Leading 5G Innovations

ZXEPS R4875F1 High Efficiency Rectifier Datasheet

ZTE

Overview

ZXEPS R4875F1 rectifier is a switching mode high efficiency rectifier that is used for communication power supply. The rectifier is constant output power control and the rated output power is **4320W**. It adopts high efficiency design. The peak efficiency can reach **97%** and save more power. It adopts advanced digital control technology to achieve better performances and satisfy the customer requirements.

ZXEPS R4875F1 Rectifier

Highlights

- **Super high efficiency, super low sleep-mode power consumption**

The peak efficiency of the module is up to **97%**. In the sleep mode, the power consumption of the rectifier is lower than 4W.

- **High power density, saving space and rental**

With much smaller size, the power density of the rectifier can reach **70.2**W/in^3, making optimum space utilization.

- **Digital design, more stable**

Advanced ARM MCU digital control along with the CAN bus realizes flexible system control and convenient system debugging and upgrading.

- **Constant power design, less CAPEX**

Constant output power design, the rated output power can reach **4320W**. At the same load rate, reducing the number of configured rectifiers to reduce CAPEX.

- **Wide range of input voltage to prolong battery life**

85VAC~300VAC, greater adaptability to the power grid to reduce the use of battery to prolong the battery life.

- **Wide temperature tolerance**

-40 ℃ ~+75℃, more field adaptable, saving temperature control equipment.

Specification

Parameter	Description
AC input	
Input voltage	Voltage range: 85 Vac - 300 Vac
Frequency	20 Hz~70 Hz (When the input frequency is lower than 40 Hz, the output power to be reduced accordingly.)
Maximum input current	27A
THD	<5% (@100% load)
Power factor	>0.99 (100% load)
DC output	
Rated output power	4320W
Range of output voltage	Range can adjustable: 42 to 58 VDC
Maximum output current	90A
Output current limit	8A~90A
Peak Efficiency	97%
Load sharing	≤2A (50%-100% load)
Regulated output voltage precision	+/-0.6%,when the input voltage of the network changes 360-440V, at 10% and 100% load. output voltage change is less than 5% when the load changes from 10 to 90% and from 90% to 10% in a period of time not more than 10 ms
Auto recovery	AC power on, rectifier module auto recovery ON and outputs power, regardless of the level of charge / discharge of the batteries
Output protection	Over-voltage protection, over-temperature protection, over-current protection, abnormal AC frequency protection, output short circuit protect and auto recovery when short circuit disappears, output fuse burnt protection
Other	
Alarm	Low input voltage, high input voltage, over-temperature, high output voltage/current, fan fault
Hot Swap	Support
Cooling mode	Fan, Fan speed auto adjustment from load current and temperature
MTBF	> 500,000h
Power density	Reach up to 70.2W / in^3
Insulation resistor	Cabinet to Input terminal to Output terminal>100MΩat voltages up

	to 500V
Environmental requirement	
Working temperature	-40℃~+75℃ • At an operating temperature of ≤55℃, the system provides the rated output voltage without performance degradation. • Output power reduction up to 80% at operating temperatures from 55°C to 65°C • Output power reduction up to 60% at operating temperatures from 65°C to 75°C
Storage temperature	-45℃~+75℃
Relative humidity	≤95%, no condensation
Applicable atmospheric pressure	70 kPa~106 kPa
Dimensions and weight	
Dimensions (W×H×D)	84.5mm×40.8mm×292.5mm
Weight	1.8kg
Safety Standard	
EMC	IEC61000-4 Series and EN 55032.
Safety standards	Complies with the IEC62368-1 standard and UL62368-1 standard (same as EN60950,IE60950, IEC 950)

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