Rectifier Module

R4815G1

Introduction

R4815G1 is a 1000W, 96% efficiency, digital controlled high power density rectifier.

It converts input Voltage ranges between 85 to 300 Vac/85 to 420 Vdc into 42 to 58 Vdc adjustable output voltage.

With comprehensive protection functions, it supports walk-in start function with low noise operation and latest technology on real time state monitoring.

Overview of R4815G1

Features

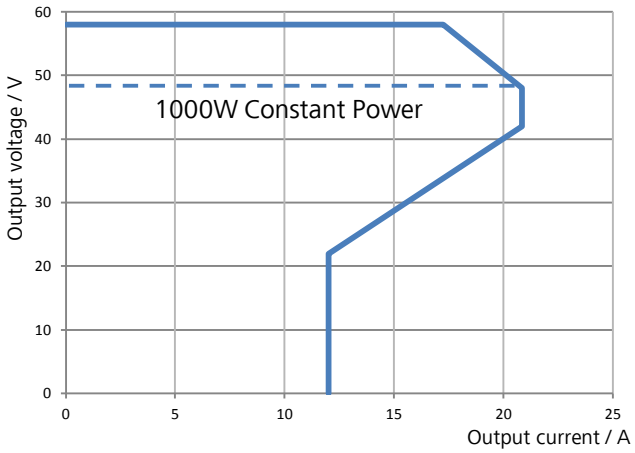
- **High efficiency**: ≥ 96%
- **Wide operation temperature range**: from -40 ℃ to 80 ℃ (full output up to **70℃**)
- **Wide hybrid input voltage**: 85 to 300 Vac/85 to 420 Vdc
- Total harmonic distortion(THD): ≤ 5%
- **Hot-swappable** rectifier
- **Digital control**
- **Intelligent electric meter**
- **CAN communication**
- Adjustable voltage and current
- **TUV,CE,UL,CB** certifications

