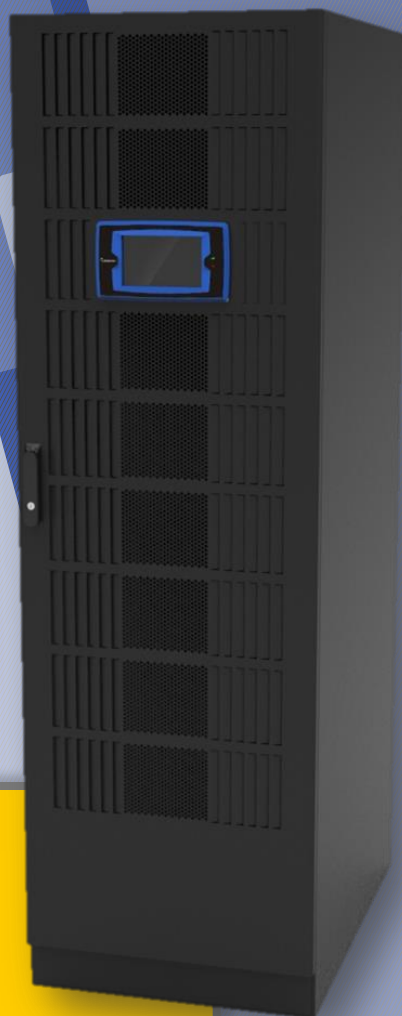


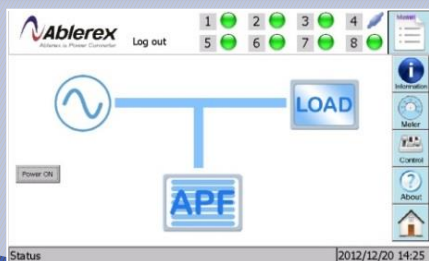
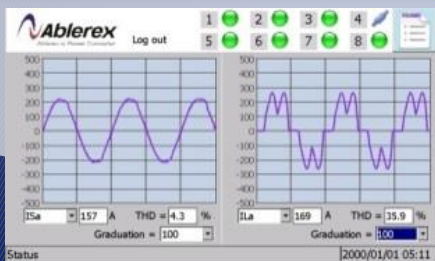
# MODULAR ESD34 Active Power Filter

## WORLD FIRST HOT-Swappable Compact Power Module



### Features

- Modular system 80A to 1920A Scalable.
- Harmonic compensation for 3-wire and 4-wire system.
- From 2<sup>nd</sup> to 51<sup>st</sup> harmonic order attenuation.
- Close / Open Loop Selectable Control.
- Full-time DSP Control System.
- Load balancing between phases and unload neutral wire.
- Programmable Harmonics Compensation and Power Factor Correction.
- Space-saving high power density design.
- Different Capacity can Operate in Parallel.
- Market Only 7inch Coloured LCD Touch Screen for advanced control and monitoring.



Load	Hz	THD	ΣS	ΣP	kVA
Freq	60.05				116
Vab	397	V 1.5	%	ΣQ	107
Vbc	397	V 1.5	%	ΣQ	-25
Vca	397	V 1.5	%	PF	0.92
Ia	169	A 35.9	%	DPFa	0.97
Ib	169	A 36.2	%	DPFb	0.97
Ic	169	A 36	%	DPFc	0.97
In	0	A			

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General Characteristics		HMI & Communication	
Storage Temperature	-20°C to 70°C	Dry Contact	3 Output Dry Contact
Operating Temperature	+0°C to 40°C		1 Input Dry Contact
Relative Humidity	<95%		1 EPO
Operating Altitude	<1000m	Communication	USB, RS-485, Ethernet
Reference Harmonics Standard	EN61000-3-4, IEEE 519-1992	Monitoring Software (Optional)	ESD-Link34
Reference Design Standard	EN60146	Communication Protocol	J-Bus/Modbus RTU Protocol
Safety Standard	EN50178		

Control Module Specification	
Input Voltage	400V +15%,-20%
Phase/Wires	3 phase 4 wires/3wires
Frequency	50/60±3 Hz (Auto Sensing)
Compensated Harmonic Orders	From 2 <sup>nd</sup> to 51 <sup>st</sup> order Global /Selective Mode : Up to 20 orders
Power Factor Correction	Power factor can be programmed from 0.6 lagging to 0.6 leading
Load Balancing	Both Phase to Phase and Phase to Neutral
CT Ratio	Primary Current: 100A~10000A    Secondary Current: 1A/5A
CT Location	Source Side: Close Loop Control    Load Side: Open Loop Control
Response Time	Global Compensation from 2 <sup>nd</sup> to 51 <sup>st</sup> < 20ms Selective Compensation < 1ms
No. of controllable Power Module	Up to 8 Power Modules.
Parallel	Up to 4 Control Modules.
Maximum Heat losses	50 Watt
Weight	14Kg

Power Module Specification	
Input Voltage	400V +15%,-20%
Phase/Wires	3 phase 4 wires/3wires
Frequency	50/60±3 Hz
Rating Current of Each Phase	80 Arms
Rating Current of Neutral	240 Arms
Inrush Current	Less than rated current
Current Limitation	Yes, at full correcting
Maximum Heat losses	1660 Watt
Weight	42Kg

Enclosure Specification		
For Maximum Capacity	Up to 480A (6 Power Modules + 1 Control Module)	Up to 320A (4 Power Modules + 1 Control Module)
Dimensions (WxDxH)	600 x 900 x 1950 mm	600 x 900 x 1500 mm
Weight (w/o Modules)	195 Kg	150 Kg
Protection Index	IP21	