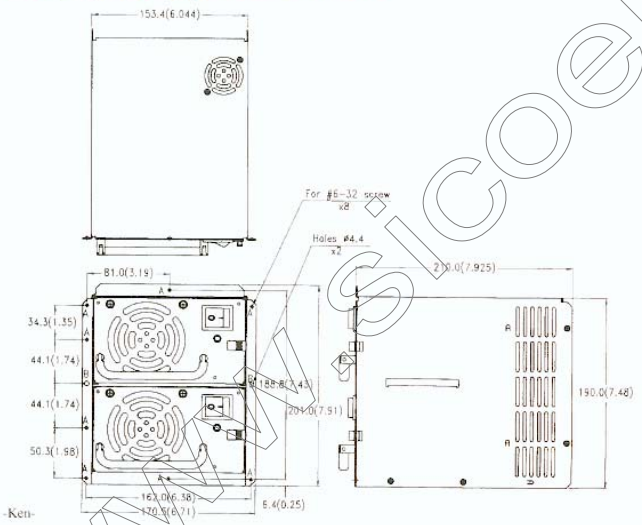
## Description:

A parallel design shelf with two 48VDC input supplies (SNP-430C) supports up to 5 outputs for the telecom and Sub-system applications.

## General Specifications:

| | |
|---|---|
| Input voltage | -40 to -60VDC |
| Input current | 9A at -48VDC |
| Inrush current | less than 10A at -48VDC, cold start 25°C |
| Outputs | see output table |
| Efficiency | 70% typical |
| Input protection | internal diode against inverse |
| Over current protection | auto recovery |
| Short circuit protection | auto recovery |
| Over voltage protection | auto recovery |
| Redundancy | O-ring built in the shelf |
| Power good | normally high |
| Operating temperature | 0°C to 50°C |
| Cooling | forced air convection |
| Storage temperature | -40°C to +75°C |
| EMI | FCC 20780 "B" |
| Safety | UL 1950 |
| | CSA 22.2 No. 950-95 |
| | TUV EN60950 |

## Mechanical Specifications:




**Notes:**

1. Dimensions shown in mm as left.
   Tolerance: ±0.8mm.
2. Size:
   170.5 x 210 x 201 (mm)
3. Connectors:

| | | |
|---|---|---|
| For power module: | | AMP 211149-1 or equivalent |
| DC input: | P1 | AMP 640901-2 or equivalent |
| Output: | P4,5,6 | AMP 640506-3 or equivalent |
| | P7 | Molex 39-28-1183 or equivalent |

4. DC output pin assignment:

| MODULE A,B: Pin | | | Pin | |
|---|---|---|---|---|
| | 1 | P.G. | 15 | N/C |
| | 2~6 | +5V | 16,17 | DC GND |
| | 7 | +12V | 18,19 | N/C |
| | 8 | FAN sense | 20,21 | DC GND |
| | 9 | -12V | 22 | N/C |
| | 10 | -5V | 23 | Chassis GND |
| | 11 | N/C | 24 | DC -48V |
| | 12,13 | DC GND | 25 | -48V Return |
| | 14 | +5V sense | | |

4. DC output pin assignment:

| | | | | | | |
|---|---|---|---|---|---|---|
| P1: | Pin | 1 | DC 0V | Pin | 4 | DC -48V |
| | | 2 | DC -48V | | 5 | DC 0V |
| | | 3 | Earth | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| P4: | Pin | 1 | +5V sense | Pin | 9~12 | +5V |
| | | 2 | N/C | | 13 | -12V |
| | | 3 | +3.3V sense | | 14~16 | +5V |
| | | 4 | -5V | | 17 | -12V |
| | | 5 | P.G. | | 18~34 | +5V |
| | | 6.7 | +5V | | 35 | Remote ON |
| | | 8 | -5V | | 36 | +5Vsb |

| | | | | | | |
|---|---|---|---|---|---|---|
| P5: | Pin | 1~12 | +3.3V | Pin | 17~26 | +12V |
| | | 13~15 | +12V | | 27~36 | GND |
| | | 16 | +3.3V | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| P6 | Pin | 1~36 | GND | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| P7 | Pin | 1 | Alarm +12V | Pin | 7,8 | +5V |
| | | 2 | Reset +12V | | 9 | N/C |
| | | 3 | Module A on line +5V | | 10~15 | GND |
| | | 4 | Module B on line +5V | | 16 | Module A Fan sense |
| | | 5 | Module A FAIL TTL+ | | 17 | Module B Fan sense |
| | | 6 | Module B FAIL TTL+ | | 18 | N/C |

