



## Sinusoidal Filter (Enclosed) - CNW 935

4A 400V 3 Line Sinusoidal Filter With screw terminals CNW935/4

### Description

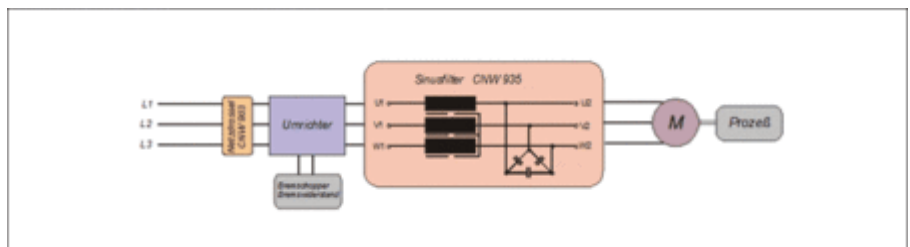
Variable Speed Drive harmonics solution for Drives causing or contributing to Motor failure. Sine wave creation of the output current on the output of a frequency drive. Longer lifetime of motor insulation, noise reduction.

- Low heating
- Low noise

- Simple connection
- Adaption to motor cables up to 1000 m possible
- In most instances the need for screened cables is avoided
- Higher clock frequency up to 16 kHz possible
- Mounting dimensions adapted to those of mains filter and braking resistor

- Test voltage: L-L 1500 V, DC 1 s; L-PE 2500 V, DC 1s
- Overload: 1,5 x I rated 1 min / h
- Climatic Category: DIN IEC 60068-1
- Frequency: 0- 60 Hz
- Short circuit voltage  $U_k$ : 8% (with 400V)
- Voltage drop: 18,4 V/branch (with IN and 50Hz)
- Max. voltage ripple: 5%
- Clock frequency of converter:  $\geq 4$ kHz
- Max. cable length to the motor: 600 m (shielded) / 1000 m (unshielded)
- Protection: IP20

### Circuit example



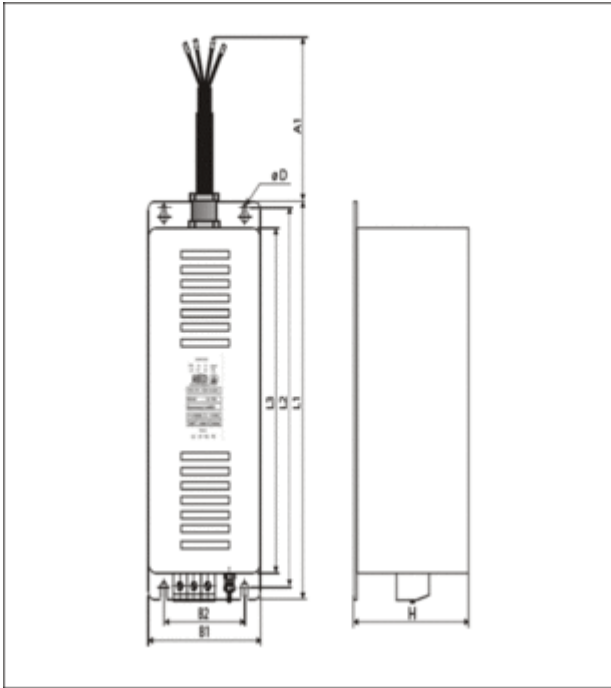
## Technical Data

Rated Voltage 500 V  
 Rated Current 4 A  
 Inductance 13.5 mH  
 Leakage Current mA

Type	Rated voltage [V]	Rated current [A]	Rated motor power [kW]	Inductance [mH]	Capacity [mF]	Weight CU [kg]	Total weight [kg]
CNW 935 / 4	3x 500V 0 - 60Hz	4	1,5	13,5	0,33	0,9	4,8
CNW 935 / 6		6	2,2	7,5	0,73	1,1	5,2
CNW 935 / 8		8	3,0	5,8	0,73	1,1	5,2
CNW 935 / 10		10	4,0	5,6	0,73	2,0	6,4
CNW 935 / 12		12	5,5	4,8	1,1	2,9	7,3
CNW 935 / 16		16	7,5	3,6	1,5	3,0	8,5
CNW 935 / 20		20	9,5	2,9	1,5	3,3	10,5
CNW 935 / 24		24	11,0	2,4	1,5	3,6	12,5

