OPS

GSC

GRID SUPPORT CONDITIONER (GSC SERIES)

A unique utility interactive photovoltaic solution with backup energy storage.

Are you responsible for continuous good quality power supply to vital facilities such as industry, banks, hospitals, schools or offices? OPS GSC technology can help you achieve this goal, providing reliable, high quality power conditioning and grid backup features for industrial and commercial systems while taking advantage of feed in tariffs and carbon credits (RECs).

POWER QUALITY AND SECURITY

End-users can enjoy normal operation of key electrical equipment as fluctuating grid voltages and even outages are conditioned into a smooth and continuous power supply. In the digital era there is an increasing need for greater power supply security where on site equipment has a crucial role. Solar power is prioritized by the GSC and where additional power is needed, power is imported from the local grid.

UTILITY INTERACTIVE

Significant benefits can accrue where a Feed in Tariff or RECs apply to your solar PV based GSC. In the case where the utility is introducing variable tariffs like peak, shoulder and off peak, the GSC can operate to peak shave with the battery storage and also utilize cheap overnight power for battery recharging. With advanced integration, control and SCADA optimisation, our GSC is ideal for mission critical power, industrial solar UPS systems and green energy buildings that are connected to constrained grids.

HIGH EFFICIENCY POWER CONVERSION

The internal power converter is a high performance IGBT based converter with inherently high efficiency. The on board digital signal processor technology provides ultra fast control of all system functions. Optional features include potential to export all available solar power to the grid. The GSC combines the functions of a grid interactive solar inverter while delivering high quality, regulated voltage with low harmonics to your system.

ON BOARD MPPT

The standard GSC includes an internal MPPT which is rated at the inverter power level. This ensures that the solar PV energy is fully available to the system for the external load and battery management.

GRID MANAGEMENT AND VOLTAGE CONDITIONING

The GSC anti-islanding features grid connect/disconnect and local power stabilisation. Internal control allows for voltage conditioning to the load to ensure a high quality and regulated power supply at all times. The GSC has a unique algorithm to determine optimum energy flows under differential tariff regimes.

Creating a better future through green innovation

LOCAL GENSET MANAGEMENT

The GSC can include an option to start and stop an additional local generator set. The generator is used only when all other options are exhausted. Its operational time is controlled and the generator loading is kept within the most efficient ranges to increase fuel efficiency.

BATTERY MANAGEMENT

Lead acid batteries are the common choice of energy storage and the GSC includes a sophisticated multiple stage charging regime for this technology. The charging management will optimise the battery life and ensure cost effective deployment of the available energy reserves.

MONITORING AND CONTROL

Industry standard ethernet ports are provided which allow connection both locally or remotely via RS232 or RS485. OPS provide a range of user-friendly SCADA packages which enable local and remote monitoring and control. Please refer to our OPS Coms, Site Connect and Site Link brochures for useful software applications. OPS can provide a link to the utility for two way control and power management optimization.

TYPICAL APPLICATIONS

- Weak or poor grids with outages, surges, sags, brownouts.
- Essential power supply in public buildings, urban and commercial sites.
- Back for factories and other critical power requirements.
- Grid connected applications where a feed in tariff or carbon credits can be generated.

	GSC -7.5	GSC -10	GSC -12.5	GSC -15	GSC -17.5	GSC -10	GSC -15	GSC -20	GSC -25	GSC -50	GSC -75	GSC -100	GSC -150	GSC -200	GSC -250	GSC -350
→ Output Values																
Phase	1					3										
Nominal AC Volts	230					230/400										
Frequency Hz	50/60															
→ Input Values																
Nominal AC power kW	7.5	10	12.5	15	17.5	10	15	20	25	50	75	100	150	200	250	350
Nominal DC Volts	120								240				360			
Surge 30seconds kW	11.25	15	18.75	22.5	26.25	15	22.5	30	37.5	75	112.5	150	225	300	350	490
Nominal PV power (kW)	7.5	10	12.5	15	17.5	10	15	20	25	50	75	100	150	200	250	350
Grid specification	1Ø 7.5kVA at 230V, 50Hz, 2 wire	1Ø 10kVA at 230V, 50Hz, 2 wire	1Ø 12.5kVA at 230V, 50Hz, 2 wire	1Ø 15kVA at 230V, 50Hz, 2 wire	1Ø 17.5kVA at 230V, 50Hz, 2 wire	3Ø 10kVA at 230/400V, 50Hz, 4 wire	3Ø 15kVA at 230/400V, 50Hz, 4 wire	3Ø 20kVA at 230/400V, 50Hz, 4 wire	3Ø 25kVA at 230/400V, 50Hz, 4 wire	3Ø 50kVA at 230/400V, 50Hz, 4 wire	3Ø 75kVA at 230/400V, 50Hz, 4 wire	3Ø 100kVA at 230/400V, 50Hz, 4 wire	3Ø 150kVA at 230/400V, 50Hz, 4 wire	3Ø 200kVA at 230/400V, 50Hz, 4 wire	3Ø 250kVA at 230/400V, 50Hz, 4 wire	3Ø 350kVA at 230/400V, 50Hz, 4 wire
Grid tolerance	10%, -15%, ± 3Hz															
Max Load kVA	5.625	7.5	9.375	11.25	13.125	7.5	11.25	15	18.75	37.5	56.25	75	112.5	150	187.5	262.5
MPPT kW	7.5	10	12.5	15	17.5	10	15	20	25	50	75	100	MPPT supplied externally			
MPPT operating range -DC	150-300								300-600				MPPT supplied externally			
Max PV array volts VDC	400								750				MPPT supplied externally			
→ Standard Features																
Front panel analog meter	–							✔								
Data logging	✔															
Weight kg	200	250	300	300	300	350	400	700	800	900	1000	1000	1200	1600	2000	2400
Dimensions H x W x D mm	1050x585x420		1220x585x420		1250x 585x 450	1150x700x540		1700x900x1050		1900x1200x1050		1900x 1300x 1050	1900x 1600x 1050	1900x2000x1050		1900x 3000x 1050
Warranty years	5															

Contact us today for more information
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OPTIMAL POWER SOLUTIONS