## Output Specifications:

| MODEL NO. | OUTPUT RAIL | LOAD | | | VOLTAGE ACCURACY | RIPPLE NOISE | LINE REG. | LOAD REG. |
|---|---|---|---|---|---|---|---|---|
| | | MIN. | RATED | MAX. | | | | |
| DTB-R30C-D | +5V | 1A | 42A | | +5.0V~+5.2V | 50mVpp | ±1% | ±4% |
| | +12V | 0A | 6A | 9A | +11.4V~+12.6V | 120mVpp | ±1% | ±5% |
| | -12V | 0A | 2A | | -11.3V~-12.6V | 120mVpp | ±1% | ±3% |
| | -5V | 0A | 1A | | -4.65V~-5.25V | 50mVpp | ±1% | ±3% |
| | +3.3V | 0A | 10A | 12A | +3.25V~+3.35V | 50mVpp | ±1% | ±3% |

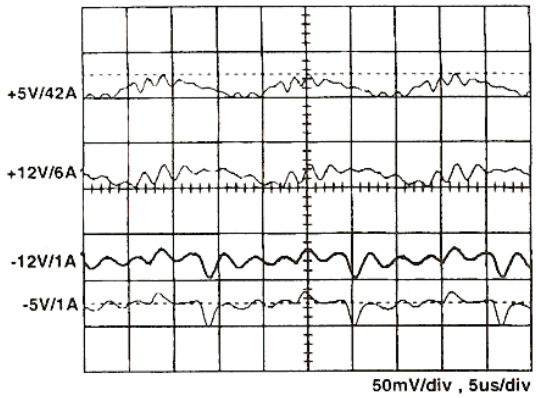
* 210W for +5V & +3.3V combined output.

## Note:

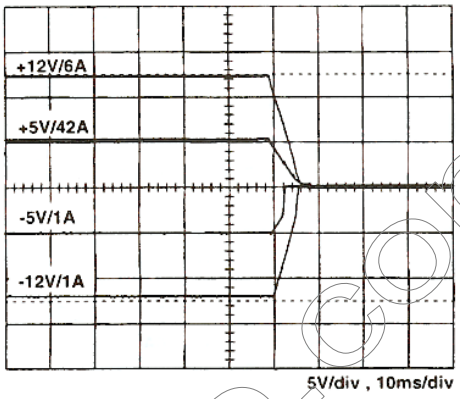
1. The total continuous power should be kept within 300W.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
4. Load regulation is defined by changing ±40% of measured output load from 60% rated load at another output set to 60% rated load.
5. Ripple & noise is measured by using 15MHz bandwidth limited oscilloscope and terminated each output with a 0.47uF capacitor at rated load and nominal line.
6. Hold up time is measured from the end of the last charging pulse to the time which the +5V output drops down to +4.75V at rated load and nominal line.
7. Efficiency is measured at rated load and nominal line.

