

All-Pole Sinewave-Filters for VLT® FC 100 / FC 200 / FC 300

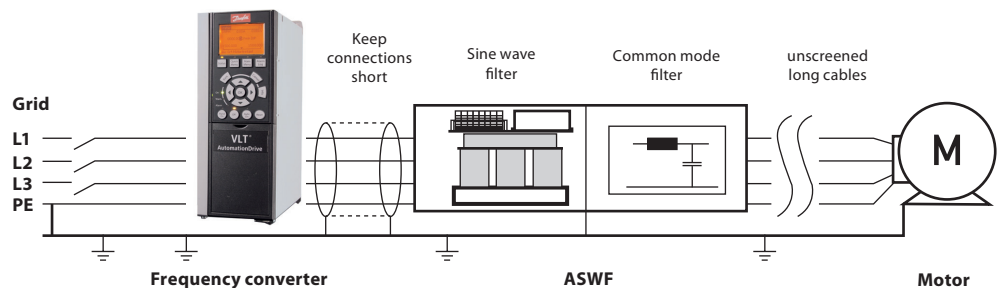


All-Pole Sinewave Filters

All-pole sinusoidal filters enable the generation of pure sinusoidal voltages not only phase-to-phase but also with respect to ground. While conventional sine filters form the phase-to-phase voltage of frequency converter's output, for all-pole sinusoidal voltages a switching frequency filter for Common-Mode is required additionally. All-pole sinusoidal filters attenuate the switching frequency and higher frequencies completely.

Typical Applications

The application of all-pole sine filters pays for itself by saving the cable shield with long motor cables. Another application relates to sensitive and difficult-to-maintain motors. Bearing currents are completely prevented, and the winding insulation is no longer strained by rapid voltage changes. Examples: pumps, which are buried deep in the ground. Some fan motors.



100%

sinusoidal output on
the motor cables
and also against
ground

Benefits

- Fulfills EMC class B/C1 for public areas grid bound and emitted (Frequency converter needs to have a H1 filter for unlimited cable length without screen)
- Unlimited motor cable length
- No screened motor cables necessary
- No special installation for parallel motors
- No bearing currents through EDM
- Avoids HF leakage currents over the motor cables
- All pole sinusoidal tensions
- No damaging voltage peaks and slew rate
- Reduced leakage current

Technical Data and dimensions

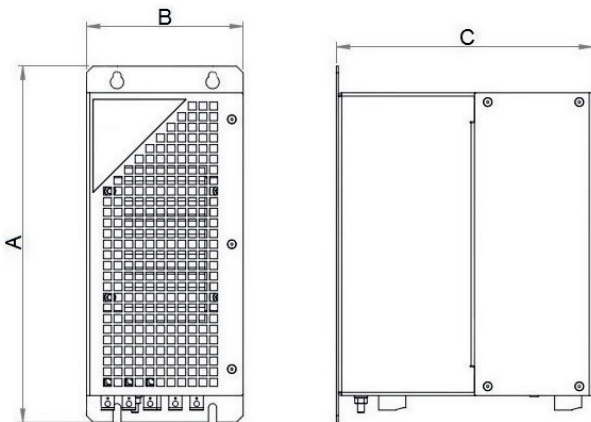
Output Voltage	max. 3x 400 V~ +25 %, sinusoidal
DC-Bus Voltage	max. 650 Vdc
Speed	max. 120 Hz
Frequency	min. 6 kHz
Climatic Category	25/085/21
Ambient Temp.	max. + 40 °C
Protection Class	IP20
Terminals	Touch Protected Screwing Terminals
Motor cable length	unlimited
RFI class	C1 (without cable screening)



Type	Filter nominal current	Frequency minimal	Typical VLT® nominal output and -current FC 302		Power loss	Weight	Height (A)	Width (B)	Depth (C)
			kW	A ¹					
	50-120 Hz	kHz					mm	mm	mm
192H5410	2.5	6	1,1	3	80	8	268	118	193
192H5411	4	6	1.5 - 2.2	4.1 - 5.6	95	9	268	118	193
192H5412	7	6	3 - 4	7.2 - 10	110	12	268	147	205
192H5413	10	6	5,5	13	140	13	268	147	205
192H5414	13	6	7,5	16	200	17	268	176	205
192H5415	16	6	11	24	245	18	268	176	205
192H5416	25	6	15	32	270	28	399	230	245
192H5417	35	6	18	37.5	330	30	399	230	245
192H5418	40	6	22	44	345	31	399	230	245
192H5419	50	6	30	61	390	71	545	325	242

¹ Nominal current of the frequency converter without derating

- Overload: 1.6 times I_r for 60s every 10 minutes
- Please ask, if you need higher voltage or higher power sizes



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