

SC4500 Small Cell Rectifier System

Advanced Technology to Simplify Your Network



The SC4500 Outdoor single-phase convection cooled rectifier is designed to efficiently transform energy from available outdoor AC sources into the 48 Volt Nominal DC power needed for small cell radios. The SC4500 provides 4500W output to power small cell radios while offering a feature set that simplifies installation combined with zero maintenance. Screw terminal input and configurable output breakers eliminate the need for custom cables, thus simplifying the inventory needed to support installation.

Power for Easy Installations

The SC4500 Rectifier was developed to maximize power for small cell radios while offering a feature set that simplifies installation.

- 8 DC output breakers share the total available power to allow configurable powering solutions.
- Screw terminal input and output connections eliminate the need for custom cables, thus simplifying the inventory needed to support installation.
- Robust performance with AC in – DC out simplicity.
- Integrated heat sink with included mounting holes provide solid connection points.
- Flexible installation in pedestal, cabinet, vault, wall, pole, shroud, or platform mounting locations.
- Available Pole Mount and Solar Shield Options for any environment.
- Mounts to the same mounting holes as the CC1600 offering a direct upgrade path for the CC1600.

Features & Advantages

- IP68 Outdoor rated convection cooled rectifier
- Flexibly provides 4500Watts of -48 Volt power
- Full power operating temperature range for outdoor (-40°C through +46°C)
- Starts and runs at any AC voltage from 170 to 300 V_{AC}
- Fail safe performance – soft start and inrush current protection prevent nuisance tripping of upstream breakers, electronic controlled short-circuit protection on the output
- Flexible Output – 8 DC output breaker positions provide protected outputs for loads from 5A to 50A
- Optional external battery input via pluggable IP68 interface connections

Technical Specifications

Electrical Specifications for System Design

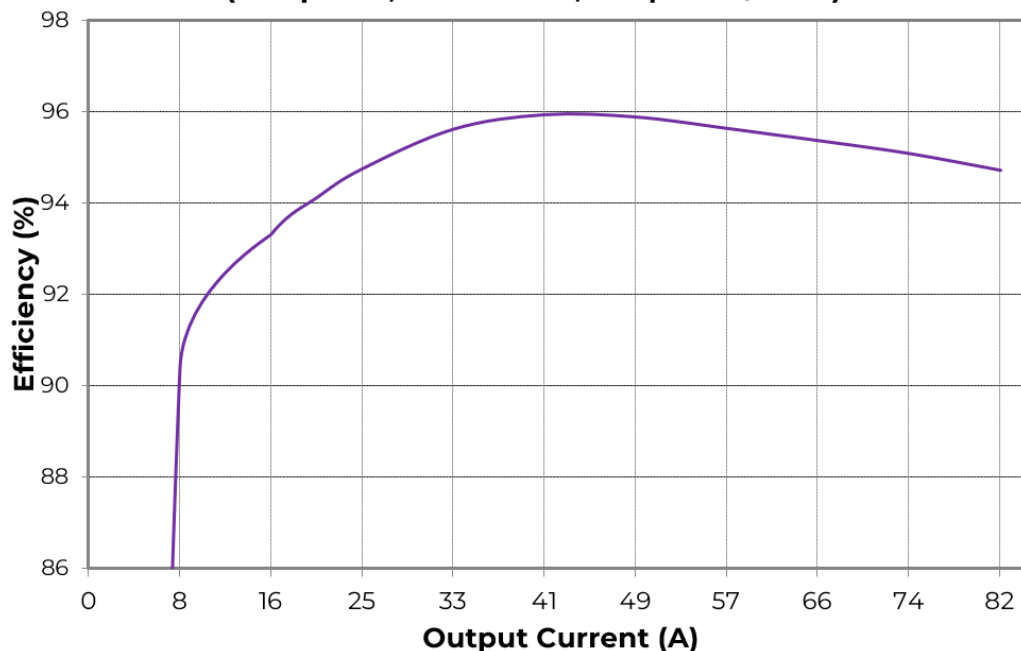
OmniOn's SC4500 Outdoor single-phase rectifier is designed to efficiently transform energy from available outdoor AC sources into the 48 Volt Nominal DC power needed for small cell radios.

