Poweross

OFF-GRID AND ON-GRID POWER



RedEarth's PowerOasis is a fully integrated, ready-to-run and modular Battery Energy Storage System (BESS) catering for the niche 30-100kW power range. It has the option to use both the in-built solar PV MPPT or AC-coupled solar PV inverters can be added. The system is fully integrated, built and tested in our ISO 9001 Brisbane factory.

PowerOasis is an ideal standalone off-grid system to run your entire mining camp, station or off grid resort. It can cater for multiple energy sources and control your solar and generator simultaneously through our smart monitoring and control platform (EMS).

For those on grid, PowerOasis is ready for the SuperGrid as the ideal solution for blackout protection, peak shaving, or EV fast charging in commercial or large residential premises. RedEarth will soon be able to

further improve ROI's with our proprietary Private Power

Plant (PPP).





EMU App Use RedEarth's EMU app to view your system status

Detailed analysis via the online portal and system touchscreen

KEY FEATURES

- ✓ All-in-one system
- ✓ Integrated solar MPPT
- ✓ Modular design
- ✓ Easy to install
- ✓ On or off-grid
- ✓ SuperGrid ready (AS4777.2)
- ✓ ROI benefits via RedEarth's PPP
- EV fast charging



With 100kVA power output, capacity starts at a minimum of 215kWh up to 1MWh. It can integrate multiple power sources via RedEarth's hybrid switchboard including solar, grid, battery and generators, maintaining high reliability, safety and efficiency of your site.

PowerOasis is an all-in-one system including batteries, battery inverters (PCS), solar PV MPPT input, Battery Combiner Panel (BCP), HVAC, fire suppression system and RedEarth's hybrid distribution board. A system that is ready-to-install and can later have additional AC coupled solar PV inverters added.







Are you an EPC or commercial solar and battery installer? Come to our factory to learn more about our commercial scale systems and for Factory Acceptance Testing (FAT).





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PowerOasis



TECHNICAL SPECIFICATIONS 100 kVA / 215 - 1MWh

Inverter Information		
Continuous AC Power	100kVA PCS Inverter (integrated 100kW Solar PV MPPT input)	
Surge capacity (% of kVA)	200ms	125% - 150%
	1 min	115% - 125%
	10 min	105% - 115%
PV DC Max Current (A)	384 A (Number of MPPT = 1)	
PV Voltage Range	520 – 900 V (MPPT = 1)	
Grid Voltage Range	3 Phase nom. 415V (Range 340 V - 460 V)	
Power Factor (PF)	Actual: -1 ~+1 lagging or leading (load dependent)	
Nominal Grid Frequency	50Hz	
Isolation	Built-in Transformer	
Battery Information		
Battery Chemistry	Lithium Ferro Phosphate (LFP)	
Cell Make / Type	CATL / 280 Ah (120S2P minimum)	
Battery Energy	8.96kWh nom. per module (min. 24 modules - max. 112 modules)	
Battery Voltage Range	250-520 VDC (varies according to final configuration)	
Working Conditions		
IP Rating	IP54 Weatherproof Outdoor Rated Enclosure	
Noise Levels	≤72dB @ 1m	
Operating Temperature	-20°C ~ +50°C (de-rating over 45°C)	
Relative Humidity	0 ~ 95% (No condensing)	
System Information		
Dimensions W*H*D (mm)	PCS, BCP, EMS & Battery enclosure (Minimum 215kWh config.)	3,880 x 2,160 x 1,380
	Each additional Battery Enclosure:	1,480 x 2,330 x 1,380
Weight (kg)	PCS, BCP, EMS & Battery Enclosure	Ca. 4,650 kg
	(Minimum 215kWh config.)	
	Each Additional Battery Enclosure	Up to 3,310 kg (each)
Cooling Method	Battery Enclosure: Aircon HVAC	PCS: Forced Fan
Fire Suppression	Halocarbon gas with mechanical glass bulb release	
Communication Protocol	Modbus TCP/IP RS485, CAN, Ethernet utilising ComAp	
Certificate & Compliance	CEC listing pending, AS 4777.2 2020, IEC 62109-1/2, UN/DOT 38.3 (Shipping)	