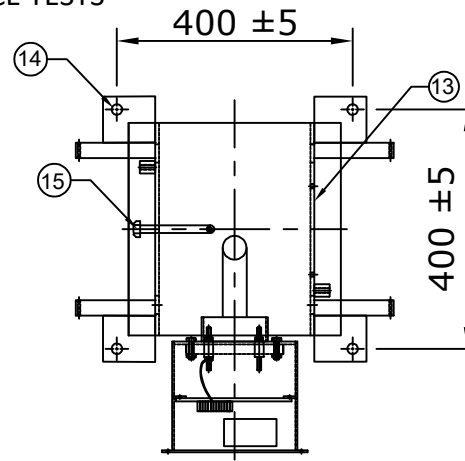
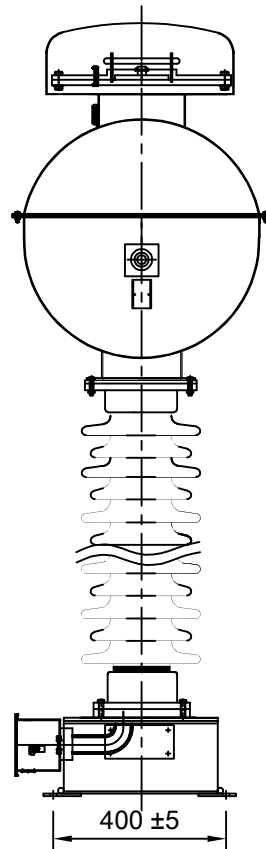
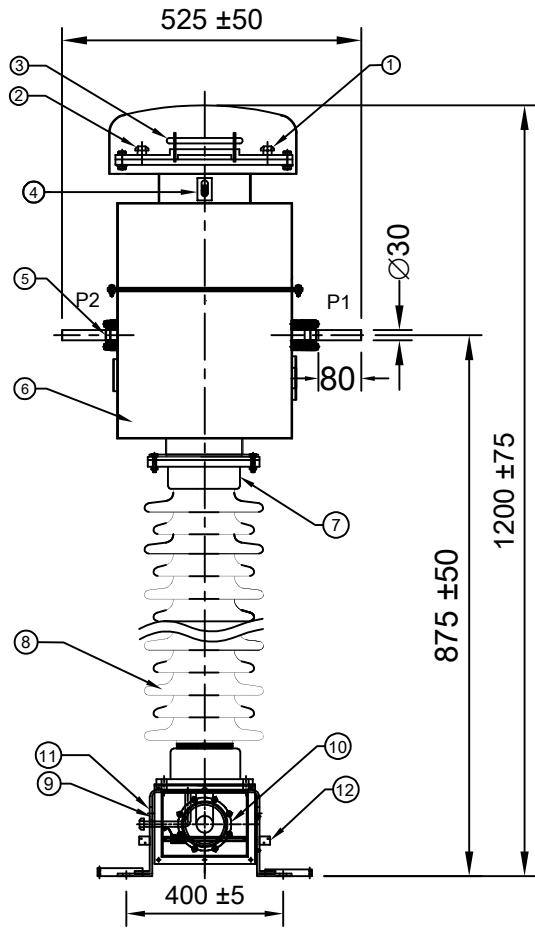


REPORTS, TO BE CHECKED DURING ACCEPTANCE TESTS

2. FOR EPC CONTRACTS ONLY



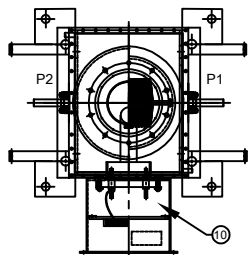
MOUNTING DETAIL

S.No.	DESCRIPTION	MATERIAL	QTY
1	OIL FILLING PLUG	M.S	1
2	NITROGEN VALVE	BRASS	1
3	PRESSURE RELEASE DEVICE	AL.+BAKELITE	1
4	OIL LEVEL INDICATOR	AL.+GLASS	1
5	PRIMARY TERMINAL Ø30x80mm	COPPER NICKEL PLATED	1
6	OIL TANK WITH COVER	M.S	1
7	BUSHING FLANGE(CEMENTED)	GI/CI	2
8	BUSHING	PORCELAIN	1
9	BASE	M.S	1
10	SECONDARY TERMINAL BOX	M.S	1
11	LIFTING HOLE Ø25mm.	M.S	4
12	EARTHING FLAT 80x50x8THICK.	M.S	2
13	NAME AND RATING PLATE	AL. ANODIZED	1
14	MOUNTING HOLE 4xØ17mm.	M.S	4
15	OIL DRAIN PLUG	M.S	1

