

CC1600 HVDC Small Cell Converter

Advanced Technology to Simplify Your Network



The CC1600SC54HV Outdoor High Voltage DC convection cooled converter is designed to efficiently transform energy from available outdoor HVDC sources into the 48 Volt Nominal DC power needed for small cell radios. The CC1600 provides 1600W output to power small cell radios while offering a feature set that simplifies installation combined with zero maintenance. Off the shelf IP65 quick connection solutions for inputs and outputs for ease of installation while providing touch safe, waterproof connectivity.

Power for Easy Installations

The CC1600 HVDC Converter was developed to maximize power for small cell radios while offering a feature set that simplifies installation.

- Three DC output connections share the total available power to allow one to three connection solutions.
- IP65 quick connection solutions for inputs and outputs for ease of installation while providing touch safe, waterproof connectivity.
- Robust performance with HVDC 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.

Features & Advantages

- Outdoor rated convection cooled converter
- Externally connectorized input/output connections
- Flexibly provides 1600 Watts of -48 Volt power
- Full power operating temperature range for outdoor (-40°C through +46°C).
- Starts and runs at HVDC +/-190VDC
- 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 – DC output terminals provide shared output for three loads, or full output for a single load

Electrical Specifications for System Design

ABB's CC1600-SC55 Outdoor converter is designed to efficiently transform energy from available outdoor HVDC sources into the 48 Volt Nominal DC power needed for small cell radios.

Input	MIN	TYPICAL	MAX
Voltage Range			
• VDC Input	190V	380V	400V
Frequency	DC	DC	DC
DC input @ 54.5Vout	6.0A	3.9A	3.6A
DC input Peak	6.9A	4.6A	4.4A

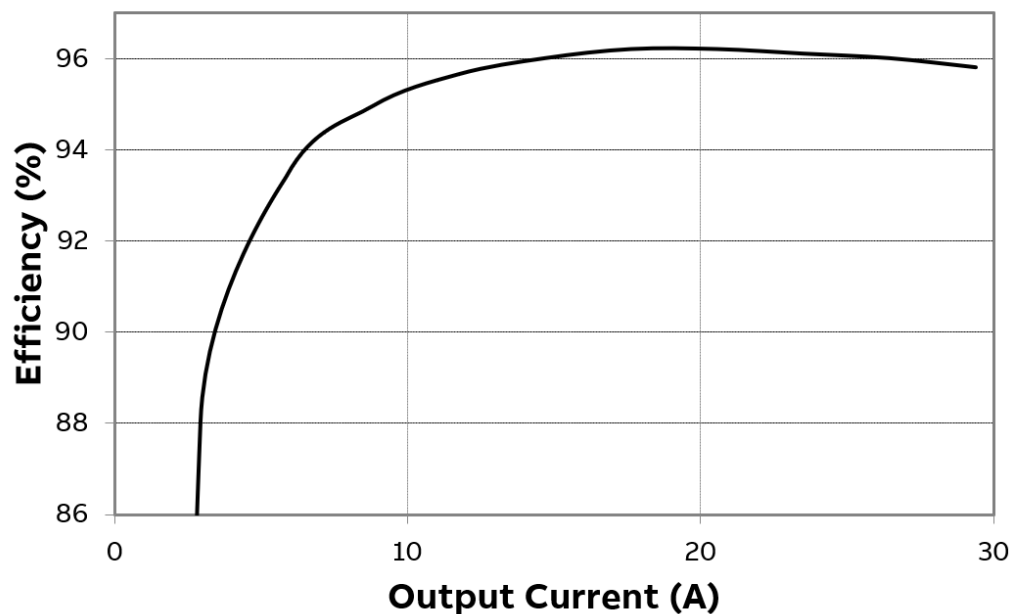
Mechanical

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 +46°C (-40°F to 115°F) Output derates 2%/C beginning at +46°C up to +55°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	4800 feet	

CC1600SC54HV Efficiency vs Output Current
(Temp: 25C, Vin: 380Vdc)

