ENERGOINVEST
Rasklopna Oprema a.d.

COUPLING CAPACITORS FOR HIGHEST VOLTAGE OF EQUIPMENT
72.5 kV – 525 kV
TYPE SK

UPON A SPECIAL REQUEST

- More number of cores
- Secondary reconnection
- Rated continuous thermal current higher than 300 In

TO SPECIFY FOR AN ORDER

- Rated net voltage
- Rated frequency
- Rated voltage factor
- Ambient temperature
- Creepage distance
- Altitude
- standard capacitance

DESCRIPTION

By their constructive design the coupling capacitors do not fundamentally differ from the capacitor dividers applied in measuring capacitor voltage transformers. The only difference is that the interterminal is eliminated as unnecessary and that the range of rated capacities is extended, as can be seen in the attached table of coupling capacitors technical characteristics. The coupling capacitors are intended for the post mounting and they are fixed on the supporting structure through the lower element. The coupling capacitor active part which is composed of capacitor elements connected in series is accommodated in a porcelain insulator sealed with a metal element at the lower side and with a coupling flange and dilatation membrane at the upper side.
On the coupling flange there is the plate with four holes and serves for carrying and fixing of the HF line trap and on the plate the vertical and horizontal design of the high voltage terminal is possible.
For the voltage of 275 kV and higher the coupling capacitor active part is accommodated in two separate porcelain insulators mounted one above another and electrically mutually connected.
The capacitor elements, treated by a special technological process, are immersed in an insulant mineral oil in the insulator which has been also previously dehydrated and degasified by a special treatment. Owing to the sealing system and to the appliance of the dilatation membrane which serves for compensation of oil volume variation due to variation of ambient temperature a complete separation of oil and insulation from the ambient temperature is realized. So, their ageing is prevented and stability of all its features in time is insured.

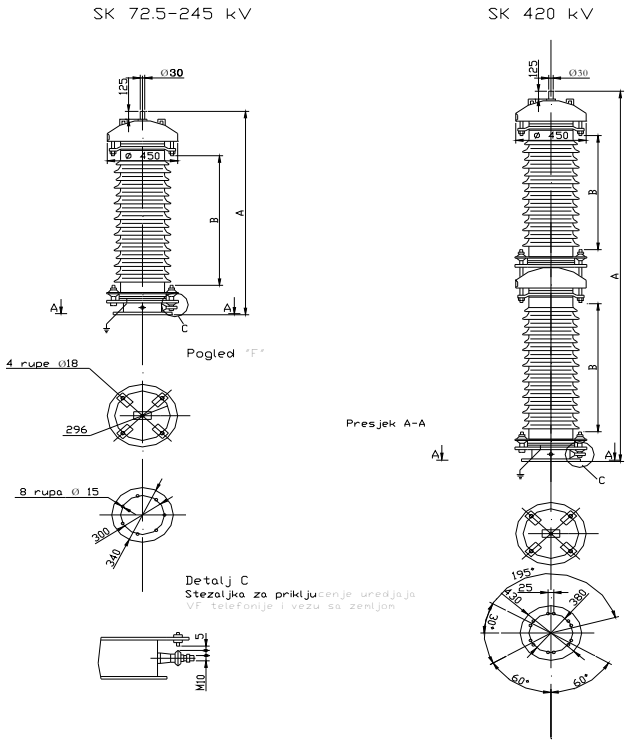
STANDARDS

Coupling capacitors are made in accordance with IEC, JUS, ANSI, BS or some other upon request.

APPLICATION

High voltage transmission lines are used for the transmission of high frequency signals and by means of them the telephone connections, relay protection, telemetering, regulation of loads and frequencies, telecontrol, locations of errors, etc. are realized. For these purposes, it is necessary to provide the effective energy transmission of HF signals from the transmitter to the high voltage transmission line and from it to the receiver. This is realized by means of different coupling devices. In the system of HF connections the high voltage capacitor has become a standard coupling device. These coupling capacitors are intended for the connection between phase and earth and for rated frequencies of 50 or 60 Hz as well as for the frequencies of HF connections system from 40 up to 500 kHz and for the temperatures from – 40 °C up to + 40 °C. The coupling capacitors are so designed that their electrical and mechanical strength is ensured, and the features like serial equivalent resistance, parasite capacitance, resonant frequency higher than 1 MHz in all cases, are achieved. All these features satisfy in full the requirements of IEC Regulations

TECHNICAL CHARACTERISTICS



TECHNICAL CHARACTERISTICS

Type			SK 72,5	100	123	145	170	245	420
Rated capacitance		pF	4400 13500	4400 11000	4400 9500	4400 8000	4400 7000	4400 5000	4400 4000
Insulation level		kV	72,5	100	123	145	170	245	420
Power frequency withstand voltage 1 min		kV	140	185	230	275	325	460	630
Impulse withstand voltage 1,2/50 μs full wave		kV	325	450	550	650	750	1050	1550
Rated frequency		Hz	50 or 60						
Flashover distance (minimum)		mm	700	860	1040	1240	1460	2266	3932
Insulator creepage distance		mm	1900	2400	3100	3700	4350	6400	11340
Terminal for HF telephony device			On the lower insulator						
Rated primary voltage		kV	$60/\sqrt{3} \div 72{,}5/\sqrt{3}$	$90/\sqrt{3} \div 100/\sqrt{3}$	$100/\sqrt{3} \div 123/\sqrt{3}$	$120/\sqrt{3} \div 145/\sqrt{3}$	$150/\sqrt{3} \div 170/\sqrt{3}$	$220/\sqrt{3} \div 245/\sqrt{3}$	$380/\sqrt{3} \div 420/\sqrt{3}$
Rated voltage factor			1,5 Un 30 sec – or upon request						
Dimensions are not strictly binding	A	mm	$1342^{\pm 18}$	$1502^{\pm 20}$	$1682^{\pm 24}$	$1882^{\pm 28}$	$2102^{\pm 38}$	$2827^{\pm 46}$	$4772^{\pm 84}$
	B	mm	$702^{\pm 18}$	$862^{\pm 20}$	$1042^{\pm 24}$	$1242^{\pm 28}$	$1462^{\pm 33}$	$2127^{\pm 46}$	$1952^{\pm 42}$
	∅30	mm	Or upon request						
Total mass		kg	130	230	260	290	330	430	960

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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