

# FLATPACK 1500 24V

## Switch Mode Power Supply 24VDC



POWERFUL TECHNOLOGY

## Flatpack

**The Flatpack 1500 is a rectifier for stand-alone use or parallel operation in a power rack system. Its very high power density, cost efficient design and ability to accept wide input voltage range and tough ambient conditions, makes it the perfect choice in any telecom network.**

Switch mode technology with soft switching and high switching frequency is used to minimize volume and weight and to obtain fast output voltage regulation. The module accepts large variations of the input voltage (85-310 VAC) and draws sinusoidal current with a soft start power-up. When operating in parallel, the Flatpack 1500 provides active current sharing between the modules independent of the Flatpack MCU (Monitoring and Control Unit).

The Flatpack 1500 will operate in ambient temperatures from -40°C to +70°C (from -40°F to +158°F). At higher temperatures the Flatpack 1500 will derate the output power and finally shut down to protect itself at extreme temperatures.

The rectifier provides 1350 W down to 21 VDC and 230 VAC nominal input voltage.



<b>FLATPACK 1500 24 V</b>	
<b>SPECIFICATIONS</b>	
<b>INPUT</b>	
Input voltage	85-310 VAC*
Frequency	45 to 66Hz
Maximum Current	8.5 Arms maximum at 185 VAC and 1350 W output
Power factor	> 0.99 at 50% load or more
Input protection	Soft start Surge protection (varistors) Internal fuses (L & N) Automatic disconnect at 310 VAC
<b>OUTPUT</b>	
Voltage	24 VDC (range: 20-29,5 VDC)
Output power	1350 W at 185-275 VAC derate at lower input voltages.
Maximum current	64 Amps at 21 VDC (230 VAC nom.)
Current share	± 2 Amps from true average current between modules (4 Amps overall)
Static voltage regulation	±0.5% from 0 to full load regulation
Dynamic voltage regulation	±1.0% for 10-90% or 90-10% load variation < 10ms
Hold up time	> 20ms
Ripple and Noise	< 100 mV peak to peak, 30 MHz bandwidth < 0.96mV rms psophometric
Output Protection	Overvoltage shutdown Blocking diode Short circuit proof High temperature protection

\*Above 275 VAC some parameters may vary outside given values.

<b>OTHER SPECIFICATIONS</b>	
Efficiency	> 88%
Isolation	3.0 KVAC – input and output 1.5 KVAC – input earth 1.0 KVDC – input earth
Rectifier Alarm	Mains failure Module failure Overvoltage shutdown Fan Failure
Visual indications	Green LED: ON, no faults Red LED: Rectifier failure Yellow LED bargraph: 10 LEDs showing load current (0-100%)
Operating temp	-40 to +70°C (-40 to +158°F)
Storage temp	-40 to +85°C (-40 to +185°F)
Cooling	2 fans (front to back airflow) Brushless w/ magnetic bearing
MTBF	> 213,600 hours Telcordia Issue I, method III (a)
Acoustic Noise	< 55dBA
Humidity	Operating: 5% to 95% RH non-condensing Storage: 0% to 99% RH non-condensing
Dimensions	214 x 41.5 x 243mm (wxhxd) (8.43 x 1.64 x 9.57")
Weight	2.8kg (6,17lbs)
<b>APPLICABLE STANDARDS</b>	
Electrical safety	EN 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) Telcordia GR1089 CORE
Harmonics	EN 61000-3-2
Environment	ETSI EN 300 019-2 ETSI EN 300 132-2 Telcordia GR63 CORE Zone 4

Specifications are subject to change without notice.

### ORDERING INFORMATION

Part no.	Description
241114.300	Flatpack 1500 24V rectifier module

241114.300.DS3 v.01



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**Location**  
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