

Compact HE rectifier for small to medium telecom applications

The Flatpack S rectifiers incorporate Telecom specifications, high efficiency, OR-ing protection on output and high power in a small, 210 mm deep box.

Used in the 1U high, 2 or 3 rectifier positions power rack with Smartpack S controller and battery and load distributions, the Flatpack S rectifiers cover 2 to 3kW applications using a minimum of space, less than 6 liters, and low heat dissipation.



FLATPACK S 48V RECTIFIER

1000W HE

Doc 241122.105.DS3 – v3

APPLICATIONS

TELECOM – MOBILE / WIRELESS

- RADIO BASE STATIONS/ CELL SITES
- LTE / 4G / WIMAX
- DISTRIBUTED ANTENNA SYSTEMS
- MICROWAVE
- BROADBAND

TELECOM – FIXED

- TELEPHONY SERVERS / SWITCHES
- FIBER OPTICS / FTTX
- MICROWAVE
- CABLE
- BROADBAND



1U 50A SYSTEM



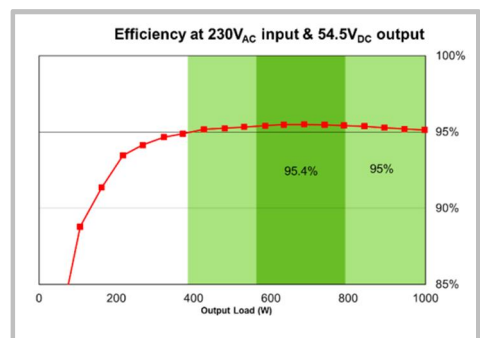
1U 100A SYSTEM



3U SYSTEM BULK OUTPUT

KEY FEATURES

- SMALL
- SHORT
- POWER DENSE, 26 W / CU IN
- HIGH EFFICIENCY
- ORING PROTECTION ON OUTPUT
- HOT PLUG-ABLE
- VOLTAGE AND POWER KEYING



FLATPACKS 48V 1000W EFFICIENCY PLOT

FLATPACK S 48V RECTIFIER



1000W HE

Model	48/1000 HE
Part number	241122.105
INPUT DATA	
Voltage (nominal)	185 - 270 V _{AC} / 185 - 250 V _{DC} ¹⁾
Voltage (range)	85 - 300 V _{AC} / 85 - 250 V _{DC} ¹⁾
Frequency	45 - 66 Hz / 0 Hz ¹⁾
Current (maximum) @ nominal input, full load	5.9 A _{RMS}
Power Factor	> 0.99 at 50% load or more
Protection	Fuse Varistor for transient protection Shutdown above 305 V _{AC} / 300 V _{DC}
OUTPUT DATA	
Voltage (default)	53.5 V _{DC}
Voltage (adjustable range)	43.5 - 57.6 V _{DC}
Power (maximum)	1000 W
Power @ 85 V _{AC/DC}	420 W
Current (maximum) @ nominal input, full load	20.9 A (@ 48 V _{DC})
Current sharing (10 - 100% load)	±5% of maximum current from 10 to 100% load
Static Voltage regulation (10 - 100% load)	±0.5%
Dynamic Voltage regulation	±5.0% for 10-90% or 90-10% load variation, regulation time < 50ms
Hold up time, maximum output power	>20ms; output voltage > 41 V _{DC}
Ripple	< 150 mV peak to peak, 30 MHz bandwidth
Protection	Blocking OR-ing FET Short circuit proof High temperature protection
OTHER SPECIFICATIONS	
Efficiency @ nominal input	95.5%, >95% @ 40 - 100% load
Isolation	3.0 kV _{AC} - input to output 1.5 kV _{AC} - input to earth 710 V _{DC} - output to earth
Alarms: Red LED 'on'	Low mains shutdown, High and low temperature shutdown, Rectifier Failure, Overvoltage shutdown on output, Fan failure, Low voltage alarm, CAN bus failure
Warnings: Yellow LED 'on'	Rectifier in power derate mode, Remote battery current limit activated, Input voltage out of range, flashing at overvoltage
Normal (module running): Green LED 'on'	
Acoustic noise	< 46dBA at nominal input and full load
MTBF (Telcordia SR-332 Issue I method III (a))	>350 000 (@ T _{ambient} : 25 °C)
Operating temperature	-40 to +85°C (-40 to +185°F), humidity 5 - 95% RH non-condensing Output power de-rates linear from 1000W @ 45°C (113°F) to 600W @ 85°C(185°F)
Storage temperature	-40 to +85°C (-40 to +185°F), humidity 0 - 99% RH non-condensing
Dimensions[WxHxD] / Weight	72 x 41.5 x 210mm (2.83 x 1.63 x 8.27") / < 850 g (1.9 lbs)
DESIGN STANDARDS	
Electrical safety	UL 60950-1-3 rd edition, EN 60950-1-3 rd edition
EMC	ETSI EN 300 386 V.1.4.1 EN 61000-6-1 / -2 / -3 / -4 / -5 FCC Part 15 Subpart 109
Environment	ETSI EN 300 019: 2-1 (Class 1.2), 2-2 (Class 2.3) & 2-3 (Class 3.2) ROHS compliant
1) DC input only allowed when up-stream breaker is rated for the applicable DC input voltage and has a maximum current rating of 32A	