Active Harmonic Filter

AHF-50A



Features:

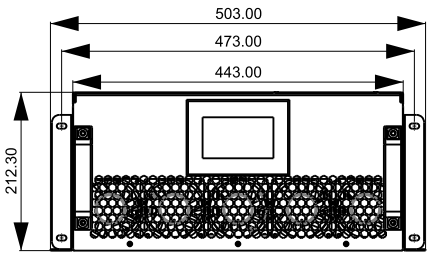
- Real time, dynamic step-less compensation
- Instant response time of 50 µsec & full response within 1 cycle
- Capacitive (Leading) & Inductive (Lagging) reactive power mitigation
- Harmonic correction up to 51th order
- RS485, Optional Wi-Fi / Ethernet modular arrangement-parallel operation up to 8 module
- Can be installed with conventional capacitor banks

Technical specifications

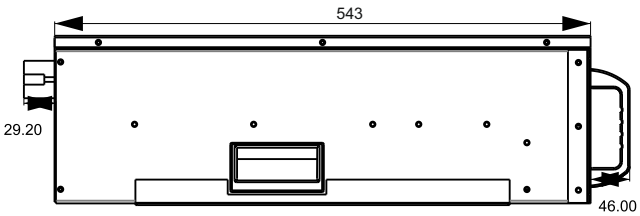
Main	
Product name	AHF
Product or component type	Active harmonic filter
System parameter	
Network configuration	3P-3W / 3P-4W
Network rated voltage	308V to 460V
Operating voltage range (P-N)	178V to 265V
Network frequency	50/60 Hz (± 2.5Hz)
RMS output current rating	50A
Current transformer	Settable through HMI up to 30000/5A
CT location	Grid side / Load side
Reactive power compensation and load balancing	As per priority & based on site (Q+H+B, H+Q+B)
Inverter topology	Three level neutral point clamped
Reactive power rating	36kVAr at 415V
Performance	
Parallel operations	Upto 8 units
Efficiency	≥97%
Losses	<3%
Response time	<50µsec and full response within 1 cycle
Overall response time	<5ms
Target power factor	Adjustable from -1 to +1
Harmonic mitigation	Upto 51th order for max current rating of 50A
Operating modes	Harmonic cancellation, Load Balancing, Power factor correction
Protection function	Over-voltage protection, Under-voltage protection, IGBT desaturation protection, over temperature protection Desaturation, over-current protection
Protection type	Built In semi conductor fuse
Cooling	Forced air cooling,188L / Sec
Communications and monitoring capabilities	
Local monitoring	4.3" HMI display
Digital Inputs	1 DI - Programmable for DG input
Digital outputs	2 DO - Programmable for alarms
Communication ports	RS485 (default)
Communication protocols	MODBUS-RTU (default)
Software updates	Through RS485 port using customised utility

Mechanical properties	
Mounting type	Wall / Rack mount
Dimensions (W × D × H) mm	503*212*617
MCCB	100A
Colour	RAL9004
Environment conditions	
Altitude	<2000m
Operating temperature	-10 ºC to 45 ºC
Relative humidity	95% RH; Non condensing
Protection class	IP20
Certification and standard	EN 50178:1997 / IEC 50178:1997
Certification	EN 61000_6_2(2005) / EN55011, GROUP1, CLASS A IEC 61000_6_2(1999) / CISPR11, GROUP1, CLASS A
AHF Series performance requirement	EN 50091-3 / IEC 62040-3 / AS 62040-3 (VFI SS 111)

