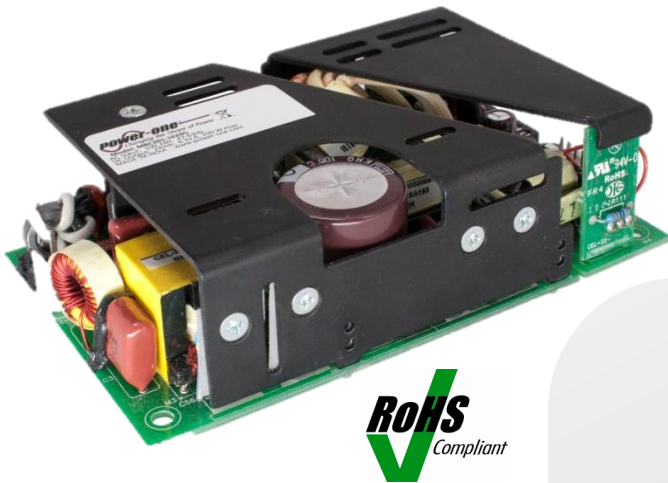


## ABC201 SERIES 200W AC/DC



### FEATURES

- 160 W convection cooled
- -20 to 50 deg C full load operation
- 3" x 5" x 1.5" (76.2 x 127 x 38.1 mm)
- No minimum load required
- 12 V fan & 5 V standby outputs
- Inhibit, Power Good and Fail signals
- Conducted EMI EN 55022-B, FCC Part 15 Level B
- ITE Safety Agency Approvals
- RoHS Compliant

### APPLICATIONS

- Instrumentation
- Lighting
- Industrial Applications
- Applied Computing
- Renewable Energy
- Test and Measurement
- Robotics
- Wireless Communications

## TECHNICAL DATA:

### Input

| PARAMETER                     | DESCRIPTION/CONDITION              |                               |
|-------------------------------|------------------------------------|-------------------------------|
| Input voltage range           | Universal Input                    | 90 - 264 Vac<br>120 - 390 Vdc |
| Input frequency range         |                                    | 47-63 Hz                      |
| Input surge current           | 230 Vac (cold start)               | 65 A max.                     |
| Safety ground leakage current | 230 Vac                            | 300 $\mu$ A max               |
| Input current                 | 120 Vac @ 200 W<br>230 Vac @ 200 W | 2.4 A<br>1.2 A                |

### Output

| PARAMETER                | DESCRIPTION/CONDITION   |                             |
|--------------------------|---|-----------------------------|
| Voltage Adjustment       | V1  | $\pm 3\%$                   |
| Transient Response       | Main output 50 to 100% load change, 50 Hz, 50% duty cycle, 0.1A / $\mu$ Sec | < 10%, recovery time < 5 mS |
| Over Voltage Protection  | V1  | 110 to 150% rated max       |
| Over Current Protection  | Rated output current  | 110% Typical                |
| Short Circuit Protection | Automatic recovery  |                             |
| Set Point Tolerance      | $\pm 1\%$   |                             |
| Rise Time                | < 100 mSec  |                             |

### Ordering Information

| PRODUCT FAMILY     | VOLTS (VDC) | MAX LOAD CONVECTION (1) | MAX LOAD 300 LFM (1) | MINIMUM LOAD (A) | RIPPLE & NOISE (4) | CONNECTOR      | TOTAL REGULATION |
|--------------------|-------------|-------------------------|----------------------|------------------|--------------------|----------------|------------------|
| ABC201-1005G       | 5.0         | 26.0 A                  | 26 A                 | 0                | 1%                 | JST            | $\pm 2.5\%$      |
| ABC201-1T05G       | 5.0         | 26.0 A                  | 35 A                 | 0                | 1%                 | Screw Terminal | $\pm 2.5\%$      |
| ABC201-1012G       | 12          | 13.33 A                 | 16.67 A              | 0                | 1%                 | JST            | $\pm 2.5\%$      |
| ABC201-1T12G       | 12          | 13.33A                  | 16.67 A              | 0                | 1%                 | Screw Terminal | $\pm 2.5\%$      |
| ABC201-1015G       | 15          | 10.66 A                 | 13.33 A              | 0                | 1%                 | JST            | $\pm 2.5\%$      |
| ABC201-1T15G       | 15          | 10.66 A                 | 13.33 A              | 0                | 1%                 | Screw Terminal | $\pm 2.5\%$      |
| ABC201-1024G       | 24          | 6.66 A                  | 8.33 A               | 0                | 1%                 | JST            | $\pm 2.5\%$      |
| ABC201-1T24G       | 24          | 6.66 A                  | 8.33 A               | 0                | 1%                 | Screw Terminal | $\pm 2.5\%$      |
| ABC201-1030G       | 30          | 5.33A                   | 6.67A                | 0                | 1%                 | JST            | $\pm 2.5\%$      |
| ABC201-1T30G       | 30          | 5.33A                   | 6.67A                | 0                | 1%                 | Screw Terminal | $\pm 2.5\%$      |
| ABC201-1048G       | 48          | 3.33 A                  | 4.17 A               | 0                | 1%                 | JST            | $\pm 2.5\%$      |
| ABC201-1T48G       | 48          | 3.33 A                  | 4.17 A               | 0                | 1%                 | Screw Terminal | $\pm 2.5\%$      |
| Vfan (all models)  | 12          | 0.5 A                   | 0.5 A                | 0                |                    |                | $\pm 20\%$       |
| V s/b (all models) | 5           | 1.0 A                   | 1.0 A                | 0                |                    |                | $\pm 5\%$        |