Input	MIN	TYPICAL	MAX
Voltage Range	170V _{AC}	200 - 277V _{AC}	300V _{AC}
Current Range	27.8A @ 170V _{AC}	23.6 - 16.9A	
Frequency	47Hz	60Hz	66Hz
Power Factor @ >50%	95%	99.5%	99.8%
Total Harmonic Distortion			5%

Mechanical	
Height (in./mm)	17 / 432
Width (in./mm)	9.5 / 241
Depth (in./mm)	4.4 / 112
Weight (Lb/Kg)	20.75 / 9.4

Environmental	
Operating Temperature	-40°C to +65°C (-40°F to 115°F) Output derates 2%/C beginning at +46°C
Storage Temperature	-40°C to +85°C (-40°F to 185°F)
Relative Humidity	0 - 100%
Protection Class	GR487 Wind Driven Rain, IP65
Altitude	5000 Meters

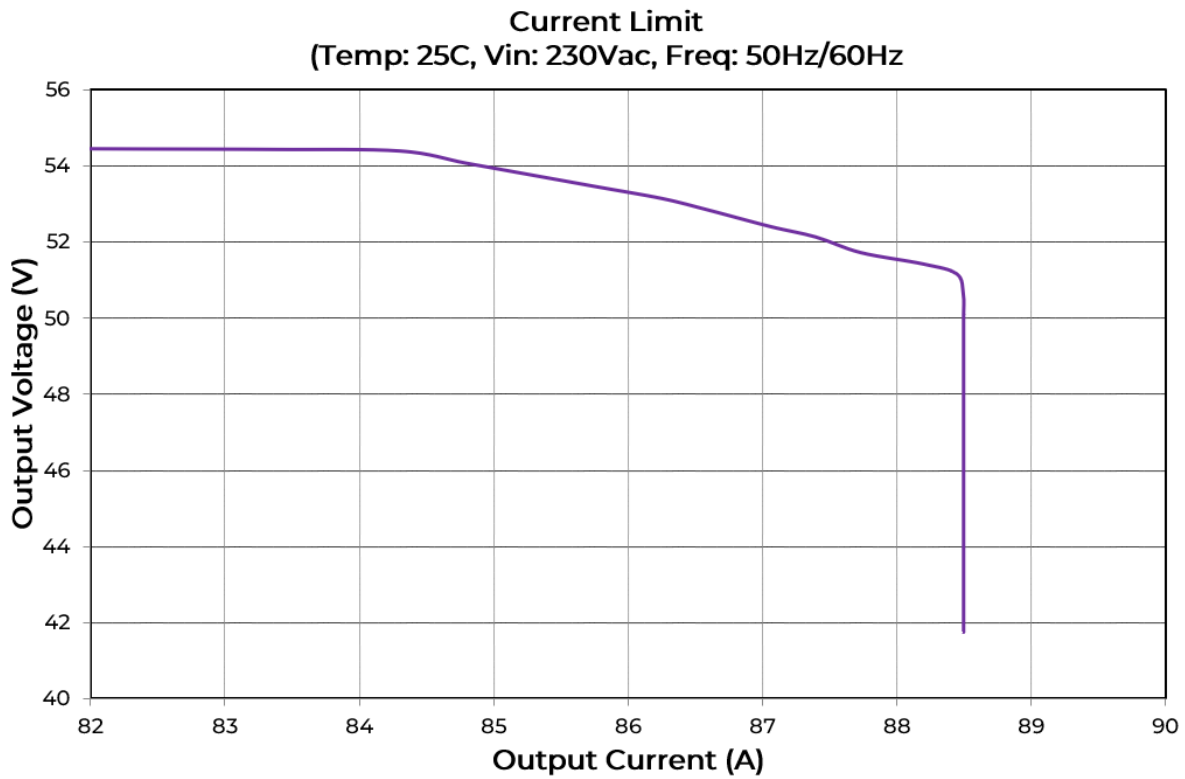
SC4500 Efficiency vs Output Current
(Temp: 25C, Vin: 230Vac, Freq: 50Hz/60Hz)



Technical Specifications (Continued)

Electrical Specifications for System Design (Continued)

Output	Range
V _{OUT}	40–58 V _{DC} range. Default = 55V _{DC} ±1%
I _{OUT}	82A @ 55V _{DC} (200 - 277V _{AC})
Regulation	±0.5%
Ripple	100 mV _{RMS} , 500 mV _{P-P}
Efficiency	96% Peak