NOTES :-

1. MAKE OF BUSHING : IEC/MODERN/BHEL/ABIL/WSI/CJI/GENESIS
2. ALL FERROUS PARTS EXPOSED TO THE ATMOSPHERE SHALL BE PAINTED WITH P.U. PAINT SHADE 631 OF IS:5
3. PRIMARY WINDING SHALL BE BAR TYPE.
4. ALL HARDWARE SHALL BE HOT DIP GALVANIZED.
5. TRANSFORMER OIL AS PER IEC : 60296.
6. ALL GASKETS SHALL BE FIXED IN PROPERLY MACHINED GROOVES.
7. ALL GASKETS SHALL BE MADE OF NITRILE BUTYL RUBBER.

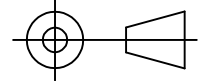
- * QUANTITY OF OIL 15 LITRES APPROX.
- * TOTAL WEIGHT 95 Kgs APPROX.
- * TOTAL CREEPAGE DISTANCE :- 1116mm (Min.)



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

Drawing approval subject to valid vendor registration

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	06.01.2021

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED PROJECT NAME : AS APPLICABLE				<div style="border: 1px solid black; padding: 5px; display: inline-block;">MEHRU</div> MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.
UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL	
1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED ±5%	DGN.	06.01.2021	SPS	
	DRN.	06.01.2021	AKASH	
	CHD.	06.01.2021	BLS	
	SCALE:	N.T.S		
TITLE :				
GENERAL ARRANGEMENT DRAWING FOR 33KV CURRENT TRANSFORMER RATIO:- 400/1-1A ,(BAR TYPE CT)				
SHEET No. 1 OF 6				DRG.NO ME-33CT-GA-01



LIVE TANK CURRENT TRANSFORMER
MADE TO IS 16227

HIGHEST SYSTEM VOLTAGE	36 kV	INSULATION LEVEL	70/170 kV
RATED S.T.C	25 kA for 1 Seconds	RATED FREQUENCY	50Hz
NOMINAL SYSTEM VOLTAGE	33 kV	CORE 1	CORE 2
RATIO	PRIMARY (Amp)	400	400
	SECONDARY (Amp)	1	1
SECONDARY TERMINALS		1S1-1S2	2S1-2S2
RATED BURDEN IN V.A		15 VA	15 VA
ACCURACY CLASS		5P	0.2S
ALF / ISF		10	<5
Min Knee point voltage		----	----
Max Rct @ 75° C		----	----
Max Iext @ Vk		----	----
YEAR OF MANUFACTURE	2021	SERIAL NO.	

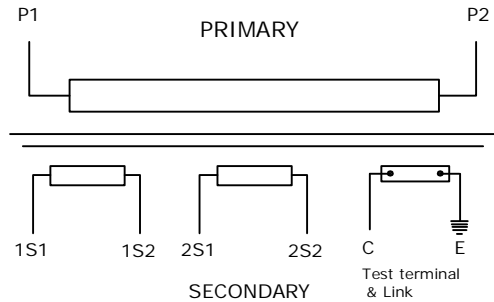
* RATED CONTINUOUS THERMAL CURRENT: 120% OF RATED PRIMARY CURRENT.
 * QUANTITY OF OIL 15 LITRES APPROX. * TOTAL WEIGHT 95 Kgs APPROX.
 MADE IN INDIA BY * TOTAL CREEPAGE DISTANCE :- 1116mm (Min.)

MEHRU ELECTRICAL AND MECHANICAL ENGINEERS (P) LTD.

E-1247 RIICO INDUSTRIAL AREA , PHASE I , EXT GHATAL , BHIWADI-301019 RAJASTHAN (INDIA)

SUITABLE FOR HOT LINE WASHING

CONNECTION DIAGRAM



CONNECTION DIAGRAM

FOR RATIO	PRIMARY CONN.	SECONDARY CONNECTION	
		CORE 1	CORE 2
400/1A	P1 - P2	1S1-1S2	2S1-2S2

- CAUTION**
- Secondary terminals should be short circuited before the burden is disconnected.
 - Test terminal 'C' must be shorted to be earth when operation
 - Do not remove earth link when in operation

115 ± 10

195 ± 15

NOTES:-

- MATERIAL OF NAME PLATE : ANODIZED ALUMINUM
- THICKNESS OF NAME PLATE : 1.2 mm.
- SERIAL NO. SHALL BE ENGRAVE BEFORE DISPATCH.

