BCC Series



- Baseplate-cooled
- Wide Operating Temperature Range
- ETSI, EMC and Environmental Compliant
- Parallel Operation
- Remote On/Off
- Low Temperature Option
- 3 Year Warranty

Specification

Input

Input Voltage Input Frequency Input Current

Inrush Current

Power Factor

90-264 VAC

• 47-63 Hz

3 A max at 90 VAC (BCC200)

6 A max at 90 VAC (BCC400) 60 A at 264 VAC +25 °C cold start

>0.9

Earth Leakage Current • <1.5 mA at 230 VAC Input Protection

• Internal T10 A/250 V fuse

Output

Output Power Output Voltage Output Voltage Trim Initial Set Accuracy Minimum Load

Hold Up Time Line Regulation Load Regulation

Ripple & Noise

Overvoltage Protection • 105-140% Vnom

Overtemperature Protection

Overload Protection

Temperature Coefficient Remote Sense

Remote On/Off

Current Share

See table

See table

• 60% to 110% Vnom

±1% nominal

No minimum load

• 10 ms min

±0.5%

See table

<1% pk-pk, 20 MHz bandwidth

(3.3 V version 130-166%)

 Shuts down at +115 °C baseplate temperature, recycle mains to reset

 102-140% constant current limiting with auto recovery

0.05%/°C

· Compensates for lead drops of up to 500 mV

· A logic '0' on the Remote On/Off connection electronically disables the output

• Up to 3 power supplies can be connected in parallel sharing within 10%, total output power derates by 10%

General

Efficiency Isolation

• 80% typical

 3000 VAC Input to Output 1500 VAC Input to Ground 500 VAC Output to Ground

Switching Frequency MTBF

• PWM 360 kHz typ, PFC 90 kHz typ

160 kHrs to MIL-HDBK-217F at 25 °C, GB

Environmental

Operating Temperature • -20 °C to +70 °C, with baseplate maintained below +83 °C utilizing system cooling. -40 °C option available - add suffix '-L' to model number

Cooling Operating Humidity

· Conduction via 6mm baseplate

• 20-95% RH, non-condensing. Units can be conformally coated for high humidity environments - add suffix '-E'

Storage Temperature Shock & Vibration

-40 °C to +85 °C

• 2 g 10 min/1 cycle, 10 Hz to 500 Hz, 60 mins each axis

EMC & Safety

Emissions

Harmonic Currents ESD Immunity Radiated Immunity EFT/Burst

Surge Conducted Immunity **Dips & Interruptions**

Safety Approvals

• EN55032, level B conducted & level A radiated

• EN61000-3-2, EN61000-3-3

• EN61000-4-2, level 3 Perf Criteria A

• EN61000-4-3, 3 V/m Perf Criteria A

• EN61000-4-4, level 3 Perf Criteria A

• EN61000-4-5, level 3 Perf Criteria A

• EN61000-4-6, level 3 Perf Criteria A

• EN61000-4-11, 30% 10 ms, 60% 100 ms, 100% 5000 ms, Perf Criteria A, B, B

 UL60950-1: CSA22.2 No. 60950-1-03. EN60950-1, CE & UKCA meets all applicable directives & legislation.

