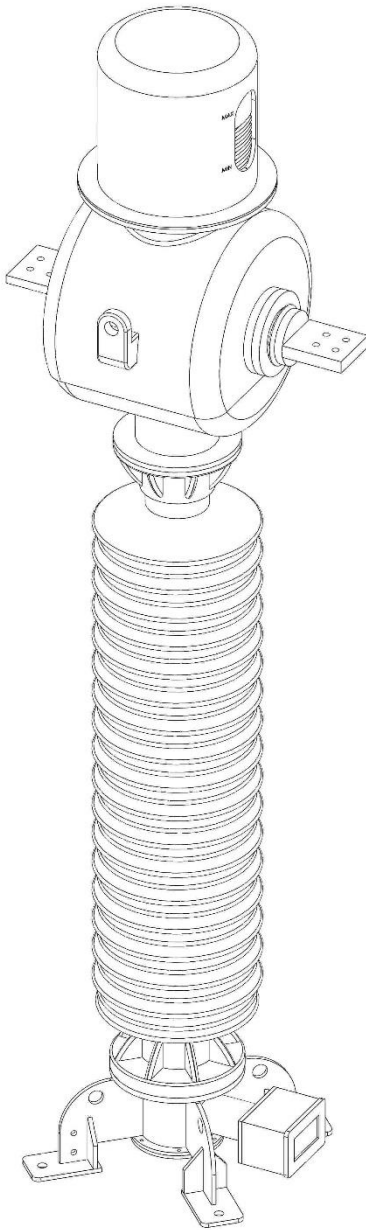


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OIL-INSULATED HIGH VOLTAGE CURRENT TRANSFORMERS VCT

Measuring current transformers of the VCT series are intended for outdoor use (indoors if necessary) in high-voltage networks from 110 to 800 kV. The main internal insulation is paper-oil type. Transformers are designed for a service life of at least 25 years (and even more if used correctly) without any maintenance. The oil is hermetically sealed from the air by a stainless-steel bellows unit, and all external parts are made of corrosion-resistant material. By design, the measuring transformers are of the support type with the upper winding arrangement in a metal case. High-voltage windings are placed in a metal case installed on the top of the transformer insulating column, oil is used as an internal insulating medium.

Current transformers (CT) can have up to eight secondary, measuring and protective windings, for various loads and accuracy classes. The primary winding is connected to the inputs passing through the aluminium housing, the number of turns of the primary winding is changed using special metal jumpers. The secondary terminals of the windings are located in the contact box located at the base of the transformer. To prevent unauthorized access to the secondary windings, the terminal box cover located inside the contact box is sealed.

Transformers do not require any special maintenance throughout their service life.



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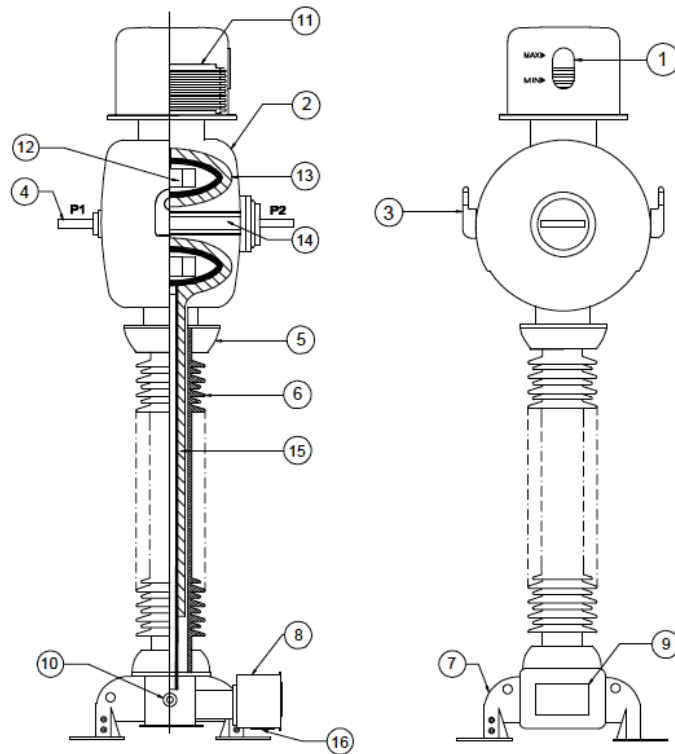


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CONSTRUCTION OF CURRENT TRANSFORMER VCT



1. Metal casing with oil level indicator
2. Tank / Housing
3. Lifting hook
4. Primary terminals
5. Flange
6. Porcelain / Polymer insulator
7. Mounting base
8. Terminal box for secondary connection
9. Ratings plate
10. Oil filling / sampling port
11. Stainless steel bellows
12. Wound secondary cores
13. High voltage insulation
14. Primary winding
15. Condenser graded bushing
16. Gland plate for secondary connection

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TECHNICAL PARAMETERS AND ADVANTAGES OF CURRENT TRANSFORMER VCT

TECHNICAL PARAMETERS OF CURRENT TRANSFORMER VCT

Parameter	Parameter value					
Rated voltage, kV	110	110	150	220	330	500
Highest permissible system, kV	126	145	172	252	420	550
Rated frequency, Hz	50 / 60					
Power frequency withstand voltage (1 min.), kV	235	275	325	460	630	680
Impulse withstand voltage 1.2/50 ms, kV	550	650	750	1050	1425	1550
Rated short-time thermal current (I_{th}), kA	to 40		to 50		to 63	
Duration of short-time thermal current, sec	1 or 3					
Rated dynamic current (I_{dyn}), kV	to 100		to 120		to 125	
Rated primary current (I_{pn}), A	from 10 to 5000					
Possibility of switching the transformation ratio	On the primary side / on the secondary side					
Rated secondary current (I_{sn}), A	1 or 5					
Number of the secondary cores	to 8					
Accuracy classes for measuring	accuracy classes for any metering needs (including high accuracy class 0.1 / 0.15 with extended range in current)					
Accuracy classes for protection	all possible types, including linear cores, low induction, etc.					
Ambient temperature, °C	from -45 to +55					
Seismic resistance, on a scale MSK-64	to 9					
Installation altitude above sea level, m	to 1000					
Creepage distance, mm/kV	25/31					
Internal insulation	Silicon/Porcelain					
Standards	DIN, IEC, IEEE/ANSI					

Advantages of VCT transformers

- ✓ Proven durability and reliability - 20 years of operation without failure messages;
- ✓ Stable and consistent very low values of partial discharge (PD) and dielectric loss factor ($\tan\delta$);
- ✓ Maintenance-free, explosion-proof and environmentally friendly operation in extreme conditions (thermal, climatic, polluted, mechanical) for long-term reliability, reduced cost of ownership and increased uptime;
- ✓ Mineral Oil – PBC free;
- ✓ No special long-term storage conditions required - products are stored in their packages.

Attention! This document provides standard values for current transformers. Upon agreement with the customer, it is possible to manufacture transformers with parameters different from those given.

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