

| REVISIONS |             |          |           |
|-----------|-------------|----------|-----------|
| REV       | DESCRIPTION | DATE     | ISSUED BY |
| -         | ISSUE 1     | 10/27/99 |           |
|           |             |          |           |

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| FILE NAME: CAD1:MSWORD:PA212243.DOC                                                                                                                                                                                                                                                                                                                                                          |  | SCALE:<br>NONE                        | REV: - | SH 1 OF 7 |
| TITLE:<br>OVS SERIES SPECIFICATION                                                                                                                                                                                                                                                                                                                                                           |  | DOCUMENT NUMBER:<br><b>P-A2-12243</b> |        |           |
| <b>TAMIIRA CORPORATION OF AMERICA</b><br>43352 BUSINESS PARK DRIVE • TEMECULA • CA • 92590<br>TEL: (909) 699-1270 • FAX: 9096769482                                                                                                                                                                                                                                                          |  | PREPARED BY:                          |        |           |
|                                                                                                                                                                                                                                                                                                                                                                                              |  | ENGINEERING:                          |        |           |
|                                                                                                                                                                                                                                                                                                                                                                                              |  | APPROVED:                             |        |           |
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## A. Electrical Specifications

### (1) AC Input Voltage Rating

AC Input Voltage Range

AC115V/AC230V by Manual Voltage Selector,  
50/60Hz (47 - 63Hz)  
AC90 – 132V  
AC180 - 264V

### (2) Input Surge Current

30A MAX at nominal line (115/230V) cold start

### (3) DC Output Adjustment Range

± 10% MIN

### (4) Line Regulation

± 0.5% MAX under specified input range

### (5) Load Regulation

± 0.5% MAX from no load to full rated load

### (6) Output Ripple and Noise

5 - 15V output 75mVp-p MAX  
24V output 120mVp-p MAX } DC to 20MHz BW

### (7) Hold-up Time

20msec MIN under nominal line and rated load

### (8) Output Transient Response

1msec MAX over ±2% of rated voltage  
under 50 - 100% load change

### (9) Output Voltage Rise Time

100msec MAX, from 10% to 90% of rated output voltage

### (10) Efficiency

70% MIN at nominal line and rated load

### (11) Overload Protection

120% TYP of rated load, fold-back limiting type

### (12) OverVoltage Protection

5V output 5.7 - 6.7V  
12V output 14.25 - 15.75V  
15V output 17.25 - 18.75V  
24V output 27.0 - 29.0V

### (13) Leakage Current

0.75mA rms MAX

### (14) Overshoot

No overshoot during turn ON/OFF

### (15) Output Voltage Stability

± 0.1% MAX for 8 hours after 20 minute warm-up

### (16) Temperature Coefficient

±0.02% per deg. C MAX

### (17) Remote/Local Sensing

Built-in

### (18) Remote ON/OFF Control

Built-in F, G, H and J Series, 300uA MIN  
< 1V for inhibit, > 4.5V for ON

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- (19) AC Power Fail Signal Built-in on 5V output models only, other voltages optional  
Power Good Logic "0"  
Power Fail Logic "1", 5msec MIN pulse width
- (20) Withstand Voltage AC 3KV (Input - Output), AC 1.5KV (Input - Chassis ground)
- (21) Insulation Resistance 50Mohm MIN DC500V (Input - Output)
- (22) Part Number Description

