

48VDC TELECOM RECTIFIER SNRC48/3000G6



DESCRIPTION

SNRC48/3000G6 is a high-efficiency digital rectifier module designed for using in high power-density environment. It's well suited for powering telecom equipment in telecom shelters, outdoor/indoor cabinets, and racks.

FEATURES

- Wide range of input voltage
- 53.5/57VDC default output voltage
- 96% efficiency
- Soft start-up
- Voltage regulation, current regulation, and current balancing support
- Real-time monitoring
- Protection from over/under voltage
- Can be used in parallel
- Low total harmonic distortion (THD)
- Hot-swap support
- CAN bus
- LED status
- Compliant with RoHS

INPUT	
Voltage range	85VAC ~ 290VAC
Rated frequency (range)	50Hz/60Hz (45Hz ~ 66Hz)
Current	≤16A
Power factor	≥0.99 at 100% load
THD	≤5% at 50%~100% load
OUTPUT	
Rated voltage	53.5VDC or 57VDC
Voltage range	42VDC ~ 58VDC
Rated power (AC range)	3000W (176VAC ~ 290VAC)
Linear power reduction (AC range)	3000W ~ 1250W (175VAC ~85VAC)
Efficiency	≥96% (input 220VAC, 15A load) ≥96.5% (input 220VAC, 25A load) ≥95.5% (input 220VAC, 50A load)
Voltage stabilization	±0.6%
Ripple and noise	≤200mVp-p (≤20MHz band)
Dynamic response	25%~50%, 50%~75% jump: Overshoot: ±5% Recovery time: ≤200μs (±0.6%Vo) 10%~90% jump: Recovery time 1: ≤50μs (±5%Vo) Recovery time 2: ≤1ms (±1%Vo)
Standby power consumption	≤5W
Start-up time	3s ~ 10s
Output hold time	>10ms

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SNRC48/3000G6



PROTECTION PARAMETERS

Input overvoltage	Protection trigger: >300VAC Recovery range: 290VAC ~ 300VAC
Input undervoltage	Protection trigger: <80VAC Recovery range: 80VAC ~ 90VAC
Output overvoltage	Protection trigger: 56VDC ~ 60VDC (can be set via settings) 1. Internal fault and output overvoltage 2. Output voltage $\geq 63V$ for $\geq 500ms$
Output current limit	Refer to pic.1
Output short-circuit	1. The unit will shut down in case of output short-circuit 2. After short-circuit disappearance, the unit will recover automatically
High temperature	Built-in high-temperature protection

SAFETY/EMC

Certificates and standards	IEC60950-1, IEC62368-1
EMC	EN 55032, EN 55024, ETSI EN 300 386, IEC61000-3-2, IEC61000-3-3, IEC61000-6-1, IEC61000-6-2, IEC61000-6-3, IEC61000-6-4
Lightning protection	5kA (8/20 μ s)

MISCELLANEOUS

MTBF	>500,000 hours (25°C)
Noise	$\leq 55dB(A)$ (40°C)

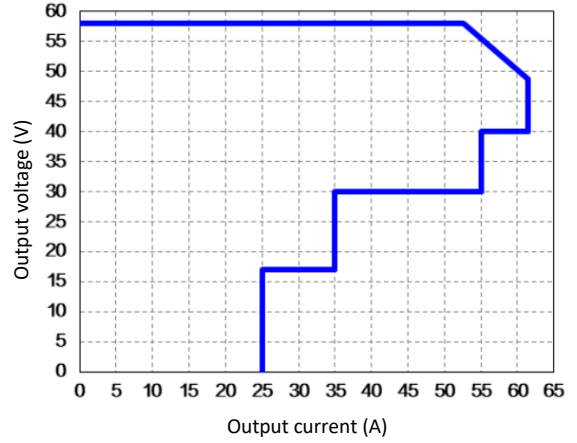
DIMENSIONS

H x W x D	40.8mm x 105mm x 269mm
Weight	<2kg

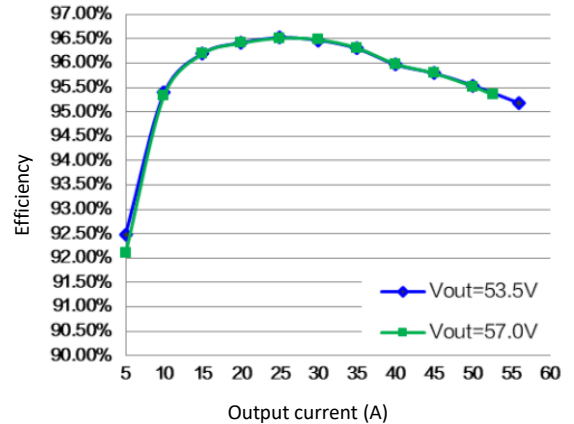
ENVIRONMENT

Cooling	Built-in fan (with temperature control and speed adjustment)
Operating temp range	-25°C ~ +75°C
Storage temp range	-40°C ~ +75°C
Humidity	5% ~ 95% (no condensation)
Altitude	$\leq 5000m$ (3000m ~ 5000m operating temp drops 1°C per 200m)

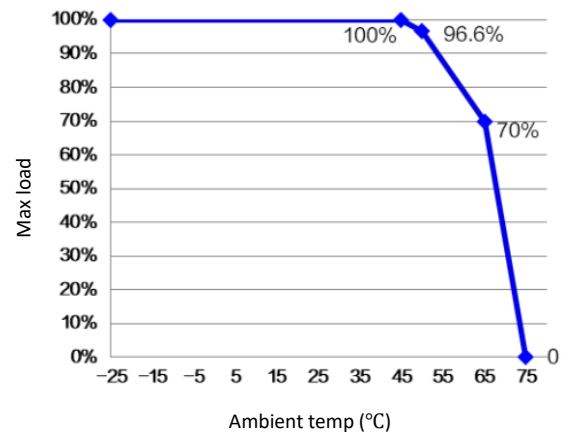
PIC 1 – OUTPUT CHARACTERISTICS



PIC 2 – EFFICIENCY (230VAC, 25°C)



PIC 3 – POWER DERATING



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