



### -AC Input-

|                           |  |
|---------------------------|--|
| Voltage/Current.....      | AC 90-264V, 47-63Hz, 5.5A Max, 1 Phase.  |
| Fusing .....              | AC 15.0A, 250V internal line fuse provided, non-user serviceable.                    |
| Power Factor .....        | >0.99 line PFC typical at AC 115V, full load.  |
| Inrush Current.....       | Thermistor soft start (~25°C cold start).<br>30Apk @ AC 115V,<br>60Apk @ AC 230V.    |
| Transient Protection..... | MOV. Withstands transients as specified by EN61000-4-5 (differential / common mode). |
| EMI Filtering.....        | Meets CISPR22B Level A, and EN 55022 Level A.  |
| Efficiency .....          | 75% typical at AC 115V, full load.   |
| Redundant/Hot Swap.....   | Full power N+1 redundant, hot swap capable.  |

### -DC Outputs-

|   |   |
|---|---|
| Voltage/Current (V/A) .....                   | Refer to Model Chart.   |
| Line/Load Regulation.....                     | <±1% at the sense point over full AC input range and 0 – 100% output loading, sense leads connected.  |
| Minimum Loading .....                         | None required for single unit applications. 10% loading required in N+1, N2 configurations.   |
| Output Turn-on Delay .....                    | <1 sec from AC turn on.<br><100 msec from remote enable.  |
| Over/Under Shoot.....                         | None at turn-on or turn-off.  |
| Stability .....                               | Output drift <±0.2% after 20 min. warm-up.  |
| Temp. Coefficient.....                        | <±0.02%/°C, 0-50°C, after 20 min. warm-up.  |
| Dynamic Response.....                         | Less than 3% deviation with a 25% load change at 1A/μsec. Output recovers to within 1% in less than 300μsec.  |
| Ripple & Noise (PARD) .....                   | 50mV max or <1% peak-to-peak nominal, whichever is greater, at the output terminals with a 20 Mhz bandwidth limit. May be measured with 0.1μF ceramic capacitor in parallel with a 22μF tantalum. |
| Current Sharing/ Parallel N+1 Operation ..... | Single wire connection for ±10% current sharing between any number of units.  |
| Remote Sense .....                            | Output compensates for up to 0.5V total line drop in the load cables. Output internally sensed if leads are opened.   |
| Over Temperature Protection.....              | Internal temperature sensing. Automatic recovery.   |

## General Product Specifications:

# 1UG Model Series 600W, Single Output.

|   |  |
|---|--|
| Hold-up Time.....                           | Output remains in regulation >15msec minimum following loss of AC power at low line, full load.  |
| Over Current/Short Circuit Protection ..... | Standard hiccup (cycles on/off) current limit. When output current is 105% to 120% of full load.   |
| Over Voltage Protection .....               | Non-crowbar type. Output exceeding 25%±10% of nominal Vout will cause the out-put to latch off. Remote enable or AC input recycle required to reset. |

### -Signals, Indicators and Controls-

|                          |   |
|--------------------------|---|
| Remote Enable.....       | Enabled by closed circuit or TTL logic 0. Disabled by open circuit or TTL logic 1.  |
| Power Fail Warning ..... | Loss of input AC causes a TTL compatible signal to go low >4msec prior to the output dropping out of regulation. At AC turn-on, signal stays low until the output is in regulation. |
| LED Indicator.....       | Front panel mounted, single-color LED. Green indicates AC power ON and output within regulation. Off indicates an input and/or output power fault.                                  |

### -Operating Environment-

|                             |  |
|-----------------------------|--|
| Operating Temperature ..... | 0° – 50°C ambient at full load, with specified airflow. Derates linearly to 50% at 70°C.                           |
| Cooling .....               | Front panel mounted dual DC ball bearing fans, rated 13 cfm minimum each. Forward airflow direction front to rear. |
| Relative Humidity .....     | Up to 90% RH, non-condensing.  |
| Operating Vibration .....   | 0.75G peak, 5 – 500Hz along three orthogonal axis.   |
| Storage Temperature .....   | -40° to 85°C.  |
| Altitude .....              | Operating to 10,000 ft. Storage to 30,000 ft.  |
| MTBF.....                   | Designed for 150,000 hours at 25°C.  |

### -Interconnect-

|                           |   |
|---------------------------|---|
| Single Output Model ..... | 18-circuit (3X6), sequential contact, hot pluggable type. Located on the rear panel Positronic Ind. P/N PLC18M4BN0A2-164.1 Mates with PI P/N PLC18F300A1. |
|---------------------------|---|

**Note:** Use of the specified mating connector is required to insure proper "make/break" sequential contact sequence.

|                    |  |
|--------------------|--|
| AC Inlet Connector | Optional. Recessed 3-circuit IEC320/C14 User accessible on the front panel. Add "I" attend of model number to designate. |
|--------------------|--|



*1U() Single Output Input/Output and Signal Connector Type and Pin Functions:*

Positronics Ind. P/N PLC18M4BN0. 18 circuit (3x6) hot plug-able type, with 16ga contact pin terminals. Glass filled polyester insulator material, rated 94V-0. Secured in the unit rear. Use of Positronic PLC18F series mating connector is required to ensure correct mating contact sequence and current capacity.

