35kV Level Three-phase On-load Tap-changing Electric Power Transformer

Summary

We have adopted series of important reforms on the 35kV level three-phase oil-immersed on-load tap-changing transformer referring material, process and structure. The transformer has the features of small size, light weight, high efficiency, low loss, low noise, reliable operation etc. which can reduce a large amount of power network loss and operation expenses with significant economic benefits.It is suitable for power plant, substation, heavy section plant ore enterprises etc.

The product complies with national standard: GB1094.1-2013 《Power Transformer Section 1 General》 GB1094.2-2013 《Power Transformer Section 2 Temperature Rise》, GB1094.3-2003 《Power Transformer Section 3 Insulation Level, Insulation Test and External Insulation Air Gap》, GB1094.5-2003 《Power Transformer Section 5 The Capacity to Bear Short Circuit》, GB/T6451-2015 《Three-phase Oil-immersed On-load Tap-changing Transformer Technical Parameters and Requirements》

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Model and meaning

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- Protection Code (Usually don't mark, TH-hygrothermal, TA-dry-hot)
- Rated high voltage (kV)
- Rated Power (kVA)
- Design serial number (9, 10.....)
- Tap-changing mode (Don't mark for NLTC, Z-OLTC)
- Conductor mode (Don't mark copper conductor, L-Aluminum conductor)
- Coil number (Don't mark two windings, S-three windings, F-splitting windings)
- Circulation mode (Don't mark natural circulation, P-Forced circulation)
- Cooling method (J-Don't mark self-cooling, F-Oil-immersed air force cooling, S-Water cooling)
- Phase number (D-Single phase, S-Three phase)

Usage environment condition

1 Device type: outdoor

2 Environment temperature: Maximum temperature +40℃, minimum temperature -30℃

3 Altitude :≤1000 meters (>1000 meters, need to modify temperature rise)

4 Relative temperature: ≤90%(25℃)

5 Installation area: Area with no corrosive gas and obvious fouling etc.

Main 35kV level three-phase on-load tap-changing power transformation technical parameters

630kVA~31500kVA three-phase two windings NLTC power transformer

Rated capacity	Voltage combination and range of tapping			Vector Group	No-load loss	Load loss	No load current	Short circuit impedance
	High voltage	range of tapping	Low voltage					
630	35	±2×2.5%±5	3.15 6.3 10.5	Yd11	0.830	7.86	0.65	6.5
800					0.980	9.40	0.65	
1 000					1.15	11.5	0.65	
1 250					1.40	13.9	0.55	
1 600					1.69	16.6	0.45	
2 000					2.17	18.3	0.45	
2 500					2.56	19.6	0.45	
3 150	35-38.5	±2×2.5%±5	3.15 6.3 10.5		3.04	23.0	0.45	7.0
4 000					3.61	27.3	0.45	
5 000					4.32	31.3	0.45	
6 300					5.24	35.0	0.45	
8 000	35-38.5	±2×2.5%	3.15 3.3 6.3 6.6 10.5	YNd11	7.20	38.4	0.35	8.0
10 000					8.70	45.3	0.35	
12 500					10.0	53.8	0.30	
16 000					12.1	65.8	0.30	
20 000					14.4	79.5	0.30	
25 000					17.0	94.0	0.25	10.0
31 500					20.2	112	0.25	

2000kVA~31500kVA three-phase two winding OLTC power transformer

Rated capacity	Voltage combination and range of tapping			Vector Group	No-load loss	Load loss	No load current	Short circuit impedance
	High voltage	range of tapping	Low voltage					
2 000	35	±3×2.5%	6.3 10.5	Yd11	2.30	19.2	0.50	6.5
2 500					2.72	20.6	0.50	
3 150	35-38.5				3.23	24.7	0.50	7.0
4 000					3.87	29.1	0.50	
5 000					4.64	34.2	0.50	
6 300					5.63	36.7	0.50	
8 000	35-38.5		6.3 6.6 10.5	YNd11	7.87	40.6	0.40	8.0
10 000					9.28	48.0	0.40	
12 500					10.9	56.8	0.35	
16 000					13.1	70.3	0.35	
20 000					15.5	82.7	0.30	
25 000					18.3	97.8	0.30	10.0
31 500					21.8	116	0.30	

1. We can manufacture the product out of the volume mentioned in the table per consumer's requirement and its performance parameters are settled referred to requirement.

