



RAID System (DC to DC)

(Hot Swap) **400W**
DTB-R40C-D



Description:

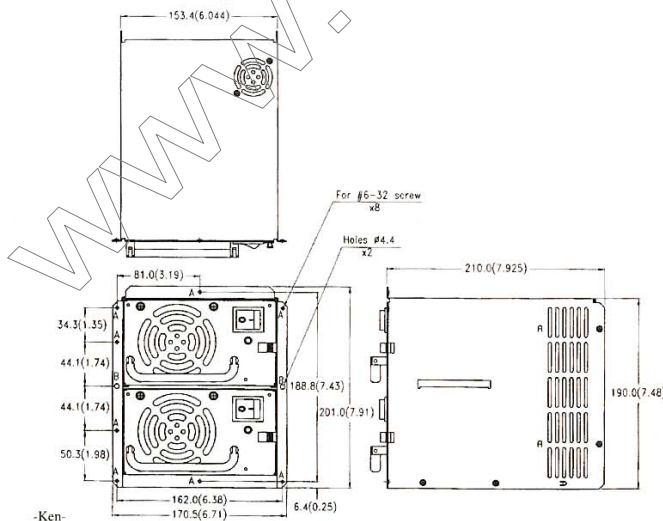
A parallel design shelf with two 48VDC input supplies (SNP-440C) supports up to 5 outputs for the telecom and Sub-system applications.

General Specifications:

| | | | |
|-------------------------------|--|-------------------------------|---------------------------|
| Input voltage | -40 to -60VDC | Over voltage protection | auto recovery |
| Input current | 14A at -48VDC | Redundancy | O-ring built in the shelf |
| Inrush current | less than 20A at -48VDC, cold start 25°C | Power good | normally high |
| Outputs | see output table | Operating temperature | 0°C to 50°C |
| Efficiency | 70% typical | Cooling | forced air convection |
| Input protection | internal diode against inverse | Storage temperature | -40°C to +75°C |
| Over current protection | auto recovery | EMI | FCC 20780 "B" |
| Short circuit protection..... | auto recovery | Safety | meet UL 1950 |

CSA 22.2 No. 950-95
TUV EN60950

Mechanical Specifications:



Notes:

- Dimensions shown in mm as left.
Tolerance: ±0.8mm.
- Size:
170.5 x 210 x 201 (mm)
- 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
- DC output pin assignment:

| MODULE A,B: Pin | 1 | P.G. | Pin 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 | | |



RAID System (DC to DC)

(Hot Swap) **400W**
DTB-R40C-D

4. DC output pin assignment:

| | | | | | | | | | | | | | |
|-----|-----|-----|-------------|-----|-------|-----------|-----|-----|-------|----------------------|-----|-------|--------------------|
| P1: | Pin | 1 | DC 0V | Pin | 4 | DC -48V | P5: | Pin | 1-12 | +3.3V | Pin | 17-26 | +12V |
| | | 2 | DC -48V | | 5 | DC 0V | | | 13-15 | +12V | | 27-36 | GND |
| | | 3 | Earth | | | | | | 16 | +3.3V | | | |
| P4: | Pin | 1 | +5V sense | Pin | 9-12 | +5V | P6: | Pin | 1-36 | GND | | | |
| | | 2 | N/C | | 13 | -12V | | | | | | | |
| | | 3 | +3.3V sense | | 14-16 | +5V | P7: | Pin | 1 | Alarm +12V | Pin | 7,8 | +5V |
| | | 4 | -5V | | 17 | -12V | | | 2 | Reset +12V | | 9 | N/C |
| | | 5 | P.G. | | 18-34 | +5V | | | 3 | Module A on line +5V | | 10-15 | GND |
| | | 6,7 | -5V | | 35 | Remote ON | | | 4 | Module B on line +5V | | 16 | Module A Fan sense |
| | | 8 | -5V | | 36 | +5Vsb | | | 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-R40C-D | +5V | 3A | 45A | 50A | +5.0V~+5.2V | 50mVpp | ±1% | ±4% |
| | +12V | 1A | 10A | 12A | +11.4V~+12.6V | 120mVpp | ±1% | ±5% |
| | -12V | 0.1A | 2A | | -11.3V~-12.6V | 120mVpp | ±1% | ±3% |
| | -5V | 0.1A | 1A | | -4.65V~-5.25V | 50mVpp | ±1% | ±3% |
| | +3.3V | 0A | 12A | | +3.25V~+3.35V | 50mVpp | ±1% | ±3% |

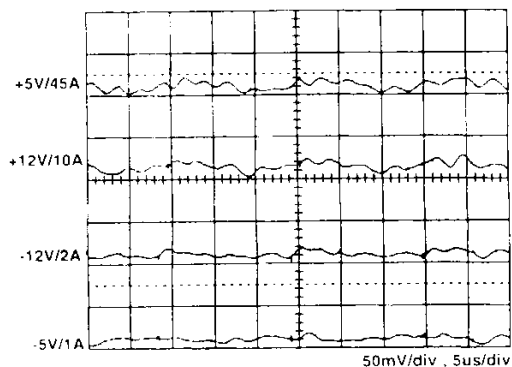
* 250W for +5V & +3.3V combined output.

