



Danfoss Advanced Active Filter AAF 007 – the **intelligent choice** for harmonic mitigation



Talented

Enjoy harmonic mitigation, power factor correction and imbalance compensation, all in one product.

You can adjust the settings to your needs and put focus on the area that is important in your application.

Selective harmonic mitigation and automatic resonance detection ensure reliable operation tailored to your application requirements.

The Danfoss Advanced Active Filter AAF 007 is designed to reduce harmonic distortion of Danfoss drives. The newestgeneration SiC switches give unmatched

60% lower power losses compared to similar filters

high efficiency and effective elimination of high-order harmonics.

The filter is compatible for use with any drive from the entire Danfoss product portfolio.

Plug and play

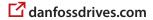
The filter is delivered pre-configured and tuned from factory, ready to use with the accompanying current transducers. When mains has no relevant resonances and filter is sized to given drive/load commissioning time is significantly reduced.

Versatile

Suitable for central or decentral harmonic mitigation.

IP20 filters are flexible for integration in any enclosure with individual drives or at the connection point for central mitigation. IP54 filters are provided as fully integrated solution in a standard Rittal cabinet with central terminals for mains, control and communication, including the option of a touch panel to parametrize and monitor the filter.

Feature	Benefit
Compact modular design - Low module weight - Uniquely compact - Parallel multiple modules in one product utilizing the same current measurements	Reduces space requirement
Easy serviceability - Few service parts - Easy exchange of modules due to low weight - Fast exchange of filter modules through Danfoss Service	Reduces service time and cost
Resonance control - Automatic detection of resonances - Adaptation of switching frequency allows continuous operation without shutdown	Improves uptime
Versatile: One product manages 3 power quality challenges - Focus on current harmonic mitigation, load balancing, power factor correction or all simultaneously - Possible focus on individual harmonics mitigation	Fewer components required, reduces complexity
Efficient operation - Lower running expenses - Longer lifetime of unit - High robustness in harsh environments	Reduces total cost of ownership
Simple commissioning - Plug and play with delivered current transducer from factory in resonant free supply grid and matched load - Easy optional parametrizing via PC software and	Get up and running fast





Setup software

Danfoss AAF 007 Setup Tool offers monitoring of the power network quality and adjustment to Danfoss Advanced Active Filter AAF 007 parameters.

Application specifics like sensor location and current transducer setup, but also compensation priority and compensation force can be adjusted.

Validation of harmonic compliance

Use the MyDrive® Harmonics tool to determine whether harmonics will be an issue in your installation, when drives are installed. MyDrive® Harmonics shows you the benefits of employing harmonic mitigation solutions from the Danfoss product portfolio and calculates system harmonic distortion. Furthermore, the software gives you a quick indication of whether the installation complies with the most recognized harmonic norms and recommendations.

To find all software tools, go to MyDrive® Suite: http://mydrive.danfoss.com/

Retrofit without dismounting existing installation

Danfoss Advanced Active Filters are easily retrofitted to existing installations, where harmonics are increased due to use of additional non-linear loads such as variable speed drives.

Specifications

specifications	
Mains voltage (L1, L2, L3)	
Voltage range	3 x 380-480 V AC
Current ratings	35 A/55 A/100 A/150 A modules
Supply frequency	50/60 Hz ±2%
Network	3-phase, 4 wire 13 3-phase, 3 wire
Compensation	Harmonic mitigation 2 nd to 60 th order Power factor correction Imbalance compensation
Current transducer (CT) accuracy	0.5 or better
Standard and requirements	Modules UL 508 EN IEC 62477-1:2012/A1:2017 EN IEC 61000-6-2:2019-11 EN IEC 61000-6-4:2020-09 IEEE 519-2022
	Cabinets EN IEC 61439-1:2021
Switching frequency	40 kHz – 60 kHz
Efficiency	
Power loss	556 W (35 A) 833 W (55 A) 1283 W (100 A) 2120 (150 A)
Current rating	
Rating	35 A/55 A /100 A/150 A
Maximum rating	600 A (4 filter modules with 150 A)
Communication interface	
PC communication	RS485 based
System communication	Modbus RTU
Environmental conditions and built-in o	ptions
Enclosures (side-by-side mounting)	IP20: 35 A – 600 A IP54: 100 A – 600 A
Ambient temperature	104 °F without derating
Humidity	5-95% (non-condensing) during operation
Altitude	<1000 m, derating 5%/1000 m, max 4000 m
Built-in options	Contactors for modules in IP54 cabinet
IP 20 enclosure only	

^{1]} IP 20 enclosure only

>98.2%

Filter efficiency using advanced SiC technology