Model No. **OVS** -

Series Name

Output voltage Case size

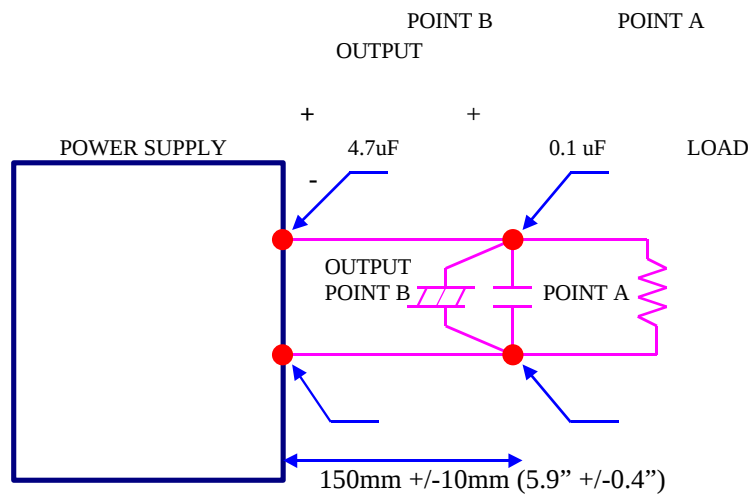
| CASE SIZE | MODEL   | VOLTS | AMPS  |
|-----------|---------|-------|-------|
| E         | OVS-5E  | 5     | 0-10  |
|           | OVS-12E | 12    | 0-5   |
|           | OVS-15E | 15    | 0-4   |
|           | OVS-24E | 24    | 0-2.5 |
| F         | OVS-5F  | 5     | 0-20  |
|           | OVS-12F | 12    | 0-10  |
|           | OVS-15F | 15    | 0-8   |
|           | OVS-24F | 24    | 0-5   |
| G         | OVS-5G  | 5     | 0-30  |
|           | OVS-12G | 12    | 0-15  |
|           | OVS-24G | 24    | 0-8   |
|           | OVS-15G | 15    | 0-12  |
| H         | OVS-5H  | 5     | 0-45  |
|           | OVS-12H | 12    | 0-22  |
|           | OVS-15H | 15    | 0-18  |
|           | OVS-24H | 24    | 0-12  |
| J         | OVS-5J  | 5     | 0-60  |
|           | OVS-12J | 12    | 0-30  |
|           | OVS-15J | 15    | 0-25  |
|           | OVS-24J | 24    | 0-16  |

|                                                                                                                                    |             |                                           |                |           |
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Note 1. Output ripple and noise to be measured with a 4.7uF +0.1 uF film or ceramic capacitor measured at points A as shown below.

Note 2. Output voltage to be measured at output terminals, Points B as shown below.

Note 3. Factory default input setting is AC115V.



Measuring Points  
A: Output Ripple and Noise  
B: Output Voltage  
Capacitors  
4.7uF: Low ESR Electrolytic  
0.1uF: Polyester film or ceramic

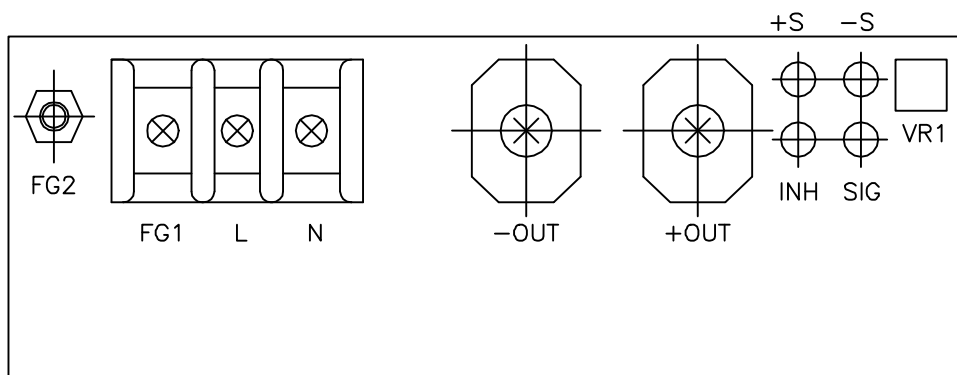
- B. Safety  
Approved by UL1950, CSA 1402C, EN60950, VDE0805  
CE Marking: EC Declaration of Conformity for LVD (Not indicated) May be issued.
- C. EMI (Conductive)
- |                         |         |                |
|-------------------------|---------|----------------|
| Meets FCC20780 Part 15J | Class B | E, F Series    |
|                         | Class A | G, H, J Series |
| VDE 0871                | Class B | E, F Series    |
|                         | Class A | G, H, J Series |
| VCC1                    | Class 2 | E, F Series    |
|                         | Class 1 | G, H, J Series |

D. Environmental

- |                           |                                                                                                                                                                                                                          |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (1) Operating Temperature | 0 to +50 deg. C (+40 deg. C with cover) *<br>For operation above 50 deg. C derate linearly to 50% load at +71 deg. C (+61 deg. C with cover) *<br>* Ambient temperature to be measured at 1" above the main transformer. |
| (2) Storage Temperature   | -20 to +85 deg. C                                                                                                                                                                                                        |
| (3) Operating Humidity    | 10 - 90% RH, non condensing                                                                                                                                                                                              |
| (4) Storage Humidity      | 10 - 95%, non condensing                                                                                                                                                                                                 |
| (5) Vibration             | 10 - 55Hz, 2G (All axis, 1 hour)                                                                                                                                                                                         |
| (6) Shock                 | 20msec, 20G (All axis, 3X ea.)                                                                                                                                                                                           |

