



Flatpack S SHE rectifier

48V 1000W

Compact SHE rectifier for small to medium telecom applications

The Flatpack S rectifiers incorporate Telecom specifications, high efficiency, ORing protection on output and high power in a small, 217 mm deep box.

Future proof solution with minimal losses and demand for cooling can be realized using this rectifier and it's super high efficiency of 97%.

The Flatpack S 48/1000 SHE fits in the existing 1U or 2U Flatpack S power cores including Smartpack S controller, battery and load distributions, covering 2 to 5kW applications using a minimum of space, less than 6 and 12 liters, and super low heat dissipation.

Main features

- Small
- Short
- Power dense - 26 W / IN³
- Super high efficiency – 97%
- OR-ing protection on output
- Hot pluggable voltage and power keying

Applications

- Wireless applications
- Fixed line applications, data communications
- Network base stations
- Rail
- Marine

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Model	FLATPACK S 48/1000 SHE
Ordering Part Number	241122.106

Input Data	
Voltage (nominal)	185 - 250 VAC
Voltage (operating range)	85 - 275 VAC
Current (maximum) @ nominal input, full load	5.9 ARMS
Frequency	45 - 66 Hz
Power Factor / THD	> 0.99 at full load
Protection	Fuse in L & N, Shutdown when input voltage is out of operating range

Output data	
Voltage (default)	53.5 VDC
Voltage (adjustable range)	42 - 57.6 VDC
Power (maximum) @ nominal input	1000 W
Power @ 85 VAC	420 W
Current (maximum) @ nominal input	20.9 A (@VOUT < 48VDC)
Hold up time, 950W output power	>10ms; output voltage > 40 VDC
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
Ripple	< 150 mVPP , 30 MHz bandwidth
Protection	ORing FET, Short circuit proof, High temperature protection, Over voltage Shutdown

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OTHER SPECIFICATIONS

Efficiency	> 97%
Isolation	4.0 kVDC - input to output, 2.5 kVDC - input to earth, 710 VDC - output to earth
Alarms: Single LED = Red	Low / high input voltage shutdown, High / low temperature shutdown, Rectifier Failure, Overvoltage shutdown on output, Fan failure, Low output voltage alarm, CAN bus failure
Warnings: Single LED = Yellow	Rectifier in power de-rate mode, Remote output current limit activated, Input voltage out of range, flashing at overvoltage, Loss of CAN communication with controller
Normal operation: Single LED = Green	Normal operation
Operating temp. (5-95% RH n.cond. hum.)	-40 to + 85°C [-40 to +185°F]
Max output power de-rates above temp / to	55°C [113°F] / 400W @ 85°C[185°F]
Dimensions[WxHxD] / Weight	72 x 41.5 x 217mm (2.83 x 1.63 x 8.54") / 620 g (1.37 lbs)

DESIGN STANDARDS

Electrical safety	EN IEC 62368-1:2020/A11:2020, IEC 62368-1:2018, UL 62368-1:2021 C22.2 No. 62368-1:2021, IEC 60950-1:2013
EMC	EN IEC 61000-6-1:2019, -6-2:2019, -6-3:2021, -6-4:2019, -6-5: 2015 FCC CFR 47 Part 15:2020, ETSI EN 300 386:v2.2.1, DNV-CG-0339:2021 IEC 62236-4:2018, -5:2018, EN 50121-4:2016+A1:2019, -5:2017+A1:2019
Marine	DNVGL-CG-0339
Environment	ETSI EN 300 019: 2-1 (Class 1.2) & 2-2 (Class 2.3) Normal operating conditions as per IEC 62040-5-3:2016 clause 4.2. Other operating conditions as per IEC 62040-5-3:2016 clause 4.3, must be advised EU 2015/863 (RoHS), 2012/19/EU (WEEE), IEC 63000:2018

Specifications are subject to change without notice