



An ISO: 9001 & 14001 Company



The Integral Solution For your Power Sector

TECHNICAL SPECIFICATION 11KV/433V, 500 KVA TRANSFORMER

1. Type of cooling	: Oil Cooled
2. Rating (at all taps)	: 500 KVA, Distribution Transformer
3. Number of phases	: 3
4. Voltages primary (L-L)	: 11000 volts -10% to +10% Secondary (L-L): 415 volts
5. Frequency	: 50Hz \pm 3%
6. Combined volt & freq. (sum) Variation	: 10% (Absolute)
7. Number of winding	: 2
8. Vector group	: DYN11
9. Impedance / Tolerance (Tolerance as per IS 2026)	: 5% on principal tap
10a. Voltage/ freq ratio	: Shall be designed for 1.1 continuous.
10. Installation	: Outdoor Type
11. Ambient temp	: 50 Degree C
12. Duty	: Continuo
13. Temperature rise	
(a) Design ambient temp.	: 50 Degree C.
(b) Temp. rise of top of C.oil by thermometer	: 50 Degree
(c) Temp. rise of wdg. Cby resistance method	: 55 Degree
14. Class of insulation	: Class- "A"
15. Relative Humidity	: 100 %
16. Short Ckt. level at 11 kV	: 40 KA RMS
17. Suitability to withstand Vacuum breaker switching	: Required
On primary and secondary sides	
18. a) Material of winding	: Copper – Electrolytic Grade
b) Core	: The Maximum flux density at any part of core and yoke shall not exceed 1.9Wb/m ² at any tap Position with \pm 10% voltage variation from voltage corresponding to the tap. The laminated core shall be of high grade cold rolled grain oriented silicon steel.
c) Tank	: Tank shall be of welded construction and Fabricated from tested low

carbon steel. It shall be designed for a continuous internal pressure of 0.35 Kg/sq.cm over normal hydrostatic pressure of oil. All bolted connections shall be fitted with weather proof hot oil resistant gasket, in between for complete oil tightness. The gaskets shall give a satisfactory service under the operating conditions and guaranteed temperature rise conditions

Bi-directional skids, rollers, jacking pads (four nos), Lifting lugs shall be provided.

d) Hardware : All nuts and bolts exposed to weather shall be hot dip Galvanized or cadmium plated or zinc passivated steel.

19. Noise : Not to exceed values specified in NEMA TR-1.

20. Insulating oil : Fresh oil (before pouring into transformer) should be as per IS 335, without inhibitor. 10% extra oil shall be supplied for topping in non-returnable containers in sealed drums.

21. Terminal arrangement : HV Terminal boxes on both primary and secondary side, suitable for termination of HT- XLPE cable with Raychem type heat shrinkable terminating kits.

4mm thick MS blank (undrilled) gland plates to be supplied with primary and secondary sides on the bottom surface and Marshalling boxes.

The secondary neutral shall be brought out and be fitted with suitable rated CT in an enclosed chamber on the transformer as per IP 55 protection. The Porcelain Bushing for neutral conductor shall conform to IS 2099 & IS 3347 and shall be covered with suitably sloped plate to protect from rain water.

The minimum length between cable gland plate and cable Lugs should be 550 mm for both primary and secondary sides of cable Boxes. Terminal marking shall be as per IS 2026.

Epoxy bushings are not acceptable.

22. Tap changer : OFF LOAD TAP CHANGER

23. Taps : Taps -10% TO +10% in steps of 5 %

24. Painting : Grey Shade 631 as per IS: 5 latest revisions