

NOTE : DRAWING APPROVAL SUBJECT TO VALID TYPE TEST REPORTS, TO BE

CHECKED DURING ACCEPTANCE TESTS.

SHEET No.: 1 OF 6

GUARANTEED TECHNICAL PARTICULARS FOR 33 KV 1-PHASE OIL IMMERSSED POTENTIAL TRANSFORMERS

PTR : 33000/V3 / 110/V3-110/V3V

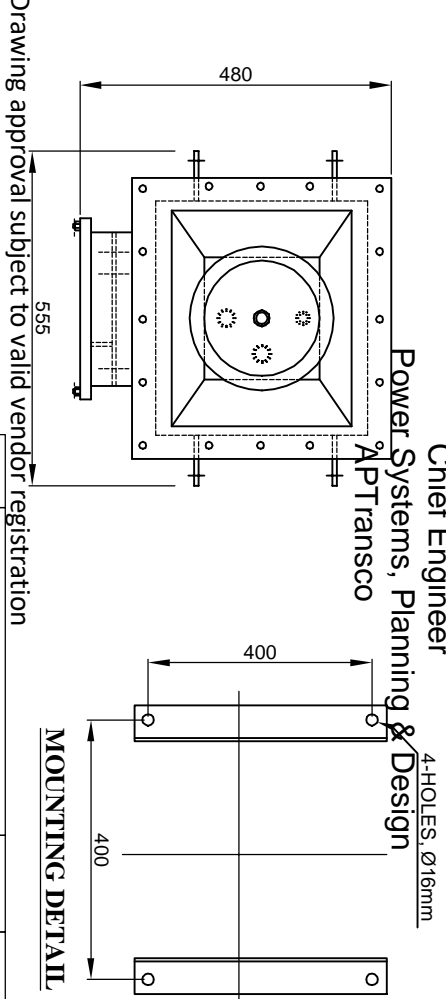
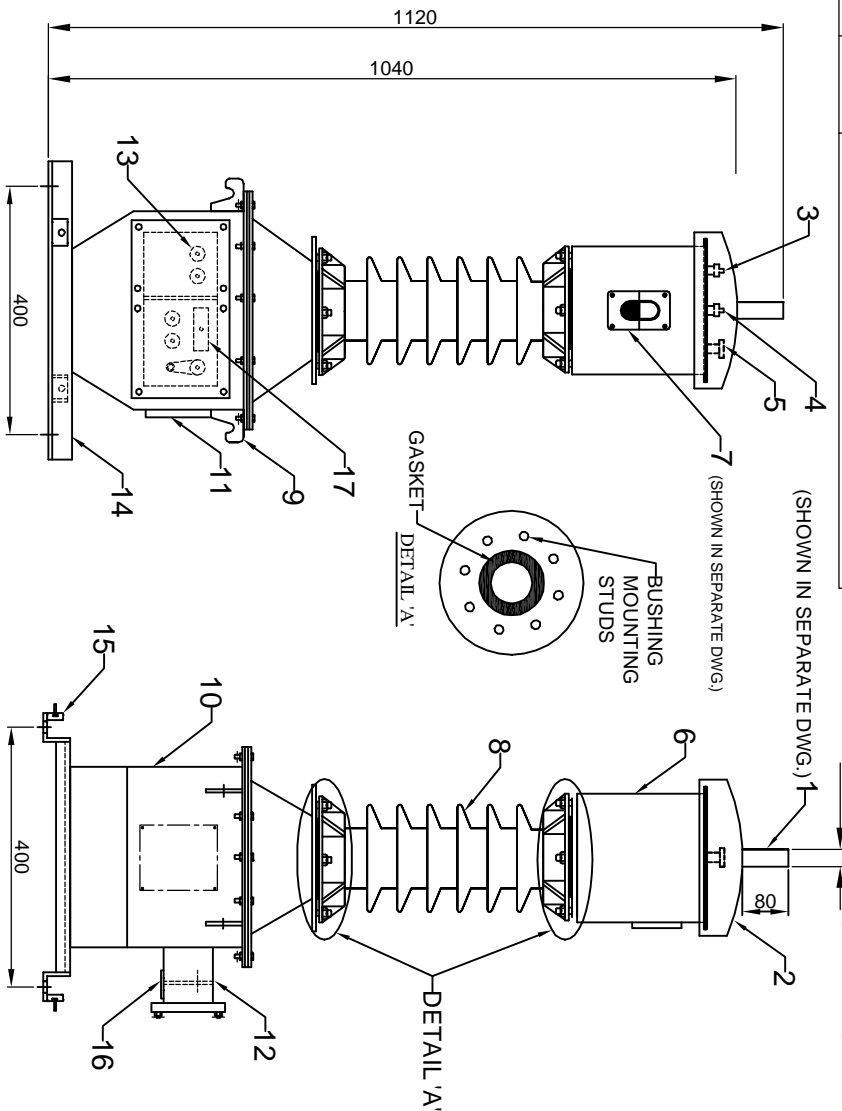
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01.	Type / Installation	Outdoor / Oil immersed
02	Manufacturer's Name and address and Country of Manufacture	Vishal Transformers & Switchgears Pvt. Ltd., Rithani, Delhi Road, Meerut – 250 103, INDIA
03.	Conforming to standard	IS: 16227:2016
04.	Rated voltage/ highest voltage (KV rms)	33/36
05.	Rated primary Voltage (kV)	33000/V3V
06.	Secondary Winding Details :	Drawing approval subject to valid vendor registration
a)	No. of secondary windings	TWO
b)	Rated secondary voltage (V)	110/V3 V
c)	Rated Burden (VA)	50 / 10 VA
d)	Class of accuracy	0.2 / 0.2
07.	Primary Stud/ Secondary Stud	Electrolytic Copper stud of 30 mm diameter X 80mm Length / M6 Nickle plated brass
08.	Partial Discharge level	< 10 pc at Um < 5 pc at 1.2 Um/√3
09.	Thickness of the matel tank	5mm top, 3.15mm tank side & bottom.
10.	Tank material and Tank coating	M.S. With paint shade 631 of IS-5
11.	Hardware exposed to atmosphere	SS
12.	Sealing arrangement(gasket & groove)	1. Insulator interfaces at top and base using gasket. 2. Secondary terminals epoxy bushing interfaces using gasket 3. Oil level indicator and interfaces with tank using gasket.
13.	Porcelain housing and it's make (Single piece only as per clause 3.1.2)	Condenser type hollow insulator, CJI/ Genesis Make or any other standard make with cemented flange
14.	Rated voltage factor and time	1.2 continuous & 1.5 for 30 Sec.
15.	Temperature rise over ambient	< 50deg.centigrade
16.	O-RING AND GASKETS	Nitrile Butyl Rubber
17.	Acceptable limit of temperature	95 deg. C
18.	Whether PT is hermetically sealed	yes
19.	Impulse withstand voltage (KVP)	170
20.	One minute power frequency withstand voltage (KV rms) of primary winding (Dry)	70
21.	One minute power frequency withstand voltage of secondary winding (KV rms)	3
22.	a) Minimum total creepage distance of insulator bushing (mm) b) Protected creepage of distance of bushing (mm)	900 400
23.	Weight of oil (Kg.)	17 ± 2 (Approx.)
24.	Weight of steel	34 Kgs (Approx)
25.	Weight of copper	2.5 Kgs (Approx.)
26.	Mounting details	400mmx 400mm.+/-2
27.	Overall dimensions	As per GA Drawing
28.	Whether all O-rings/ gasket are fixed in grooves	yes

