

Solar Power Solution

The Flatpack2 Solar Power Solution is a modular and flexible solution designed to provide safe and secure supply of AC (and DC) power in remote off-grid or poor-grid locations. The modularity enables fast and efficient matching of energy requirements (solar capacity) or power to the AC output. The modularity also makes it possible to add redundancy for improved reliability.

It can house up to 8 Flatpack2 solar 1500W HE (with MPPT) modules and 12 Rectifier modules.



Flatpack2 Solar power solution with room for:

- 8 Flatpack2 1500 HE Solar
- 8 Rectifiers
- 2 battery shelves
- AC (and DC) distribution

Solar power outdoor cabinet

With fan/filter cooling unit

Doc CTEA0828R.401.DS3 – rev1

FLEXIBILITY AND RELIABILITY

The Flatpack2 Solar Power Solution provides the optimal flexibility through its scalability. Modules can easily be added to meet changing demands. In the unlikely event of a failure a module can be replaced in seconds, ensuring an unmatched reliability.

A separate AC input is provided to allow for a connection of a generator or a local grid in a "poor-grid" application.

The solution is housed in an IP55 rated outdoor enclosure with a fan/filter thermal management. The enclosure ensures optimal operating conditions for the power electronics.

APPLICATIONS

The Solar Power Solution is well suited for a wide range of applications such as:

- Hybrid solar/generator networks
- Rural electrification
 - Hospitals
 - Humanitarian aid sites
 - Construction sites
 - Military camps
 - Private housing
 - Etc.
- Rail and Metro
- Oil & Gas
- Poor-grid stabilization

KEY FEATURES

- UP TO 12KW PEAK POWER INPUT
- UP TO 18 KVA (14,4 KW) AC OUTPUT
- SMARTPACK S PANEL MOUNTED CONTROLLER PROVIDING EXCELLENT MONITORING AND CONTROL FEATURES.
- FAN FILTER THERMAL MANAGEMENT
- CABLE ENTRIES IN THE BOTTOM OF CABINET
- IP 55 CABINET DESIGN
- ADDITIONAL SPACE FOR 2 BATTERY STRINGS
- FRONT ACCESS FOR EASY INSTALLATION, OPERATION AND MAINTENANCE
- OPTIONAL MULTISITE MONITORING FOR REMOTE STATISTICS, PERFORMANCE COMPARISON AND OPTIMIZATION OF SITES

Solar power outdoor cabinet



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PHYSICAL SPECIFICATIONS		1.5M OD CABINET 1PH	1.5M OD CABINET 3PH
Exterior Height x Width x Depth (mm)		1500mm (59.06 in)	1500mm (59.06 in)
Exterior Width (mm)		700mm (27.56 in)	700mm (27.56 in)
Exterior Depth (mm)		823mm (32.40 in)	823mm (32.40 in)
Weight excl. rectifiers and batteries		150kg	160kg
CABINET SPECIFICATIONS			
Skin Material	Single skin Aluminium or galvanized steel (corrosion-resistant)		
Frame Material	Galvanized Steel		
Powder-Coat Paint	Outdoor Polyester Light grey RAL 7035 coating		
Heat Management	Fan/Filter with filter		
Cable entries	Bottom of cabinet: 2 entries with FL21 cut-out with Marcon		
RAIL SPECIFICATIONS			
Construction	Galvanized Steel		
Mounting Pattern	EIA Standard with holes for cage nuts. Optional M5 or M6 kits available		
Mounting	19" mount - 12U total for Powercore only *19" area can be expanded by installation of optional 9U kit		
Battery shelves	2x shelves as standard		
AC OUTPUT			
Max number of rectifiers	8pcs	12pcs	
Voltage	230V, 50Hz, 1ph	400V, 50Hz, 3ph	
Maximum Power (continuous / overload <15s)	9,6kW (12kVA /16kVA)	14,4kW (18kVA /24kVA)	
Load MCB and connections	Load Breakers		
AC priority	1x 32A, 1x 16A, 1x 6A		
AC non priority	1x 32A, 1x 16A, 1x 6A, 2x spare positions		
PV INPUT / DC CONNECTIONS			
Voltage	170-230VDC (tolerance: 85-265 VDC)		
Power	Up to 12 kW Voltage – 48VDC (53,5VDC default range: 48-57,6VDC)		
Battery MCB and connections	Up to 4x100A, M8 bolts		
Load MCB and connections DC	Load breakers: 1x 16A, 1x4A, 5x spare positions		
Programmable LVD	1x DC LVLD (max. 150A), 1x AC LVLD (max. 3x32A)		
MONITORING			
Alarm connections	Plug-in wire connectors front access		
Controller	Smartpack S Panel Mounted (Eltek PN 242100.415SC)		
Local Operation	Menu driven software via keypads and LCD, Ethernet cable (PowerSuite)		
Remote Operation	PowerSuite via Web NMS via SNMP-agent		
I/O	6 digital inputs and 6 potential free relay contacts (NO or NC)		
Alarms setup	Alarms Load fuse alarm, Battery fuse alarm, Low Battery Voltage , High Battery Voltage, Temperature alarm, Door switch alarm, Mains detect alarm, SPD Alarm		
OTHER SPECIFICATION			
Isolation	3.0 KVAC – input and output , 1.5 KVAC – input earth, 1.0 KVDC – output earth		
Operating temp	-40 to +50°C (-40 to +122°F)*		
Storage temp	-40 to +85°C (-40 to +185°F)		
DESIGN STANDARDS			
Electrical	IEC 60950		
EMC	ETSI EN 300 386 V.1.3.1, EN 61000-6-3, EN 61000-6-2		
Environment	ETS 300 019, Ingress Protection: EN 60529 IP55		
OPTIONAL KITS			
Kit: Battery Shelf, Kit: 19inch mounting, 9U, Kit: DC Service Light, Kit: Smoke Detector, Kit: 400W AC Heater, Kit: Gore Filter, Kit: RRH DC distribution with SPD, Kit: Additional DC distr. with LVLD, Kit: Additional DC distr. without LVLD			

* Note that the cabinet's operating temperature range does not apply to batteries. Refer to the manual for used batteries. Low stated temperatures assumes cabinet with installed heater (optional).

Specifications are subject to change without notice