- * PRIMARY WINDING AREA : 707 sq.mm
- * CURRENT DENSITY : 0.68 A/sq.mm

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

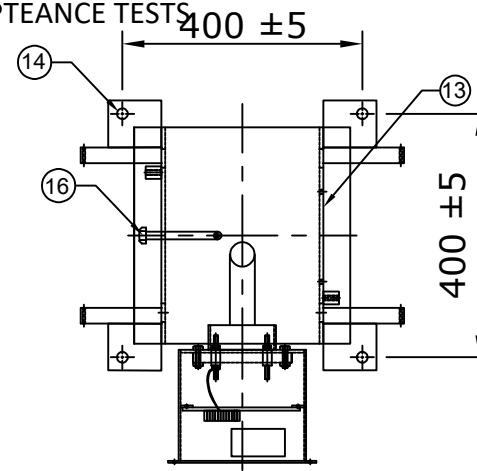
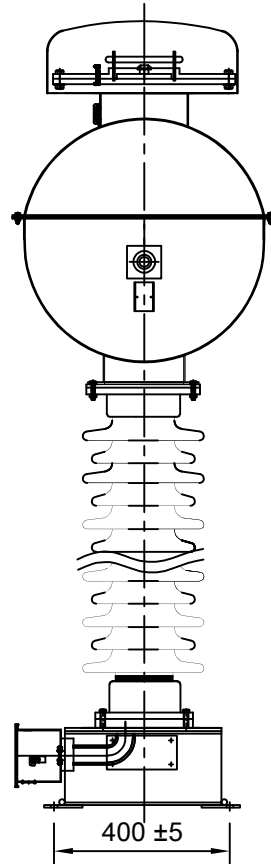
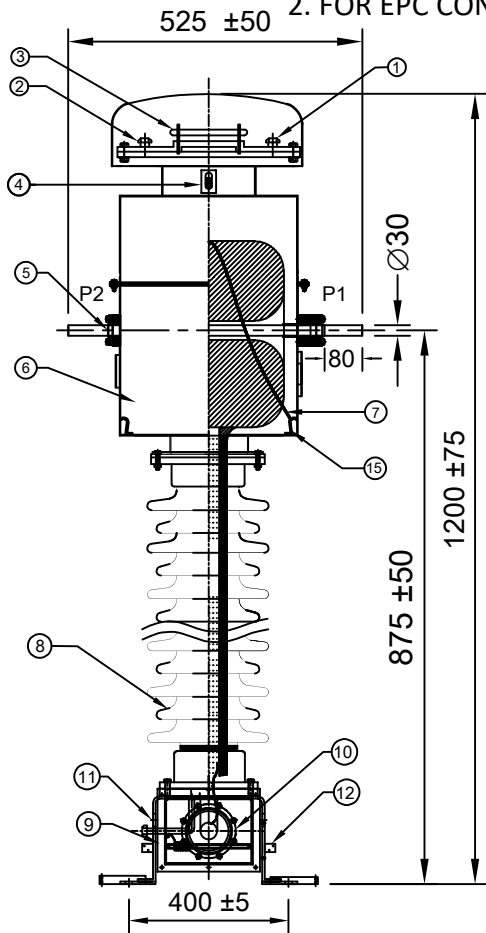
CHIEF ENGINEER
POWER SYSTEMS, PLANNING & DESIGN
APTRANSCO

RO	FOR APPROVAL	06.01.2021
REV.	REVISION DESCRIPTION	DATED INITIALS

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED				PROJECT NAME : AS APPLICABLE	
UNLESS OTHERWISE SPECIFIED 1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED ±5%	DGN.	06.01.2021	SPS	AL. ANODIZED	 MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.
	DRN.	06.01.2021	AKASH		
	CHD.	06.01.2021	BLS		
	SCALE:	N.T.S			
TITLE :					
NAME PLATE DRAWING FOR 33kV CURRENT TRANSFORMER RATIO: - 400/1-1A ,BAR TYPE CT				DRG.NO ME-33CT-NP-01	
SHEET No. 3 OF 6					