Vishal Transformers & Switchgears (P) Ltd

Chief Engineer
Power Systems, Planning & Design
APTransco

(V.S. Negi)
G.M. (Marketing)



S.No.	ITEM	MATE. / SPEC.	QTY.
1.	PRIMARY TERMINAL	TINNED COPPER Ø30 x 80 LENGTH	1No.
2.	DOME SHAPE RAIN COVER	M.S.	1No.
3.	OIL FILLING PORT	M.S. (HDG)	1No.
4.	NITROGEN VALVE	M.S. (HDG) / BRASS	1No.
5.	PRESSURE RELIEF VALVE (SPRING TYPE)	BRASS	1No.
6.	OIL EXPANSION CHAMBER	M.S.	1No.
7.	OIL LEVEL INDICATOR	ALUMINIUM & GLASS	1No.
8.	H.T. BUSHING WITH CEMENTED FLANGE	POREGLASS/ EPOXY RESIN/ REPUTED FABRIC GLASS/ REPUTED	1No.
9.	LIFTING LUGS	M.S.	4Nos.
10.	MAIN TANK	M.S.	1No.
11.	RATING PLATE	AL. ANODISED	1No.
12.	SECONDARY TERMINAL BOX	M.S.	1No.
13.	SECONDARY TERMINALS	EPOXY RESIN WITH NICKELLED BRASS	As Req.
14.	MOUNTING BASE	M.S.	1No.
15.	EARTHING PAD	M.S., 50 x 8 x 60(L)mm	2Nos.
16.	REMOVABLE GLAND PLATE WITHOUT HOLE	M.S.	1No.
17.	HRC FUSE	6A	1No.

