

Flatpack2, Integrated Power Supply System 75A – 300A

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 24VDC applications across the globe.

Applications

DNV Marine approved

This power system comes with the DNV approved power rack and is widely used in maritime environments.

Bulk feed for flexibility

The system is designed for bulk feed and can be used with customer distributions

Optional position for extra controller

Optional space for extra Smartnode or Smartpack for even greater flexibility and full range of features

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.

Efficiency

The system is utilizing the latest in marine approved rectifier technology and comes standard equipped with the Flatpack2 rectifier. The Flatpack2 rectifier has an efficiency rated >89% for loads 30-70%.

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), optional space for a Smartnode. It contains 1U of PR (power rack) which can house 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 (85-290 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.

The secondary microprocessor performs active current sharing independent of the master controller.

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. Due to the higher efficiency the system also runs cooler and therefore needs less external cooling.

Unique connection

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

Global approvals

Flatpack2 is CE marked, UL recognized, DNV and NEBS certified for worldwide installation.

Flatpack2 PS System 24V 84A – 336A, Integrated

Additional Technical Specifications

AC Input	
Voltage	2 x 1 phase 230 VAC (A+B)
Frequency	44 to 66Hz
Maximum Current	See Flatpack2 24VDC datasheet
Input Protection	- o Soft start - o Surge protection (varistors) - o Internal fuses (L & N) - o Disconnect above 290 VAC

Monitoring	
Master Controller	See Smartpack datasheet
Smartnode	See Smartnode 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)
Optional	Modbus over Smartnode
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	- o Battery current(optional) - o 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	26,7 VDC(adjustable 21,7 – 28,8)
Current	- o 1 module Max. 84A - o 2 modules Max. 168A - o 3 modules Max. 252A - o 4 modules Max. 336A

Connections	
Battery connections	N/A
Load MCB connections	N/A
Alarm connections	Plug-in wire connectors rear access for 6 potential free relays.

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 +70°C (-40 to +158°F) (De rating >45°C/ 113°F)
Storage temp.	-40 to +85°C (-40 to +185°F)
Dimensions	482 x 432 x 89 mm (2U) (wxdxh) (19 x 17 x 3.5") recommended cabinet depth is min 400 mm (15.7")
Weight	Approx. 5kg (11lbs) excl. rectifiers

Applicable Standards	
Electrical safety	IEC 60950 UL 60950 DNV Approved for maritime use
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	(Sales configured systems, CTO)
241115.200	Flatpack2 Rectifier, 24V 2kW	
C20402.106	Flatpack2, 2U Integrated 7,2kW <i>Two modules are included when ordering this system</i>	

Specifications are subject to change without notice

C20402.106 – 2v0