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CNW 307

Filtercombination (single stage)



Unique Selling Point

- Compact construction
- Different connections (Terminals/cables /bars)
- Easy and fast istallation damping of the harmonics
- Attenuation of current harmonics
- Limintation of inrush currents
- Reduction of mains disturbance, current peaks and voltage drops
- Increased life time for IGBT's
- Low noise

Description

Applications: Interference suppression of frequency converters with IGBT's and reduction of harmonics PFC (Power Factor Correction) and commutation (current conduction between thyristors) with fast switching semiconductors.

- Conforming to: VDE 0565-3-1 / EN 133200
- Test voltage: L-L 2100 V, DC 1s, L-PE 2700 V, DC 1s
- Overload: 1,5 x I 1 min/h
- Climatic category: DIN IEC 60068-1

Technical Data

- Nominal Voltage : 500 V
- Rated current : 3 - 50 A

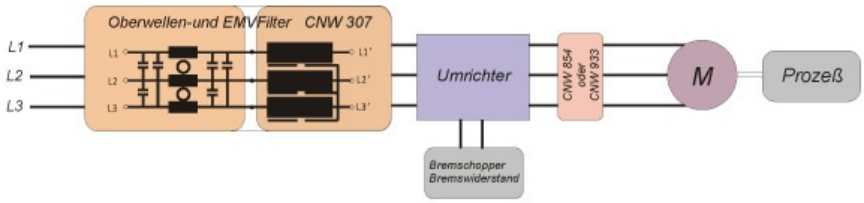
(1) Voltage drop of line choke: The line choke of the CNW 307/3 and CNW 307/6 has a Uk of 4 %. For current ratings of 10 A off the line chokes have a Uk of 2 %.

(2) Leakage current of line filters: The technical data shows the maximum leakage current under normal operating conditions. If two phases are interrupted, the leakage current may increase to 6 times the value.

For Europe:
Short circuit voltage Uk: 2% (at 400 V) Voltage drop: 4,6 V/branch

For America:
Frequency: 60 Hz Short circuit voltage Uk: 4,8% (at 200 V) Voltage drop: 5,5 V/branch

Circuit example



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Technical data

Type	Rated voltage [V]	Rated current [A]	Inductance [mH]	Leakage current [mA]	Copper [kg]	Weight [kg]
CNW 307 / 3	up to 3x500	3	9,70	<15	0,7	2,3
CNW 307 / 6	up to 3x500	6	4,88	<15	0,8	2,8
CNW 307 / 10	up to 3x500	10	1,46	<15	1,2	2,8
CNW 307 / 16	up to 3x500	16	0,91	<15	1,9	3,9
CNW 307 / 25	up to 3x500	25	0,58	<15	2,4	5,2
CNW 307 / 36	up to 3x500	36	0,41	<15	3,5	5,8
CNW 307 / 50	Bis 3x500	50	0,29	<30	4,6	9,4

The CNW 307 discharges the mains power supply by compensating the harmonics reactive power. The harmonics are reduced to a THD of < 60%. This increases the efficiency and discharges the leads. Further, the line choke limits the mains disturbances such as current peaks and voltage drops of the mains. To comply with the EN 610003-2 or IEEE 519 it is recommended to use the CNW 898 range. The integrated mains filter attenuates the excessive asymmetrical and symmetrical HF currents caused by the inverter.

1.1 Measurement for residential area

By using the filter CNW 307 the limit values according to EN 61800-3 for the first environment and general availability are complied with up to a cable length of max. 25 m to the motor. The limit values according to EN 61800-3 for the first environment and general availability correspond to the limit values for equipment of class B from the EN 55011.

1.2 Measurement for industrial area

By using the filter CNW 307 the limit values according to EN 61800-3 for the first environment and limited availability are complied with up to a cable length of max. 60 m to the motor. The limit values according to EN 61800-3 for the first environment and limited availability correspond to the limit values for equipment of class A from the EN 55011.