NOTE :-

1. CREEPAGE DISTANCE OF H.T. BUSHING :- 900 mm (MIN).
2. TANK SHALL BE PAINTED WITH MIN 2-COATS OF ZINC RICH EPOXY PRIMER & ONE COAT OF PU PAINT SHADE NO.-631 OF IS : 5- EXTERNALLY.
3. THE INNER SURFACE SHALL BE PAINTED WITH OIL RESISTANCE PAINT.
4. ALL HARDWARE EXPOSED TO ATMOSPHERE SHALL BE SS.
5. ALL GASKET SHALL BE MADE OF NITRILE BUTYL RUBBER & HOUSED IN PROPERLY MACHINED GROOVES.
6. DETAIL 'A' : GASKET ARRANGEMENT IN MACHINED GROOVE FOR BUSHING MOUNTING ON BOTH SIDE.
7. METERING CORE SHALL BE PROVIDED IN SEPARATE SECONDARY BOX WITH SEALING ARRANGEMENT.

VISHAL TRANSFORMERS & SWITCHGEARS (P) LTD.
 RTNANI, DELHI ROAD, MEERUT U.P (INDIA)

SCALE	MATERIAL	NAME	SIGN.	DATE
N.T.S		VISHESH		
		GAURAV		
		M.P. S.		

REV. NO.	DESCRIPTION	REV. BY	APPD. BY	DATE
	GENERAL ARRANGEMENT DRAWING OF 33KV 1-Ø OIL IMMERSED PT RATIO : 33000/√3 / 110/√3-110/√3V			
	DRAWING NO.- GA-023321-228			REV.
	SHEET NO:- 2 OF 6			00

ALL DIMENSIONS ARE IN MM. TOLERANCE:- ±10% WEIGHT:- 110±10 Kg.

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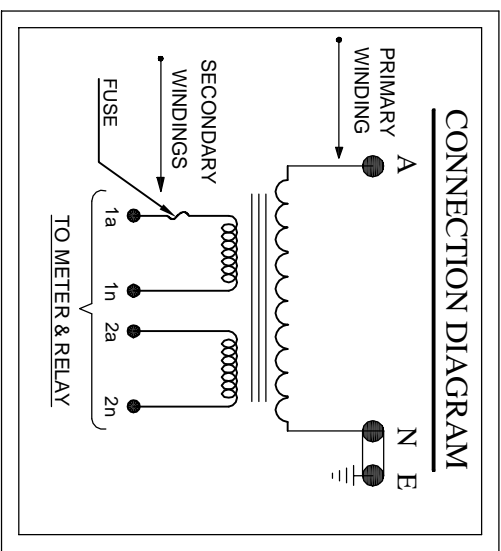


33KV 1-Ø POTENTIAL TRANSFORMER

S.No.	MADE TO	IS-16227 : 2016
RATIO	CONNECTION	PHASE TO EARTH
33000/√3 / 110/√3-110/√3V		
HSV / INS. LEVEL	TYPE	33KV, OUT DOOR O/C
36 / 70 / 170 KV		
BURDEN	Nos. OF WINDING	TWO
50 / 10 VA		
ACC. CLASS	FREQUENCY	50 HZ.
0.2 / 02		
CLASS OF INS.	EARTHING SYSTEM	SOLIDLY EARTH
A		
VOLTAGE FACTOR	YEAR OF MFG.	
1.2 CONT. & 1.5 FOR 30 SEC.		
	TOTAL WEIGHT	110 ± 10 Kg.
OIL QUANTITY	TYPE OF INSULATING OIL	IEC : 60296
22 ± 2 Ltrs		
PROP. OF	TEMPERATURE CATEGORY	-5°C to 40°C
PO. NO.		

**MFD. BY: VISHAL TRANSFORMERS & SWITCHGEARS PVT. LTD.
MEERUT (INDIA) 250103**

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RITHANI, DELHI ROAD, MEERUT U.P (INDIA)

SCALE N.T.S	MATERIAL	NAME VISHESH	SIGN.	DATE
		CHK. GAURAV		
		APPD. M.P. S.		
		DRG. REF. NO.		

