ENERGOINVEST
Rasklopna Oprema a.d.

CAPACITOR VOLTAGE TRANSFORMER FOR HIGHEST VOLTAGE OF EQUIPMENT, 72.5 kV - 245 kV
TYPE KNT

TO SPECIFY FOR AN ORDER

- Rated primary voltage
- Rated frequency
- Rated secondary voltage
- Rated capacity
- Rated output
- Accuracy class
- Rated voltage factor
- Specific creepage distance
- Ambient temperature
- Altitude
- Standard

STANDARDS

The voltage transformers are in accordance with IEC, VDE, JUS, ANSI and BS standards, or some other upon request.

DESCRIPTION

Capacitor voltage transformer, type KNT consists of capacitor voltage divider and electromagnetic unit.

Capacitor voltage divider

The active part of capacitor voltage divider comprises an unity of capacitor elements connected in series and made of high-quality mix dielectric and aluminium foil that are impregnated by mineral or synthetic impregnating compound. Mix dielectric is made of poly-prophylene foil and high quality capacitor paper by special technological process. Capacitor elements with mix dielectrics of 0.02%/°C approx. Temperature capacity factor and less than 0,1% factor of dielectric losses insure a stability of both temperature and time capacities, a stable transmission ratio of capacitor voltage divider, and steady accuracy of capacitive voltage transformer for its entire service life.

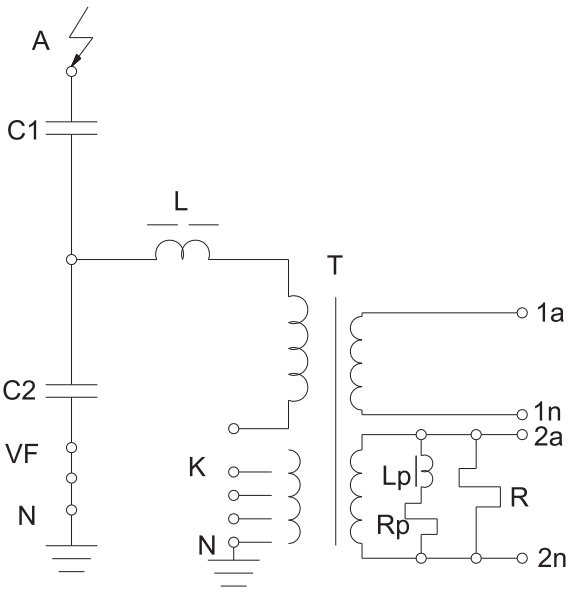
Dilatable diaphragm fitted above active part inside insulator of capacitor divider compensates volume variation of impregnating compound. The used impregnating compound does not contain PCB which is ecologically harmful.

Insulator for capacitor divider is made of high-quality electro-porcelain with configuration of sheds for specific creepage distance of 25 mm/kV highest system voltage.

Upon request, we deliver transformer with porcelain insulator of 31 mm/kV specific creepage distance, or with composite insulator of specific creepage distance as requested.

Gaskets, resistant to impregnating compound and aging, guarantee a reliable sealing for the entire service life of transformer.

Due to a high quality mix dielectric and impregnating compound none sample testing of the latter is predicted.



C1 - HV capacitor
C2 - Inter voltage capacitor
T - Voltage intermediate transformer
L - Compensating reactor
Lp, Rp, R - Suppression system for Ferro-resonant oscillation
K - Terminals for adjustment of secondary voltage
VF - HF terminal

Electromagnetic unit

Electromagnetic unit consists of voltage intermediate transformer, compensating reactor and system for suppression of Ferro-resonant phenomena installed in a housing filled with high graded transformer oil. Used oil is very resistant to aging and does not contain PCB which is ecologically harmful.

Primary winding of voltage intermediate transformer and winding of compensating reactor have terminals for correction of both voltage and angular errors at the transformer.

Compensating reactor has low losses what guarantees a steadiness of its inductivity and maintaining a declared accuracy under condition of real operation during the entire service time of the transformer.

Suppression system for Ferro-resonant oscillation consists of resistor connected constantly and serial connections of saturated suppressor and resistor of low resistance at one of secondary winding.

Low service induction of intermediate transformer and an installed system for Ferro-resonance suppressor insure an efficient suppressing of Ferro-resonant oscillations and good transient response at short circuit in a net.