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

2. FOR EPC CONTRACTS ONLY



MOUNTING DETAIL

NOTES :-

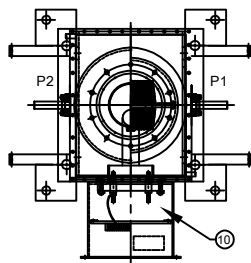
1. MAKE OF BUSHING : IEC/MODERN/BHEL/ABIL/WSI/CJI/GENESIS
2. ALL FERROUS PARTS EXPOSED TO THE ATMOSPHERE SHALL BE PAINTED WITH P.U. PAINT SHADE 631 OF IS:5
3. PRIMARY WINDING SHALL BE BAR TYPE.
4. ALL HARDWARE SHALL BE HOT DIP GALVANIZED.
5. TRANSFORMER OIL AS PER IEC : 60296.
6. ALL GASKETS SHALL BE FIXED IN PROPERLY MACHINED GROOVES.
7. ALL GASKETS SHALL BE MADE OF NITRILE BUTYL RUBBER.

* QUANTITY OF OIL 15 LITRES APPROX.

* TOTAL WEIGHT 95 Kgs APPROX.

* TOTAL CREEPAGE DISTANCE :- 1116mm (Min.)

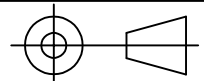
S.No.	DESCRIPTION	MATERIAL	QTY
1	OIL FILLING PLUG	M.S	1
2	NITROGEN VALVE	BRASS	1
3	PRESSURE RELEASE DEVICE	AL.+BAKELITE	1
4	OIL LEVEL INDICATOR	AL.+GLASS	1
5	PRIMARY TERMINAL Ø30x80 mm.	COPPER NICKEL PLATED	1
6	OIL TANK WITH COVER	M.S	1
7	COIL TIEING STRING	NYLON	---
8	BUSHING	PORCELAIN	1
9	BASE	M.S	1
10	SECONDARY TERMINAL BOX	M.S	1
11	LIFTING HOLE Ø25mm	M.S	4
12	EARTHING FLAT 80x50x8THICK.	M.S	2
13	NAME AND RATING PLATE	AL. ANODIZED	1
14	MOUNTING HOLE 4xØ17mm.	M.S	4
15	HOOK FOR COIL TIGHTENING	M.S	4
16	OIL DRAIN PLUG	M.S	1

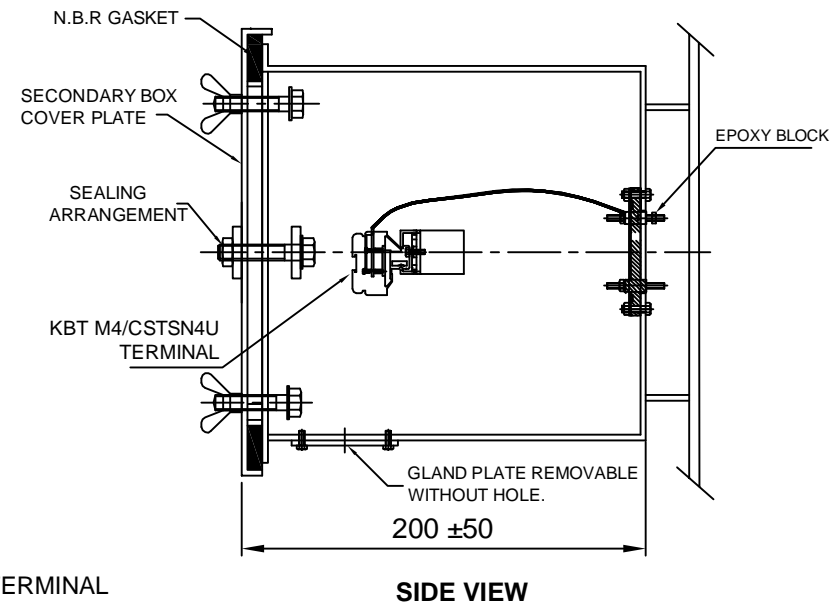
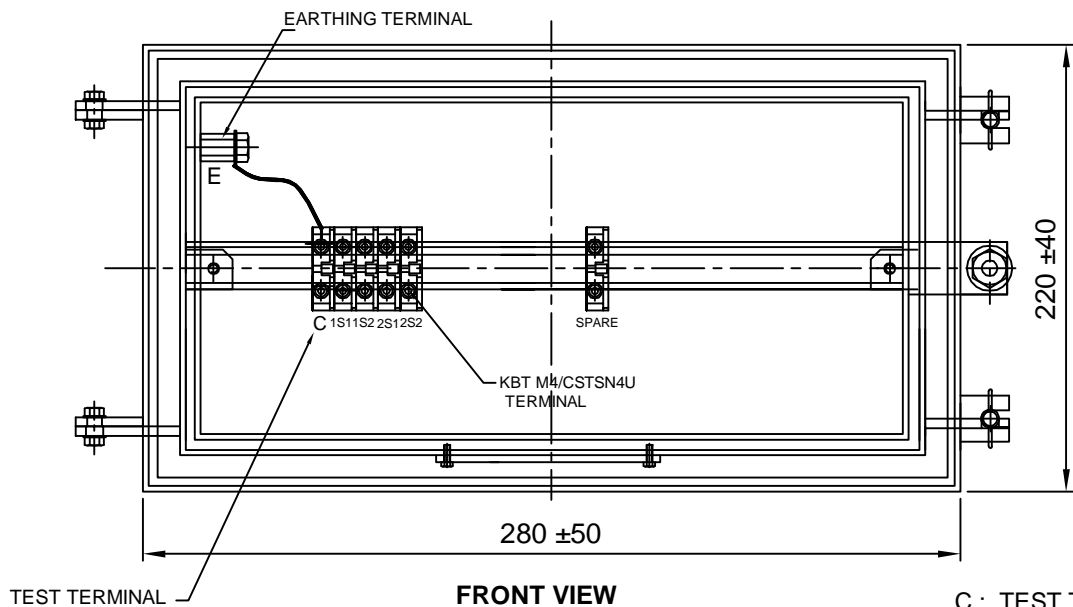