| <u>Pin#</u> | <u>Sequence</u> | <u>Function</u>                          |
|-------------|-----------------|--|
| 1           | (2) standard,   | Remote Voltage Adjust.                   |
| 2           | (2) standard,   | Power Fail Warning                       |
| 3           | (1) postmate,   | Current Share Single                     |
| 4           | (2) standard,   | No Connection.                           |
| 5           | Blank           | Not Used                                 |
| 6           | (2) standard,   | L – Line (AC) Input.                     |
| 7           | (2) standard,   | +S1 (+V1) Remote Sense.                  |
| 8           | (2) standard,   | DC-OK Signal.                            |
| 9           | (2) standard,   | -S1 (-V1) Remote Sence.                  |
| 10          | (3) postmate,   | Remote DC Enable.<br>TTL Low/Closed= ON. |
| 11          | (1) premate,    | Primary Earth (PE) chassis ground.       |
| 12          | Blank           | No connection.                           |
| 13,14       | (2) standard,   | +V1 (DC power output).                   |
| 15          | (1) premate,    | -V1 (Rtn).                               |
| 16          | (2) standard,   | -V1 (Rtn).                               |
| 17          | Blank           | No connection.                           |
| 18          | (2) standard,   | N – Neutral (ACC) Input.                 |

*Indicators and Controls:*

LED 1: DC Power Good. Located on the front panel. The power supply is functioning within specifications when the LED indicator is green. Off indicates an input or output fault condition.

Power Good (DC OK) ..High signal when V-out is within +-3% of nominal voltage. Signal goes low when V-out drops below 95% of nominal.

Remote Adjust .....External 0-5V DC on remote adjust pin referenced to negative sense equals – 5% to +5% change of nominal voltage.

Remote Sense                   Output compensates for up to 0.5V total line drop in the load cables.

Current Sharing/  
Parallel N+1 Operation..... Single wire connection for ±10% current sharing between any number of units.

Remote DC Enable           Enabled by closed circuit or TTL logic 0. Disabled by open circuit or TTL logic 1.

*Other Features:*

Undervoltage Protection... Auto DC output shutdown when AC input falls below safe operating limits (≈ 80VAC). Automatic recovery.

Under Voltage Warning   Loss of input AC causes a TTL compatible signal to go low >4msec prior to any output dropping out of regulation. At AC turn-on, signal stays low until output is in regulation.

Minimum Loading..... None required.

Over Current/Short  
Circuit Protection ..... Standard hiccup mode (on/off cycle) current limit when Vout current is >105% to 120% of full load. Automatic recovery when overload is removed.

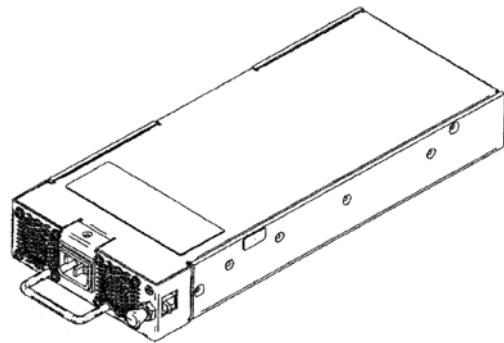
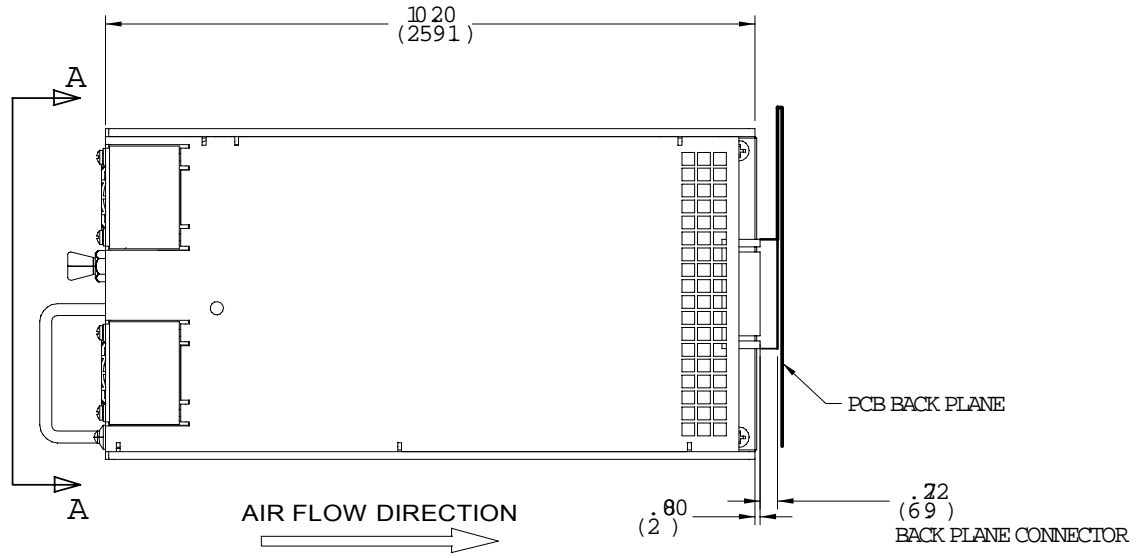
Over Voltage Protection... Non-crowbar type. Any output that exceeds 25% ±10% of nominal Vout will cause Vout to latch off. Remote enable or AC input recycle required to reset.

Over Temperature  
Protection ..... Internal temperature sensing. Causes Vout to shut down. Automatic recovery.

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# **Mechanical Outline**

## **Single Output**



AC Input Option "T"