Solar Power Solution

The Flatpack2 Solar Power Solution is a modular and flexible solution designed to provide safe and secure supply of 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 24 Flatpack2 solar 1500W HE (with MPPT) modules and up to 12 Rectiverter modules.

Flatpack2 Solar power solution with room for:

- 24 Flatpack2 1500 HE Solar
- 12 Rectiverters
- 6 PV Connection panels

Solar power indoor cabinet

CTEA2442.400.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 cabinet can be used as stand alone, or several cabinets can be fitted together side by side with special brackets.

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 36KW SOLAR POWER
- UP TO 18KVA AC OUTPUT
- SMARTPACK 2 MASTER + BASIC CONTROLLERS PROVIDING EXCELLENT MONITORING AND CONTROL FEATURES.
- CABLE ENTRIES IN THE BOTTOM OF CABINET
- IP 20 CABINET DESIGN
- FRONT ACCESS FOR EASY INSTALLATION, OPERATION AND MAINTENANCE
- OPTIONAL MULTISITE MONITORING FOR REMOTE STATISTICS, PERFORMANCE COMPARISON AND OPTIMIZATION OF SITES
- CONFIGURABLE MAINS INPUT/OUTPUT (3-PHASE, TN / 1X SINGLE PHASE)

Solar power indoor cabinet

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PHYSICAL SPECIFICATIONS	
Exterior Height x Width x Depth (mm)	2000 x 600 x 600
Weight excl. rectifiers	172 kg
CABINET SPECIFICATIONS	
Material	Galvanized 2.0 mm steel frame
Powder-Coat Paint	N/A
Cable entries	Top cover / Bottom plinth
AC OUTPUT	
Max number of rectiverters	12pcs
Voltage	230V / 400V, 50Hz, 1ph / 3ph
Maximum Power (continuous / overload <15s)	14,4kW (18kVA / 24kVA)
Load MCB and connections	Load Breakers
AC Priority	2x 6A, 1x 10A
AC non priority	1x 63A, 3x 20A
PV INPUT / DC CONNECTIONS	
Max number of solar MPPT chargers	24pcs
PV Input Voltage	170-230VDC (tolerance: 85-265 VDC)
PV Power	Up to 36 kW Battery Voltage – 53,5VDC default, range: 48-57,6VDC)
Battery Fuses and connections	Up to 4x600A
DC Load MCB	1x 32A, 2x 6A. 1x2A
Programmable LVD	1x AC LVLD (max. 32A) 1x DC LVLD (max. 150A)
MONITORING	
Alarm connections	Plug-in wire connectors front access
Controller	Smartpack 2 Master + Basic (Eltek PN 242100.500 + 242100.501)
Local Operation	Menu driven software via keypads and LCD, Ethernet cable (PC Browser)
Remote Operation	PC Browser
I/O	6 digital inputs and 4 potential free relay contacts (NO or NC)
Alarms setup	Alarms Load fuse alarm, Battery fuse alarm, Low Battery Voltage , High Battery Voltage, Temperature alarm, Mains detect alarm, SPD Alarm, etc.
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 IP20

Specifications are subject to change without notice

* 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).