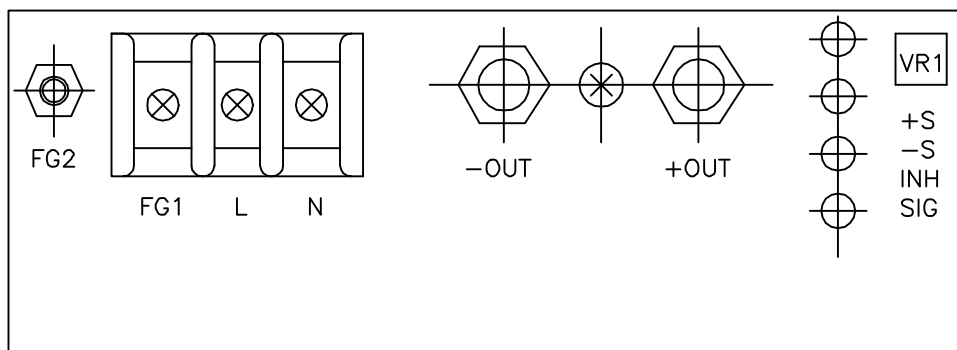
## E. Input/Output Connector Layout

Cases E, F and G



Note: Case E does not have an inhibit terminal.

Cases H and J



FG1: AC GROUND  
 FG2: CHASSIS GROUND  
 L: AC LINE  
 N: AC NEUTRAL  
 OUT: OUTPUT  
 S: SENSE  
 INH: INHIBIT  
 SIG: AC POWER FAIL SIGNAL  
 VR1: VOLTAGE ADJUST

## F. Connector Type and Size

| MODEL     | TERMINALS |             |                                                  |
|-----------|-----------|-------------|--------------------------------------------------|
|           | FG1, L, N | ±OUT        | ±S, INH, SIG                                     |
| OVS-E,F,G | M4        | #6-3 UNC    | Bead Pins:<br>R93-31 (MOLEX)<br>or SVF-01T-2.36N |
| OVS-H,J   | M4        | #1 4-20 UNC |                                                  |

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G. Mechanical Specifications, dimensions shown in mm (inches).