TITLE		DRAWING NO.-	REV.
RATING & CIRCUIT DIAGRAM PLATE		NP-023321-228	
(RATIO: 33000/√3 / 110/√3-110/√3V)		SHEET NO:- 3 OF 6	00

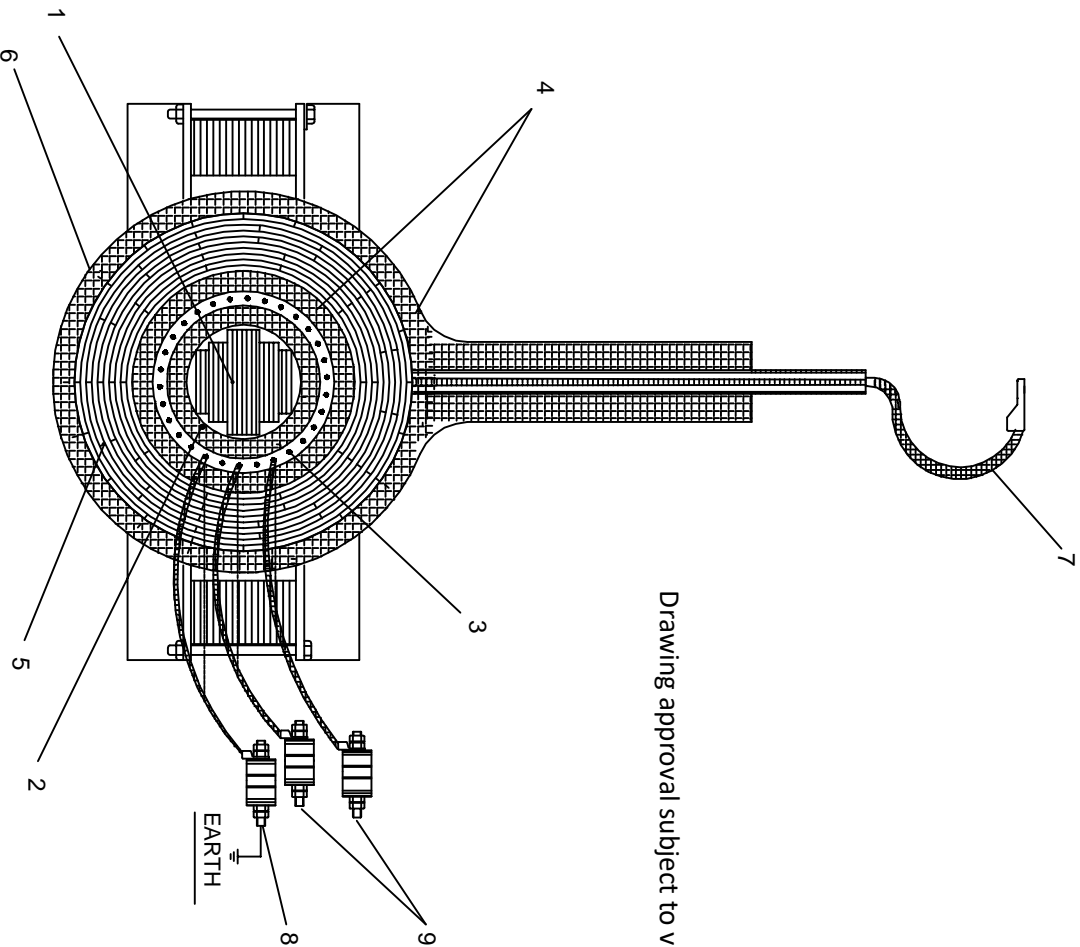
REV. NO.	DESCRIPTION	REV. BY	APPD. BY	DATE
TOLERANCE:-		WEIGHT:-		

ALL DIMENSIONS ARE IN MM. 6 5 4 3 2 1

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

S.No.	ITEM	MATE. / SPEC.	QTY.
1.	CORE	C.R.G.O. SILICON STEEL	*****
2.	CORE INSULATION	PRESS BOARD	*****
3.	SECONDARY WINDING	SE. COPPER WIRE	*****
4.	INSULATION (SECONDARY & PRIMARY WINDING)	CRAFT PAPER	*****
5.	PRIMARY WINDING	SE. COPPER WIRE	*****
6.	INSULATION (OVER PRIMARY WINDING)	CRAFT PAPER	*****
7.	PRIMARY LEAD CONNECTED WITH PRIMARY TERMINAL	P.V.C. COPPER WIRE	*****
8.	HT NEUTRAL TERMINAL	EPOXY	1 No.
9.	SECONDARY TERMINALS	EPOXY	As Req.

