Grid Solutions

MAXSINE™ CENTAURUS

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 develop 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.

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.)

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 50 A to 100 A line current and 150 A respectively 300 A neutral current
- 200V-750V mains voltage
- Color touch LCD screen
- Simple wiring and convenient maintenance
- One HMI required up to 10 modules

Key Features

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

Applications

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

Key Benefits

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

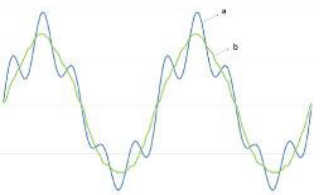
GE VERNOVA

Technical Characteristics

Rated output: Phases	**MaxSine™ Centaurus 50A** 50 Arms	**MaxSine™ Centaurus 100A** 100 Arms
Mains voltage	208/400 VAC (200 V~440 V) 660/690 VAC (480 V~750 V)	
Network configuration	3-Phase 3-Wire3-Phase 4-Wire	
Frequency	50Hz / 60Hz (±5%)	
Switching frequency	20kHz	
Overload capability	1.1 x I RMS Long time; 1.2 x I RMS for 30s	
Response time	<10 ms	
Harmonics	2^{nd} ... 50^{th}	
Compensation effect	> 95%	
Power dissipation	< 3% of the rated power of the device	
Noise level	< 6SdB 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	1500m; 1500~3000m Capacity reduction use; (more than 3000m please contact your supplier)	
Degree of protection	IP20 (Higher protection requirements can be customized)	
Protection functions	over-voltage protection; low-voltage protection; short-circuit protection; reverse protection of inverter bridge; over-compensation protection; phase loss protection; overheating protection etc.	
Interface Protocol	RS485; GPRS(4G) for available accessories	
Enclosure	MaxSine™ Centaurus 50A 520×778×172 mm (WxDxH) 50 kg	MaxSine™ Centaurus 100A 520×778×172 mm (WxDxH) 50 kg
Enclosure material	Noless than 1.5mm sheet ironColor 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, cosφ, THD(u), THD(i), current harmonics spectrum up to 50^{th} harmonics
- Waveforms of currents
- Cabinet temperature
- Uploading of measurements for reporting



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

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

For more information, visit
gevernova.com/grid-solutions

GEA-N50190
English
251008

GE VERNOVA