#### Notes:

1. Combined power from main output, Vfan and Vs/b should not exceed total power rating.
2. Fan output tolerance is  $\pm 20\%$ . When V1 full load, Vfan needs 20 mA load to be within regulation specification. Peak current for fan output is 1 A.
3. Ripple is 2% up to 20% load and less than 1% above 20% load. Output noise measurement is made with a 20 MHz bandwidth using a 6" twisted pair, terminated with a 10 uF tantalum capacitor in parallel with a 0.1 uF ceramic capacitor.
4. Specifications are for nominal input voltage, 25°C and max load unless otherwise stated.
5. Air flow over length of supply recommended (either direction) for forced air rating.
6. Class 1 models have Earthing tab J4. Class 2 models (-2 suffix) have no Earthing tab.
7. Specifications may change without notice.
8. Warranty 2 years.

#### General Specifications

| PARAMETER           | DESCRIPTION/CONDITION                                |   |
|---------------------|--|---|
| Hold Up Time        | 120 Vac  | 10 mSec   |
|                     | 230 Vac  | 10 mSec   |
| MTBF                | >200 kHrs  | Belcore TR-332  |
| Switching Frequency | PFC converter variable 35 to 250 kHz, 90 kHz typical | Resonant converter variable 35 to 250 kHz, 90 kHz typical |
| Isolation Voltage   | Input to Output: Min 4242 Vdc                        |   |
| Weight              | 325 g (0.72 lbs)                                     |   |

#### Environmental

| PARAMETER             | DESCRIPTION/CONDITION        |   |
|-----------------------|------------------------------|---|
| Operating Temperature | Operating                    | -20 to 70°C. See derating charts below. |
|                       | Storage                      | -40 to +85°C                            |
| Humidity              | 95%                          | Non-Condensing                          |
| Altitude              | Operating 10,000 ft.         | Non-operation 40,000 ft.                |
| Conducted emissions:  | EN55022, FCC part 15 Level B |   |
| Radiated Emissions    | EN55022, FCC part 15 Level B | To be controlled in end system          |
| Static Discharge      | EN61000-4                    | 2, 3, 4, 5 Level 3                      |
| Harmonic Current      | EN61000-3-2, Class D         |   |

#### Signals

| PARAMETER         | DESCRIPTION/CONDITION  |
|-------------------|--|
| Power Good Signal | TTL signal goes high after main output is in regulation band. Delay is 0.1 to 0.3 sec.       |
| Power Fail Signal | TTL signal goes low 1 msec advance before output goes out of regulation due to mains failure |
| Remote ON / OFF   | To turn-on power supply short J3 pin 4 to pin 6 (PSU is shipped in this configuration)       |
| Remote Sense      | Compensates for 200 mV cable drop  |

#### Safety

| PARAMETER     | DESCRIPTION/CONDITION  |
|---------------|--|
| EN / UL / CSA | EN60950-1+A12:2011, IEC60950-1 2 <sup>nd</sup> +A1 2009, CSA-22.2 No 60950-01-07+ A1, UL60950-1-2011 |