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RITHANI, DELHI ROAD, MEERUT U.P (INDIA)



SCALE BOM NO.

DRN.	NAME	SIGN.	DATE
CHK.	VISHESH GAURAV		
APPD.	M.P. S.		

DRG. REF.

REV. NO.	DESCRIPTION	REV. BY	APPD. BY	DATE
TOLERANCE:-				

TITLE
SECTIONAL VIEW FOR 33KV 1-Ø PT INTERNAL JOB
(RATIO : 33000/√3 / 110/√3-110/√3V)

DRAWING NO. :- SEC-023321-228

SHEET NO:- 4 OF 6

REV. 00

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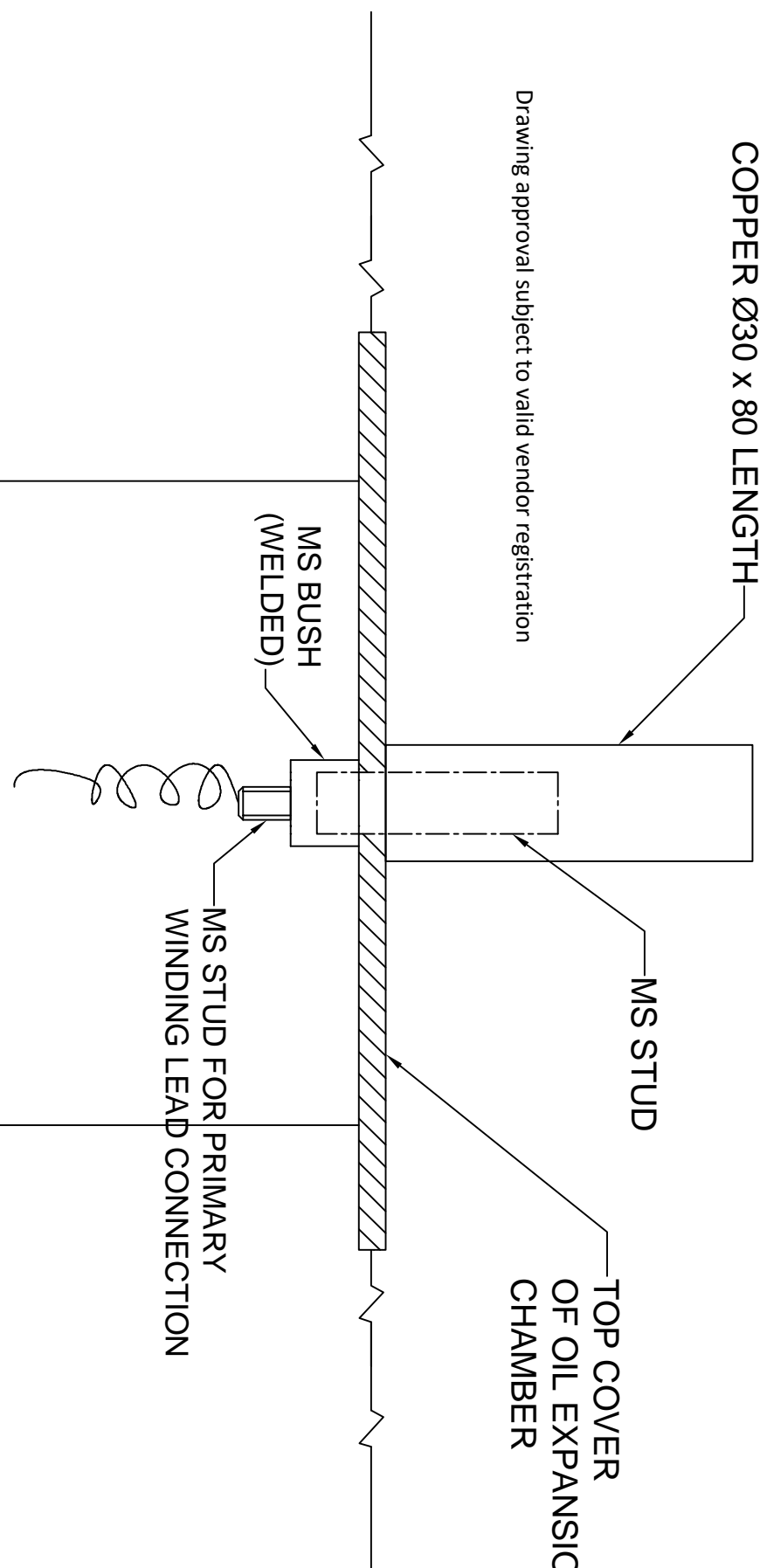
ALL DIMENSIONS ARE IN MM.

