



# PC1000

1000kVA 700 - 2822kWh



## The Battery System, designed for Microgrids.

Integrating SIEMENS battery inverter, solar inverters and microgrid controller to form the core of your renewable solution.

### Product Applications

#### Microgrid

Take control of your energy autonomy. Connect and disconnect from the network seamlessly.

BASE ● SPS ●

#### Solar Pumping

Renewable solution to provide 24/7 pumping from solar energy.

BASE ○ SPS ●

#### Grid Connected Battery

Grid-connected BESS for community batteries, VPP & EV charging.

BASE ● SPS ○

#### Off-Grid Hybrid

Stand-alone power system for remote infrastructure and communities.

BASE ○ SPS ●

#### Solar Smoothing

Solar integration for constrained networks or diesel/gas power stations.

BASE ○ SPS ●

#### EV Charging

Battery-buffered electric vehicle charging solutions.

BASE ● SPS ●

#### Safe

- Advanced Energy Management System for safety and performance.
- Safe battery management of LFP cells.
- Integral fire protection, safety & emergency stop mechanisms.

#### Smart

- Graphical HMI Control Interface.
- SCADA / DNP3 Compatible.
- Fleet remote monitoring & reporting.
- Easy solar farm and generator power station integration.

#### Robust

- Hot dip galvanised base.
- Ruggedised enclosure with thermal insulation.
- Sunshield outer layer.
- Durable powder coating.
- IP55 / IP56 Dual Zone rating.

#### Simple Install

- Reduce project risk with pre-integrated microgrid controller and PV inverter.
- Quick on-site installation.
- Complete system factory tested, fast site commissioning.
- Flexible site placement.



Australia's most flexible & reliable  
energy control system.

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# POWERCORE PC1000

Power Type	Three Phase
Max Power	1000kVA
Max System Energy Capacity	2822kWh
Max Integrated Solar AC	1200kVA
Max Solar DC	1800kWp

SPECIFICATIONS	UNIT	RANGE
Rated Power	kVA	1000
Peak Power	kVA (3sec)	1400
Reactive Power (Capacitive & inductive Capacity)	kVAr	800
Inverter Full Load Continuous	A	1270
Fault Current / Output Breaker trip time		2.2kA for <100ms
Load Acceptance & Rejection Rate		50% <100ms, 100% <500ms
AC Voltage	V	400 – 430 (415V nominal)
HV Voltage (option)	kV	11 / 22 / 33
Frequency	Hz	50
Drive Unit		Customised Siemens SINAMICS S120
Powertrain		Full four quadrant operation
Transformer		Galvanically Isolated
Inverter Efficiency		98%
Power Factor		-1 to 0 to +1
STATCOM Support Modes		Volt-VAr & fixed VAr
Communications		4G / Wi-Fi / Satellite
IP Rating		IP55
Operating Ambient Temperature	°C	-10°C – 60°C (40°C without de-rate)
Altitude (MASL)	m	<1000
Relative Humidity		0 - 95% (Non-Condensing)

ENERGY STORAGE OPTIONS	UNIT	G <sup>1</sup>	N	P	R	U	W	Y	AB
Battery BOL	kWh	700	1411	1646	1881	2117	2352	2587	2882
Battery EOL	kWh	70% after 10 years (90% DoD, 1 cycle per day)							
Depth of Discharge		90%							
Operational Life Cycle		70% after 10 years (90% DoD, 1 cycle per day)							
Dimensions WxH	mm	2400 x 2400							
Dimensions L	mm	4700	10800 <sup>2</sup>	10800 <sup>2</sup>	10800 <sup>2</sup>	10800 <sup>2</sup>	10800 <sup>2</sup>	10800 <sup>2</sup>	10800 <sup>2</sup>
Weight	kg	10000	15200	16400	18600	19800	21000	22200	23400
Battery Type		Lithium-Iron Phosphate (LFP)							
Round Trip Efficiency		>96%							
Internal Temperature	°C	<35°C Battery Cell Temperature (Thermostatically Controlled)							

PV INVERTER OPTIONS	UNIT	400	500	600	700	800	900	1000	1100	1200
Maximum AC Output	kW	400	500	600	700	800	900	1000	1100	1200
Maximum DC Power	kWp	600	750	900	1050	1200	1350	1500	1650	1800
DC Input Voltage Range	V	580...1000								
MPP Trackers	qty	4	5	6	7	8	9	10	11	12
Equipment Standards	IEC 62619:2017 IEC 62109-1:2010 IEC 62109-2:2010 IEC 61800-5-1:2007 AS/NZS 4777.2:2015 AS/NZS 4777.2:2020 (OEM Certified) AS61439, UL 1973 UL9540A, UN38.3									
System Level Standards	AS/NZS 3000:2018 AS/NZS 5139:2019 AS/NZS 4509.1:2009									

<sup>1</sup> Includes expansion Canopy

<sup>2</sup> Option for additional MPP Trackers



BENEFITS	SPECIFICATIONS	
<b>Safety &amp; Protection</b>	<ul style="list-style-type: none"> <li>• AC type II surge protection</li> <li>• AC short circuit protection</li> <li>• AC output overcurrent protection</li> <li>• AC output voltage protection</li> <li>• DC overcurrent protection</li> <li>• Over temperature protection</li> <li>• &amp; air con monitoring</li> <li>• PV type II surge &amp; lightning protection</li> <li>• Early battery failure detection</li> <li>• Battery smoke and temperature alarms</li> <li>• Active battery module and cell management</li> </ul>	<ul style="list-style-type: none"> <li>• Integrated system emergency stop</li> <li>• Integrated DC insulation monitoring</li> <li>• Monitored switchgear status</li> <li>• Configurable alarm event notifications</li> <li>• Semi-permeable membrane to prevent toxic fumes and explosive gas build up</li> </ul>
<b>Built to Endure</b>	<ul style="list-style-type: none"> <li>• Galvanised heavy-duty steel base frame</li> <li>• External sun shielding</li> <li>• Advanced temperature zone control</li> </ul>	<ul style="list-style-type: none"> <li>• Durable powder coat enclosure</li> <li>• Integrated lifting points &amp; forklift points</li> <li>• Lockable doors</li> </ul>
<b>Control &amp; Functionality</b>	<ul style="list-style-type: none"> <li>• PowerCore Microgrid Controller (Robust industrial-grade PLC)</li> <li>• PowerCore HMI interface</li> <li>• In-built AC coupled renewable controller</li> <li>• In-built generator synchronising system</li> <li>• Advanced generator load control algorithm</li> <li>• Machine-learning generator droop characterisation</li> <li>• Distributed sensor management system (DSMS)</li> <li>• Data acquisition microprocessor</li> <li>• MGS cloud-based monitoring platform with data historian</li> <li>• MGS remote service capability via secure VPN</li> <li>• Internal (control) and external (client/monitoring) segregated networks</li> </ul>	
<b>Built to Endure</b>	<ul style="list-style-type: none"> <li>• Exchangeable Modbus map to interface with existing generator controls (ComAp, DeepSea, Deif, Cummins PowerCommand, CAT EMCP, etc)</li> <li>• Expandable Modbus TCP/IP interface for external sensors (weather station)</li> <li>• Additional DSMS as required (fuel system)</li> </ul>	
<b>Warranty</b>	<ul style="list-style-type: none"> <li>• Integrated MGS product warranty</li> <li>• 5 years standard warranty</li> <li>• Additional 5 years extension available</li> </ul>	

