

Ground Wire Chokes (earth line chokes)



DE (DEH, DEN, DENO) Series

Nominal current:	16 - 25 A @ ϑ_a 40°C
Nominal inductance:	0.02 - 4 mH
Application range:	DEN $f_{Res} \geq 300$ kHz DEH $f_{Res} \geq 20$ MHz
Isolation voltage:	2 kV eff. / wdg. ambient
Climatic category:	25/100/21 acc. to IEC 60068-1
Plastic case:	UL 94 V-0
Potting resin:	UL 94 V-0

All types of chokes correspond to the international specifications for radio interference chokes (EN 138100).

The most important conditions:

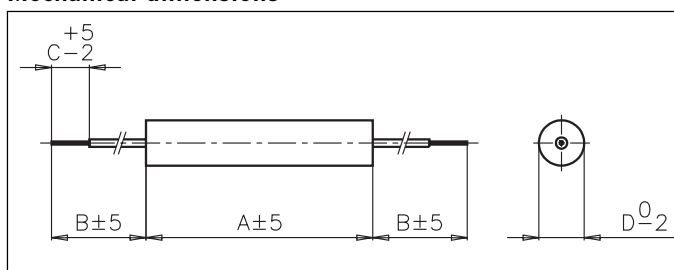
Wire cross section of ground wire choke	\geq wire cross section earthed conductor of equipment
Conductor cross section	$\geq 1 \text{ mm}^2$ at 16 A 1.5 mm^2 at 20 A
Voltage drop across choke	$\leq 4 \text{ V a.c. at } 4 \times I_{Nom.}$

Technical Data

Type	Conductor Cross-section [mm ²]	I_N (1) [A]	L_N (2) [mH]	R_{cu} (3) [mΩ]	$\sim f_{Res}$ [MHz]
DEHL1-10-16-20/a	1	16	0.02 ±15%	15	30
DEH2.5-15-25-40/a	2.5	25	0.04 ±15%	10	20
DEN1-25-16-4/a	1	16	4.00 -30% +50%	27	0.3
DENO1-23-16-2/a	1	16	2.00 -30% +50%	15	0.3
DENO1-25-16-4/a	1	16	4.00 -30% +50%	27	0.3

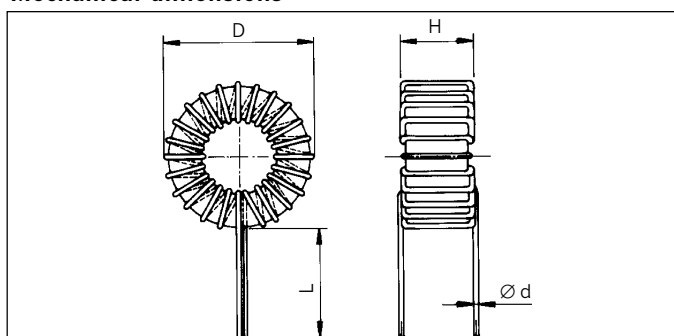
- (1) @ ϑ_a 40°C; current derating over 40°C: $I = I_N \times \sqrt{(100-\vartheta_a)/60}$
- (2) Nominal inductance measured according to EN 138100, see introduction of this catalog, paragraph 3.4
- (3) Resistance @ ϑ_a 25°C

Mechanical dimensions



Type	A [mm]	B [mm]	C [mm]	D [mm]
DEHL 1-10-16-20/a	60	35	10	12
DEH 2.5-15-25-40/a	80	60	10	17

Mechanical dimensions



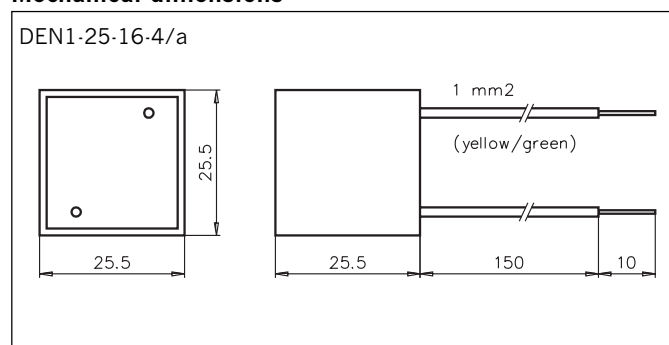
Type	D [mm]	H [mm]	d [mm]	L [mm]
DENO 1-23-16-2/a	25	18	1.12	30
DENO 1-25-16-4/a	25	18	1.12	30



Ground wire chokes for HF (high frequency) or LF (low frequency) purposes are often used in the radio interference suppression field as an additional interference suppression element to interference suppression chokes and interference suppression capacitors.

These types of chokes permit the building of a system free of ground wire loops. Ground wire chokes can only be put on the market if they meet the relevant specifications (e.g. VDE and SEV).

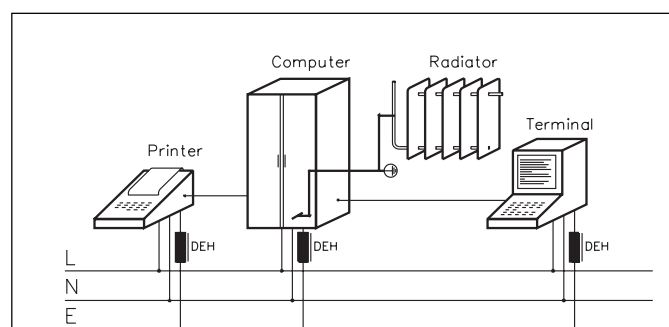
Mechanical dimensions



Application:

DEN/DEH earth line chokes are very often used, if within the systems, earth conductor loops are to be taken into consideration. (Interconnection of several peripheral apparatus with a computer on locally installed wall sockets).

Errors in the system caused by earth conductor loops are to be found in the LF-field as well as in the HF-field. In many cases the error can be eliminated by separating the mains earth line, using an earth line choke.



Example of a perfect earth line system using a radiator and an earth line choke.