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

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PRIMARY TERMINAL
COPPER Ø30 x 80 LENGTH

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Power Systems, Planning & Design
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SCALE BOM NO.

DRN.	VISHESH	NAME	SIGN.	DATE
CHK.	GAURAV			
APPD.	M.P. S.			
DRG. REF.				

REV. NO.	DESCRIPTION	REV. BY	APPD. BY	DATE
TOLERANCE:-	WEIGHT:-			

TITLE
EMERGENCE OF PRIMARY TERMINAL FOR 33 KV 1-Ø PT
(RATIO : 33000/√3 / 110/√3-110/√3V)

DRAWING NO.:-
PRI. TER-030

SHEET NO:- 5 OF 6

REV. 00

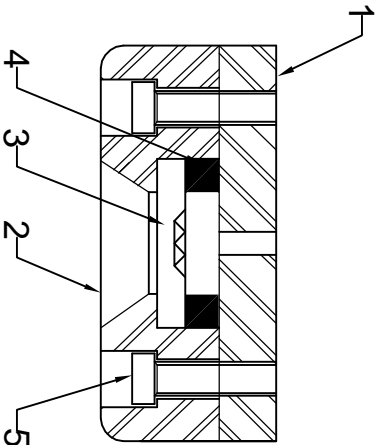
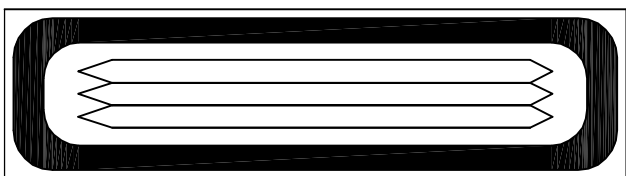
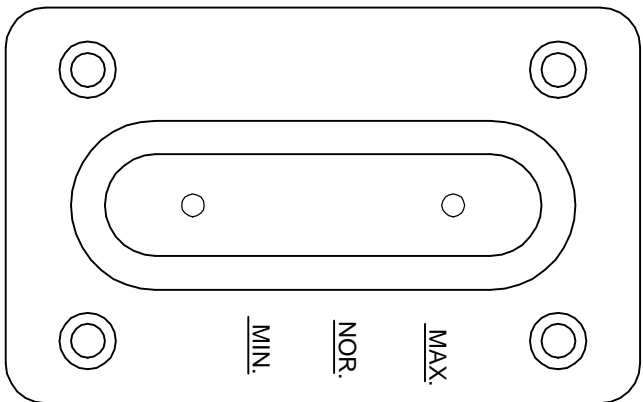
ALL DIMENSIONS ARE IN MM.

BILL OF MATERIAL

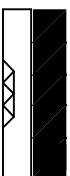
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S.No.	ITEM	MATE. / SPEC.	QTY.
1.	BASE PLATE (WELDED WITH TANK)	M.S.	1No.
2.	TOP PLATE	ALUMINIUM	1No.
3.	PRISMATIC GLASS	-	1No.
4.	GASKET	NITRILE BUTYL RUBBER	1No.
5.	ALLEN KEY BOLT	-	4Nos.

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RITHANI, DELHI ROAD, MEERUT U.P (INDIA)



SCALE BOM NO.

TITLE
OIL LEVEL INDICATOR FOR 33KV 1-Ø PT
(RATIO : 33000/√3 / 110/√3-110/√3V)

DRN.	NAME	SIGN.	DATE
CHK.	VISHESH GAURAV		
APPD.	M.P. S.		

DRG. REF.

DRAWING NO.:-	REV.
OIL-065	00

SHEET NO:- 6 OF 6

ALL DIMENSIONS ARE IN MM.

REV.NO.	DESCRIPTION	REV. BY	APPD. BY	DATE
TOLERANCE:-	±5%	WEIGHT:-		