

- Temperature Compensated
- AC or DC Input
- Auto Boost Option
- Low Ripple & Noise
- Battery LVD
- Non-Standard Configuration Available

### Specification

<b>Input</b>		<b>General</b>	
Input Voltage	<ul style="list-style-type: none"> <li>• See Table (DC input options are also available - See DC-DC SX Series for specification)</li> </ul>	Efficiency	<ul style="list-style-type: none"> <li>• 80-95% depending on model - consult sales for individual models</li> </ul>
Input Frequency	<ul style="list-style-type: none"> <li>• See Table</li> </ul>	Isolation	<ul style="list-style-type: none"> <li>• 6000 VDC Input to Output (Y caps disconnected)</li> <li>• 2200 VDC Input to Ground</li> <li>• 2200 VDC Output to Chassis</li> </ul>
Input Current	<ul style="list-style-type: none"> <li>• See Table</li> </ul>	Switching Frequency	<ul style="list-style-type: none"> <li>• 30 KHz typical</li> </ul>
Inrush Current	<ul style="list-style-type: none"> <li>• See Table</li> </ul>	MTBF	<ul style="list-style-type: none"> <li>• Typically &gt;110,000 hrs at 20 °C to MIL-HDBE-217E, consult sales for individual models</li> </ul>
Earth Leakage Current	<ul style="list-style-type: none"> <li>• See Table</li> </ul>	Signals	<ul style="list-style-type: none"> <li>• AC FAIL and BATT FAIL isolated changeover relay contacts</li> </ul>
<b>Output</b>		<b>Environmental</b>	
Output Voltage	<ul style="list-style-type: none"> <li>• See Table</li> </ul>	Operating Temp	<ul style="list-style-type: none"> <li>• -20 °C to +40 °C - See Derating Curves</li> </ul>
Output Voltage Adj	<ul style="list-style-type: none"> <li>• ±10% nom</li> </ul>	Storage Temp	<ul style="list-style-type: none"> <li>• -25 °C to +85 °C</li> </ul>
Hold Up Time	<ul style="list-style-type: none"> <li>• 28 ms 200 &amp; 300 W models, 18 ms 300 &amp; 550 W models, 12 ms 750 &amp; 1K1 W from nom input</li> </ul>	Cooling	<ul style="list-style-type: none"> <li>• Units with fans require no extra cooling</li> </ul>
Line Regulation	<ul style="list-style-type: none"> <li>• &lt;0.5% for max input voltage swing</li> </ul>	Operating Humidity	<ul style="list-style-type: none"> <li>• 90% max RH non-condensing</li> </ul>
Load Regulation	<ul style="list-style-type: none"> <li>• &lt;1% for 0-100% load change</li> </ul>	Operating Altitude	<ul style="list-style-type: none"> <li>• 3000 m max</li> </ul>
Dynamic Regulation	<ul style="list-style-type: none"> <li>• 0.5-2.0% depending on Vout for 10% load change</li> </ul>	Airflow Direction	<ul style="list-style-type: none"> <li>• Where fitted, fan blows air into unit</li> </ul>
Ripple & Noise	<ul style="list-style-type: none"> <li>• &lt;1% pk-pk (20 MHz bandwidth)</li> </ul>	<b>EMC &amp; Safety</b>	
Overvoltage Protection	<ul style="list-style-type: none"> <li>• 120% approx Vnom</li> </ul>	Emissions	<ul style="list-style-type: none"> <li>• EN55022 Level B conducted</li> <li>• EN55022 Level A radiated</li> </ul>
Overload Protection	<ul style="list-style-type: none"> <li>• Constant current approx 120% Inom</li> </ul>	ESD Susceptibility	<ul style="list-style-type: none"> <li>• EN61000-4-2 Level 4 Air Perf Criteria B</li> <li>• Level 3 Contact Perf Criteria B</li> </ul>
Temperature Compensation	<ul style="list-style-type: none"> <li>• At -3 mV/°C/cell</li> </ul>	Radiated Susceptibility	<ul style="list-style-type: none"> <li>• EN50140 Level 3 Perf Criteria B</li> </ul>
Temperature Coefficient	<ul style="list-style-type: none"> <li>• 0.02%/°C</li> </ul>	EFT/Burst	<ul style="list-style-type: none"> <li>• EN61000-4-4 Level 3 Perf Criteria B</li> </ul>
Remote ON/OFF	<ul style="list-style-type: none"> <li>• Output inhibited when ROF pin is connected to 0 V</li> </ul>	Surge	<ul style="list-style-type: none"> <li>• EN61000-4-5 Level 3 Perf Criteria B</li> </ul>
		Safety Approvals	<ul style="list-style-type: none"> <li>• IEC950, UL9050</li> </ul>