2. We can provide specially designed products according to various operation environment.

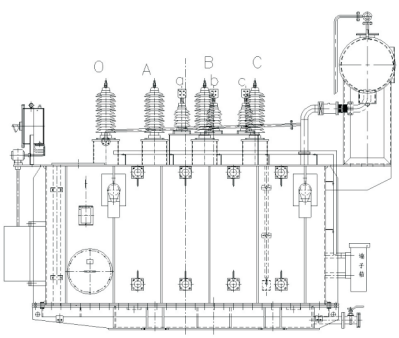
3. Choose medium voltage different from the value in table or set up tap changer. Choose asymmetric tap-changing for high voltage tap-changing.

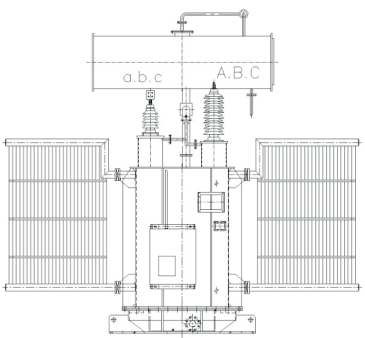
4. Consumer can choose short circuit impedance different from value in table.

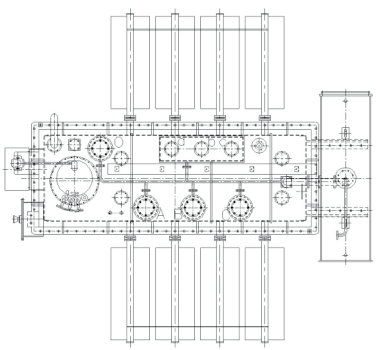
5. We should take confirmation of drawings after signing the contract as valid and binding for final size.

Structure Features

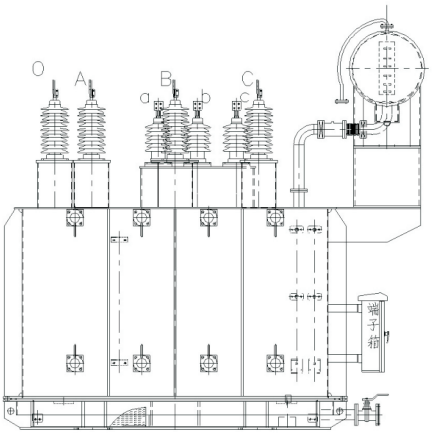
35kV level three-phase two winding OLTC power transformer

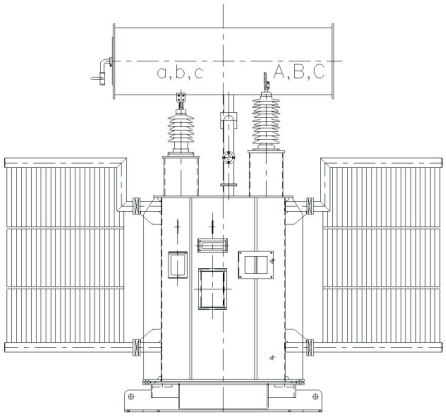


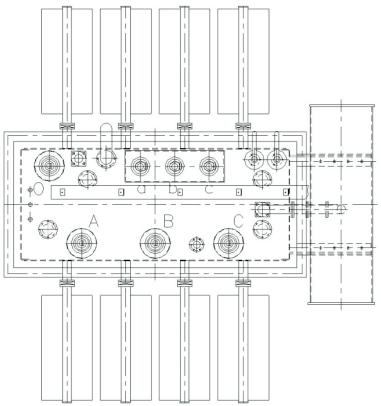




35kV three-phase two windings NLTC power transformer







Ordering instructions

Consumer needs to offer the following technical parameters when ordering:

Model, Product , rated volume, system voltage, voltage combination, connection symbol labeling, short circuit impedance, no-load loss,on-load loss, no-load current, rated frequency, cooling method, altitude, working environment and other requirements. Serial number.