Front view of R4815G1

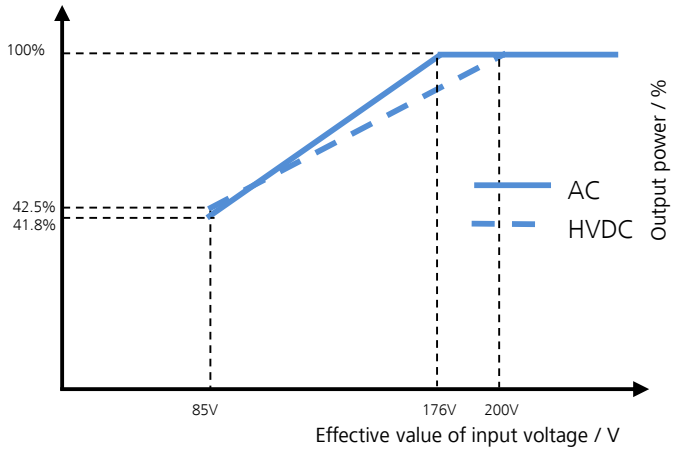
Scenarios

- Access network
- Transmission network
- Communication network of enterprises

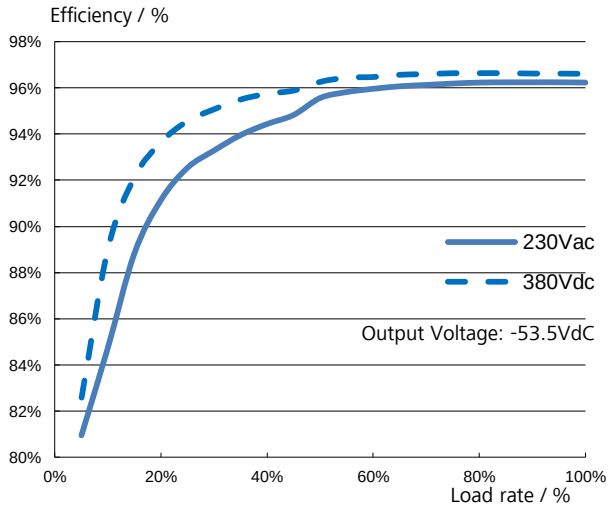
Feature Curve



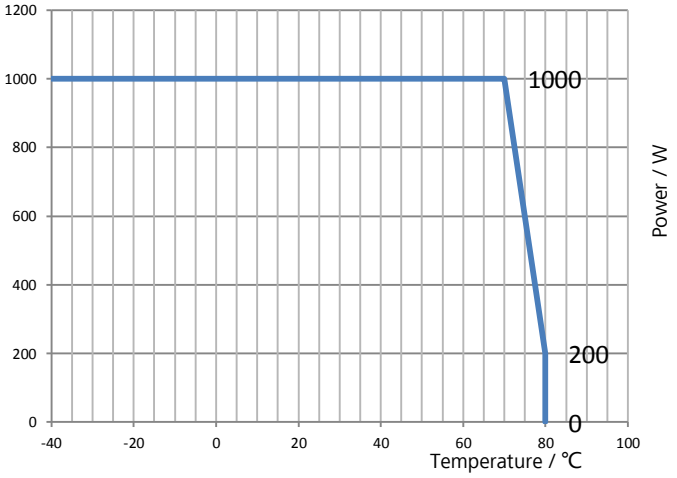
Output Feature Curve



Output Power Vs Input Voltage Curve

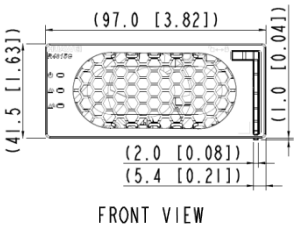


Energy Efficiency Curve

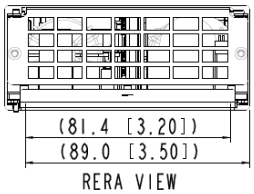


Output Power Vs Temperature Curve

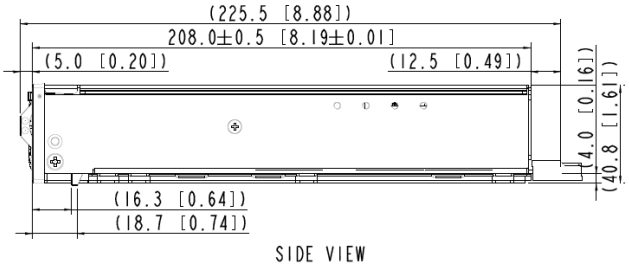
Dimension Drawings



FRONT VIEW



RERA VIEW



SIDE VIEW

Specifications

Product		R4815G1	
Basic specifications	Dimension	95.5 mm(W) × 208 mm(D) × 40.8 mm(H)	
	Weight	≤ 1.2 kg	
	Cooling	Forced Air cooling (Built-in fan)	
Input feature	Input Voltage	85 to 300 Vac	85 to 420 Vdc
	AC Input Mode	220 Vac single phase (or 110 Vac dual live lines)	HVDC, rated: 240 Vdc/336 Vdc
	Frequency	45 to 66 Hz, rated: 50 Hz / 60 Hz	-
	Input Current	≤ 5.3 A	
	Power Factor	≥ 0.98 (> 50% load at 230 Vac)	-
	THD	≤ 5% (> 50% load at 230 Vac)	-
Output feature	Efficiency (for 230 Vac Input)	> 95% (60% to 100% load) > 96% Max	
	Output Voltage	42 to 58 Vdc, rated voltage: 53.5 Vdc	
	Output Power	1000W (176 to 300 Vac)	1000W (200 to 420 Vdc)
	Ripple and Noise	<200 mV pk-pk, 20 M bandwidth, < 2 mV rms psophometric	
	Hold-up Time	> 10 mS at 870W, output voltage > 42 V	
	Output Regulated Voltage Precision	≤ 0.6% Vo from no load to full load	
	Current Share	±5% output rated current from 10% to 100% load	
Environmental specifications	Operating Temperature	-40 ℃ to +80 ℃ (full output below 70℃), ETS EN 300-019	
	Storage Temperature	-40 ℃ to +80 ℃; ETS EN 300-019	
	Relative Humidity	5% to 95% (non-condensing), ETS EN 300-019	
	Altitude Range	≤ 5000 m (If the altitude is within the range of 2000 m to 5000 m, the maximum operating temperature decreases by 1℃ as the altitude increases by 200 m)	
Protection	Input Overvoltage Protection	Protection point: > 300 Vac / 420 Vdc	
	Input Under-voltage Protection	Protection point: < 80 Vac / 80 Vdc	
	Output Overvoltage Protection	56 to 60 Vdc (can be set by monitoring unit)	
	Output Short Circuit Protection	A long term short circuit is allowed. After the fault is rectified, the rectifier will restore automatically	
	Over-temperature Protection	Protection point: ≥ 80 ℃	
Reliability	MTBF	≥ 500,000 hours (Telcordia SR-332 issue2 Method 1 at 25 ℃)	
Audible noises	Specification	≤ 45 dB (25 ℃, full load); sound presure@1m distance, ISO3744	
Safety/EMC/ Lightening protection	Safety Certification	Passed TUV, CE, UL certifications; got the CB certificate; complies with UL60950-1, IEC60950-1, EN60950-1, CAN/CSA C22.2 No. 60950 -1	
	Isolation	Input to output: 4242 Vdc; input to earth: 2121 Vdc; output to earth: 707Vdc	
	EMC	EN55022 Class B, EN55024, EN61000-3-2, EN61000-3-3, ETSI EN300 386, ETSI EN301489, ITU-T K.20	
	Lightening Protection	Common model(input to earth) / differential model(input to input): 5KA (8/20uS, ITU-T K.44)	

HUAWEI TECHNOLOGIES CO., LTD.

Huawei Industrial Base

Bantian Longgang

Shenzhen 518129, P.R. China

Tel: +86-755-28780808

www.huawei.com