.NO: 3-KAD 5370	
DATE : 26.03.2021		5/7	



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NO	REVISION	SIGN	DATE
2			
1			

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GTP FOR 245 KV CURRENT TRANSFORMER

Particulars	Units	Data
245KV Current Transformers		
SUPPLIER DATA		
Name of Manufacturer		CG Power and Industrial Solutions Limited, Nasik
Type		IOSK:245/460/1050
Reference Standard		IEC:- 61869-1 & 2 ; IS 16227-1&2
Oil Standard		IS : 335 (2018) / IEC -60296
Whether it is Live tank or Dead tank		Live Tank CT
Service		Outdoor Type, Single Phase CT
Primary Winding		Aluminium
System details		
Highest system voltage		245kV
No. of phase		Single
Rated Frequency		50HZ
System neutral		Solidly Earthed
CT ratings:		
Voltage Class	KV	245
Rated continuous thermal current		120% of rated primary current
Insulation Level		
1 Minute 50 Hz withstand		
HV terminal & earth	KV r.m.s	460
Secondary wiring	KV	5
1.2/50 micro second Lightning Impulse withstand voltage	KV Peak	1050
250/2500 second Switching Impulse withstand voltage	KV Peak	Not Applicable
Short-time current		
Rated 1 second current	kA rms	40
Rated Dynamic current	kA p	100
Insulation Class	Class	A
Temperature rise	°C	
Design ambient temperature	°C	55
Limit of temperature rise / Max Temperature rise over ambient		55
Minimum Creepage Distance (mm/kV)	mm/kV	7595 mm
Corona extinction voltage	kV rms	156
Maximum radio interference voltage at 1.1U _{rated} /sq.rt.3 at 1 MHz	micro volts	2500 μV
Partial discharge level at Um	pC (max.)	<10 PC @ Um , <5PC @1.2Um/√3
Mounting		As per Drawings Hot Dip Galvanised
Seismic Acceleration	g	0.3 g
Cantilever strength of CT at the terminal	kg	350
Whether it is possible to adjust the tap settings of any core independent of other cores?		Yes
As per specification. CT to be provided with oil level gauge, Pressure relief device / Stainless steel bellows		CT will come with Oil Level gauge & Stainless Steel Bellow. CGL don't have PRD design in its CTs.
As per specification, an inert gas cushion / stainless steel bellow shall be provided on top for expansion of the oil.		Stainless Steel Bellow
As per specification, N2 sealing cover is required.		Stainless Steel Bellow, No gas cushioning given in our CT design
Whether GA & foundation drawings are furnished along with the offer for each type of CT?		Attached
Tan delta		< 0.005.

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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.

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STC Rating	Insulation Level (kV)	Rated Current (Amps)	Rated Extended Current (Amps)	Primary Winding	Insulator
40kA-1sec	460/-/1050	800	960	Aluminium	Porcelain

Core 1	Core 2	Core 3	Core 4	Core 5
800-600-400/1A				
--	--	--	--	20
PS	PS	PS	PS	0.2S
--	--	--	--	≤ 5 @ All ratios
800 @ 800/1A, 600 @ 600/1A, 400 @ 400/1A	800 @ 800/1A, 600 @ 600/1A, 400 @ 400/1A	800 @ 800/1A, 600 @ 600/1A, 400 @ 400/1A	800 @ 800/1A, 600 @ 600/1A, 400 @ 400/1A	--
≤4 @ 800/1A, ≤2 @ 400/1A ≤3 @ 600/1A,	≤4 @ 800/1A, ≤3 @ 600/1A, ≤2 @ 400/1A	≤4 @ 800/1A, ≤2 @ 400/1A ≤3 @ 600/1A,	≤4 @ 800/1A, ≤3 @ 600/1A, ≤2 @ 400/1A	--
30 @ 800/1A, 60 @ 400/1A 40 @ 600/1A,	30 @ 800/1A, 40 @ 600/1A, 60 @ 400/1A	30 @ 800/1A, 60 @ 400/1A 40 @ 600/1A,	30 @ 800/1A, 40 @ 600/1A, 60 @ 400/1A	--

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