

FREESUN PPC

UTILITY SCALE POWER PLANT CONTROLLER

With over 22 GW inverters installed worldwide, Power Electronics has acquired the necessary know-how and expertise for the development of advanced, reliable and precise control algorithms to meet the most demanding grid codes in the world. Power Electronics Power Plant Controller offers smart and flexible solutions for utility PV and storage power plants.



TECHNICAL CHARACTERISTICS

GENERAL DATA	Dimensions (WxDxH) mm	415 x 230 x 515
	Weight (kg)	10
	Mounting system	Wall mounted
	Compatible inverters	Freesun inverters, Freemaq PCS and Freemaq statcoms
	Power supply	250W
I/O and COMMUNICATIONS^[1]	4 x Digital inputs	Programmable inputs and active high (24Vdc). Optically isolated.
	1 x RS485 port	3 wires (GND,A,B), Modbus RTU
	1 x USB port	PC connectable using a master.Modbus configurator (ModScan or similar). Reserved for TS.
	1 x CAN port	3 wires (LO, GND, HI), Modbus RTU
	1 x Ethernet port (RJ45)	Modbus TCP/IP
ENVIRONMENTAL CONDITIONS	Operation temperature	0~50°C (32°~122°F)
	Storage temperature	-20~80°C (-4°~176°F)
	Humidity	5-95% non-condensing
	Degree of protection	IP42
CERTIFICATIONS	CE	
OTHERS	Web interface for local and remote monitoring	
	Customized solution	

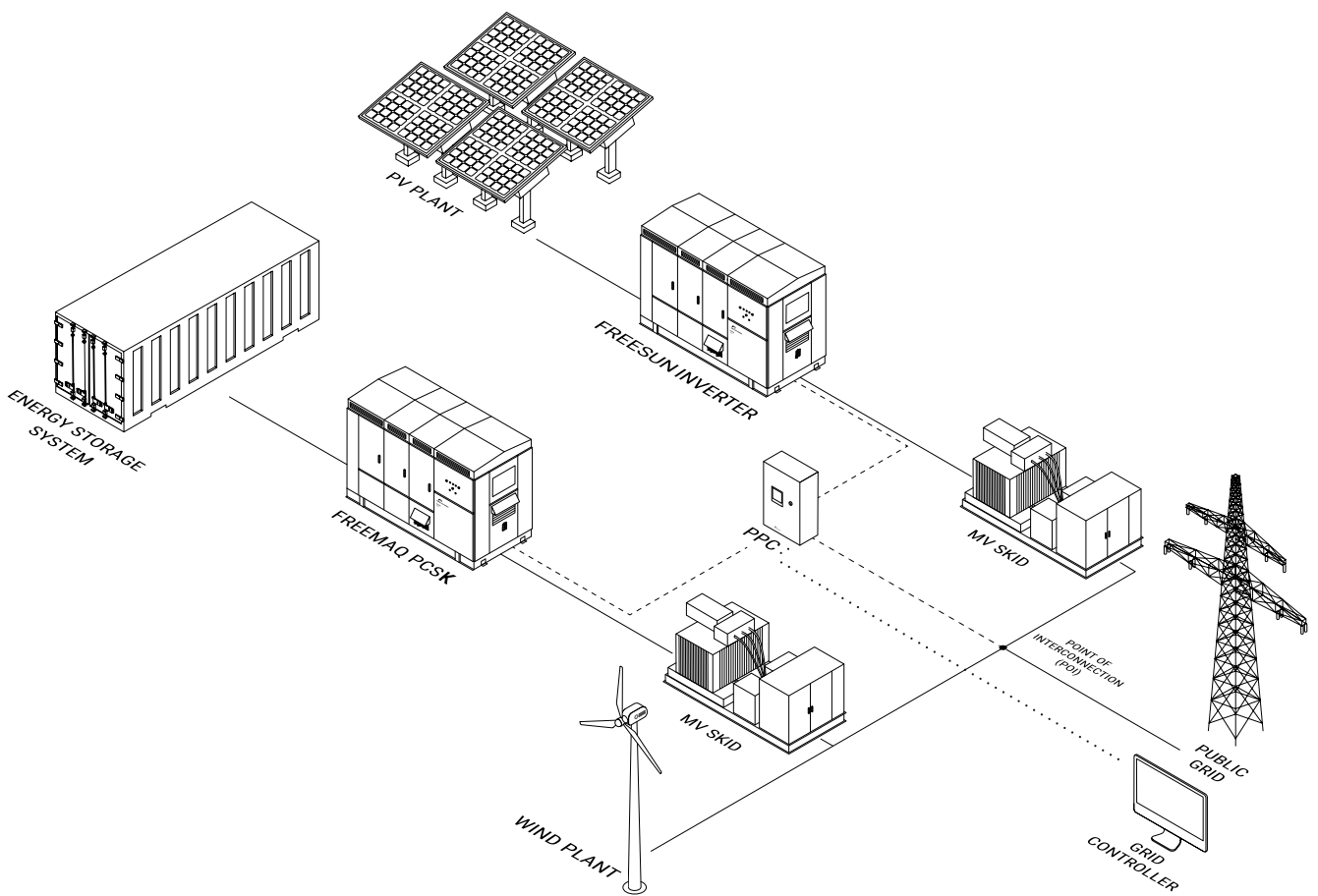
[1] Communication ports can be customised depending on PV plant design without prior notice.

POWER PLANT CONTROLLER

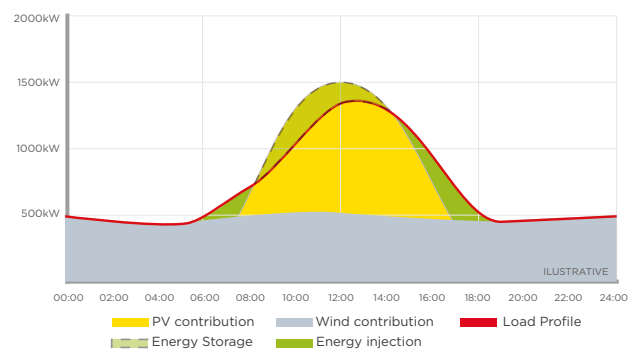
The Power Plant Controller (PPC) can be the main governor of the most complex power plants, by monitoring the point of interconnection (POI) and at the same time controlling the power generation and storage equipment.

The PPC is equipped with the latest PLC based microprocessor that interacts through the programmable digital/

analogue signals and communication ports (Modbus TCP). The PPC together with the Freesun solar inverter or the Freemaq series can be customized for those countries (Puerto Rico, Hawaii....) that require full compliance to stringent dynamic grid support response at POI.



- PPC main governor and interface of the system.
- Multiple renewable power sources: solar, wind, etc.
- Centralized dynamic grid support at POI.
- Power smoothing – Enable ramp rate control.
- Storage equipment control.



DYNAMIC GRID SUPPORT

The Power Electronics Power Plant Controller is a device used to manage PV plants in order to comply with all the utility and customer requirements, thanks to its fast and flexible control algorithms. The PPC helps the grid controller to manage the performance of the PV plant, guaranteeing grid quality requirements.

The PPC includes the latest utility interactive specifications to support the grid, by controlling the reactive and active power at the POI with a fast response time. This flexible plant control device allows the user to customize the unit, in order to comply with any grid code standards and regulations.

