Flatpack2 48/2000

Switch Mode Power Supply 48VDC

POWERFUL TECHNOLOGY

Product Description

The Flatpack2 is a battery charger and rectifier for stand-alone use or for working in parallel as part of a DC power system controlled and monitored by the Smartpack.

Flatpack2 is optimized for a wide range of system sizes. Digital communication over CAN bus with Smartpack simplifies system design and enhances flexibility.

Realization of Flatpack2 systems is possible by fitting 5 rectifiers across a 23" shelf and 4 rectifiers across a 19" shelf.

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 22W/in^3 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

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

ü **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.

ü **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.

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

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

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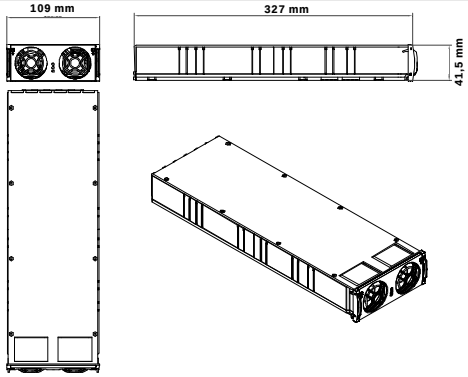

Flatpack2
Additional Technical Specifications

AC Input

Voltage	85-300 VAC (Nominal 185 – 275 VAC)
Frequency	45 to 66Hz
Maximum Current	12.5 A_{rms} maximum at nominal input and full load
Power Factor	> 0.99 at 20% load or more
Input Protection	Varistors for transient protection Mains fuse in both lines Disconnect above 300 VAC

DC Output

Voltage	53.5 VDC (adj. range: 43.5-57.6 VDC)
Output Power	2000 W at nominal input
Maximum Current	41.7 Amps at 48 VDC and nominal input
Current Sharing	±3% from true average current between modules
Static voltage regulation	±0.5% from 10% to 100% load
Dynamic voltage regulation	±5.0% for 10-90% or 90-10% load variation, regulation time < 50ms
Hold up time	> 20ms; output voltage > 43.5 VDC at 1500W load
Ripple and Noise	< 100 mV peak to peak, 30 MHz bandwith < 0.96 mV rms psophometric
Output Protection	Overvoltage shutdown Blocking diode Short circuit proof High temperature protection

Other Specifications

Efficiency	Typical 92%, min. 91% at 40-90% load
Isolation	3.0 KVAC – input and output 1.5 KVAC – input earth 0.5 KVDC – output earth
Alarms:	Low mains shutdown High temperature shutdown Rectifier Failure Overvoltage shutdown on output Fan failure, one or two fans. Low voltage alarm at 43.5V CAN bus failure
Warnings:	Low temperature shutdown Rectifier in power derate mode Remote battery current limit activated Input voltage out of range, flashing at overvoltage Loss of CAN communication with control unit, stand alone mode
Visual indications	Green LED: ON, no faults Red LED: rectifier failure Yellow LED : rectifier warning
Operating temp	-40 to +75°C (-40 to +158°F)
Storage temp	-40 to +85°C (-40 to +185°F)
Cooling	2 fans (front to back airflow)
Fan Speed	Temperature and current regulated
MTBF	> 350, 000 hours Telcordia SR-332 Issue I, method III (a) ($T_{ambient}$: 25°C)
Acoustic Noise	< 55dBA at nominal input and full load ($T_{ambient}$ < 30°C)
Humidity	Operating: 5% to 95% RH non-condensing Storage: 0% to 99% RH non-condensing
Dimensions	109 x 41.5 x 327mm (wxhxd) (4.25 x 1.69 x 13")
Weight	1.9 kg (4.19lbs)

Applicable standards

Electrical safety	IEC 60950-1 UL 60950-1 CSA 22.2
EMC	ETSI EN 300 386 V.1.3.2 (telecommunication network) EN 61000-6-1 (immunity, light industry) EN 61000-6-2 (immunity, industry) EN 61000-6-3 (emission, light industry) EN 61000-6-4 (emission, industry) Telcordia NEBS GR1089 CORE
Harmonics	EN 61000-3-2
Environment	ETSI EN 300 019-2 (-1, -2, -3) ETSI EN 300 132-2 Telcordia NEBS GR63 CORE Zone 4 RoHS compliant (pending)

Specifications are subject to change without notice.

ORDERING INFORMATION

Part no.	Description
241115.100	Flatpack2 48/2000

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