

VLT® Active Filter MCC 108



Voltage range

- 380 - 480 V AC 50 - 60 Hz
- 500 - 690 V AC 50 - 60 Hz

Power Range

190 A, 310 A, 500 A
Up to 4 units can be paralleled for higher power

Enclosure degree

- IP 00, IP 21, IP 54

The perfect solution for

- Restoring weak networks
- Increasing network capacity
- Increasing generator power
- Meeting compact retrofit demands
- Securing sensitive environments
- Utilising energy savings

Danfoss Active filters eliminate harmonic distortion from non-linear loads and improves system power factor.

Proven VLT® power electronics re-establishes optimal sinusoidal power and power factor=1 by generating and injecting counter phased harmonic and reactive currents.

The modular build-up offers the same characteristics as our High Power VLT® family, including high energy efficiency, user-friendly operation, back channel cooling and high enclosure grades.

Danfoss Active Filters can compensate individual VLT® drives as a compact integrated solution or be installed as a compact stand alone solution at a common point of coupling compensating several loads simultaneously. Danfoss Active Filter can operate at medium voltage level by means of step down transformer.

Features	Benefits
Energy saving Power factor correction and control Priority dedication Automatically adapts to network changes Reduced harmonics Back channel cooling	Less operation cost Saves energy Increased transformer efficiency Reduced cable losses / Smaller cables Less control room cooling Less fan power consumption
Reliable Continues operation if overloaded High robustness against voltage waveforms Self protection features Optional, mains disconnect switch and fuses Back channel cooling Coated PCB board as option Retrofit without dismantling existing equipment	Maximum up time More up-time No need of external switches Lower panel heat Longer lifetime Increased resistance against dust Save time and cost
User friendly Standard award winning control panel (LCP) Same compact wall mount cabinet style as drive Modular design High component reuse with drive Automatic current sensor adaptation Complies with VLT® software	Save initial and operation cost Effective commissioning and operation Well known and easy installation in small installation spaces Enables fast installation Fast and easy service Less commissioning Save commissioning time Enables analysis support

PC software:

MCT 10

Ideal for commissioning, servicing, monitoring and performance logging.

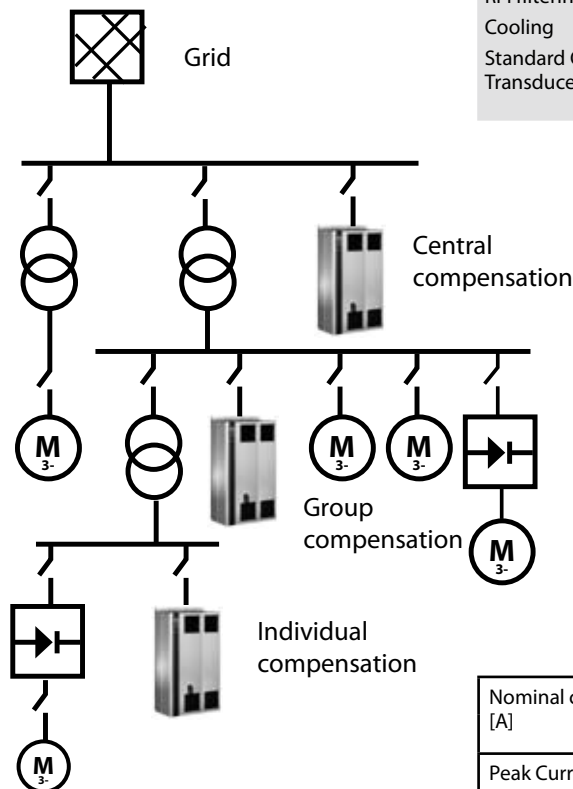
MCT 31

Harmonic calculation tool supporting VLT® Active Filters.

RoHS compliant

The VLT® Active filter is manufactured with respect to the environment, and it complies with the RoHS directive.

Specifications	
CT requirements	Three standard current transformers (CT's), connected during installation at phases L1, L2 and L3
Operation modes	Mode 1: Harmonic mitigation Mode 2: Harmonic mitigation and power factor correction with options to program the task priorities
Harmonic mitigation performance	< 5% THD of the rated non-linear load current at the PCC
Harmonics Control	Individual harmonic control of 1st harmonic of the reactive current and the 2nd through at least the 25th harmonic (excluding the 3rd.)
Compatibility	Equipment is compatible for field installation with existing active filters
PC Software & user interface	Commissioning tool function Configuration and installation settings function. User settings and information function. Control panel function. Data logger and event log function. Network monitoring and measurements function. Filter load and status function. Software update function.
LCP Regulation	UL-file. CE marking, cULus (UL508C) and c-tick (AS/NZS 2064). IEEE519 / EN61000-3-xx Harmonic Mitigation Guidelines IEEE587/ANSI C62.41/ EN61000-4-5 Surge Immunity EN55011 Electromagnetic compatibility EN50178, EN60146 Safety/Design
Ambient temperature	-10°C to +45° C, up to 1000 meters above sea level, with relative humidity of 5% - 85% RH, class 3K3 (functions to be maintained up to 95% RH not condensing)
Power fuses	Optional
RFI filtering	Class A2 RFI required; Class A1 RFI optional
Cooling	Air cooled with primary cooling through back channel
Standard Current Transducer	Rated secondary current 1 A and 5 A Rated apparent power 0.5 VA Accuracy class 0.5 or better



Nominal current [A]	@ 400 V	190	310	500
	@ 690 V	140	230	365
Peak Current [A]	@ 400 V	475	775	1250
	@ 690 V	375	625	1000
Enclosure size H x W x D [mm]		1540 x 840 x 373	2000 x 840 x 494	2000 x 1400 x 600 H = 2200 with plint
RMS overload [%]		120%, 60 seconds in 10 min.		

* Above 460V derating of the active filter power for the harmonic mitigation will occur

Danfoss Drives, Ulsnaes 1, DK-6300 Graasten, Denmark, Tel. +45 74 88 22 22, Fax +45 74 65 25 80, www.danfoss.com/drives • E-mail: info@danfoss.com

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