## Performance:

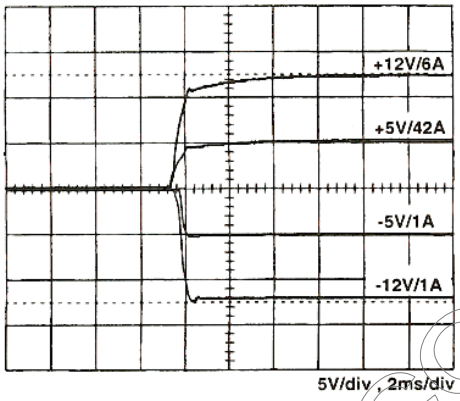
1. Switching frequency ripple



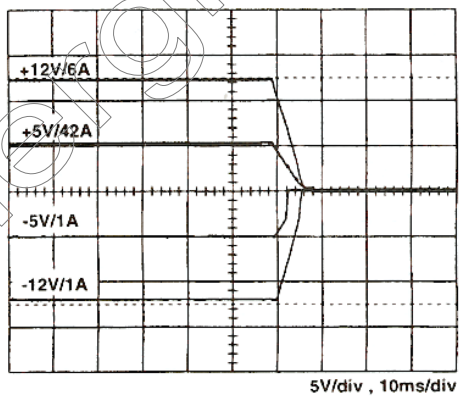

2. Line frequency ripple



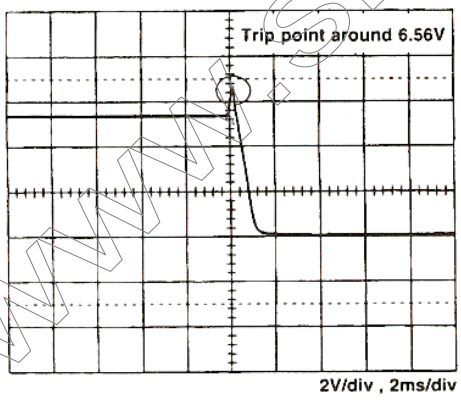

3. Output turn on wave form



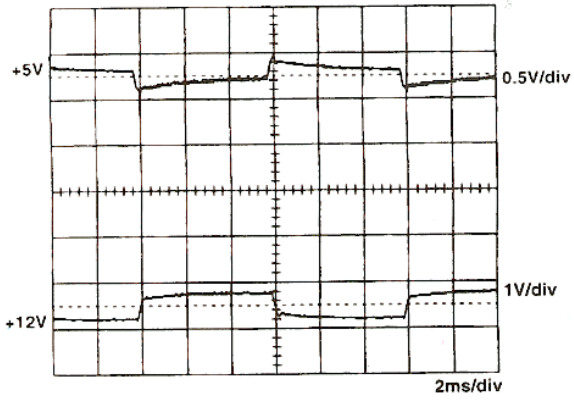

4. Output turn off wave form




5. Over voltage protection

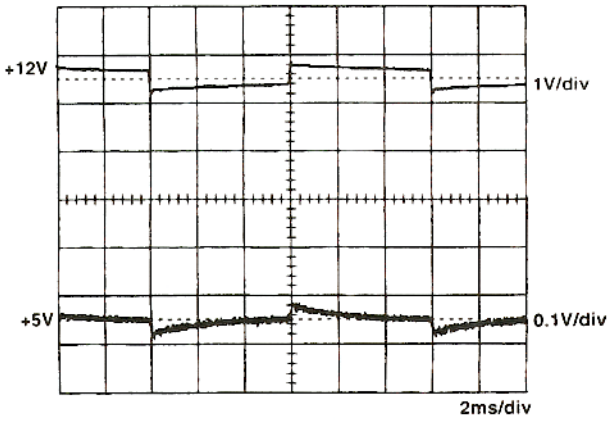



6. +5V step response



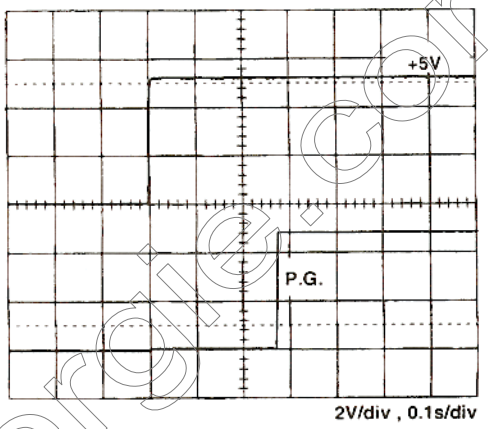

+5V steps from 8.4A to 42A

7. +12V step response




+12V steps from 1.2A to 6A
other output at 60% load

8. Power good signal




9. Power fail signal