

RX48A3000RBM Rectifier Module

CE FC RoHS



Introduction

- RX48A3000RBM is a high-efficiency, high-power-density rectifier module utilizing digital control. It features a wide input voltage range, low operational noise, and built-in comprehensive circuit protection mechanisms to ensure safe and reliable system performance. It can be applied in scenarios such as pure optical base stations and newly built base stations.

Features

▪ High Efficiency & Flexibility:

Functional modules support hot-swapping and can be flexibly configured based on customer and scenario requirements, facilitating easy installation, maintenance, and redundant design expansion.

High-Efficiency Conversion:

The module ensures continuously optimized output under various environmental conditions, achieving a conversion efficiency of over 95%.

▪ Safe & Reliable:

The power supply module utilizes an electrically isolated circuit to effectively suppress interference, enhancing system immunity and electrical safety to ensure long-term stability and reliability.

▪ Smart Control (Wide Range):

Supports a wide input voltage range of 170Vac-285Vac, along with voltage adjustment and current limiting features to guarantee stable system operation.

*Product dimensions and parameters refer to the latest documents;

*The product shall be subject to the actual item.



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Configuration

RX48A3000RBM Base Station Isolated 3000W Rectifier Module for Hybrid Solar & Storage Systems

Product Category	
Model	RX48A3000RBM-HRX48A3000RBM-L
Peak Conversion Efficiency	≥ 95%
Standby Power Consumption	Output powered on: ≤ 2.0W; Input powered on: ≤ 4.0W
Cooling Method	Air cooling
Input Parameters	
Input Protection Voltage (OVP / UVP)	285Vac/170Vac145Vac/85Vac
Input Protection Recovery Voltage (OVP / UVP recovery)	280Vac/175Vac140Vac/90Vac
Input Voltage Range	170Vac~285Vac85Vac~140Vac
Input Frequency Range	45Hz~55Hz55Hz~65Hz
Max. Input Current	18A36A
Max. Input Power	3000W
Charging Parameters	
Output DC Voltage Range	40V ~ 60VDC (Factory default: 54VDC), (adjustable)
Applicable Battery Type	Lead-acid battery / Lithium-ion battery
Battery Management	Output charging parameters and protection parameters are configurable
Output DC Current	Rated: 50A
Display & Communication	
Status Indication	LED indicators: Red (fault & alarm); Blue (standby & run); Green (power)
Communication Method	Rs485 Bus / Standard Modbus Protocol /CAN2.0B
Protection Functions	
PV Input Protection	PV input over voltage and under voltage protection
Output Protection	Voltage regulation protection, battery reverse polarity protection, battery disconnection protection, and overcharge protection
General Protection	Over-temperature protection, fan fault protection, over-current protection, and surge protection
Safety / Dielectric Withstand	Input / output to ground: 1.0KV/20mA/60S
	Communication Port to Ground: 0.7KV/20mA/60S
Insulation Resistance	≥10MΩ
Grounding Resistance	≤0.1Ω
Other Parameters	
Installation Method	Embedded inside a combiner box or cabinet system chassis
Product Dimensions	333*105*41mm
Product Weight (kg)	2.025
Operating Ambient Temperature	-20℃ ~+50℃ (Derating occurs above 40℃)
IP Rating	IP20
Altitude	≤ 4000m(Derates by 1℃ for every 100m increase above 3000m)

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