



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.



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.

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.

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.

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 66Hz
Maximum Current	See Flatpack2 48VDC datasheet
Input Protection	<ul style="list-style-type: none"> o Soft start o Surge protection (varistors) o Internal fuses (L & N) o Disconnect above 300 VAC

DC Distribution Options	
Load breakers and fuses	<ul style="list-style-type: none"> o 18 x (2-63A) o 9 x (2-63A) + 6 x (80-125A)
No. of Battery fuses	<ul style="list-style-type: none"> o 6 (max. 100A each) o 3 (max. 200A each) o 2 (max. 250A each)
Programmable LVD	<ul style="list-style-type: none"> o 1 LVBD (150, 300, 500 or 600A) o 1 LVLVD (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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> o Battery current o Rectifier current
Alarms	<ul style="list-style-type: none"> 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

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	<ul style="list-style-type: none"> o 3.0 KVAC – input and output o 1.5 KVAC – input earth o 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

DC Output	
Voltage	48 VDC
Current	<ul style="list-style-type: none"> o 5U Max. 150A o 6U Max. 300A o 7U Max. 450A o 8U Max. 600A

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 o Class 1.2, 2.3, 3.2 ETSI EN 300 132-2

Ordering Information

Part no.	Description	(Sales configured systems, CTO)
241115.100	Flatpack2 Rectifier, 48V 2kW	(rectifier option I)
241115.105	Flatpack2 Rectifier, 48V 2kW HE	(rectifier option II) *High Efficiency*
241115.110	Flatpack2 Rectifier, 48V 2kW BF	(rectifier option III) *Back-to-Front Air flow*
241119.100	Flatpack2 Rectifier, 48V 3kW	(rectifier option IV)
CTO20405.nnn	Flatpack2, 4U Integrated 8kW	(with rectifier options I, II and III)
CTO20406.nnn	Flatpack2, 4U Integrated 16kW	(with rectifier options I, II and III)
CTO20407.nnn	Flatpack2, 4U Integrated 24kW	(with rectifier options I, II and III)
CTO20408.nnn	Flatpack2, 4U Integrated 32kW	(with rectifier options I, II and III)
CTO30405.xxx	Flatpack2, 4U Integrated 12kW	(with rectifier options IV)
CTO30406.xxx	Flatpack2, 4U Integrated 24kW	(with rectifier options IV)

Specifications are subject to change without notice

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