

# R4850G1 Rectifier



**Rectifier**

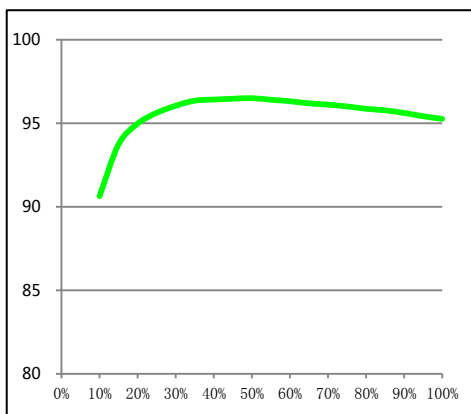
## Features

- ✓ High efficiency:  $\geq 96\%$
- ✓ Input voltage range: 85~300VAC
- ✓ Operating temperature range:  $-40^{\circ}\text{C}\sim 75^{\circ}\text{C}$
- ✓ Total harmonic distortion(THD):  $\leq 5\%$
- ✓ Hot-plug
- ✓ Digital control
- ✓ Intelligent electric meter
- ✓ Communication over RS485
- ✓ Adjustment of voltage and current
- ✓ Meet RoHS requirements
- ✓ Passing the TUV,CE,CB,UL certifications

## Introduction

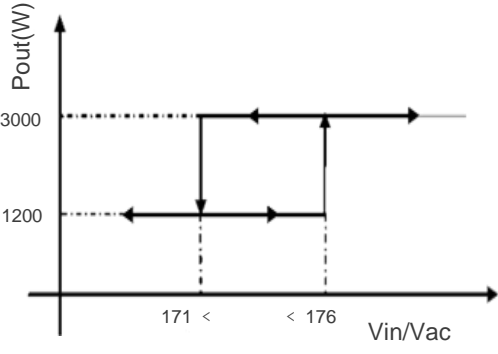
The R4850G1 is a digital rectifier that converts the 85~300VAC to 53.5 VDC and possesses the characters of high efficiency, high power density, wail-in start, hot-plug, complete protection, and low noise. The rectifier adopts the latest power monitoring technology, implements the function of monitoring the states of loads and the rectifier status in real time. The output voltage of the rectifier can be adjusted through the host.

Electrical Specifications	Specification
<b>Input</b>	
Input voltage	85~300VAC
Input voltage mode	220VAC single phase (or 110VAC dual live lines)
Frequency	45~65Hz Rated: 50Hz/60Hz
Maximum input current	$\leq 18.5\text{A}$
Power factor	$\geq 0.99$
THD	$\leq 5\%$
<b>Output</b>	
Output voltage	42~58VDC Default value: 53.5VDC
Output power	3000W(176~300VAC)
<b>Others</b>	
Dimension	88.9(H) $\times$ 103(W) $\times$ 243(D)mm
Weight	$\leq 2.8\text{kg}$
Cooling	Forced air cooling
<b>Environmental Specifications</b>	
Operating temperature	$-40^{\circ}\text{C}\sim +75^{\circ}\text{C}$ (non-derating under $55^{\circ}\text{C}$ )
Storage temperature	$-40^{\circ}\text{C}\sim +75^{\circ}\text{C}$
Relative humidity	5%~95%(non-condensing)
Altitude range	$\leq 4000\text{m}$ (If the altitude is within the range of 3000m to 4000m, the maximum operating temperature decreases by $1^{\circ}\text{C}$ as the altitude increases by 200m.)

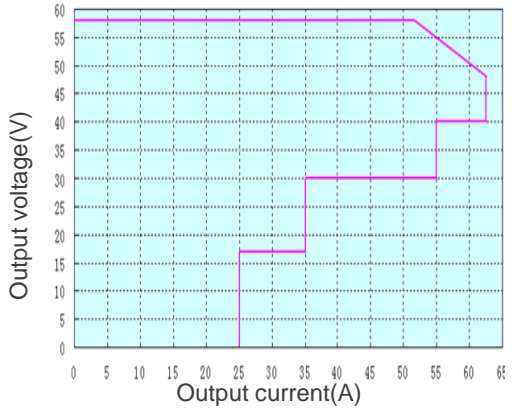


Efficiency curve

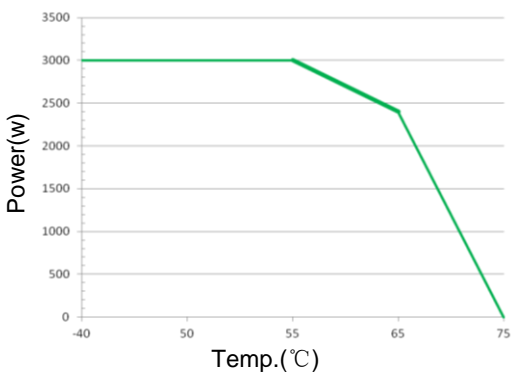
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Output power V.S input voltage



Output voltage V.S Output current



Power derating curve

Protection	
Input overvoltage protection	Protection point: >300VAC
Input undervoltage protection	Protection point: <85VAC
Output overvoltage protection	58.5~60.5 VDC(can be set by PMU)
Output short circuit protection	A long term short circuit is allowed
Over-temperature protection	Protection point: $\geq 75^{\circ}\text{C}$ ( $167^{\circ}\text{F}$ )
Reliability	
MTBF	>500,000hours
Audible Noise	
Specification	$\leq 50\text{dB}$
Safety/EMC/Lightening Protection	
Safety Certification	Passes TUV, CE, UL certifications Catch the CB certificate Complies with UL60950-1 IEC60950-1 EN60950-1 CAN/CSA C22.2 No. 60950 -1
	EMC
Lightning protection	YD 5098-2005 5KA

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