

OPS

# GEC

## GRID EXPORT CONDITIONER (GEC SERIES)

Affordable, grid-connected solar power conversion products, focused on maximum energy yield.

**OPTIMAL**  
POWER SOLUTIONS

# GEC



The GEC is a unique grid-connected power conditioner by global standards. Clients enjoy increased energy harvesting and operational flexibility due to our advanced control and monitoring options.

### IMPROVED POWER UTILITY SYSTEMS

Our grid-connected power solutions have evolved through extensive experience of Indian and other Asian grid networks. These power systems suffer regular voltage sags and surges, notches and frequency shifts which reduce enduser productivity and lead to business losses. Advanced phase-by-phase control technologies built into the GEC allow for solar power plants to tolerate wide-ranging grid conditions. Our technology is first choice for clients seeking to maximise energy yield and achieve strong financial returns.

### INDUSTRIAL AND COMMERCIAL APPLICATIONS

Many industries face the problems of poor power supply and regular blackouts. The GEC phase-by-phase control isolates losses and disturbances per phase so that the total system is not affected. The GEC is ideal for systems of 10 to 100kWp where land space or rooftop areas are physically available for solar array installations. OPS provide local mini-scada software packages as an option for end-user system management and performance assessment.

### MEGAWATT SOLAR GRID-CONNECT SYSTEMS

In response to growing market demand for large solar farms, OPS has developed modular solutions that provide high performance, easy maintenance, and future system expansion options. The OPS GEC 250K is our preferred product choice in multi-megawatt solar farm applications. Our unique sequential switching and bridging options for the GEC series are well accepted by utilities and large corporate clients who wish to maximise solar farm efficiency and obtain maximum rate of return.

### 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.

For multi-megawatt applications, our PVNet software enables comprehensive monitoring and control of each GEC unit as well as the entire solar power plant including important parameters of the AC evacuation equipment.

## OPERATIONAL OVERVIEW

The GEC is a fully automated system, designed to operate with minimum maintenance and operation.

- The system automatically 'wakes up' in the morning and exports power provided there is sufficient solar energy and the grid voltage and frequency are in range. An advanced MPPT algorithm ensures all available solar power is harnessed and exported to the utility.
- When exported power is below a preset value or the solar insolation is below a pre-set value for a predetermined amount of time, the inverter is disconnected from the grid and is operated in 'sleep mode'. In this mode the inverter power stage components are switched off thereby keeping the standby losses to a minimum.
- The inverter will reconnect to the grid network when at least one phase of the grid supply is back in range.

- The system will continue operating even when only one phase of the incoming grid supply is available. If the last remaining phase voltage was to move out of the preset range, the inverter will immediately disconnect from the grid.
- The inverter will reconnect after a predetermined time, when at least one phase of the grid supply is back in the preset range.

## TYPICAL APPLICATIONS

- Rooftop solar grid connect systems.
- Building integrated PV solar systems.
- Distributed generation options in the utility network

	GEC -7.5	GEC -10	GEC -12.5	GEC -15	GEC -17.5	GEC -10	GEC -15	GEC -20	GEC -25	GEC -50	GEC -75	GEC -100	GEC -150	GEC -200	GEC -250	
→ 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	
Max PV power kW	8.625	11.5	14.375	17.25	20.125	11.5	17.25	23	28.75	57.5	86.25	115	172.5	230	287.5	
MPPT voltage range VDC	150-250									330-620			450-750			
Max PV array volts VDC	300									600			875			
→ 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	
Dimensions H x W x D mm	1050x 585x 450	1150x700x540			1250x 585x 450	1150x700x540		1700x800x1050		1900x1000x1050		1900x 2000x 1050	1900x 1600x 1050	1900x2000x1050		
Warranty years	5															

Contact us today for more information

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