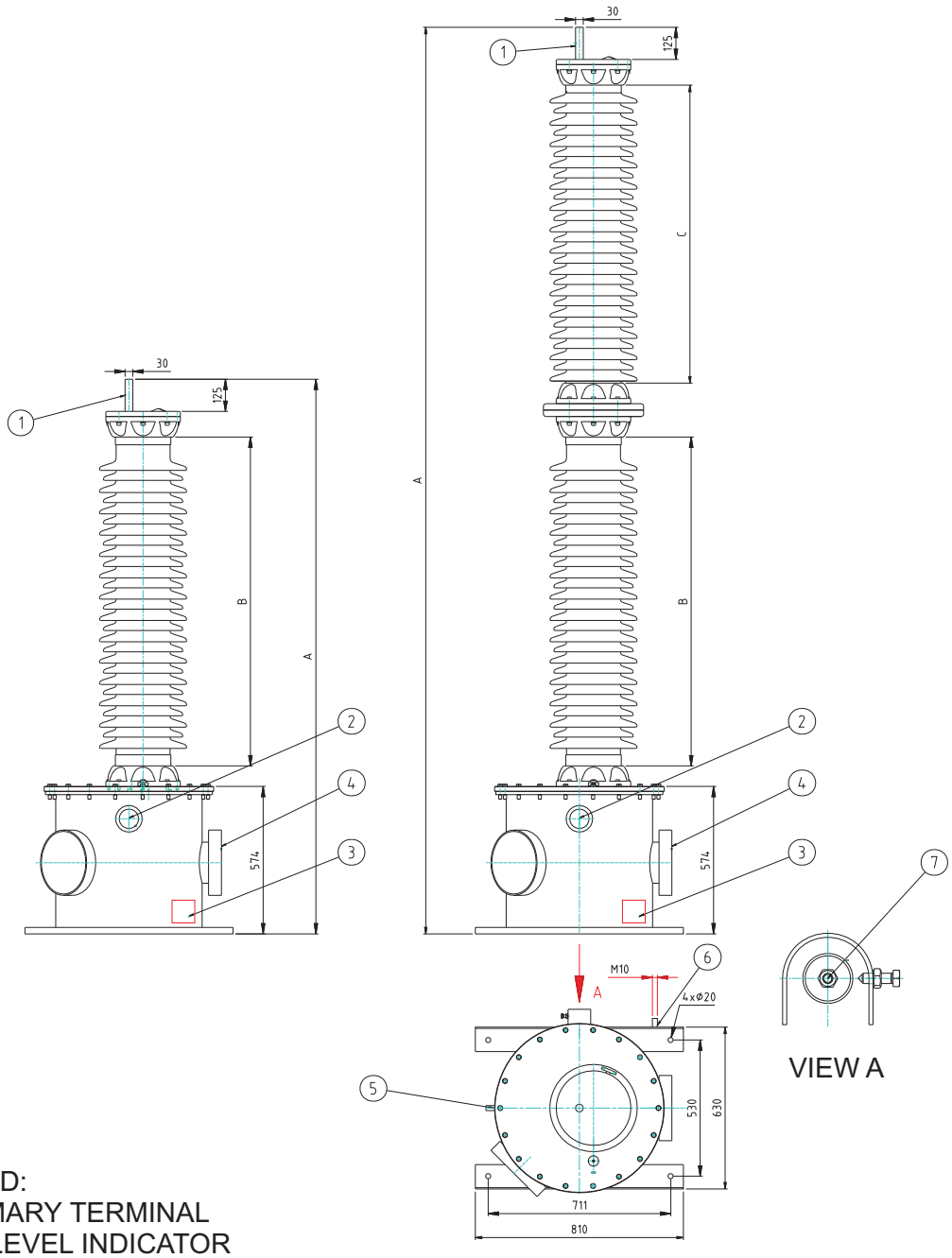
A coupling filter terminal for VF telephony, secondary terminal box, oil level indicator, valve for taking oil sample and earthing screw are fixed on housing of electro-magnetic unit.

Optionally, an overlap for single capacity measurement C_1 and C_2 can be fitted in the housing, at site.

Anti-corrosive protection of electro-magnetic unit housing is obtained by hot galvanization.

Resistance to atmospheric over-voltages, efficient system for suppression of Ferro-resonance oscillations, sealing system and anti-corrosive protection are a guarantee for long service life of the transformer and minimum maintenance.

TECHNICAL CHARACTERISTICS						
Type			KNT 72.5	KNT 123	KNT 245	KNT 420
Highest system voltage		kV	72,5	123	245	420
Rated primary voltage		kV	66/√3	110/√3	220/√3	400/√3
Withstand voltage of net frequency		kV	140	230	460	680
Impulse withstand atmospheric voltage		kV	325	550	1050	1550
Rated frequency		Hz	50 or 60			
Rated capacity		pF	8000	8800	4400	4000
Flashover distance		mm	700	1225	2360	3460
Accuracy class	For measurement		0,2-0,5-1			
	For protection		3P-6P			
Boundary thermal output		VA	750			
Rated voltage factor			1,5/30 s and upon request			
Rated secondary voltage		V	100/√3 and 100/3 and upon request			
Dimensions are not obligatory	A	mm	1580	2160	3529	4549
	B	mm	700	1280	1280	1730
	C	mm	-	-	1280	1730
Primary terminal			plate or round			
Total mass		kg	580	610	760	830
Ambient temperature		°C	-25°C do + 40°C			



LEGEND:
1. PRIMARY TERMINAL
2. OIL LEVEL INDICATOR
3. NAME PLATE
4. SECONDARY TERMINAL BOX
5. OIL SAMPLING VALVE
6. EARTHING SCREW
7. VF TERMINAL

Note:

All data contained herewith are to be considered as Information only.
The Manufacturer reserves all rights for changes for the purpose of technical improvement.
A list of guaranteed values with dimension drawing attached should be submitted upon Customer's request.

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