

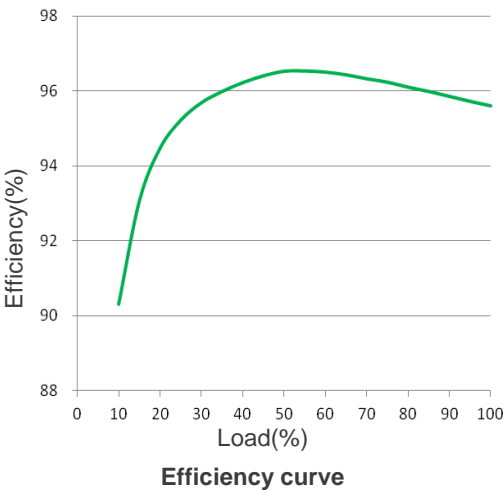
R4850G2 Rectifier



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 CAN
- ✓ Adjustment of voltage and current
- ✓ Meet RoHS requirements
- ✓ Passing the TUV,CE,CB,UL certifications



Introduction

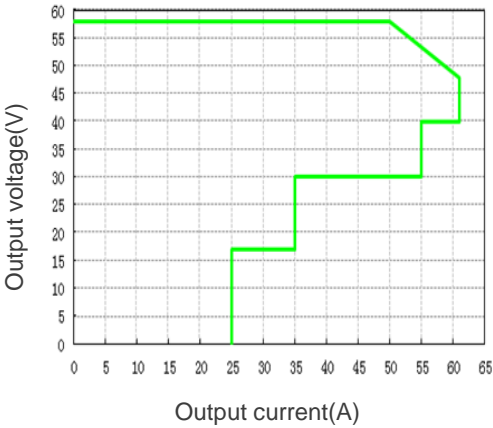
The R4850G2 is a digital rectifier that converts the 85~300VAC to 53.5 VDC and possesses the characters of high efficiency, high power density, walk-in start, hot-plug, complete protection, and low noise. The rectifier adopts the latest power monitoring technology, implements the function of monitoring 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
Input	
Input voltage	85~300VAC
Input voltage mode	220VAC single phase(or 110VAC dual live lines)
Frequency	45~65Hz Rated: 50Hz/60Hz
Maximum input current	$\leq 17\text{A}$
Power factor	≥ 0.99
THD	$\leq 5\%$
Output	
Output voltage	42~58VDC Default value: 53.5VDC
Output power	3000W(176~300VAC)
Others	Specification
Dimension	40.8(H) \times 105(W) \times 281(D)mm
Weight	$\leq 2\text{kg}$
Cooling	Built-in fan(The rotation of fan depends on the internal temperature)
Environmental Specifications	
Operating temperature	$-40^{\circ}\text{C}\sim +75^{\circ}\text{C}$ (non-derating under 55°C)
Storage temperature	$-40^{\circ}\text{C}\sim +70^{\circ}\text{C}$
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°C as the altitude increases by 200m.)

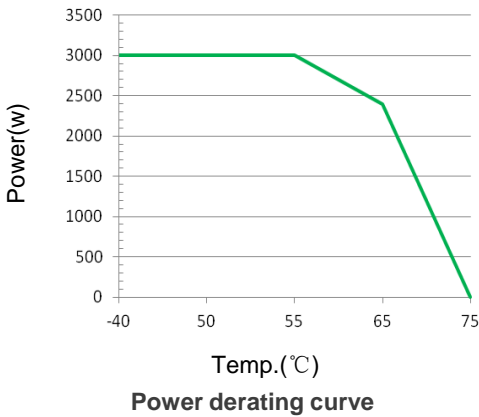
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Output voltage V.S Output current



Power derating curve

Protection	
Input overvoltage protection	Protection point: >300VAC
Input undervoltage protection	Protection point: <85VAC
Output overvoltage protection	58.5~60.5VDC(be set by PMU)
Output short circuit protection	A long term short circuit is allowed
Over-temperature protection	Protection point: ≥75℃(167°F)
Reliability	
MTBF	>500,000hours
Audible Noise	
Specification	≤45dB
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
	EN55022 Class B EN55024 EN61000-3-2 EN61000-3-3 ETSI EN300 386 ETSI EN301489 ITU-T K.20
Lightning protection	YD 5098-2005 5KA

Interface Description

The rear panel of the rectifier provides an golden finger connection which is used as AC input,DC output and signal connection.For the location of the pins, see Figure 3. For the definitions of the pins, see Table 1.

Figure 4 Pins on the rear panel

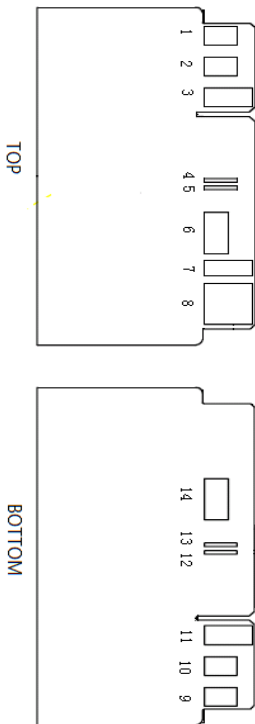


Table 1 Definitions of the pins on the rear panel

Pin	Definition	Function
1、 9	L	Live line
2、 10	N	Neutral line
3、 11	PE	Protect earth
4	CANL	CANL
13	ACD1	Slot detection signal 1
5	ACD2	Slot detection signal 2
12	CANH	CANH
6、 14	OUTPUT+	Output:48V+
8	OUTPUT-	Output:48V-
7	Pre-charge	Pre-charge

CAUTION

- Only trained and qualified personnel can be allowed to install or service the rectifier. Wear antistatic clothes, antistatic gloves, and ESD wrist straps before operating the rectifier.
- Each rectifier input is protected by two fuses, one for the live wire and the other for the neutral wire.

Removing the Rectifier

Figure 5 Removing a PSU



- Step 1: Push the locking latch left.
- Step 2: Remove the PSU out of the PDU by externally drawing the handle, as shown in Figure 5.

Installing the Rectifier

Figure 6 Installing a PSU



- Step 1: Push the locking latch left and pull out the handle.
- Step 2: Push the PSU slowly into the subrack along the guide rail and push the locking latch right to fix the handle, as shown in Figure 6.

Transport

The product must be packed with firmly packing box when transport. Out of the box the mark “prevent moisture”, “lay down carefully” and other required mark must have. Any transport tools are permitted if the product in the packing box .When transport must avoid rain and snow attack directly and mechanical shock.

Storage

Product should be packaged in the packing box before use .The store room should be meet : -40 °C to +70°C ambient temperature ,related humidity less than 80%,dry ,ventilation and hasn't any corrosive gas.