### Model Numbering & Option Codes

Style	Power (watts)	Input	No. of Outputs	Outputs	Options
<b>BA=</b> Chassis Mount (Ears) <b>BN=</b> Narrow <b>BX=</b> Chassis Mount <b>BB=</b> Box <b>BC=</b> 3U Cassette <b>BE=</b> 6U Eurorack	200 300 350 550 750 1K1	<b>I =</b> 55 VAC <b>J =</b> 115 VAC <b>L =</b> 230 VAC <b>T =</b> 400 VAC <b>A =</b> Autoranger <b>P =</b> PFC	<b>S =</b> Single	<b>06 =</b> 6.75 V <b>12 =</b> 13.5 V <b>14 =</b> 15.75 V <b>24 =</b> 27.0 V <b>36 =</b> 40.5 V <b>48 =</b> 54.0 V <b>60 =</b> 67.5 V <b>C1 =</b> 108.0 V <b>C2 =</b> 121.5 V <b>D1 =</b> 216.0 V <b>D4 =</b> 243.0 V	<b>-C =</b> Cover (Std) <b>-T =</b> OTP <b>-E =</b> Conformal Envelope <b>-M =</b> Ruggedised <b>-A =</b> Auto Boost <sup>(6)</sup> <b>-H =</b> Auto Boost <sup>(7)</sup>

The BX series has been designed specifically for battery charging and standby systems including the following features:

- 2.25 V/cell 20 °C float charge voltage.
- Temperature compensation -3 mV/°C/cell. Sensing circuit fitted to PCB as standard. Can be provided on remote flying lead - contact sales office for details.
- Supply fail relay changeover contacts.
- Battery fail relay changeover contacts - operates 20 seconds before under voltage disconnect.
- Output 'OR' diode for zero bleed on battery in UVD

Auto Boost charging options

- Option A - Automatic selection of boost charge when the output current >10% and float charge when the output current <10%. Suitable for cyclic charging of batteries e.g. traction vehicle applications.
- Option H - Automatic selection of boost charge when the output current >90%. Suitable for battery backed-up systems where the battery can be boost charged while the load is connected.

