

Flatpack2 | Integrated

Modular Power Supply Unit



POWERFUL TECHNOLOGY



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) witch 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 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.

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

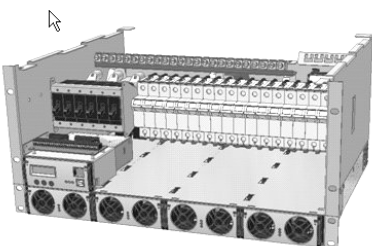
Front-to-back air flow with chassis-integrated heat sinks gives the module the most suitable working environment and no limitations in the scalability of the desired system solution.

✓ Unique connection

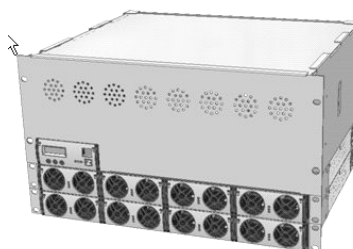
A true plug-and-play connection system: time-to-install and cost-reducing solution.

✓ Global approvals

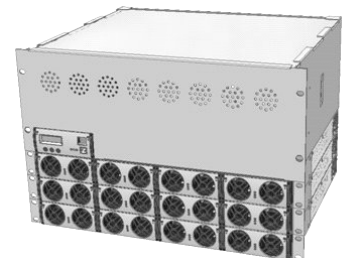
Flatpack2 is CE marked, UL recognized and NEBS certified for world wide installation.



Flatpack2 5U Integrated System



Flatpack2 6U Integrated System



Flatpack2 7U Integrated System

Flatpack2 | Integrated

Additional Technical Specifications

Maximum number of rectifiers – 4 to 16

AC Input	
Voltage	1 phase 230 VAC 3 phase 230 VAC (Δ) 3 phase 400 VAC+N (Y)
Frequency	45 to 66Hz
Maximum Current	See Flatpack2 48VDC datasheet (241115.001.DS3)
Protection	Soft start Surge protection (varistors) Internal fuses (L & N) Disconnect above 290 VAC

Monitoring	
Monitoring unit	See Smartpack (242100.100.DS3) datasheet
Local operation	Menu driven software via keypads and LCD or PC (PowerSuite)
Remote operation	PowerSuite via modem or Web NMS via SNMP-agent
Alarm relays	6 or 2 relays
Visual indications	Green LED – System ON Yellow LED – Minor alarm(s) Red LED – Major alarm(s) LCD – system status
Digital inputs	6 or 2 (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

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

DC Distribution Options	
No. of Load breakers	18 x (2-63A) 24 x (2-63A) (Smartpack PR mounted) 15 x (2-63A) + 2 x (80-125A) 21 x (2-62A) + 2 x (80-125A) (Smartpack PR mounted)
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)

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 60950 UL 60950
EMC	ETSI EN 300 386 V.1.3.1 (telecommunication network) EN 61000-6-3 (emission, light industry) EN 61000-6-2 (immunity, industry)
Environment	ETSI EN 300 019-2 ETSI EN 300 132-2

ORDERING INFORMATION

Part no.	Description
241115.001	Flatpack2 48V Rectifier Module
M20405.000	Flatpack2 5U Integrated – 19” 3ph Y 7,2kW 2x200A Battery Breakers, 150A LVBD, 6 I/O, 1.5m TP
M20806.000	Flatpack2 6U Integrated – 19” 3ph Y 14kW 3x200A Battery Breakers, 300A LVBD, 150A LVLD, 6 I/O, 1.5m TP
M21207.000	Flatpack2 7U Integrated – 19” 3ph Y 22kW 3x200A Battery Breakers, 500A LVBD, 300A LVLD, 6 I/O, 1.5m TP
200000.xxx	Flatpack2 Integrated – Sales configured system

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