Ablerex
Experts in Power Conversion

ENERSINE
(Active Power Filters) - Modular


Enersine 480A

MAXIMUM ACTIVE HARMONICS AND POWER FACTOR COMPENSATION

Ablerex Active Power Filters (APF) in modular topology are the best solution to compensate variable power factor and harmonics. With high current ratings from 320A to 480A they are adapted to any load size for maximum versatility of use.

PERFECT FOR:

Highly polluting loads | Motor drive systems | CNC machines | Airports | Industry | Medical

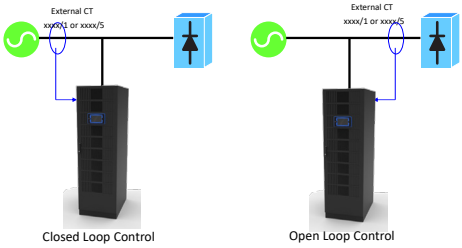
FEATURES

- 3 level converter based on multi DSP control technology
- Space-saving high power density design
- The same model applies 3 Phase 3 Wires/ 4 Wires System
- Can work in closed or open loop
- Compensate up to 51st harmonics with response time of less than 1ms
- Selective mode - Choice of the harmonics to compensate
- Power Factor Correction
- Correct unbalanced three phase utility
- No overload effects
- Advanced operations interface: 7"Color LCD Touch Screen to set all system's parameters and read the 500 lines logfile
- SD card to download logfile, records waveform and parameter
- Display voltage/current waveform, parameter and frequency spectrum
- Multiple languages
- Customizable LCD SW with logo
- Complete standard communication: 3x output and 1x input dry contact, RS485 ModBus, ethernet, settable e-mail alarm

SPECIFIC FOR MODULAR

- Easy hot-scalable and hot-swappable power modules
- 60 or 80A per module, up to 1920A with 24 in parallel
- 1 LCD screen for all the parallel system
- 1 Control Module for 8 Power Modules
- Easy to install in standard 19" rack cabinet

OPEN/CLOSE LOOP CONTROL



Closed Loop Control | Open Loop Control

USER FRIENDLY HMI

The 7" color touch screen display of the APF lets you set all the parameters, read the logfile, download data to a removeable SD card. It can also show voltage and current waveforms, before and after the APF activation, together with the frequency spectrum through a bargraph. It can be personalized with different logo and languages.

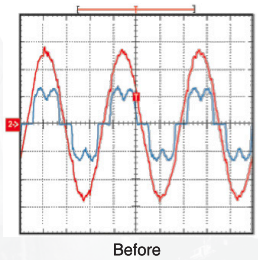
SPECIFICATIONS

MODEL		ENERSINE 320	ENERSINE 480
ELECTRICAL	Input voltage	400V +15%, -20%; 480V +10%, -20%	
	Phase/Wires	3-phase 4 wires/3wires	
	Max phase compensation current per cabinet	320A	480A
	Frequency	50/60 ±3Hz	
	Harmonic compensation	From 2nd to 51st order	
	Power factor correction	Both lagging and leading programmable	
	Load balancing	Both phase to phase and phase to neutral	
	Reaction time	66μs	
	Control algorithm	CT at Source Side: closed loop control - CT at Load Side: open loop control	
	Parallel (up to)	1440A	1920A
COMMUNICATION	Display	7" colorful LCD touch screen	
	Dry contact	3 output dry contacts, 1 input dry contact, 1 EPO	
	Communication	USB, RS-485 modbus RTU port, ethernet port	
	Software	Dedicated monitoring and data storage software	
GENERAL	Equipment storage temperature	-20°C to +70°C	
	Operating temperature	-10°C to +40°C without derating	
	Relative humidity	<95%	
	Operating altitude	<1000m without derating	
	Reference harmonic standard	EN61000-3-4, IEEE 519-1992	
	Reference design standard	EN60146	
	Safety standard	EN50178; UL508	
	Electromagnetic compatibility	EN61000-6-4, EN55011, CISPR 11, IEC 61000-3-12, IEC 61000-3-11, IEC 61000-6-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, EN 61000-4-8, EN61000-4-34	
PHYSICAL	Topology	Modular	
	Installation	Floor	
	Max n° of modules per cabinet (60 or 80 A, mixable)	4	6
	Max modules in parallel	24	24
	Maximum current	1920A	
	Dimensions (WxHxD) mm	600x1500x900	600x1950x900
	Weight (kg)	161	207
	IP protection degree	IP21	
	Open chassis version	-	

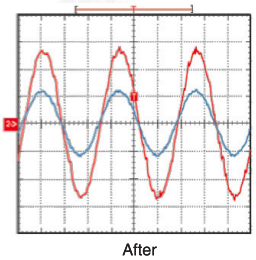
Specifications subject to change without notice

TRUE HARMONIC & POWER FACTOR CORRECTION

Ablerex APF not only compensates harmonic current but also improves power factor. It will also correct for either a leading or lagging power factor. Enersine can compensate harmonics up to order 51st in less then 1ms.



Before
THDi%=30%, PF=0.81



After
THDi%=4.3%, PF=1.0