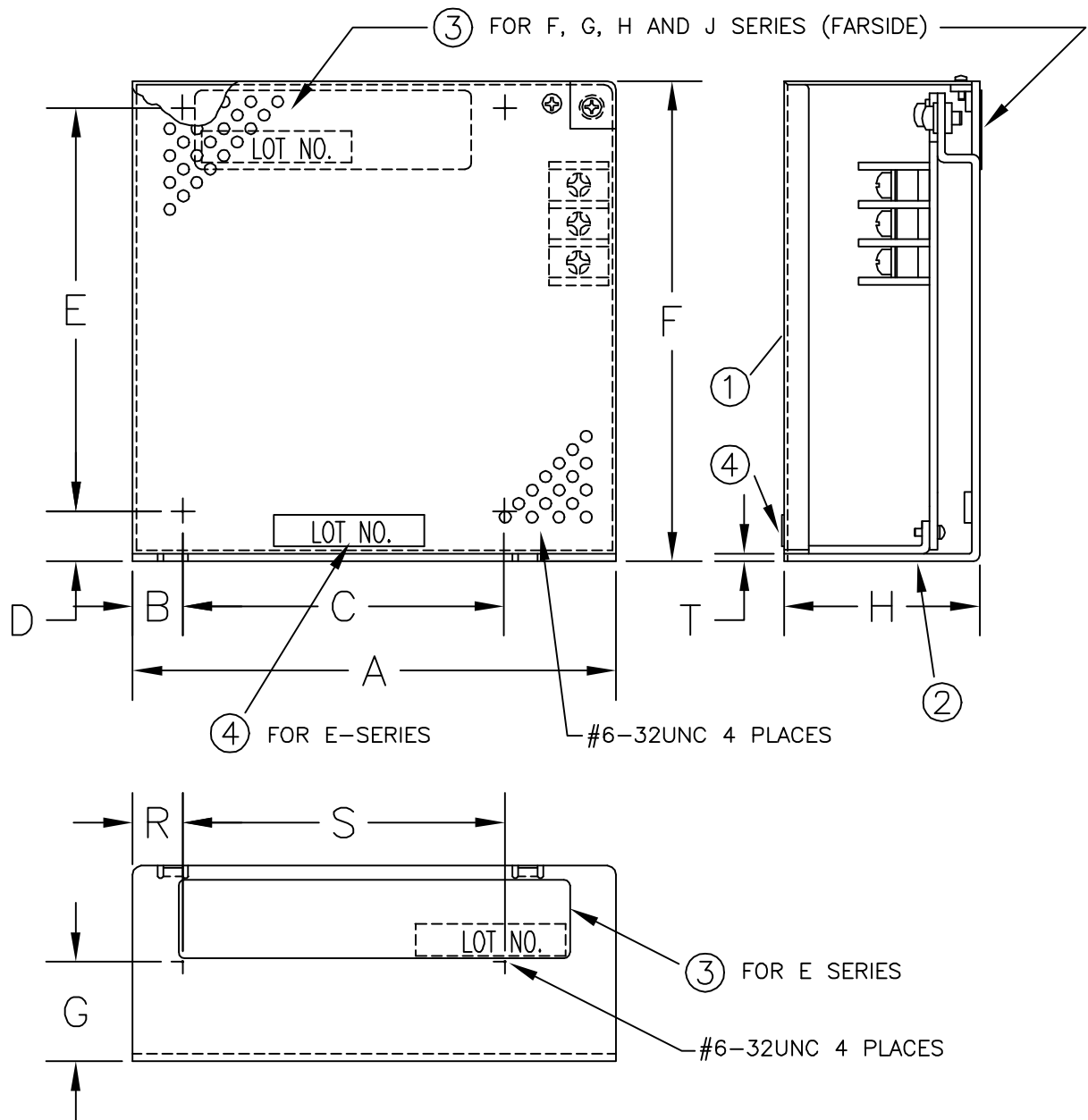
See sheet 7 for drawing representaion

| MODEL      | A                 | B                 | C                 | D                 | E                 | F                 | G                 | H                 | R                 | S                 | T               |
|------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------|
| OVS-E      | 117.3<br>(4.62)   | 12.7<br>(0.50)    | 76.29<br>(3.00)   | 12.7<br>(0.50)    | 104.6<br>(4.12)   | 124<br>(4.88)     | 25.4<br>(1.00)    | 50.8<br>(2.00)    | 12.7<br>(0.50)    | 76.2<br>(3.00)    | 2.00<br>(0.079) |
| OVS-F      | 180.3<br>(7.10)   | 38.1<br>(1.50)    | 114.3<br>(4.50)   | 12.7<br>(0.50)    | 104.6<br>(4.12)   | 124<br>(4.88)     | 30.2<br>(1.19)    | 60.2<br>(2.37)    | 38.1<br>(1.50)    | 114.3<br>(4.50)   | 2.00<br>(0.079) |
| OVS-G      | 218.4<br>(8.60)   | 12.7<br>(0.50)    | 177.8<br>(7.00)   | 12.7<br>(0.50)    | 104.6<br>(4.12)   | 124<br>(4.88)     | 30.2<br>(1.19)    | 60.2<br>(2.37)    | 12.7<br>(0.50)    | 177.8<br>(7.00)   | 2.00<br>(0.079) |
| OVS-H      | 269.2<br>(10.60)  | 12.7<br>(0.50)    | 228.6<br>(9.00)   | 12.7<br>(0.50)    | 104.6<br>(4.12)   | 124<br>(4.88)     | 33.3<br>(1.31)    | 66.0<br>(2.60)    | 12.7<br>(0.50)    | 228.6<br>(9.00)   | 3.00<br>(0.116) |
| OVS-J      | 304.8<br>(12.00)  | 12.7<br>(0.50)    | 254<br>(10.00)    | 12.7<br>(0.50)    | 104.6<br>(4.12)   | 124<br>(4.88)     | 34.8<br>(1.37)    | 69.9<br>(2.75)    | 12.7<br>(0.50)    | 279.4<br>(11.00)  | 3.00<br>(0.118) |
| TOLERANCES | ±1.016<br>(±0.04) | ±0.508<br>(±0.02) | ±0.254<br>(±0.01) | ±0.508<br>(±0.02) | ±0.254<br>(±0.01) | ±1.016<br>(±0.04) | ±0.508<br>(±0.02) | ±1.016<br>(±0.04) | ±0.508<br>(±0.02) | ±0.254<br>(±0.01) | N/A             |

#### Material List

| ITEM # | PART NAME        | QTY | MATERIAL       |
|--------|------------------|-----|----------------|
| 1      | COVER            | 1   | ALUMINUM SHEET |
| 2      | CHASSIS          | 1   | ALUMINUM SHEET |
| 3      | LABEL            | 1   | PAPER          |
| 4      | LABEL FOR E ONLY | 1   | PAPER          |

|                                                                                                                                    |             |                                                                                    |                |           |
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