Three-phase line and commutating reactor
acc. to VDE0570-2-20 (EN61558 /IEC61558)

Type code:

- KDD: Three-phase commutating reactor / 3UI-core / vertical

Generally:

- **Commutating reactor:** This reactor, connected in incoming circuit on the AC-side of converter installations, causes:
  - A lower ripple
  - Attenuation of the current harmonics
  - Realisation of the short-circuit voltage (uk) of 4%
  - Reduction of the steepness of the current rise during commutation as well as with short-circuit or short-circuit to frame.
- Degree of protection IP00 (suitable for installation in enclosures up to IP20)
- Ground connection as preparation for fitting in gears and systems of class of protection I
- Dimensioning for pollution severity P2
- Maximum ambient temperature 40°C / Insulation class F
- Frequency 50 Hz / - dimensioned for continuous operation (ED = 100 %)
- Vacuum-resin impregnated
- Connections - currents up to ca. 250 A on transformer terminals - shockproof according to VBG4
  - currents higher than ca. 250 A with bolt connection - shock protection has to be ensured by the installation

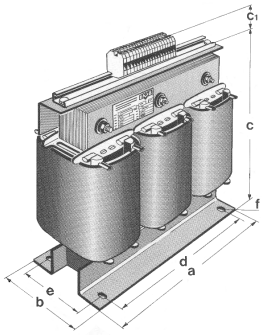
Standards and basics:

- VDE0570-1 (EN61558-1 / IEC61558-1) – follow-up standard for VDE0550-1 „Safety of transformers, power packs and the like“
- VDE0570-2-20 (EN61558-2-20 / IEC61558-2-20) – follow-up standard for VDE0550-5 „Particular requirements for small reactors“
- General technical conditions and information (see page 78)

c UL us on request

- Variants of voltage:
400 V (other voltages on request)

- KDD



Remark:
When inquiring for a reactor with other nominal values you should consider that following data is decisive for the calculation of a line or commutating reactor, as long the **short-circuit voltage - uk** (voltage drop) shall amount 4%:

- **nominal voltage (phase voltage)** - **U in Volt**
- **nominal current** - **I_N in Ampere**
- **inductance** - **L in mH**
- **effective current** - **Ieff**

To do the calculation the **nominal current (I_N)** has to be known (herewith the effective current - nominal current + effect of the current harmonics - has to be considered).

Inductance, nominal current, dimensions and weights for the types KDD (Sizes 0,1 - 10,0 kVA)

Nominal power in KVA = type designation	Inductance at nominal voltage 400 V in mH	Nominal current at nominal voltage 400 V and uk 4% in A (eff)	a in mm	b in mm	c in mm	d in mm	e in mm	f in mm	Cu. weight in kg	Total weight in kg
0,1	1,96	15	125	75	105	100	57	5	1,0	2,5
0,2	1,40	21	155	80	130	130	57	8	1,4	4,0
0,3	0,98	30	155	95	130	130	74	8	1,8	5,0
0,5	0,59	50	190	95	155	170	70	8	2,5	7,0
0,75	0,47	63	190	105	155	170	80	8	4,5	10,0
1,0	0,33	90	230	125	195	180	100	8	5,0	13,0
1,5	0,25	120	240	135	205	190	107	11	7,0	18,0
2,0	0,20	150	240	155	205	190	127	11	8,5	25,0
2,5	0,17	175	265	155	225	215	128	11	10,0	27,0
3,0	0,12	250	300	155	255	240	122	11	11,0	29,0
4,0	0,10	300	300	180	255	240	147	11	13,0	39,0
5,0	0,074	400	360	165	305	310	127	11	15,0	47,0
6,3	0,059	500	360	180	305	310	142	11	19,0	62,0
7,5	0,042	700	360	195	305	310	157	11	25,0	68,0
8,8	0,037	800	420	195	355	370	153	11	30,0	82,0
10,0	0,035	850	420	195	355	370	153	11	32,0	89,0
12,5	0,034	875	500	225	400	450	155	12 x 50	33,0	90,0
15	0,033	900	500	225	400	450	155	12 x 50	45,0	100
17,5	0,027	1100	500	230	400	450	160	12 x 50	45,0	115
20	0,023	1300	500	230	400	450	160	12 x 50	65,0	130
25	0,018	1600	560	240	490	510	170	12 x 50	55,0	150
Dimension c1 = 60 - 100 mm										

Options (on request)

- Installation in enclosure (see page 32)
- Snap-on fixing (up to size 0,2 KVA
- Additional tappings and windings
- Adding of elements for temperature monitoring (e.g. PTC-thermistors)
- Reactors in horizontal construction form
- Reactors with higher power