Grid Solutions

REACTIVE POWER COMPENSATION PRODUCT SOLUTIONS

MaxSine™ Centaurus

Active harmonic filter

Reactive power compensation equipment from Grid Solutions helps customers improve performance with energy savings and better power quality. Our products and solutions save customers money and reduce the environmental impact of their operations.

For active compensation of harmonics currents and reactive power

There is an increasing amount of electrical equipment with non-linear voltage-current characteristics connected to the network. The harmonic currents they produce cause harmonic voltages in the network impedances, which add to the fundamental system voltage and result in voltage distortion. This voltage distortion is experienced by all electrical equipment connected to the network, leading to higher thermal loading of motors, transformers, capacitors, switchgear and cabling. Some of the electrical equipment develops more audible noise when supplied with distorted voltage. Sensitive electronic protection, control and ripple control systems are not likely to operate properly when supplied with distorted voltage. The most effective way to eliminate harmonics is Maxsine active harmonic filter.

MaxSine™ Centaurus

CUSTOMER BENEFITS

- Real time filtering and power compensation
- Compact modular construction
- Improved power quality
- Money savings

FUNCTIONS

- Two compensation modes: fast mode for selectable harmonics (1st-50th) or ultra fast mode for global compensation
- Devices available for 3-wire as well as 3-wire + neutral (4-wire)
- Priority setting for harmonics and/or fundamental reactive compensation
- Total power factor can be forced to 1.0
- Adjustable amplitude and phase of individual harmonic compensation current
- Excellent response time < 10ms and adjustable from 1 network period to 50 network periods in fast mode
- Multiple CT-circuits (open loop, closed loop, CT-additions, etc.)

APPLICATIONS

- Datacenter
- Telecom
- Airports
- Metro lines
- Hospitals
- Commercial buildings
- fast-changing loads (welding machines, lifts)

WHY MaxSine™ Centaurus ?

- Modular construction
- Power adaption by increasing the number of modules
- Compact size
- Floor mounted in cubicle or Directly wall-mounted
- Basic modules 100 A to 150 A line current and 300 A to 450 A neutral current respectively
- 208 V-750 V mains voltage
- Multilingual, color touch LCD screen
- Simple wiring and convenient maintenance

MaxSine™ FEATURES

- Small size enables customized modular cabinet construction
- Three level hardware topology
- Two sets of current sampling hardware port design suitable for complex field harmonic filtering applications
- Multiple protection functions
- Standard component RS485, Available accessories GPRS(4G)、Bluetooth wireless and mobile APP
- Clock

MaxSine™ Centaurus

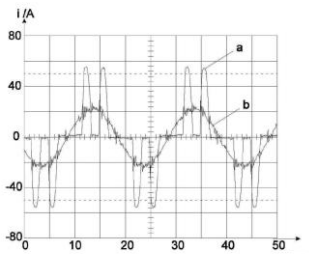
TECHNICAL CHARACTERISTICS

Rated output:	**MaxSine™ Centaurus 100A**	**MaxSine™ Centaurus 150A**
phase:	100 Arms	150 Arms
Main's voltage:	220/400V_{AC} (200V~440V); 690V_{AC} (480V~750V)	
Network configuration:	3-Phase 3-Wire; 3-Phase 4-Wire	
Frequency:	50Hz / 60Hz (±5%)	
Switching frequency:	~20 kHz	
Overload capability:	1.1×I RMS Long time; 1.2×I RMS for 30S;	
Response time:	< 5 ms （Dynamic reponse time: < 100 μs）	
Harmonics:	2^{nd} ... 50^{th}	
Compensation effect:	≥95%	
Power dissipation:	< 3% of the rated power of the device	
Noise level:	≤65 dB acc. To ISO 3746	
Parallel No.:	≤10 sets	
Ambient temperature:	-25 °C ... +40 °C	
Storage temperature:	-25 °C ... +70 °C	
Atmospheric humidity:	< 95% RH	
Elevation of installation:	1500 m; 1500~3000m, capacity reduction for use; (>3000m, please contact GE)	
Degree of protection:	IP20 (Higher protection requirements can be customized)	
Protection functions:	over-voltage; low-voltage; short-circuit; reverse of inverter bridge; over-compensation; phase loss; over-heating, etc.	
Interface Protocol:	RS485;	
Enclosure:	MaxSine Centaurus 100A/150A (220V/400V) 520×548×240 mm （W×D×H） 55 kg	Maxsine Centaurus 100A/150A (690V) 520×730×225 mm （W×D×H） 60 kg
Enclosure material:	1.5mm, iron sheet; Color RAL 7035;	
Cooling:	Forced	
EMC immunity:	EN 61000-6-2	
EMC emissions:	EN 61000-6-3	
Electrical safety:	IEC 61800-5-1	

EXTENDED POWER METER FUNCTIONS

- Network voltages
- Load, network and compensation currents of individual phases and neutral
- RMS, fundamental, harmonic currents and crest factors
- Active fundamental reactive, apparent and harmonics reactive power, cos phi, THD(u), THD(i), current harmonics spectrum up to 50^{th} harmonics
- Waveforms, Histogram of currents and voltage

ISO 9001, ISO 14001 and OHSAS 18001-cerfified management programs govern the entire development and production process for power compensation products and ensure a high-quality product.



Load current of a drive before (a) and after (b) compensation with MaxSine™

For more information, please contact GE Grid Solutions

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