Note:

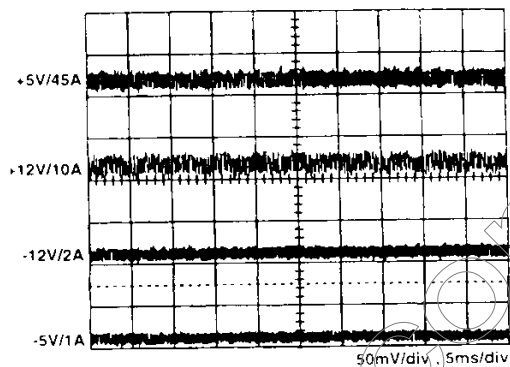
- The total continuous power should be kept within 400W.
- At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
- Line regulation is defined by changing $\pm 10\%$ of input voltage from nominal line at rated load.
- Load regulation is defined by changing $\pm 40\%$ of measured output load from 60% rated load at another output set to 60% rated load.
- 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.
- 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.
- Efficiency is measured at rated load and nominal line.

Performance:

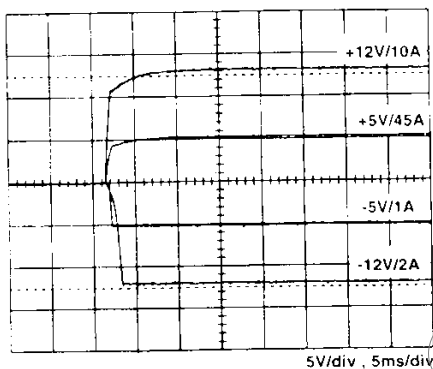
1. Switching frequency ripple



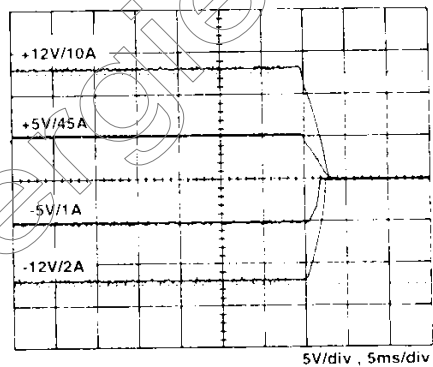
2. Line frequency ripple



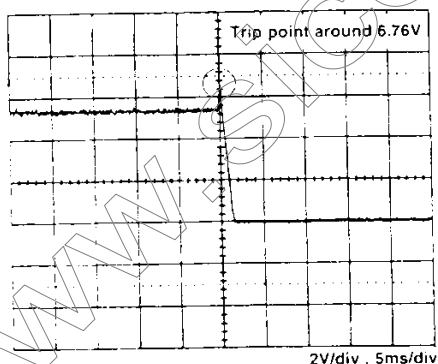
3. Output turn on wave form



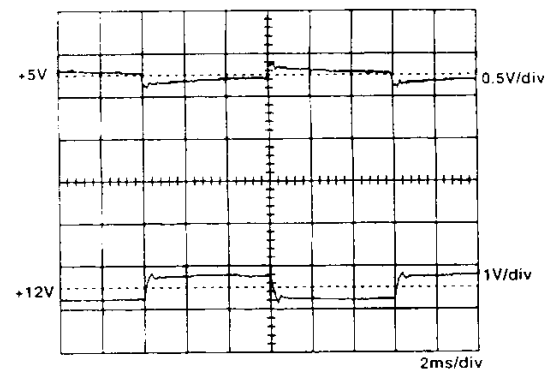
4. Output turn off wave form



5. Over voltage protection

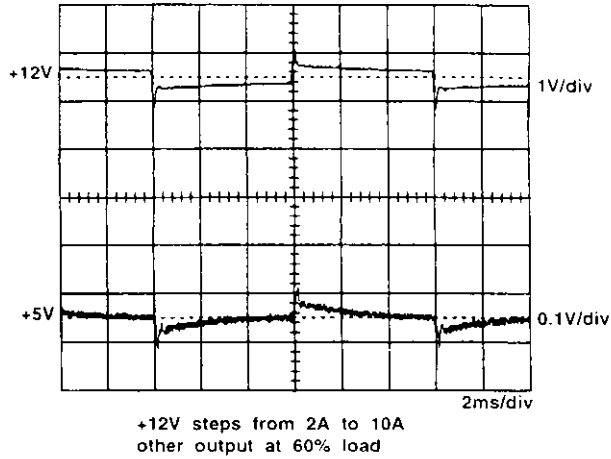


6. +5V step response

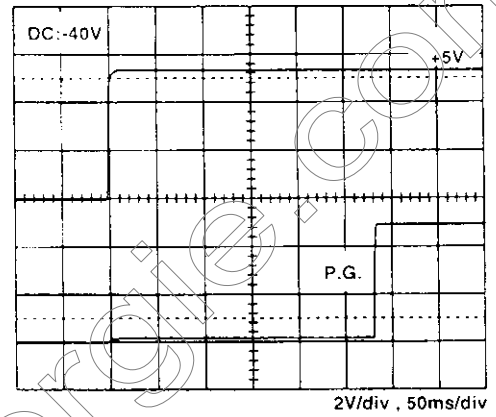




7. +12V step response



8. Power good signal



9. Power fail signal

