Optimizing your drive!

RHF-Active 55-480-50/60-20-A

Main

Product type	Active harmonic filter for reduction of the harmonic distortion of variable frequency drives or other non linear loads. SiC-Power MOSFET´s and Schottky Diodes allows for very high efficiency and also enables switching frequency of 50kHz, which results in effcient ellimination of high harmonics. This filter reduces the THD of the current from typically 35% to below 5%.

Type code	RHF-Active 55-480-50/60-20-A
Topology	SiC-Power MOSFET´s and Schottky Diodes
Order code	35000005
Supply voltage	3 • 380 - 480V (+10% / -15%) 50Hz/60Hz (+/- 2%)
Compensation	Harmonic Mitigation of Harmonics 2nd to 60th order Power Factor Corection Imbalance compensation
Rated current	55A (compensation current)
Typical Drive Rat.	90kW (for 35% compensation ratio target 5%)
CT accuracy	0.5 or higher
Standards and requirements	IEC/EN 61000-2-2 / -4 IEC/EN 61000-3-2 / -4 / -12 IEEE 519-2022 G5/4
Humidity	5…..95% - (non-condensing) during operation
Ambient temp.	min. -10°C (14°F) max. 40 °C (104°F) derating above 40°C (104°F): >40°C <45°C = 10% ≥45°C <50°C = 20% ≥50°C <55°C = 30% ≥55°C = 100% (off)
Altitude	<1000m derating above 1000m: -5%/1000m (up to 4000m)

specific data

Power loss	833W
Efficiency	98.2%
Sys. Efficiency	>99% (for 90kW drive rating)
Weight	18kg + 9,2kg

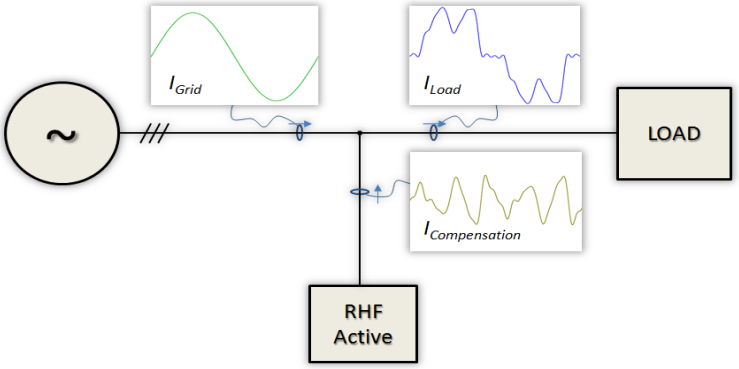
Electrical connections, controls and auxilary supply

Main supply	bolted connection M5, 6-25mm²
	Tightening torque, min-max.: 2-2.5Nm
Control	RS485 PC control, USB, Free configuartion software