AC INPUT SPECIFICATION							SX
Code		I	J	L	A	T	P
Nominal Input Voltage	All Models	55 V rms <sup>(3)</sup>	115 V rms	230 V rms	Autoranger	400 V rms	Universal
Voltage Range	All Models	50-65 V	90-127 V	180-253 V	115/230 V	300-450 V	90-253 V
Frequency Range	All Models	44-66 Hz	44-66 Hz	44-66 Hz	44-66 Hz	44-66 Hz	44-66 Hz
Earth Leakage Current	All Models	<0.5 mA	<1.6 mA	<2.5 mA	<2.5 mA	<2.5 mA	<2.5 mA
440 Hz Operation Leakage	All Models	<3 mA	<10 mA	<20 mA	<20 mA	<20 mA	<20 mA
Inrush Current	200	25 A	15 A	25 A	25 A	40 A	25 A
	300	25 A	15 A	25 A	25 A	40 A	25 A
	350	25 A	15 A	25 A	25 A	40 A	25 A
	550	25 A	15 A	25 A	25 A	70 A	25 A
	750	-	15 A	25 A	25 A	40 A	25 A
	1K1	-	-	25 A	-	40 A	25 A
Input Fusing (Input fuses are fast HRC types)	200	10 A	5 A	5 A	5 A	5 A	5 A
	300	10 A	5 A	5 A	5 A	5 A	5 A
	350	16 A	10 A	10 A	10 A	5 A	10 A
	550	16 A	10 A	10 A	10 A	5 A	10 A
	750	-	16 A	16 A	16 A	5 A	10 A
	1K1	-	-	16 A	-	10 A	10 A
Input Current	200	7.5 A	3.6 A	1.8 A	3.6 A	1.1 A	3 A
	300	8.7 A	5.4 A	2.7 A	5.4 A	1.6 A	4.4 A
	350	10.1 A	6.2 A	3.1 A	6.2 A	1.9 A	5.2 A
	550	15.9 A	9.8 A	4.9 A	9.8 A	2.9 A	8.1 A
	750	-	13.4 A	6.7 A	13.4 A	4 A	10 A
	1K1	-	-	9.9 A	-	5.9 A	8 A

#### Notes

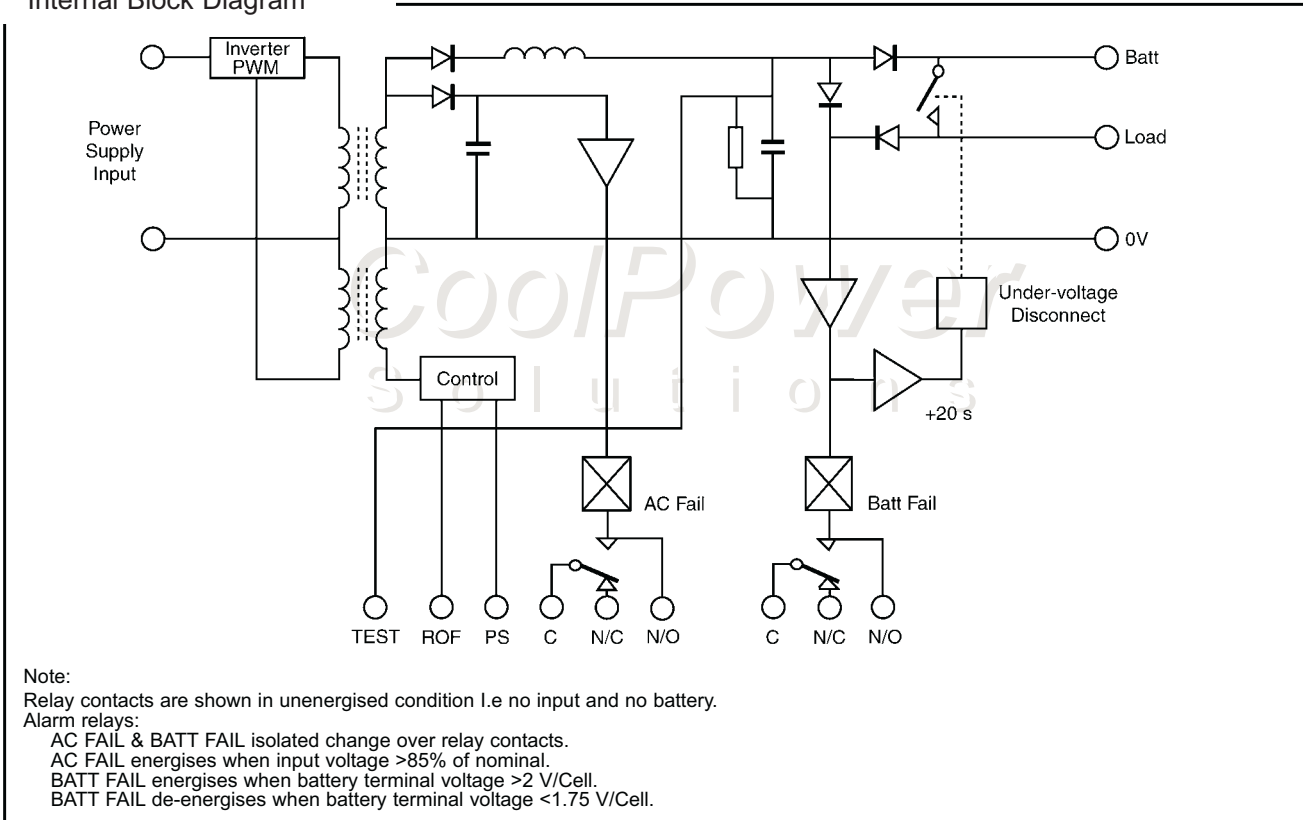
- Universal input range for 1K1 model only 180-264 VAC.
- For DC-DC input specification see DC-DC SX Series.
- 55 V input ratings assume trapezoidal input wave shape.

