



## DC 1000 SERIES

### 100 WATT

### DC-DC CONVERTERS

#### FEATURES

- Current Mode Control
- 200 KHz Switching Frequency
- Remote Control Shutoff
- Adjustable Output Voltage
- Input Surge Protection
- Remote Sense
- Over 100,000 Hrs MTBF per MIL STD 217D at 40°C G.B. Environment

#### APPLICATIONS

- Distributed Power Architecture
- Telecommunications
- Instrumentation
- Computers



| Model  | Input Range (VDC) | Output Voltages (VDC) | Output Current (AMPS) |
|--------|-------------------|-----------------------|-----------------------|
| DC1001 | 18-36             | 5                     | 20.0                  |
| DC1002 | 18-36             | 12                    | 8.3                   |
| DC1003 | 18-36             | 15                    | 6.7                   |
| DC1004 | 18-36             | 5,12,12               | 10,2,2                |
| DC1005 | 18-36             | 5,15,15               | 10,2,2*               |
| DC1006 | 36-72             | 5                     | 20.0                  |
| DC1007 | 36-72             | 12                    | 8.3                   |
| DC1008 | 36-72             | 15                    | 6.7                   |
| DC1009 | 36-72             | 5,12,12               | 10,2,2                |
| DC1010 | 36-72             | 5,15,15               | 10,2,2*               |

\*Power limited to 100 watts.

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WITH YOUR CUSTOM DESIGNS AND SPECIFICATIONS.  
AT INTRONICS WE ARE PREPARED TO  
RESPOND PROMPTLY TO YOUR NEEDS.**

#### GENERAL SPECIFICATIONS

|                              |                           |
|------------------------------|---------------------------|
| Voltage Accuracy             | ± 1% Main, ± 3% Auxiliary |
| Voltage Adjustments          | 5% (Main Only)            |
| Ripple                       | <1%                       |
| Noise (<20 MHz)              | <2%                       |
| Temperature Coefficient      | .02%/°C                   |
| Transient Response           | 1mS 0.5% V Excursion      |
|                              | 60% Load ± 40%            |
| Regulation Line/Load         | ± 1% Main, ± 2% Auxiliary |
| Isolation (Input-to-Output)  | 500Vdc                    |
| Isolation (Terminal-To-Case) | 500Vdc                    |
| Switching Frequency          | 200 KHz Typical Fixed     |
| Efficiency                   | 82% Typical               |
| Remote Control On            | 5.5Vdc or open circuit    |
| Off                          | 0.5Vdc                    |

#### FAULT PROTECTION

|                             |                              |
|-----------------------------|------------------------------|
| Reverse Polarity Protection | Yes (External fuse required) |
| Overvoltage Main            | Yes                          |
| Short Circuit               | Indefinite, Auto Recovery    |
| Thermal Shutdown            | Optional†                    |

#### ENVIRONMENTAL

|                       |                |
|-----------------------|----------------|
| Operating Temperature | -20°C to 70°C  |
| Storage Temperature   | -40°C to 105°C |

#### OPTIONS AVAILABLE

|                                              |    |
|----------------------------------------------|----|
| Current sharing and external synchronization | -1 |
| Thermal shutdown                             | -2 |
| Terminal block                               | -3 |
| Inrush current limit                         | -4 |

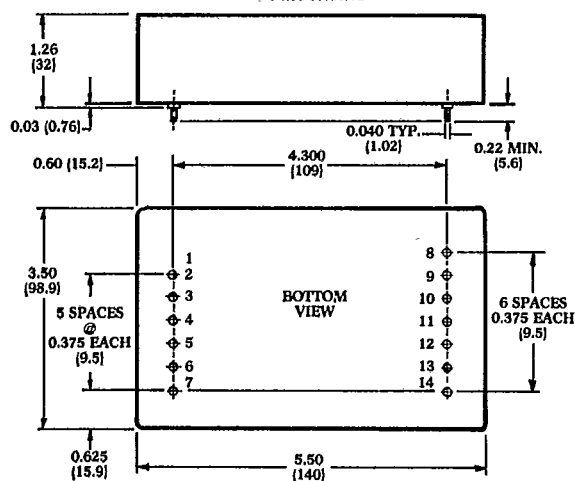
#### SUFFIX

#### ORDERING INFORMATION FOR OPTIONS

Choose option or options. Add suffix to model number. i.e. Option -1 DC1002-1. If more than one option is chosen then add suffix as follows:  
DC1001-1/3/4 adding a / after each option.