Last modified: 27.03.2018. All data is provided to the best of our knowledge and awareness and is subject to error and amendment.

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Dimensions

Image 1

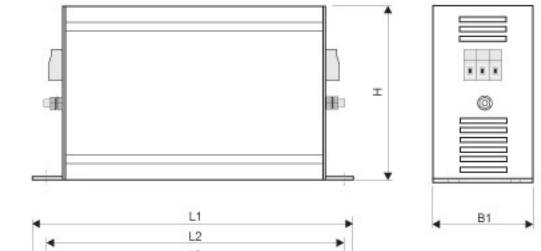
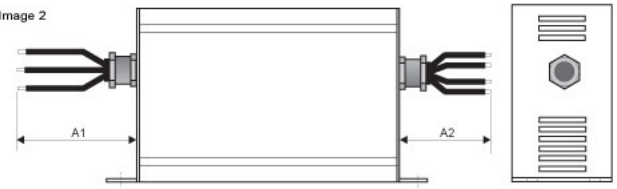


Image 2



Type	Terminals Image 1	Cables Image 2	L 1 [mm]	L 2 [mm]	L 3 [mm]	B1 [mm]	B2 [mm]	H [mm]	A1 [mm]	A2 [mm]	∅ D [mm]
CNW307/3	4 mm2	1,5 mm2	167	153	136	90	60	175	1500	1000	7
CNW307/6	4 mm2	1,5 mm2	167	153	136	90	60	175	1500	1000	7
CNW307/10	4 mm2	1,5 mm2	167	153	136	90	60	175	1500	1000	7
CNW307/16	6 mm2	2,5 mm2	207	193	176	90	60	175	1500	1000	7
CNW307/25	6 mm2	4,0 mm2	307	293	276	90	60	175	1500	1000	7
CNW307/36	10 mm2	6,0 mm2	307	293	276	90	60	175	1500	1000	7
CNW307/50	16 mm2	10 mm2	387	373	356	90	60	175	1500	1000	7

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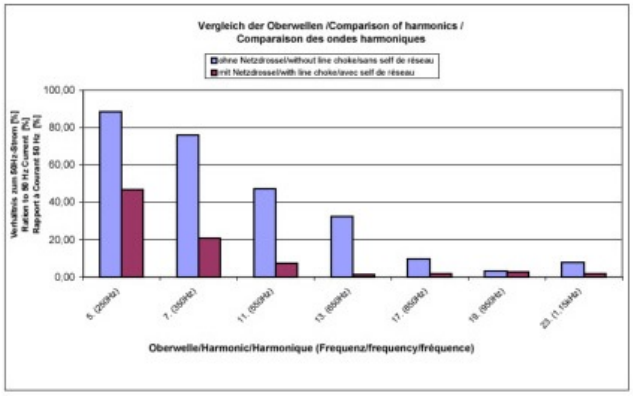
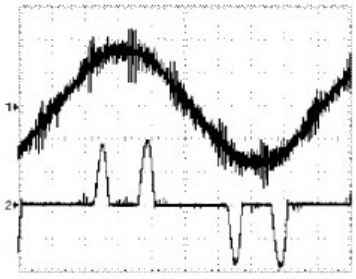
Comparison of harmonics

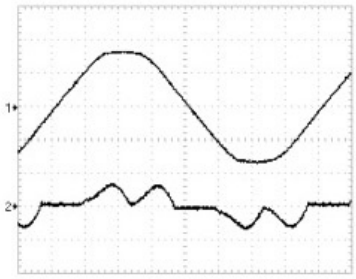


ohne Oberwellen-Filter
without harmonics filter
sans filtre de réseau/self réseau



CH 1: Spannung/voltage/tension

mit Oberwellen-Filter
with harmonics filter
avec filtre de réseau/self réseau



CH 2: Strom/current/courant

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