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POWER SYSTEMS, PLANNING & DESIGN
APTRANSKO**

Drawing approval subject to valid vendor registration

REV.	REVISION DESCRIPTION	DATED INITIALS
R0	FOR APPROVAL	06.01.2021

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED PROJECT NAME : AS APPLICABLE				<div style="border: 1px solid black; padding: 2px; display: inline-block;">MEHRU</div> MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.
UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL	
1. ALL DIMENSIONS ARE IN mm. 2. TOLERANCE WHEREVER NOT INDICATED ±5%	DGN. 06.01.2021 DRN. 06.01.2021 CHD. 06.01.2021	SPS AKASH BLS	SEE TABLE	
	SCALE: N.T.S			
TITLE :				 DRG.NO ME-33CT-SE-01
SECTIONAL ARRANGEMENT DRAWING FOR 33kV CURRENT TRANSFORMER RATIO:- 400/1-1A ,(BAR TYPE CT)				
SHEET No. 2 OF 6				

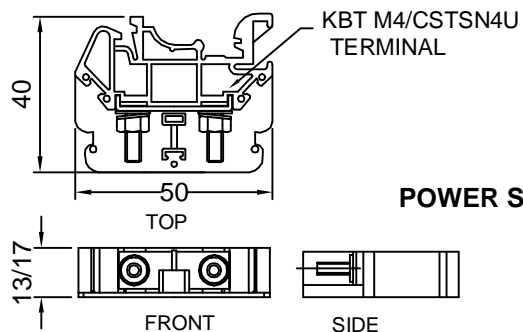


NOTES:-

1. SECONDARY TERMINAL BOX SHALL BE PROVIDE GLAND PLATE REMOVABLE WITHOUT HOLE.
2. SECONDARY TERMINAL BOX SHALL BE PROVIDED WITH COVER.
3. M.S SHEET THICKNESS FOR TERMINAL BOX 3.0mm & FOR COVER 2.0mm.
4. MATERIAL OF GASKET : NITRILE BUTYL RUBBER GASKET.
5. DEGREE OF PROTECTION : IP 55
6. 20% SPARE TERMINAL SHALL BE PROVIDED.