## MECHANICAL OUTLINES AND CONNECTIONS

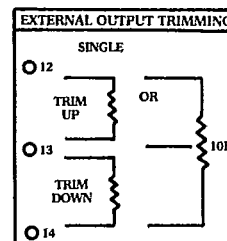
## PC MOUNTING



## DC1000 Series

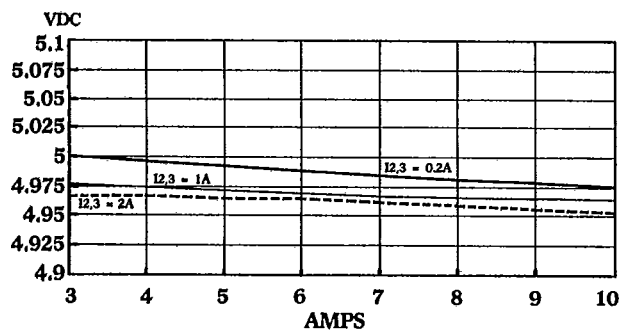
| Connections |          |            |
|-------------|----------|------------|
| PIN         | SINGLE   | TRIPLE     |
| INPUTS      |          |            |
| 1           | No Pin   | *          |
| 2           | - Input  | *          |
| 3           | - Input  | *          |
| 4           | + Input  | *          |
| 5           | + Input  | *          |
| 6           | Control  | *          |
| 7           | Case     | *          |
| OUTPUTS     |          |            |
| 8           | - Output | - Sense 1  |
| 9           | - Output | - Output 1 |
| 10          | + Output | + Output 1 |
| 11          | + Output | + Sense 1  |
| 12          | - Sense  | - Output 2 |
| 13          | Trim     | Com 2 & 3  |
| 14          | + Sense  | + Output 3 |

\*Connection is same as single column

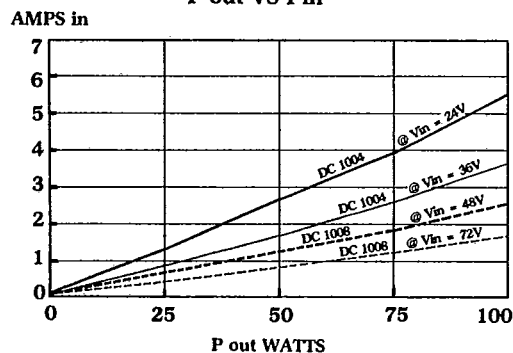
Tolerance .xx =  $\pm 0.04$ .xxx =  $\pm 0.005$ 

## PERFORMANCE CURVES

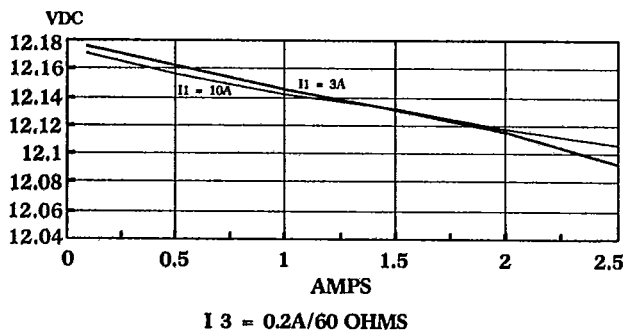
DC 1004  
OUTPUT #1 REGULATION  
I<sub>2,3</sub> = OUTPUT CURRENT ON CHANNEL 2 & 3



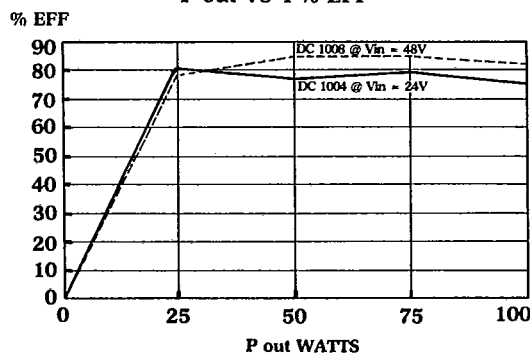
DC 1004 & 1008  
P out VS I in



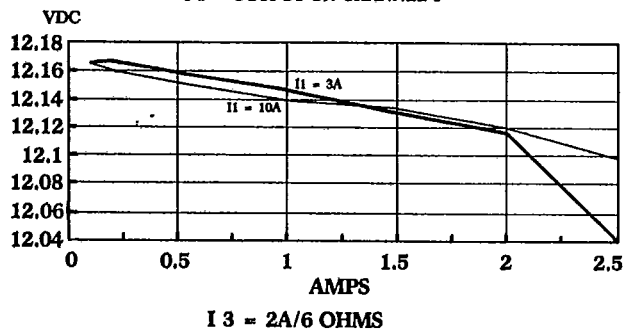
DC 1004  
OUTPUT #2 REGULATION  
I<sub>1</sub> = OUTPUT CURRENT ON CHANNEL 1



DC 1004 & 1008  
P out VS I % EFF



DC 1004  
OUTPUT #2 REGULATION  
I<sub>1</sub> = OUTPUT ON CHANNEL 1



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