

Data Sheet 1.17/5

# Compensation Reactors

## Type DEK

### Application

The compensation reactors are used to reduce the capacitive load for the regulating transformer and the feeding network. They are connected to the input of the test transformer. By switching the reactor unit to the optimum tap, the power demand for a certain capacitive load is minimized.

### Description

The parameters depend first of all on the capacitive load or load range ( $\mu\text{F}$  or kvar) and the test voltage, but also on the primary voltage of the test transformer.

The compensation reactors are designed for continuous duty at a maximum ambient temperature of 40 °C. The reactors are built into a cubicle (IP20), the DE 1000/ 6 is built into a steel tank filled with high quality mineral transformer oil according to IEC 60296.

The reactors without taps are according to the following table:

Table 1: Technical parameters Types A

Types A	Power kVA	Voltage V	Current A	Frequency Hz	Impedance mH	Dimensions (L x W x H) mm <sup>3</sup>	Weight kg
DEK 25/ 0.4	25	400	62,5	50	20	450 x 450 x 500	125
DEK 50/ 0.4	50	400	125	50	10	600 x 500 x 750	250
DEK 100/ 0.4	100	400	250	50	5	750 x 600 x 1000	530
DEK 200/ 0.4	200	400	500	50	2.5	900 x 700 x 1100	1100
DEK 25/ 0.5	25	500	50	50	32	450 x 450 x 500	125
DEK 50/ 0.5	50	500	100	50	16	600 x 500 x 750	250
DEK 100/ 0.5	100	500	200	50	8	750 x 600 x 1000	530
DEK 200/ 0.5	200	500	400	50	4	900 x 700 x 1100	1100
DEK 25/ 0.4	25	400	62.5	60	17	450 x 450 x 500	125
DEK 50/ 0.4	50	400	125	60	8.5	600 x 500 x 750	250
DEK 100/ 0.4	100	400	250	60	4.2	750 x 600 x 1000	530
DEK 200/ 0.4	200	400	500	60	2.1	900 x 700 x 1100	1100
DEK 25/ 0.5	25	500	50	60	26	450 x 450 x 500	125
DEK 50/ 0.5	50	500	100	60	13	600 x 500 x 750	250
DEK 100/ 0.5	100	500	200	60	6.6	750 x 600 x 1000	530
DEK 200/ 0.5	200	500	400	60	3.3	900 x 700 x 1100	1100

If different power values are needed, the reactors can be connected in parallel (combined to one reactor unit), thus adding the different power values. This gives the opportunity, to better compensate the load for different output voltages.

For compensation at higher voltages (at 6 kV) and higher power rating the following reactor is recommended:

Table 2: Technical parameters Type B

Type B	Power kVA	Voltage V	Current A	Frequency Hz	Impedance mH	Dimensions (LxWxH) mm <sup>3</sup>	Weight kg
DEK 1000/ 6 with taps at and	1000	6000	167	50	115	1150 x 1200 x 1650	2000 <sup>1)</sup>
	1000	4500	222	50	65		
	1000	3500	286	50	39		
DEK 1000/ 6 with taps at and	1000	6000	167	60	95	1150 x 1200 x 1650	2000 <sup>1)</sup>
	1000	4500	222	60	54		
	1000	3500	286	60	32		

<sup>1)</sup> incl. 500 kg mineral transformer oil

The switching between the taps is done manually or via a motorised off-load tap changer.

Please see also Data Sheet 1.18 for Tunable Compensation Reactors.

### Type designation

DEK a/b

a = rated power in kVA

b = rated voltage in kV