OUTPUT VOLTAGE & CURRENT RATINGS										BX
Battery Voltage				Maximum Continuous Power						Unit Output Code
Fail (1.75 V/cell)	Nom (2 V/cell)	Float (2.25 V/cell)	Boost (2.4 V/cell)	200 W	300 W	350 W	550 W	750 W	1K1 W	
5.25	6	6.75	7.2	29.6 A	44.4 A	52.0 A	81.5 A	N/A	N/A	06
10.50	12	13.50	14.4	14.8 A	22.2 A	26.0 A	40.7 A	55.5 A	N/A	12
12.25	14	15.75	16.8	12.7 A	19.0 A	22.2 A	35.0 A	47.6 A	N/A	14
21.00	24	27.00	28.8	7.4 A	11.1 A	13.0 A	20.4 A	27.7 A	40.7 A	24
31.50	36	40.50	43.2	4.9 A	7.4 A	8.6 A	13.6 A	18.5 A	27.6 A	36
42.00	48	54.00	57.6	3.7 A	5.5 A	6.5 A	10.2 A	13.9 A	20.7 A	48
52.50	60	67.50	72.0	3.0 A	4.4 A	5.2 A	8.1 A	11.1 A	16.3 A	60
84.00	96	108.00	115.0	1.8 A	2.7 A	3.2 A	5.1 A	7.0 A	10.2 A	C1
94.50	108	121.50	129.6	1.6 A	2.8 A	3.3 A	4.5 A	6.2 A	9.0 A	C2
168.00	192	216.00	230.4	0.9 A	1.4 A	1.6 A	2.5 A	3.5 A	5.1 A	D1
189.00	216	243.00	259.2	0.8 A	1.2 A	1.4 A	2.3 A	3.1 A	4.6 A	D4

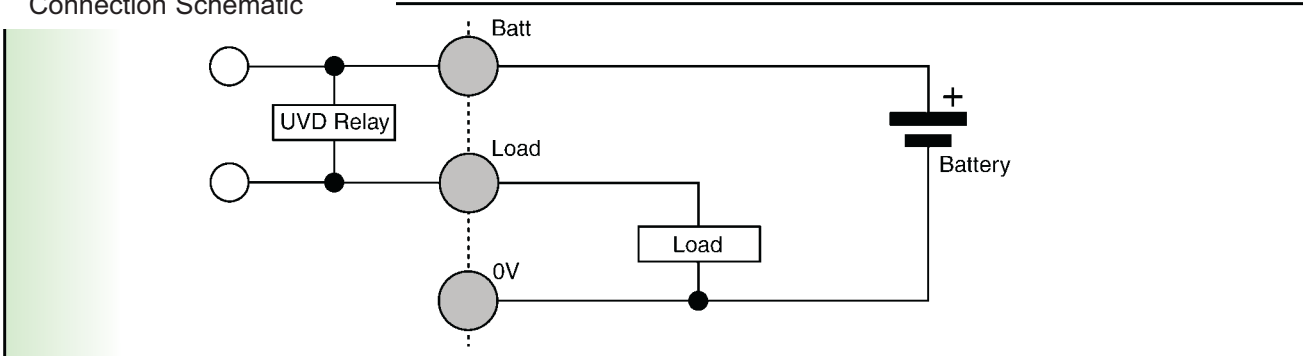
Notes

- Shading denotes UVD unable to break full load.

