Flatpack2, Integrated
Power Supply System 150A – 600A

Versatile and powerful solution for any application

The combination of cost-effective design, power density and reliability makes the Flatpack2 a product family that truly stands out and provides unparalleled network availability. The versatility of the Flatpack2 rectifier means that it can be used in a wide variety of 48VDC and 24VDC applications across the globe.

Applications

**Wireless, fiber and fixed line communication**
Today's communications demand state of the art, cost effective and compact DC power systems. Flatpack2 delivers an industry leading power density and superb reliability at lowest lifetime cost.

**Broadband and network access**
Increasing network speed demands flexible and expandable DC power solutions. The Flatpack2 rectifiers are your key building blocks for future needs.

**Small and large**
Due to the high power density, cost competitive design and a highly flexible system communication interface, Flatpack2 rectifiers are used in system solutions from 5kW to 96kW.

Product Description

The Flatpack2 Integrated has been specifically designed to meet the demand for higher density and more compact power solutions. It is suitable for applications needing an expandable, easily serviceable and reliable power supply, fitting within a minimal space.

The Flatpack2 Integrated is a compact power system containing a Monitoring and Control Unit (Smartpack), LVD, battery and load MCBs. It contains of a 4U distribution unit and 1 to 4U of PR (power rack) which can house 4 Flatpack2 rectifier modules each. Switch mode technology with resonant topology and high switching frequency is used to minimize volume and weight and to obtain high reliability.

The system accepts large variations on the input voltage (85-290 VAC) and draws sinusoidal current with a soft start power-up.

Key Features

**Highest efficiency in minimum space**
Resonant topology makes the module efficiency industry leading and contributes to the rectifier's ultra compact dimensions.

**Digital controllers**
Primary and secondary controls are digitalized, enabling excellent monitoring and regulation characteristics. Thus, the number of component has been reduced by 40% - for highly reliable, long life, trouble free DC power systems.

**Heat management**
Front-to-back air flow with chassis-integrated heat sinks gives the module the most suitable working environment and no limitations in the scalability of the desired system solution.

**Unique connection**
A true plug-and-play connection system: time-to-install and cost-reducing solution.

**Global approvals**
Flatpack2 is CE marked, UL recognized and NEBS certified for worldwide installation.

See reverse side for specifications

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Flatpack2 PS System 150A – 600A, Integrated

Additional Technical Specifications

**AC Input**
- **Voltage**
  - 1 phase 230 VAC
  - 3 phase 230 VAC
  - 3 phase 400 VAC+N (Y)
- **Frequency**
  - 45 to 66 Hz
- **Maximum Current**
  - See Flatpack2 48VDC datasheet
- **Input Protection**
  - Soft start
  - Surge protection (varistors)
  - Internal fuses (L & N)
  - Disconnect above 300 VAC

**DC Output**
- **Voltage**
  - 48 VDC
- **Current**
  - 5U Max. 150A
  - 6U Max. 300A
  - 7U Max. 450A
  - 8U Max. 600A

**DC Distribution Options**
- **Load breakers and fuses**
  - 18 x (2-63A)
  - 9 x (2-63A) + 6 x (80-125A)
- **No. of Battery fuses**
  - 6 (max. 100A each)
  - 3 (max. 200A each)
  - 2 (max. 250A each)
- **Programmable LVD**
  - 1 LVBD (150, 300, 500 or 600A)
  - 1 LVLD (150, 300, 500 or 600A)

**Monitoring**
- **Monitoring Unit**
  - See Smartpack datasheet
- **Local Operation**
  - Menu driven software via keypads and LCD or PC (PowerSuite)
- **Remote Operation**
  - PowerSuite via modem or Monitoring via WebPower (WEB Interface and SNMP protocol)
- **Alarm Relays**
  - 6 relays
- **Visual Indications**
  - Green LED - System ON
  - Yellow LED - Minor alarm(s)
  - Red LED - Major alarm(s)
  - LCD - system status
- **Digital Inputs**
  - 6 (for monitoring of external equipment)
- **Current Measurements**
  - Battery current
  - Rectifier current
- **Alarms**
  - Load fuse alarm
  - Battery fuse alarm
  - LVD operated
  - Low output voltage alarms
  - (2 individual alarm levels)
  - High output voltage alarms
  - (2 individual alarm levels)
  - Battery capacity
  - Temperature alarm
  - Symmetry alarm

**Connections**
- **Battery connections**
  - Battery cable, M8 bolts
- **Load MCB connections**
  - Negative distribution directly from CBs. Common positive bus bars
- **Alarm connections**
  - Plug-in wire connectors front or rear access

**Other Specifications**
- **Isolation**
  - 3.0 KVAC – input and output
  - 1.5 KVAC – input earth
  - 0.5 KVDC – output earth
- **Operating temp.**
  - -40 to +60°C (-40 to +140°F)
- **Storage temp.**
  - -40 to +85°C (-40 to +185°F)
- **Dimensions**
  - 482 x 380 x 267mm (6U) (wxdxh) (19 x 14.9 x 10.5‘’)
  - Recommended cabinet depth is min 400 mm (15.7‘’)
- **Weight**
  - Approx. 5kg (11lbs) excl. rectifiers

**Applicable Standards**
- **Electrical safety**
  - IEC/UL 60950-1
  - CSA 22.2
- **EMC**
  - ETSI EN 300 386 V.1.3.2 (telecommunication network)
  - EN 61000-6-3 (emission, light industry)
  - EN 61000-6-2 (immunity, industry)
- **Environment**
  - ETSI EN 300 019-2
  - Class 1.2, 2.3, 3.2

**Ordering Information**

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Specifications are subject to change without notice

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