Figure 1 Output Power Vs. Temperature

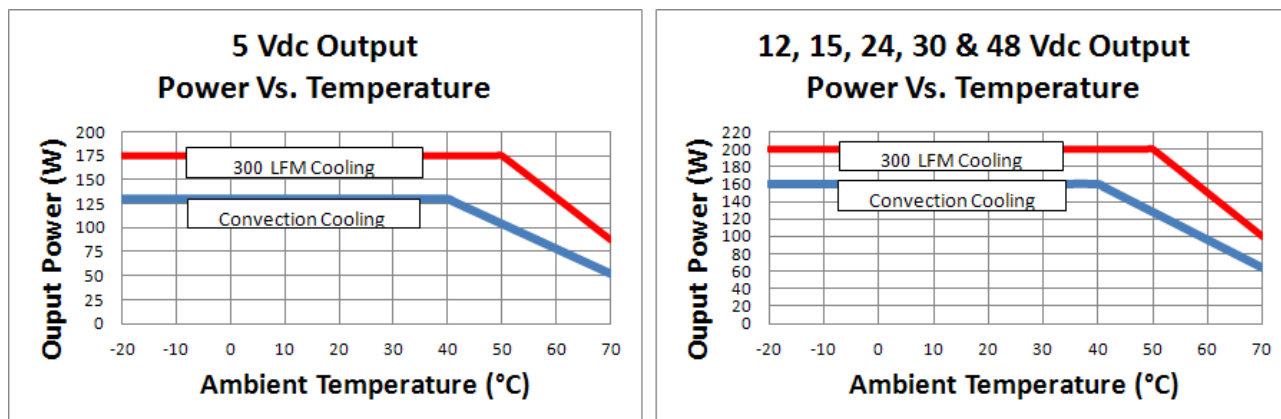
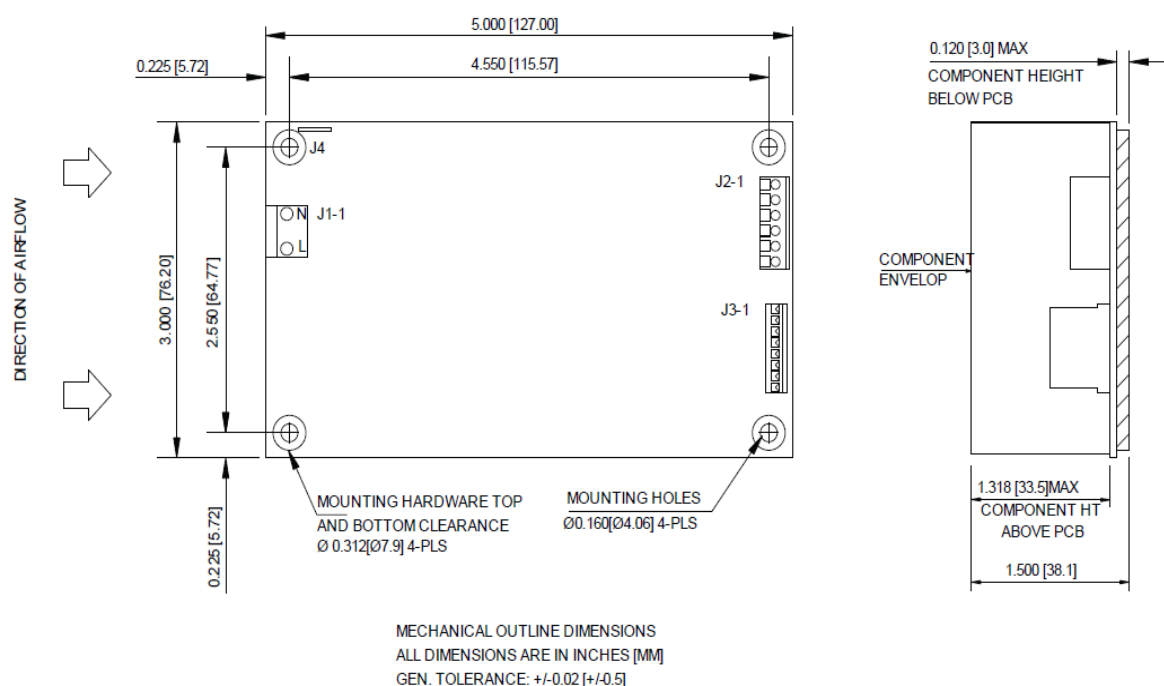


Figure 2 Dimension Drawing (Top and Side View)



## Mechanical

| INPUT = J1   | EARTHING TAB = J4                     | DC OUTPUT = J2  |  | SIGNALS & AUX POWER= J3   |   |
|--|---------------------------------------|---|--|---|---|
| Pin 1: AC Neutral<br>Pin 2: Removed<br>Pin 3: AC Line      | Molex: 19705-4301                     | Pin 1 = RTN<br>Pin 2 = RTN<br>Pin 3 = RTN                               | Pin 4 = Vout<br>Pin 5 = Vout<br>Pin 6 = Vout | Pin 1 = + Remote Sense<br>Pin 2 = Vfan (+12 V)<br>Pin 3 = - Remote Sense<br>Pin 4 = Inhibit | Pin 5 = Vs/b (5 Vdc)<br>Pin 6 = Return (Signal)<br>Pin 7 = Power Fail<br>Pin 8 = Power Good |
| Mating Connector:<br>Molex: 09-50-3031<br>Pins: 08-50-0106 | Mating Connector:<br>Molex: 190030001 | Mating Connector:<br>JST VHR-6M, Pins: SVH-41T-<br>P1.1. AWG #20 to #16 |  | Mating Connector:<br>Molex: 22-01-2087, Pins: 08-50-0113                                    |   |

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