Internal Block Diagram



Connection Schematic



### Mechanical Details - BX200 & BX300 Chassis Mount Units



- NOTES:
1. Customer fixings: A = M3 ISO Metric
  2. Fixing screws must not penetrate unit by more than 5mm.
  3. Dimensions in mm & include cover.

Weight  
BX200 1.4 kg  
BX300 1.7 kg

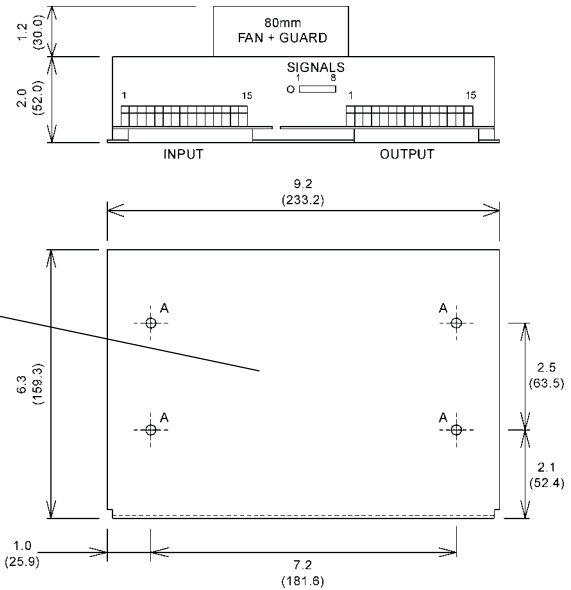
#### Connections

INPUT		
PIN	AC	DC
1	EARTH	EARTH
2		POS
3	NEUTRAL	POS
4	-	NEG
5	LINE	NEG
6	-	-
7	115V	N/C
8	LINK	N/C
9-15	NOT USED	N/C

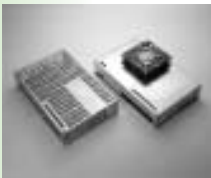
For other mechanical options  
See AC-DC SX Series

OUTPUT	
PIN	FUNCTION
1	TEST
2	ROF
3	PS
4	ACF COM
5	ACF N/C
6	ACF N/O
7	BF COM
8	BF N/C
9	BF N/O
10	0 V
11	0 V
12	LOAD
13	LOAD
14	BATTERY
15	BATTERY

80 mm<sup>2</sup> fan & fan guard  
(BX300 only)



### Mechanical Details - BX350, BX550, BX750 & BX1K1 Chassis Mount Units



- NOTES:
1. Customer fixings: A = M3 ISO Metric
  2. Fixing screws must not penetrate unit by more than 5mm.
  3. Dimensions in mm & include cover.

Weight  
BX350 2.3 kg  
BX550 & BX750 3.1 kg

SIGNALS	
Pin	FUNCTION
1	TEST
2	ROF
3	PS
4	ACF COM
5	ACF N/C
6	ACF N/O
7	BF COM
8	BF N/C
9	BF N/O

#### Connections

INPUT		
PIN	AC	DC
1	EARTH	EARTH
2	NEUTRAL	POS
3	LINE	NEG
4	115 V	
5	LINK	

For other mechanical options  
See AC-DC SX Series

OUTPUT	
PIN	FUNCTION
1	0 V
2	0 V
3	0 V
4	LOAD
5	LOAD
6	LOAD
7	BATTERY
8	BATTERY
9	BATTERY

120 mm<sup>2</sup> fan & fan guard  
(BX550, 750 & 1k1 only)