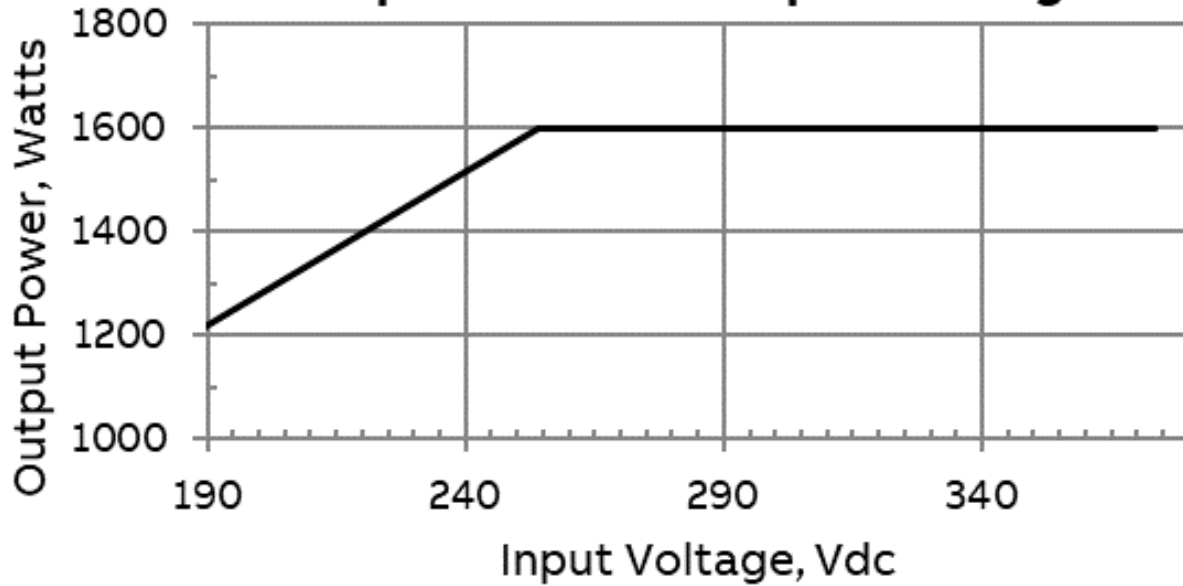


Electrical Specifications (continued)

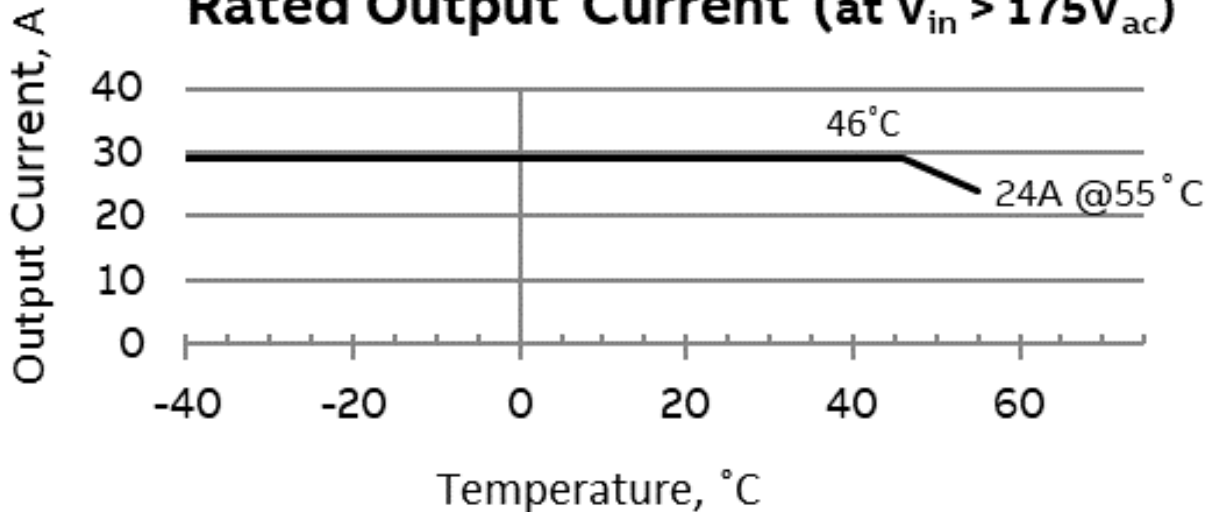
Output

V_{out}	42–58 V _{DC} range. Default = 54.5Vdc±1%
I_{out}	22A @ Low line input; 33A @ High line input Up to 26A to any individual output; 33A maximum total output
Regulation	±0.5% ; 2% over life load and temperature
Ripple	100 mV _{rms} , 250 mV _{p-p}
Efficiency	96.2% Peak

Output Power vs Input Voltage



Rated Output Current (at $V_{in} > 175V_{ac}$)




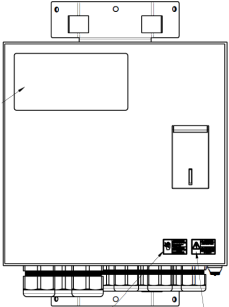
Specifications (continued)

Agency Certifications

EMC Performance	FCC Part 15, EN 55032 (CISPR32), EN 55035, Level A, GR-1089
Safety	ANSI/UL60950-1-2014, EN60950-1 2nd ed+A1+A2, CAN/CSA C22.2 No. 60950-1- 07 +Am2: 2014, NEBS GR-1089, GR-63-CORE, CE, RoHS6/6, GR-3108 Class 4
Lightning Surge	EN/IEC 61000-4-5 Level 4 (Error free), ANSI C62.41 Category B 100 kHz ring and 1.2/50 μ s combination waves (6kV damage free); ITU-T K.45, Telcordia GR-1089

Drawings

CC1600 Ordering Information

Ordering Code	Description	Picture
1600301680A	CC1600SC54HV Small Cell Converter	
1600269170A	<p>SC Dist-DIN-01 Pole Mount Distribution</p> <p>Accepts inputs from up to 3 x CC1600-SC55 Converters</p> <p>Supports 6 Outputs:</p> <ul style="list-style-type: none"> Each load on breaker 4 x 10A 2 x 30A <p>Cord Grips for each SO Cord</p>	

Mounting and Connection Accessories



Ordering Code	Description	Picture
1600183817A	Pole Mount Bracket	
1600270672A	4.5" Stand-Off Pole Mount Bracket	
1600183819A	Solar Shield Kit	
1600270673A	Open Top Solar Shield	
1600270671A	Three Load Interface Kit	



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