Type code:
- GD : Single-phase direct current smoothing reactor / EI-core
- GDS: Single-phase direct current smoothing reactor / UI-core / vertical

Generally:
- Direct current smoothing reactor: This reactor which is connected between rectifier and load causes:
- Attenuation of the current harmonics
- by lengthening of the duration of current flow a overriding of short-term system voltage dips
- Limitation of the peak current
- Special feature: small change of the inductance in the range up to the nominal current (linear characteristic)
- 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 B
- Frequency 50 to 60 Hz
- Vacuum-resin impregnated
- Dimensioned for continuous operation (ED = 100 %)
- 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

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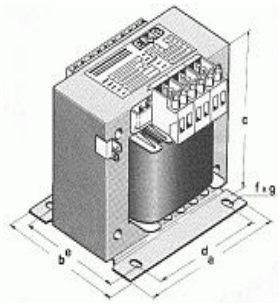
- Voltage range:
up to 600 V (other voltages on inquiry)

- GD



Remark:
On the basis of the **magnetic load (L x I²eff in VAs)** the circa size of the needed **direct current smoothing reactor** can be fixed.
For this following values are needed::
- Inductance - L in H
- Effective current - Ieff

Example:
- Inductance - L = 0,02 H
- Effective current - Ieff = 25 A
LxI²eff = 0,02 H x 25 A x 25 A = 12,5 VAs
The size can be taken from the tables "Magnetic loadability, dimensions and weights..." (column " max. magnetic loadability in VAs") by rounding off to the next higher value.

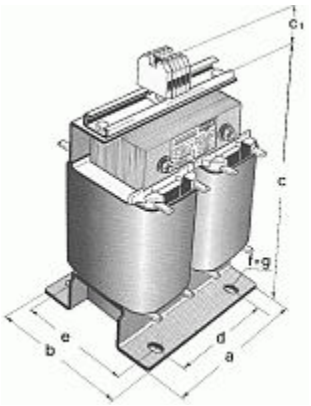
This means for our example:
LxI²eff = 12,5 VAs → 13,7 VAs (rounded off)
Because of this a **direct current smoothing reactor GD1,5** has to be chosen.
We would like to help you dimensioning your reactor.

Magnetic loadability, dimensions and weights for the types GD

Nominal power in kVA = Type designation	max. magnetic loadability in VAs	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
0,05	0,45	78	60	90	56	48	4,8	0,3	1,2
0,075	0,7	85	65	98	64	50	4,8	0,4	1,5
0,1	0,91	85	80	98	64	64	4,8	0,45	2,0

0,13	1,2	96	75	105	84	62	5,8	0,65	2,3
0,16	1,45	96	85	105	84	73	5,8	0,8	2,8
0,2	1,8	105	95	115	80,5	73	5,8	0,9	3,2
0,25	2,3	120	95	125	90	74	5,8	1,0	3,8
0,32	2,9	120	105	125	90	85	5,8	1,2	4,7
0,4	3,64	120	105	125	90	85	5,8	1,4	5,6
0,5	4,45	120	125	125	90	104	5,8	2,0	6,6
0,63	5,7	150	115	150	122	90	7,0	2,6	7,5
0,8	7,3	150	130	150	122	106	7,0	3,2	9,7
1,0	9,1	174	125	170	135	86	7,0	4,0	11,5
1,5	13,7	174	155	170	135	116	7,0	5,0	16,4
2,0	18,0	195	180	185	150	140	10,0	6,5	22,8
2,5	22,8	195	190	185	150	150	10,0	8,0	26,2

- GDS



Magnetic loadability, dimensions and weights for the types GDS									
Nominal power in kVA = Type designation	max. magnetic loadability in VAs	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
3,0	31,8	200	195	255	140	160	11	8,8	31
3,5	36,4	240	165	305	200	125	11	11,0	33,5

4,0	41,0	240	165	305	200	125	11	12,4	35
4,5	45,0	240	180	305	200	140	11	15,4	42,5
5,0	45,5	240	180	305	200	140	11	16,7	44
6,3	68,1	280	195	355	240	151	11	22,0	56
7,5	80,0	280	210	355	240	166	11	25,0	65
8,8	90,0	280	225	355	240	181	11	26,5	74
10,0	113	280	225	355	240	181	11	30,0	75
12,5	150	280	255	355	240	211	11	40,0	100
15	194	350	215	400	300	130	11	45	105
17,5	220	400	230	470	350	140	11	51	110
20	250	400	230	470	350	140	11	59	120
25	278	400	240	550	350	157	13	68	150
30	340	400	240	550	350	157	13	76	170
35	389	400	240	550	350	157	13	85	180
40	450	450	280	570	400	170	13	105	200
50	560	450	300	620	400	190	13	125	260
63	700	500	320	670	450	220	13	140	300
75	890	500	320	670	450	220	13	145	310
100	1120	500	350	740	450	220	13	162	390
135	1500	550	380	790	500	250	13	180	480
165	1850	550	425	790	500	270	13	247	600
Maß c1 = 60 - 100 mm									

Options (on inquiry)
- Installation in enclosure
- Snap-On fixing (up to size 0,2 KVA with the types GD..)
- additional tapping and booster windings
- adding of elements for temperature monitoring (e.g. PTC thermistors)
- Reactors in horizontal type of construction