

Type code:  
**- DFD: Three-phase filter reactor / 3UI-core / vertical**

- Generally:
- Filter reactor: This reactor which is connected as protective reactor before capacitor banks (compensation equipment) causes:
  - Avoidance of resonance between line inductance and capacitor at system oscillations and by that protection of the compensation capacitors as well as protection of the supplying system against high harmonic current.
  - Degree of protection IP00 (suitable for the installation in enclosures up to IP23)
  - 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
  - relationship XN/XC 7% (resonant frequency 189Hz at 50Hz system frequency)
  - Frequency 50 Hz
  - Vacuum-resin impregnated
  - Dimensioned for continuous operation (ED = 100 %)
  - Connections - currents up to ca. 250 A on transformer terminals - shockproof according to BG4
  - currents higher than ca. 250 A with bolt connection – shock protection has to be ensured by the installation

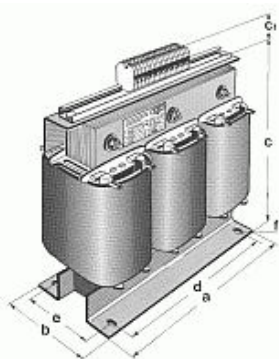
- Standards and basics:
- VDE0570-1 (EN61558-1 / IEC61558-1) - follow-up standard for VDE0550-1
  - „Safety of transformers, power packs and the like“
  - VDE0570-2-20 (EN61558-2-20 / IEC61558-2-20) - follow-up standard for VDE0550-5
  - „Particular requirements for small reactors“
  - General technical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



- Variants of voltage:

400 V

**- DFD**



Remark:

When inquiring for a filter reactor you should consider that following data is decisive for the calculation:

- Nominal voltage (phase voltage) - U in Volt
- Reactive power of the compensation equipment - Q
- Blocking frequency - fr in Hz
- System frequency - fn in Hz

or

- Nominal voltage (phase voltage) - U in Volt
- Reactive power of the compensation equipment - Q
- relationship XN/XC (\*) - p (in %)
- Blocking frequency - fr in Hz

or

- Nominal current - IN in Ampere
- Inductance - L in mH

(\*) XN = reactance at nominal frequency; XC = reactance

Dimensions and weights for the types DFD  
 (Values at: Nominal voltage 400 V and a relationship XN/XC of 7% (Resonant frequency 189Hz at 50Hz system frequency))

Nominal power in kVA = Type designation	Compensation power in kVA	Inductance in mH	Current in A	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	2,5	14,26	4,1	125	75	105	100	57	5	1,0	2,5
0,2	3,5	10,19	5,75	155	80	130	130	57	8	1,4	4,0
0,3	5,0	7,13	8,2	155	95	130	130	74	8	1,8	5,0
0,5	7,5	4,75	12,3	190	95	155	170	70	8	2,5	7,0

0,75	10,0	3,57	16,5	190	105	155	170	80	8	4,5	10,0
1,0	15,0	2,38	24,7	230	125	195	180	100	8	5,0	13,0
1,5	20,0	1,78	32,9	240	135	205	190	107	11	7,0	18,0
2,0	30,0	1,19	49,4	240	155	205	190	127	11	8,5	25,0
2,5	50,0	0,71	82,3	265	155	225	215	128	11	10,0	27,0
3,0	55,0	0,65	90,5	300	155	255	240	122	11	11,0	29,0
4,0	60,0	0,59	98,7	300	180	255	240	147	11	13,0	39,0
5,0	75,0	0,475	125	360	165	305	310	127	11	15,0	47,0
6,3	100	0,357	165	360	180	305	310	142	11	19,0	62,0
7,5	125	0,285	210	360	195	305	310	157	11	25,0	68,0
8,8	150	0,24	250	420	195	355	370	153	11	30,0	82,0
10,0	200	0,178	330	420	195	355	370	153	11	32,0	89,0

Maß c1 = 60 - 100 mm

Options (on inquiry)

- Reactors with other relationships XN/XC (respectively resonant frequencies) - Installation in enclosures (see page 31)
- Reactors with other system voltages and other system frequencies - Reactors in horizontal type of construction
- adding of elements for temperature monitoring (e.g. PTC thermistors)