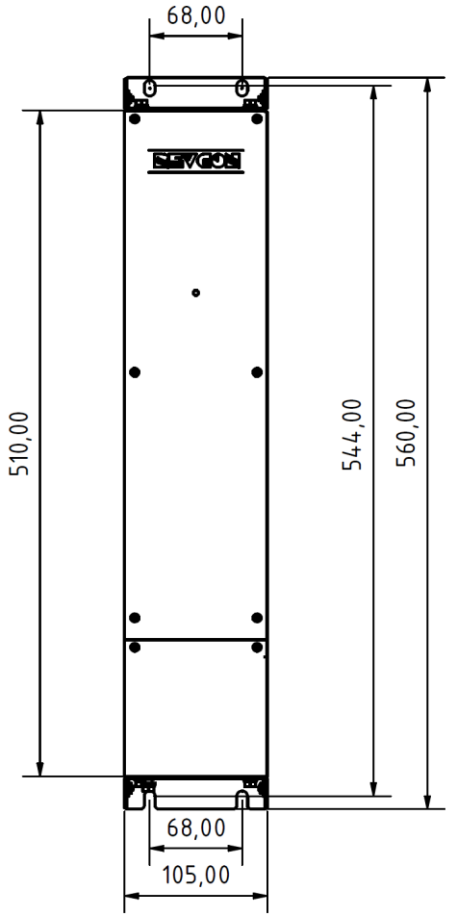
Working principle RHF-Active

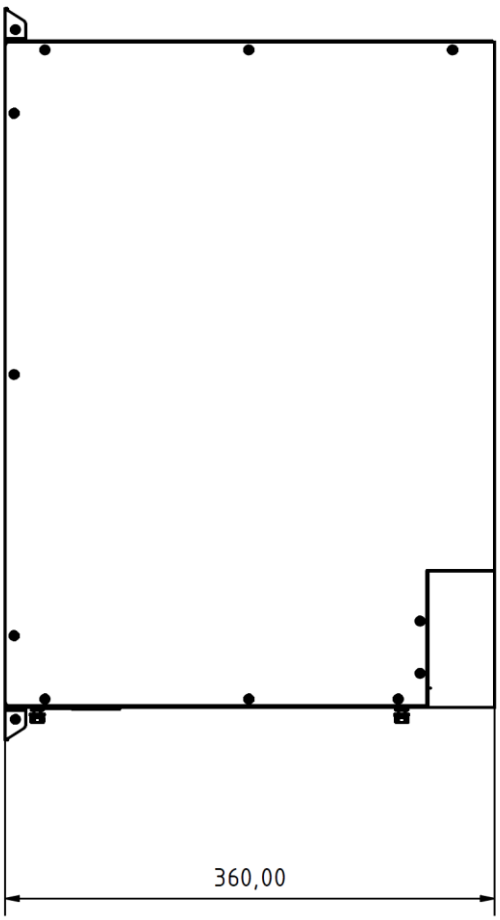
Active Harmonic Filters are parallel filter circuits injecting harmonics into the supply. These Harmonics have phase shift of 180° compared to the harmonics in the system. Therefore the injected Harmonics are eliminating the Harmonics seen from the mains supply. The following picture helps to verify the principle.

The REVCON RHF-Active, do not require any expensive commissioning on site. After power up, the unit will do self commissioning in order to reach the best possible performance, but of course individual settings are also possible. Beside harmonic mitigation of harmonics from the 2nd to 60th order, the RHF-Active offer compensation functions such as power factor correction and imbalance compensation.

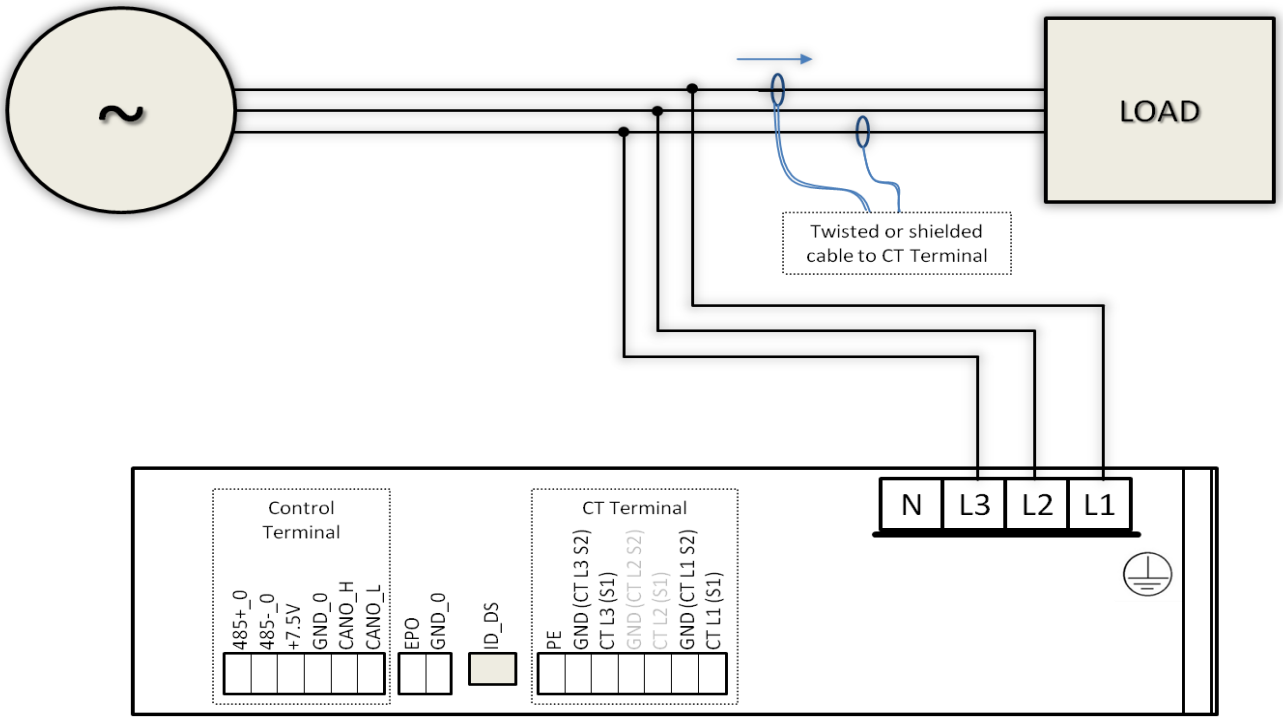


Physical dimensions filter RHF-Active 55-480-50/60-20-A





Wiring Principle 3P3W



Wiring Principle 3P4W