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



MATERIAL: POLYAMIDE
MAKE: ELMEX/CONNECTWELL
TERMINAL (DETAIL)

**CHIEF ENGINEER
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APTRANSCO**

R0	FOR APPROVAL	06.01.2021
REV.	REVISION DESCRIPTION	DATED INITIALS

CLIENT : TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED PROJECT NAME : AS APPLICABLE				 MEHRU ELECTRICAL & MECHANICAL ENGINEERS (P) LTD.
UNLESS OTHERWISE SPECIFIED	DATE	NAME	MATERIAL	
1. ALL DIMENSIONS ARE IN mm.	DGN. 06.01.2021	SPS	M.S	
2. TOLERANCE WHEREVER NOT INDICATED ±5%	DRN. 06.01.2021	AKASH		
	CHD. 06.01.2021	BLS		
	SCALE: N.T.S			
TITLE : SECONDARY TERMINAL BOX DRAWING FOR 33kV CURRENT TRANSFORMER RATIO:- 400/1-1A ,BAR TYPE CT				 DRG.NO ME-33CT-STB-01
SHEET No. 4 OF 6				

Guaranteed Technical Particulars for 33kV Current Transformer			
Sl. No.	Item Description	Unit	GTP as per Bid
E	CURRENT TRANSFORMER		
1	Make		Mehru Electrical & Mechanical Engineers (P) Ltd, Bhiwadi, (Raj), Inida
2	Type and Designation		Outdoor, Oil Cooled Live Tank Type, Current Transformer
3	Applicable standards		IS 16227
4	Class		A
5	Rated Voltage	33 kV	33 kV
6	Rated Primary current	Amps	400
7	Rated Secondary current	Amps	1
8	Rated output (Burden)	VA	Core:-1 15VA, Core 2: 15VA
9	Rated output at 0.8 lag. p.f.	VA	N/A
10	Class of accuracy		Core:1 - 5P, Core: 2 - 0.2S
11	Accuracy limit factor		Core1: 10
12	Knee point voltage for highest tap	Volts	NA
13	CT Resistance of secondary winding corrected to 70 deg.C for highest tap	Ohms	NA
14	Magnetising current at knee-voltage point/4		NA
15	secondary limiting voltage	kV	As per IS 16227
16	Instrument security factor for winding meant for metering		Core-2-< 5
17	One minute Power Frequency withstand test voltage of		
a)	Primary winding	kV (rms)	70
b)	Secondary winding	kV (rms)	3
18	1.2/50Hz Impulse wave withstand voltage of primary winding	kV (peak)	170
19	One minute dry P.F. withstand voltage of primary winding	kV (rms)	70
20	Creepage distance	mm	31mm/kV i.e. 1116mm (Min.)
21	Rated continuous thermal current	Amps	120% of rated primary current
22	Ratios available at highest taps		Yes
23	Rated short time thermal current	kA (rms)	25 kA
24	Rated time for above	Sec.	1
25	Rated dynamic current for primary	kA (Peak)	62.5
26	Class of insulation		A
27	Max. Temperature rise over ambient of 50 deg.C at any part of oil	deg.C	50c max
28			
a)	Radio interference voltage		N/A As per IS 16227 Clause 6.11.2
b)	Partial discharge level		<10 pC at Um & <5 pc at 1.2Um/ $\sqrt{3}$

NOTE: 1. DRAWING APPROVAL SUBJECT TO VALID TYPE TEST

4620249/2021/EEMRT-ENES1

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

30	Temp. rise after passing short time thermal current for one second	deg.C	50c max
31	Current density in primary winding at		
a)	Normal rating		0.68 Amp/sqmm
b)	Short time rating of 1 Sec.		35.36 Amp/sqmm(max.)
c)	Dynamic rating		88.40 Amp/sqmm (max.)
32	Type of primary winding		Copper
33	No. of primary turns		1
34	No. of secondary turns		400
35	Flux density at knee point		1.4 Tesla
36	Radio interference voltage	(micro volts)	
a)	with terminal connector mountd		N/A As per IS 16227 Clause 6.11.2
b)	under test condition		N/A As per IS 16227 Clause 6.11.2
37	Variation in ratio and phase angle error due to variation in		
a)	Voltage by 1%		N/A
b)	Frequency by 1 Hz.		N/A
38	Mounting details		400±5 x 400±5 mm
39	Source/grade of oil and standard with which it complies		EHV Grade Transformer Oil as per IS335/IEC 60296 of any reputed make
40	Quantity of insulating oil	Litres	15 Ltr Approx
41	Weight of Oil	kg	12kgs Approx
42	Total Weight including Oil	kg	95kG Approx
43	Overall dimensions (mm)		1200±75 x 525±50 x 400±5 mm
44	Wheather sealed (if so, type of sealing)		PRD
43 a)	Weight of Steel		56 kgs (Approx.)
c)	Weight of copper		15.5 kgs (Approx.)

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