Flatpack2
2U Integrated

Higher density and more compact power solutions

The Flatpack2 2U 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

Product Description

The Flatpack2 2U Integrated is a compact power system containing a Monitoring and Control Unit (Smartpack), LVD, battery and load MCBs. It can house up to 4 Flatpack2 rectifier modules. 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 (85-300 VAC) and draws sinusoidal current with a soft start power-up.

Applications

Wireless, fiber and fixed line communication

Today's communications demand state of the art, cost efficient and compact DC power systems. Flatpack2 delivers the industry leading power density of 21W/in3 and superb reliability at lowest lifetime cost

Broadband and network access

Increasing network speed demands flexible and expandable DC power solutions. Flatpack2 is your key building block for future needs.

Product Features and Advantages

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 world wide installation.

Flatpack2, 2U Integrated
Additional Technical Specifications

AC Input

Voltage	1 phase 230 VAC (single, dual or individual feed)
Frequency	45 to 66Hz
Maximum Current	See Flatpack2 48VDC datasheet
Protection	o Soft start o Surge protection (varistors) o Internal fuses (L & N) o Disconnect above 300 VAC

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	o Green LED – System ON o Yellow LED – Minor alarm(s) o Red LED – Major alarm(s) o LCD – system status
Digital inputs	6 (for monitoring of external equipment)
Current measurements	Battery current Rectifier current
Alarms	o Load fuse alarm o Battery fuse alarm o LVD operated o Low output voltage alarms (2 individual alarm levels) o High output voltage alarms (2 individual alarm levels) o Battery capacity o Temperature alarm o Symmetry alarm

DC Output

Voltage	48 VDC
Current	Max 150A

DC Distribution Options

No. of Load breakers	6 x breakers (2-32A)
No. of Battery fuses	1 or 2 (max. 100A each)
Programmable LVD	Optional: 1 LVBD (150A) Optional: 1 LVLD (150A)

Connections

Battery connections	Battery cable, M6 bolts
Load MCB connections	Negative distribution from row connector (max 10mm2).
Alarm connections	Rear access row connector (2,5mm2)

Other Specifications

Isolation	o 3.0 KVAC – input and output o 1.5 KVAC – input earth o 0.5 KVDC – output earth
Operating temp.	-40 to +65°C (-40 to +145°F)
Storage temp.	-40 to +85°C (-40 to +185°F)
Dimensions	482 x 370 x 89mm (2U) (wxdxh) (19 x 14.6 x 3.5″) recommended cabinet depth is min 400 mm (15.7″)
Weight	Approx. 5kg (11lbs) excl. rectifiers

Applicable Standards

Electrical safety	o IEC/UL 60950-1 o CSA 22.2
EMC	o ETSI EN 300 386 V.1.3.2 (telecommunication network) o EN 61000-6-3 (emission, light industry) o EN 61000-6-2 (immunity, industry)
Environment	o ETSI EN 300 019-2 Class 1.2, 2.3, 3.2 o ETSI EN 300 132-2

Ordering Information

Part no.	Description	
241115.100	Flatpack2 Rectifier Module, 48V 2kW	(also the "High Efficiency" and "Back-to-Front Air flow" rectifier options)
CTO20402.nnn	Flatpack2, 2U Integrated 8kW	(Sales configured system, CTO)