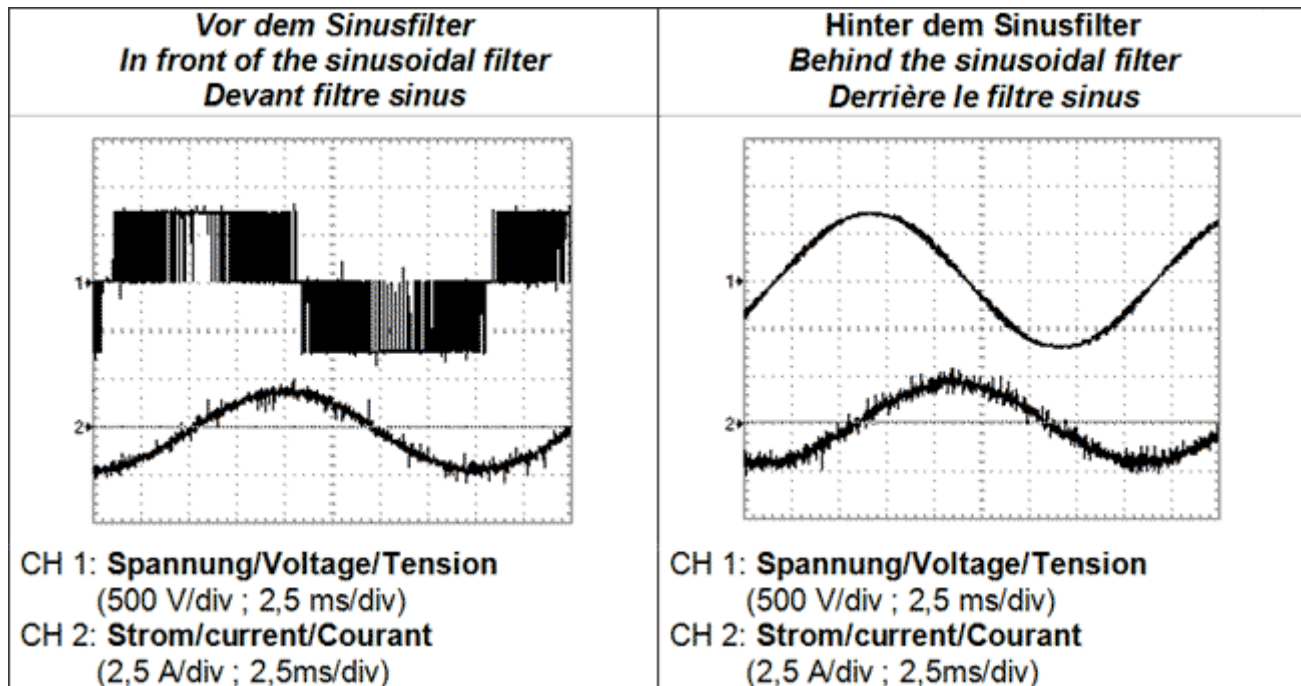
The sinusoidal filter has the effect of a low-pass. It forms the clocked voltage pulses into a sinewave-form voltage. The operation and the loss balance of the asynchronous motor are similar to that with normal mains operation. The typical singing motor noise with converter operation now will not occur because the phase current now has also the sinewave-form again. The comfortable operation is being bought by the filter losses. Depending on the installation, now it is possible to abandon the shielded cable to the motor.

## Dimension drawing



Type	Dimensions							Connection	
	L1 [mm]	L2 [mm]	L3 [mm]	B1 [mm]	B2 [mm]	H [mm]	A1 [mm]	Input Shielded cable	Output Bushing terminals
CNW 935 / 4	222	204	175	90	54	146	300	4 x 1,5 mm <sup>2</sup>	4 mm <sup>2</sup>
CNW 935 / 6	222	204	175	90	54	146	300	4 x 1,5 mm <sup>2</sup>	4 mm <sup>2</sup>
CNW 935 / 8	222	204	175	90	54	146	300	4 x 1,5 mm <sup>2</sup>	4 mm <sup>2</sup>
CNW 935 / 10	222	204	175	150	110	146	300	4 x 1,5 mm <sup>2</sup>	4 mm <sup>2</sup>
CNW 935 / 12	222	204	175	150	110	146	300	4 x 2,5 mm <sup>2</sup>	6 mm <sup>2</sup>
CNW 935 / 16	222	204	175	200	180	160	300	4 x 2,5 mm <sup>2</sup>	6 mm <sup>2</sup>
CNW 935 / 20	222	204	175	200	180	160	400	4 x 4,0 mm <sup>2</sup>	6 mm <sup>2</sup>
CNW 935 / 24	222	204	175	200	180	160	400	4 x 4,0 mm <sup>2</sup>	10 mm <sup>2</sup>

### Curve comparison with and without sinusoidal filter



### Comparison of the relative harmonic content

