

Flatpack2 24/2000

Switch Mode Power Supply 24VDC



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 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/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

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.

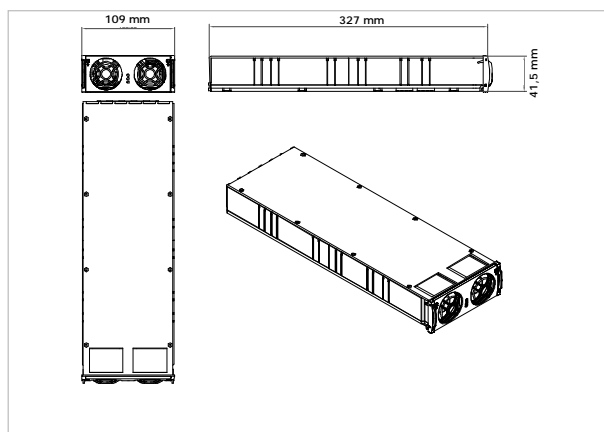
ü **Heat management**
Front-to-back air flow with chassis-integrated heat sinks gives the module the most suitable working environment and no limitations in the scalability of the desired system solution.

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.



Flatpack2
Switch Mode Power Supply 24VDC



Flatpack2

Additional Technical Specifications

| AC Input | |
|------------------|--|
| Voltage | 85-290 VAC (Nominal 176 – 275 VAC) |
| Frequency | 44 to 66Hz |
| Maximum Current | 13.4 A _{rms} maximum at nominal input and full load |
| Power Factor | > 0.99 at 50% load or more |
| Input Protection | Varistors for transient protection Mains fuse in both lines Disconnect above 290 VAC |

| DC Output | |
|----------------------------|--|
| Voltage | 26.7 VDC (adj. range: 21.0-29.0 VDC) |
| Output Power | 2000 W at nominal input |
| Maximum Current | 84.0 Amps at 24 VDC and nominal input |
| Current Sharing | ±5% 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 > 21 VDC at 1000W load |
| Ripple and Noise | < 100 mV peak to peak < 0.96 mV rms psophometric |
| Output Protection | Overvoltage shutdown Blocking diode Short circuit proof High temperature protection |

| Other Specifications | |
|----------------------|--|
| Efficiency | Typical 89% |
| 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 21.5V CAN bus failure |
| Warnings: | 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 +167°F) |
| Storage temp | -40 to +85°C (-40 to +185°F) |
| Cooling | 2 fans (front to back airflow) |
| Fan Speed | Temperature and load regulated |
| MTBF | > 200, 000 hours Telcordia SR-332 Issue I, method III (a) |
| Acoustic Noise | < 65dBA at nominal input and 70% 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 (3.97 lbs) |

| 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 61000-6-4 (emission, industry) EN 61000-6-3 (emission, light industry) EN 61000-6-2 (immunity, industry) EN 61000-6-1 (immunity, light industry) Telcordia NEBS GR1089 CORE (pending) |
| Harmonics | EN 61000-3-2 |
| Environment | ETSI EN 300 019-2 ETSI EN 300 132-2 Telcordia NEBS GR63 CORE Zone 4 (pending) RoHS compliant (pending) |

Specifications are subject to change without notice.

ORDERING INFORMATION

| Part no. | Description |
|------------|-------------------|
| 241115.200 | Flatpack2 24/2000 |

Document Rev. No.: 241115.200.DS3 v.01

| Location | Company | Telephone | Fax |
|--------------|-----------------------|-----------------|-----------------|
| Europe | Eltek Energy AS | +47 32 20 32 00 | +47 32 20 32 10 |
| Americas | Eltek Energy, LLC | +1 815 459 9100 | +1 815 459 9118 |
| Asia/Pacific | Eltek Energy Pte Ltd. | +65 6 7732326 | +65 6 7753602 |
| China | Eltek Energy Ltd. | +852 28982689 | +852 28983189 |
| Middle East | Eltek Middle East | +971 4 887 1176 | +971 4 887 1175 |