Models and Ratings

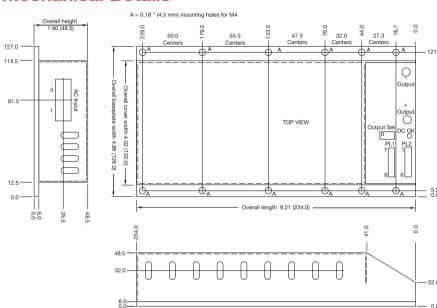


Output	Output	Output	Output	Model
Power	Voltage	Current	Load Regulation	Number ^(1,2)
165 W	3.3 V	50.0 A	1.5%	BCC200PS03
200 W	5.0 V	40.0 A	1.5%	BCC200PS05
210 W	7.5 V	28.0 A	1.5%	BCC200PS07
240 W	12.0 V	20.0 A	1.5%	BCC200PS12
264 W	3.3 V	80.0 A	1.5%	BCC400PS03
400 W	5.0 V	80.0 A	1.5%	BCC400PS05
405 W	7.5 V	54.0 A	1.5%	BCC400PS07
408 W	12.0 V	34.0 A	1.0%	BCC400PS12
405 W	15.0 V	27.0 A	1.0%	BCC400PS15
396 W	18.0 V	22.0 A	1.0%	BCC400PS18
408 W	24.0 V	17.0 A	1.0%	BCC400PS24
406 W	28.0 V	14.5 A	1.0%	BCC400PS28

Notes

- 1. For -40 °C operating temperature, add suffix '-L' to model number.
- 2. For conformally coated option, add suffix '-E' to model number.
- 3. 600 W model available for OEM quantities contact sales.

Mechanical Details



Overall dimensions are in inches (mm) Weight: 2.87 lbs (1.3 kg)

Tolerance: ±0.05 in (±1.5 mm) length and width ±0.02 in (±0.5 mm) height

Input:

AMP Mate'n'lok 3 way. Mating housing AMP 350766-1.

Socket crimp AMP 926893-1. Pin 3: Live

Pin 2: Earth Pin 1: Neutral

Output:

Power output +ve and -ve by M6 studs.

Use appropriate ring terminals and wire for the load current.

Maximum torque: 17.7 lbs-in (2 Nm)

Signal connections on two 0.1 (2.5) headers (PL1 & PL2).

Mating Housing: Molex 22-01-2065. Mating Crimp: Molex 08-50-0032.

F	PL1 Connections		PL2 Connections		
Pin	Function		Pin	Function	
1	Current Balance		1	Current Balance	
2	Voltage Balance		2	Voltage Balance	
3	Trim		3	Trim	
4	-Remote Sense		4	-Remote Sense	
5	+Remote Sense		5	+Remote Sense	
6	Remote On/Off		6	Remote On/Off	

Accessor

- 1. Input & output connector kit order part 'BCC CONKIT'.
- 2. For thermal pad, order part 'BCC THERM'.

Application Notes -

Current and voltage balance pins are used to connect units in parallel - see drawing. Remote On/Off: Output is on with pin left floating, pull pin down to -Output to turn output off.

Remote sense pins are used to compensate for lead drops, for up to 0.5 V maximum. When not used, move switch SW1 to local positions. See below for switch positions. The BCC series is approximately 80% efficient, so for 400 W load consumption, the cooling system used will have to be able to absorb 100 W while maintaining the baseplate to a maximum of +83 °C.

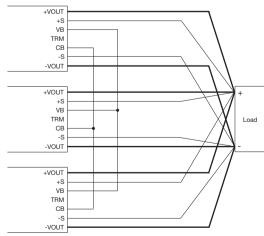
Remote sense switchers - single unit					
	Remote	Local			
SW1 D (1)	OFF	ON			
SW1 C (2)	OFF	ON			
SW1 B (3)	ON	OFF			
SW1 A (4)	ON	OFF			

Parallel units with remote sense				
	PSU 1	PSU 2	PSU 3	
SW1 D (1)	OFF	OFF	OFF	
SW1 C (2)	OFF	OFF	OFF	
SW1 B (3)	ON	OFF	OFF	
SW1 A (4)	ON	OFF	OFF	

Parallel units without remote sense				
	PSU 1	PSU 2	PSU 3	
SW1 D (1)	ON	OFF	OFF	
SW1 C (2)	ON	OFF	OFF	
SW1 B (3)	OFF	OFF	OFF	
SW1 A (4)	OFF	OFF	OFF	

Contact sales office for a full set of application notes.

Examples of parallel operation



Ensure output power leads are of equal length and type for all units and that they are capable of carrying the load current. Set all units to the required output ±0.1V. The voltage setting pot on unit 1 can be used to set the overall output voltage if required.