# Installation and application notes PIN Series 350 Watts User Guide



## **Input Specification**

Nominal Input voltage 24V DC

Input voltage range 18-32V DC. Low Line

inhibit, turn on 21V nominal, turn off 18.5V

nominal.

Efficiency Typ 75% @ full load.

EMI-filter standard BTR 2511

**Isolation** Tested at 500V DC:

Input to Chassis
Input to Output

### **Output Specification**

Max output power 350W

Overall regulation Less than 0.5%

Ripple Pk-Pk (20Mhz bandwidth)

Main o/p: 75mV max. Aux o/p: <1.5% or 75mV

whichever is greater.

Current limit All outputs are separately

protected. Overall power limit set at approximately 400W output power

Short circuit Protected for continuous

protection short circuit.

Overvoltage 120-130% typ.

**protection** (Recycle input to reset).

Thermal protection Outputs disabled when

internal temp exceeds safe operating range.

**Remote sense** As supplied, the main

output has local sense links fitted. Do not remove these links unless remote sensing is

required (200mV total drop max)

Minimum load Not required.

**Isolation** Tested at 250V DC:

**Output to Chassis** 

<u>General</u>

**Cooling** Forced air cooled

(cover mounted fan)

Operating temp 0°C to 50°C.

For 50° to 65°C, de-rate each o/p @ 2.5% per °C

Weight 4Kg typ.

## **CAUTION**

- 1. Connect the power supply correctly. Always use correct size and style input connections.
- Install power supply correctly. Use correct screw sizes for mounting. Screws must not penetrate the interior of the supply excessively to avoid shorting internal components.
- Operate the power supply safely. Power supplies generate heat; allow adequate ventilation at the sides for fan intake and exhaust and keep away from combustible materials and gases. Make sure liquid or metal fragments do not enter the supply, as this could constitute a fire hazard.
- This power supply is intended for use as a component part of other equipment. When installing, the relevant safety standards (e.g. IEC950/VDE0805; EN60950; CSA C22.2 no.950 & no. 234; UL1950) must be complied with.
- Maintain power supply safely. Only qualified personnel should service or repair this unit.
   Beware of possible hazardous internal voltages due to charged capacitors, even after power is disconnected.
- In case of failure, this power supply should be returned to Advance Product Services Ltd to ensure compliance with safety requirements. Interference with the internals of this unit by any other persons may invalidate the warranty.
- 7. The outputs of this product must be earthed in the end use equipment to maintain SELV. Live parts of outputs exceeding 42V should be adequately protected from contact by personnel.

## **Installation & Application Notes**

### Signals Information

#### **Function**

A Input fail signal (active low)
B Input fail signal (active high)
C Outputs up signal (active high)
D Outputs up signal (active low)
E Remote Shutdown input 0V return
F Remote Shutdown input +5V

**Note:-** All signals are referenced to main output 0V.



**Signals Connector** 

Barrier type terminal strip, 6 off no. 6-32 UNC screws (0.325" centers).

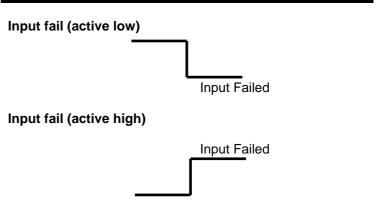
#### **DC Input Terminal**

Barrier type terminal strip, 6 off no. 6-32 UNC screws (0.375" centers).

### **Output Terminal**

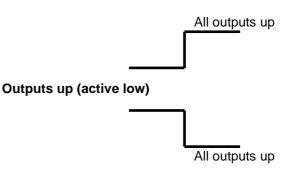
Barrier type terminal strip, 13 off no. 6-32 UNC screws (0.375" centers).

Output 4 and 5 are fully floating with respect to the remaining outputs. Terminal X is used as the 0V return for outputs 4 and 5.



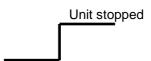
TTL compatible Input Fail signals occur when the input voltage is removed or drops below 18.5V

#### Outputs up (active high)



TTL compatible Outputs Up signals are active when all outputs are >85% of their nominal voltage.

#### **Shutdown Input**



TTL High can be applied from an external source to provide an inhibit and shutdown signal to the inverter stage. Unit can be restarted by applying TTL low signal or leaving the connection open.

# Installation & Application Notes

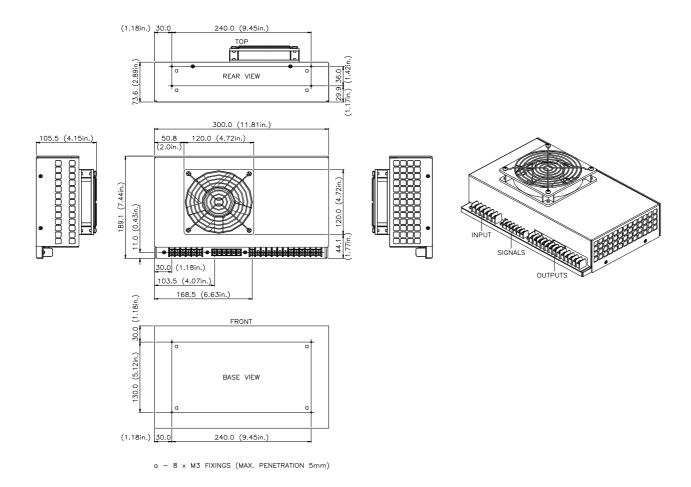
#### **Electrical Isolation & Insulation**

The PIN Series power supply has been tested with the following voltages:

Input to Output 500V DC
Input to Chassis 500V DC
Output to Output 250V DC
Output to Chassis 250V DC

There are capacitors between output common and chassis earth so no high voltages should be applied between the output terminals and chassis earth.

## Mechanical Outline



#### Notes:

- 1. Input: Six off No. 6-32 UNC screws (0.375" centers). Maximum torque: 0.68Nm (6in-lbs).
- 2. Signals connector: Six off No.6-32 UNC screws (0.325" centers). Maximum torque: 0.68Nm (6in-lbs).
- 3. Output Connections: Thirteen off No. 6-32 UNC screws (0.375" centers). Maximum torque: 0.68Nm (6in-lbs).
- 4. All dimensions are in millimetres (inches) and are typical.
- 5. Customer fixings: Base mounted four M3 fixings provided. Maximum screw penetration of 5mm.

  Rear mounted four M3 fixings provided. Maximum screw penetration of 5mm.