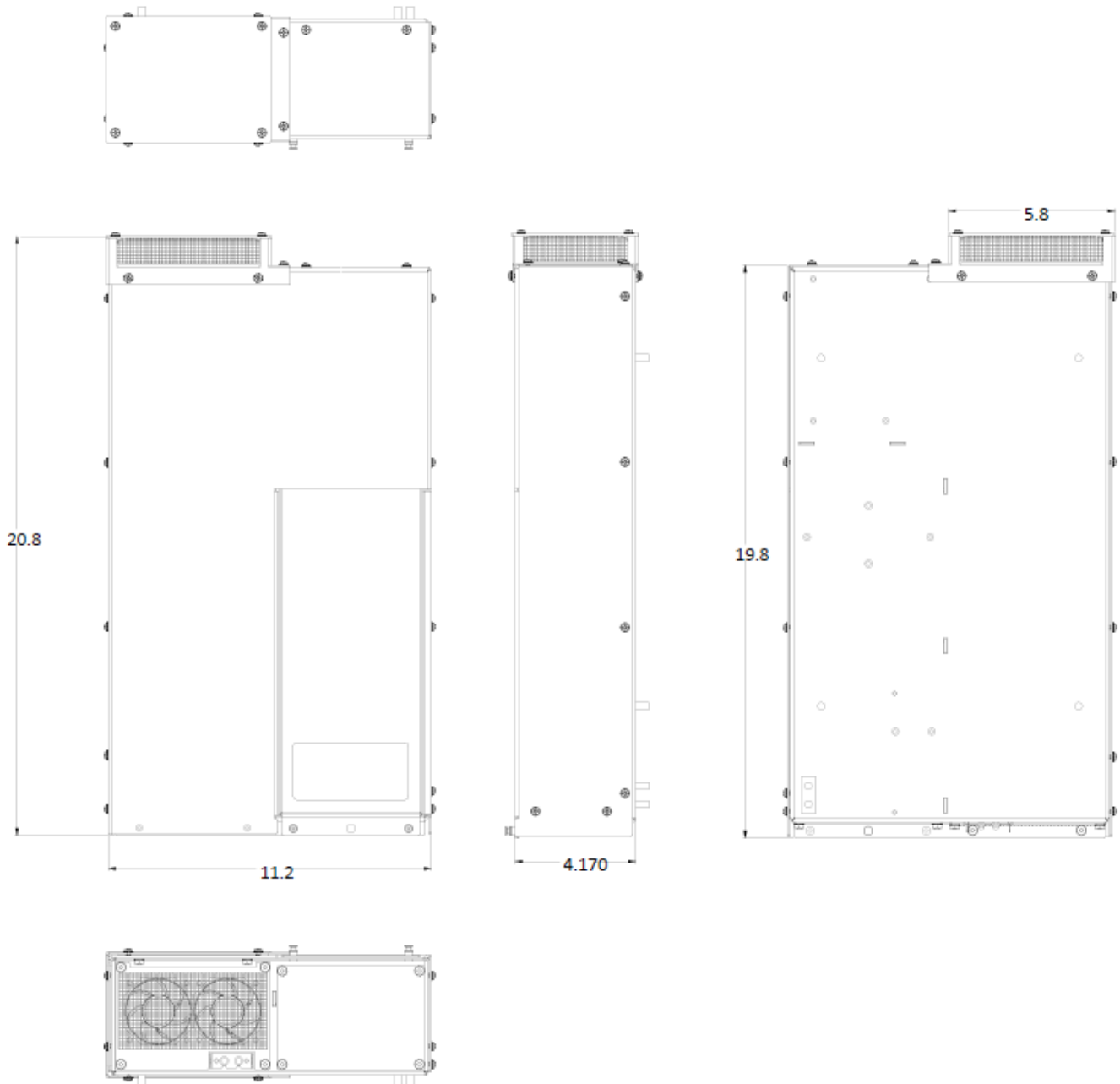


Technical Specifications (Continued)

EMC & Safety Specifications

Agency Certifications	
EMC Performance	FCC Part 15, EN 55032 (CISPR32), EN 55035, Level A, GR-1089
Safety	ANSI/UL* 62368-1 and CAN/CSA† C22.2 No. 62368-1 Recognized, NEBS GR-1089, GR-63-CORE, CE, RoHS 10/10, GR-3108 Class 4
Lightning Surge	EN/IEC 61000-4-5 Level 4 (Error free), ANSI C62.41 Category B 100 kHz ring and 1.2/50µs combination waves (6kV damage free); ITU-T K.45, Telcordia GR-1089

Mechanical Outline



Technical Specifications (Continued)

SC4500 Ordering Information

Ordering Code	Description	Picture
1600486476A	SC4500 Small Cell Rectifier Equipped with No Circuit Breakers SC4500AC54DC-8BK	
1600480211A	SC4500 Small Cell Rectifier Equipped with 2 - 15A, 4 - 30A, and 2 - 50A Circuit Breakers SC4500AC54DC-8BK-C-2F-4L-2	
1600485632A	SC4500 Small Cell Rectifier Equipped with 2 - 5A, 2 - 15A, and 4 - 30A Circuit Breakers SC4500AC54DC-8BK-A-2C-2F-4	

Mounting Accessories

Ordering Code	Description	Picture
1600487086A	SC4500 Pole Mount Bracket	
1600487087A	SC4500 Stand-Off Bracket	
1600487088A	SC4500 H-Frame / Wall Mounting Plate	

Breakers

Ordering Code	Amperage	Designation	Min Wire Gauge	Picture
450029223	5	A	10	
450029222	10	B	10	
450029220	15	C	10	
450029219	20	D	10	
450029218	25	E	10	
450029217	30	F	10	
450029214	35	G	8	
CC408654288	40	H	8	
450029213	50	L	6	

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