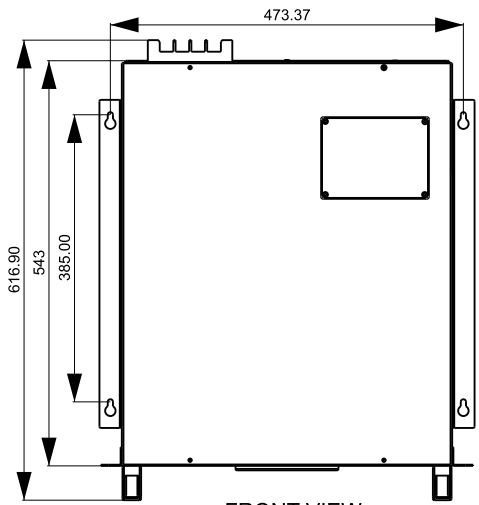
Mechanical diamensions



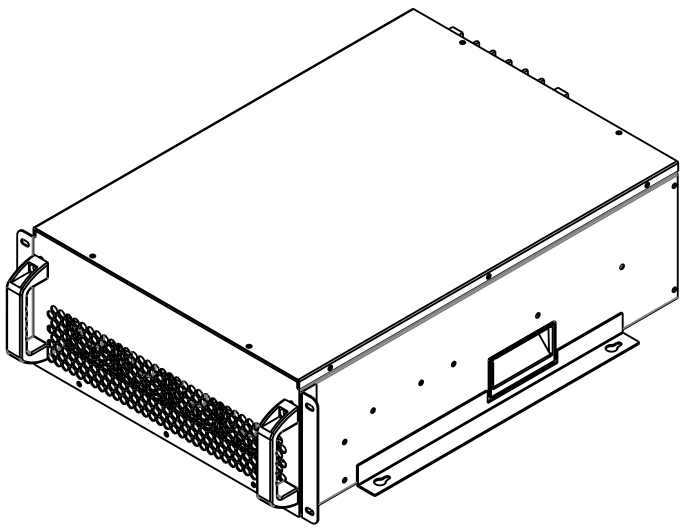
BOTTOM VIEW



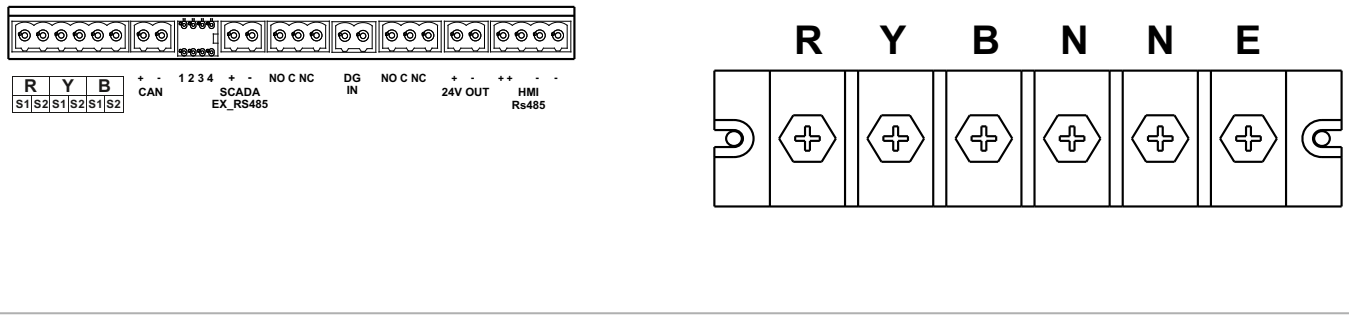
SIDE VIEW



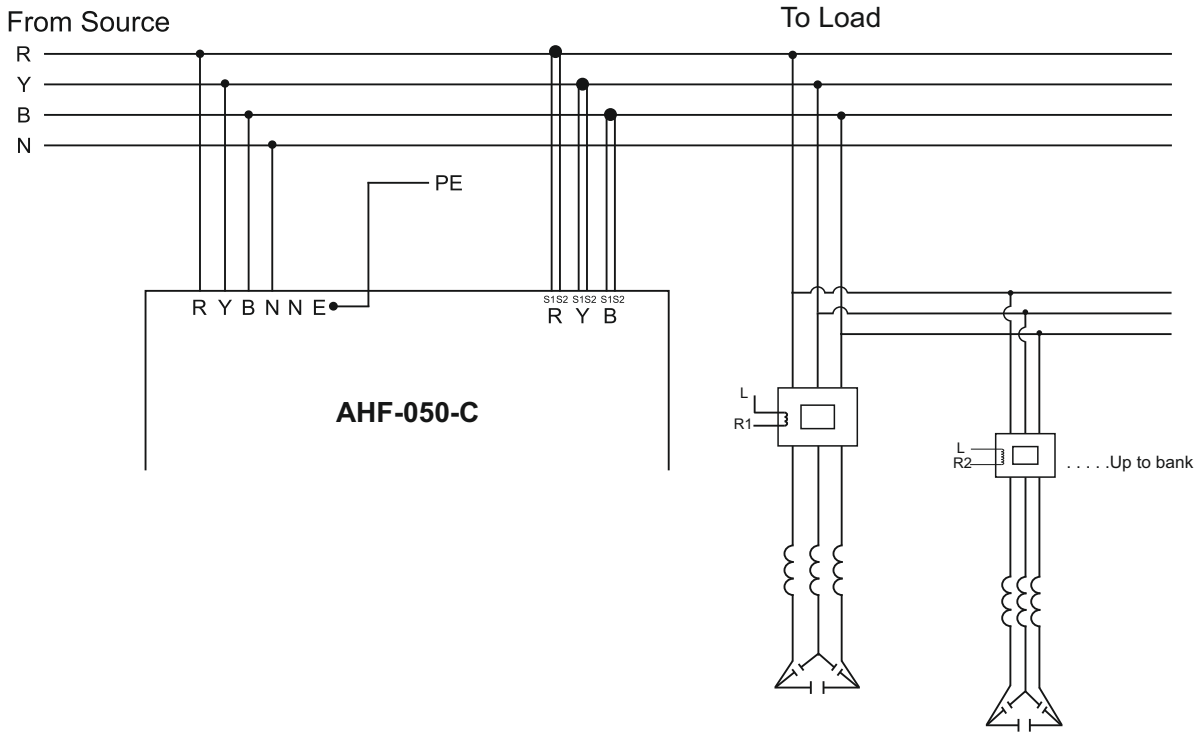
FRONT VIEW



Terminal diagram



Terminal connection



Ordering information

Product code	Description
AHF-050-RCK-4P-04-C	Active harmonic filter 50A, C, Rack mounted, 3P-4W with 4.3 inch HMI
AHF-050-WLL-4P-04-C	Active harmonic filter 50A, C, Wall mounted, 3P-4W with 4.3 inch HMI
AHF-050-WLL-4P-XX-C	Active harmonic filter 50A, C, Wall mounted, 3P-4W without display

Note : For XX Model seperate common controller is mandatory