THE FIRST CHOICE OF ENERGY EFFICIENCY

ACTIVE HARMONIC FILTER (AHF)

Active Harmonic Filter (AHF) is an IGBT based device connected in parallel with a non-linear load that requires harmonic mitigation.

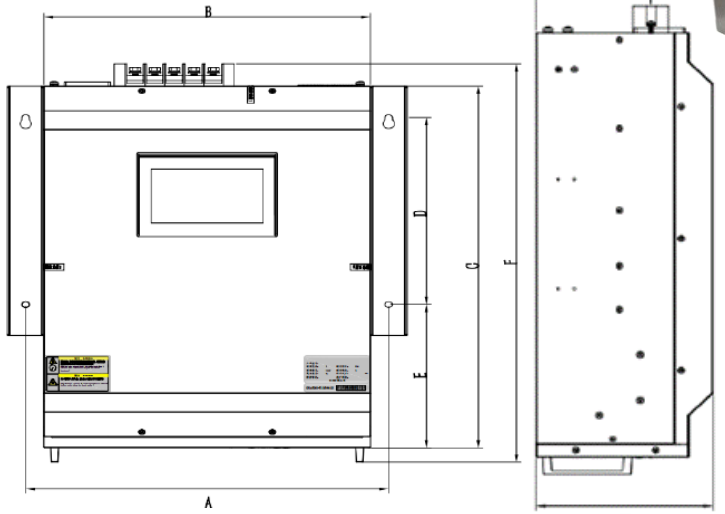
AHF monitors the currents of the load and compensate produced harmonic currents by generating an equal compensation current for each selected harmonic order 180^{O} phase shifted to the incident harmonic. This result in a reduction of load harmonics at the installation to the desired level.

FEATURES

- Protection of loads and equipment from waveform distortions, voltage variations, harmonics mitigation, low power factor and load imbalance.
- Energy efficiency and savings: Lower energy losses and a higher efficiency of the system.
- Allows reduced production downtime.
- Increase lifetime of the electrical equipment.
- Real time compensation of current harmonics.
- Flexibility: Take care of individual disturbance patterns and automatically adapt to changing load conditions and sudden network load changes
- Simple dimensioning and installation.
- Allows compliance to ER UK G5/4

PRODUCT INFORMATION - ELCO SYSTEMS - ACTIVE HARMONIC FILTER (AHF)

System Parameter	50Amp	75Amp	100Amp	150Amp
Rated Voltage	400V/415V ±15%			
Frequency	50 Hz -10% +20%			
Parallel	Max 15 for 7'HMI			
Efficiency	Up to 98%			
Wiring	3P4W + PE			
Inverter topology	3-level IGBT Inverter with PWM			
Protection Functions	Over or under -voltage/grid voltage unbalance, over or under-current/over or under-temperature/voltage abnormality/ over or underfreqeuncy, pre-charge fault, IGBT overheat, sequence fault and CT fault			
Heat Loss	< 2.5%			
CT	100/5 ~ 10000/5			
MTBF	Up to 100,000 hours			
Switching Frequency	20kHz			
Unbalanced current compensation	Negative sequence/zero sequence			
Cable Entry	Rear of Module			
Harmonic compensation capacity	99%			
Overcurrent	Up to 120%			
Alarm record	Available			
Cooling Direction	Front Entry			
Performance				
Instantaneous response time	<0.05 ms			
Full Response Time	< 5 ms			
Target Power Factor	1.0 or as setting			
Cooling Mode	Fan cooling			
Noise	≤ 55db			
Fixing Type	Drawer and Wall Mounted Type			
Drawer Type Size (WxHxD)	450 x 88 x580	450 x 110 x 580	450 x 160 x 580	450 x 192 x 580
Net Weight	18kg	21kg	30kg	38kg
Environment Condition				
Altitude	≤1000m			
Operating Temperature	-10°C~+50°C			
Relative Humidity	5%~95% without condensation			
Communication Function				
RS485 Communication	RS485 parallel communication connection			
Module Display	64.5mm*13.8mm LCD screen			
HMI Monitoring Screen	7-inch LCD touch screen (155mm x 88mm) - with IP65 Display with USB Port for export data Display Funcation - % working of SVG that compensate to system and internal temperature, Voltage, Current, THDv, THDi, Harmonic Spectrum, Power Factor, Active Power, Reactive Power, Apparent Power in grid and load side. Control Fuction - Current Compensation, Current Vectors, Compensation Priority, change limit temperature of internal IGBT.			
Standards and Certifications				
Electrical Safety	Low Voltage Directive 2014/35/EU, EN 62477-1:2012+A11:2014+A1:2017, EIT022001			
Electromagnetic Compatibility	IEC 61000-3-2 : 2019, IEC 61000-3-3 : 2019, IEC 61000-6-1:2019, IEC 61000-6-3 : 2007/A1:2011 IEC 61000-4-2 , IEC 61000-4-3, IEC 61000-4-4 , IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-11, 2014/30/EU, G 5/4-1, BS EN 61000-6-4, BS EN 61000-6-2			
Third Party Approvals	CE Certificate,CQC,Type Test Report , ISO9001 Certificate			

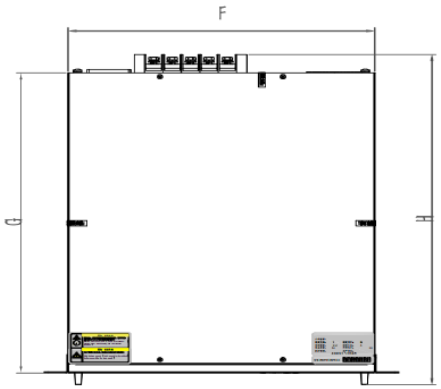


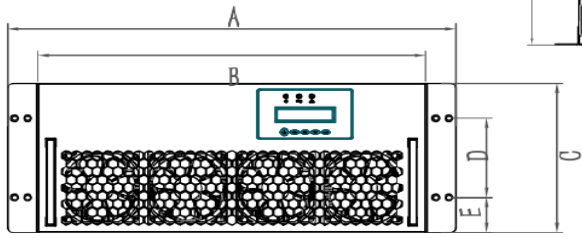
Wall Mounted Type (50A / 75A / 100A/ 150A)

PRODUCT INFORMATION - AHF

Product Code	Type	Amp	Dimension (mm)							
			A	B	C	D	E	F	G	H
AHF-ELCO0050400D	Drawer Type	50.0	520	450	88	50	19	450	580	643
AHF-ELCO0075400D		75.0	520	450	110	72	19	450	580	643
AHF-ELCO0100400D		100.0	520	450	160	70	45	450	580	639
AHF-ELCO0150400D		150.0	520	450	192	102	45	450	580	639
AHF-ELCO0050400W	Wall Mounted	50.0	500	450	580	300	230	643	63.5	88
AHF-ELCO0075400W		75.0	500	450	580	300	230	643	85.5	130
AHF-ELCO0100400W		100.0	500	450	580	300	230	639	123.5	190
AHF-ELCO0150400W		150.0	500	450	580	300	230	639	148.5	222

PRODUCT DIMENSION





Drawer Type