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1. Description

This product is a AC to DC power transfer device, it can provide for a **216W** single dc output with constant voltage source.

2. Electrical

2.1 Input Voltage

- a. 100 - 240Vac Nominal.
- b. 88 - 280Vac Universal.

2.2 Input Frequency

47- 63Hz.

2.3 Input Current

3A max. at 100Vac input & DC output at full-load.

2.4 Inrush Current

100/200A max. at cold-start & 25°C & DC output at Full-load and 115/230Vac input.

2.5 Hold-Up time

10msec min. at Full-load output and 115Vac input.

2.6 Efficiency

85% min. at Full-load output and 115/230Vac input.

2.7 Safety Test

- a. Leakage current less than **0.5mA** at 254Vac, 50Hz.
- b. Hi-Pot test : 1500Vdc, 10mA, 60Sec. between Primary to Secondary ground.
Allow factory test condition to set 1500Vac 10 mA 1Sec.
- c. Insulation : at dc 500Vdc, 1 Sec. between Primary to Secondary circuit, IR shall $\geq 20M\Omega$.
- d. Grounding test : AC 30A , 2 Sec. between input safety ground and SELV output GND, GR $\leq 0.1\Omega$.

2.8 Power line Harmonic

Input current harmonic shall comply with IEC 61000-3-2 class D requirement.

PF value ≥ 0.9 at 240Vac input & DC output at Full-load.

PF value ≥ 0.95 at 100Vac input & DC output at Full-load.

2.9 Output Voltage and Current

| Vout | Range | Iout (min.) | Iout (max.) | Peak (XS) |
|------|----------|-------------|-------------|-----------|
| 24V | 23 – 25V | 0A | 9A | - |
| | 23 – 25V | - | - | 10A |

2.10 Ripple and Noise

Low frequency ripple ($< 100\text{kHz}$) $\leq 350\text{mVpp}$, and Total composite Ripple and Noise. Less than 350mVpp , tested by dc loading side parallel with a $10\mu\text{F}/\text{ELE}$. and $0.1\mu\text{F}/\text{Ceramic}$. Capacitors and Measured Band Width set at 20MHz .

2.11 Over-Shoot and under-shoot

Less than 10% of nominal Voltage value.

2.12 Protection

- a. SCP : Short circuit protection with auto. recovery function.
- b. OVP : Over voltage protection with auto recovery function.
Tripped voltage will be less than 32Vdc .
- c. OCP : Over current protection with auto recovery function.
Current limit : 12.6A (Max).
- d. OTP : No damage or plastic case melting or safety issue occur, with auto recovery function.

2.13 LED Indication

Green light for Nominal operation. Blank or Flash for **Protection** mode.

2.14 Rise time

Rise time shall be less than 50msec. , it should be measured from 10% to 90% of the output voltage.

2.15 Temperature Coefficient

Less than $0.2\% / ^\circ\text{C}$

2.16 Transient Response

Dynamic **load** condition.

| DC output | I_1 (A) | I_2 (A) | $\Delta V_{\text{max.}}$ (V) | Time-max. | dI/dT |
|-----------|-----------|-----------|------------------------------|-----------|------------|
| 24V | 1 | 3 | +/- 1.0V | 10 msec. | 50mA/usec. |
| 24V | 3 | 6 | +/- 1.0V | 10 msec. | 50mA/usec. |
| 24V | 6 | 9 | +/- 1.0V | 10 msec. | 50mA/usec. |

50% of duty cycle.

3. Environment

3.1 Temperature

- a. Operation : 0 to 40°C at nominal $100\text{-}240\text{Vac}$ input condition.
- b. Storage : -40 to 70°C

3.2 Humidity

- a. Operation : 20 to 80%
- b. Storage : 10 to 90%

3.3 Altitude

From sea level to 2,000M (operation) and 40,000Ft above (Non operation).

4. EMC

4.1 EMS

| Test Item | Test Specification | IEC Standards |
|-----------|---|---------------|
| ESD | Contact +/- 8KV | 61000-4-2 |
| ESD | Air +/- 15KV | 61000-4-2 |
| RS | FR: 26MHz-1.0GHz, Field Strength: 3V/M | 61000-4-3 |
| EFT | +/- 2KV on AC power line. | 61000-4-4 |
| SURGE | +/- 1KV (DM) & +/- 2KV (CM) | 61000-4-5 |
| CS | 3V/M | 61000-4-6 |
| DIPS | 0% 250Cy, 40% 5 Cy, 70% 5Cy | 61000-4-11 |

4.2 EMI

| Standards | Specification |
|-----------|-----------------|
| FCC | Part 15,class B |
| VCCI | Class B |
| CISPR | Part 22,class B |

5. Reliability

5.1 Life (for Electrolytic Capacitors)

12,000 hours (8 hours/day x 300 days/year x 5 years)

At full load & 115/230 VAC input & ambient temperature at 25°C.

5.2 M.T.B.F.

60,000 Power On Hours at 25°C.

5.3 Temperature Rise.

Less than 50°C for Top of case , under the test condition of nominal AC 100-240Vac input & DC output at full-load and ambient temperature at 25+/-1°C.

5.4 Burn-in

100% Burn-In with 80~100% of full-loading & 35~45°C Environment temperature.

5.5 Vibration Test

- a. Non operation vibration with shipping container shall be 2G'S peak/7-50Hz, 4G'S /50-500Hz, **there should be no any abnormal found after test.**
- b. Operation vibration shall be 0.5G'S peak/10-60Hz, 3 AXES, **there should be no any abnormal found after test.**

5.6 Drop-Test

Test height is 100cm, **there should be no any abnormal found after drop test.**

6. Mechanical

6.1 Plastic enclosure :

GE material GE LEXAN **945** .

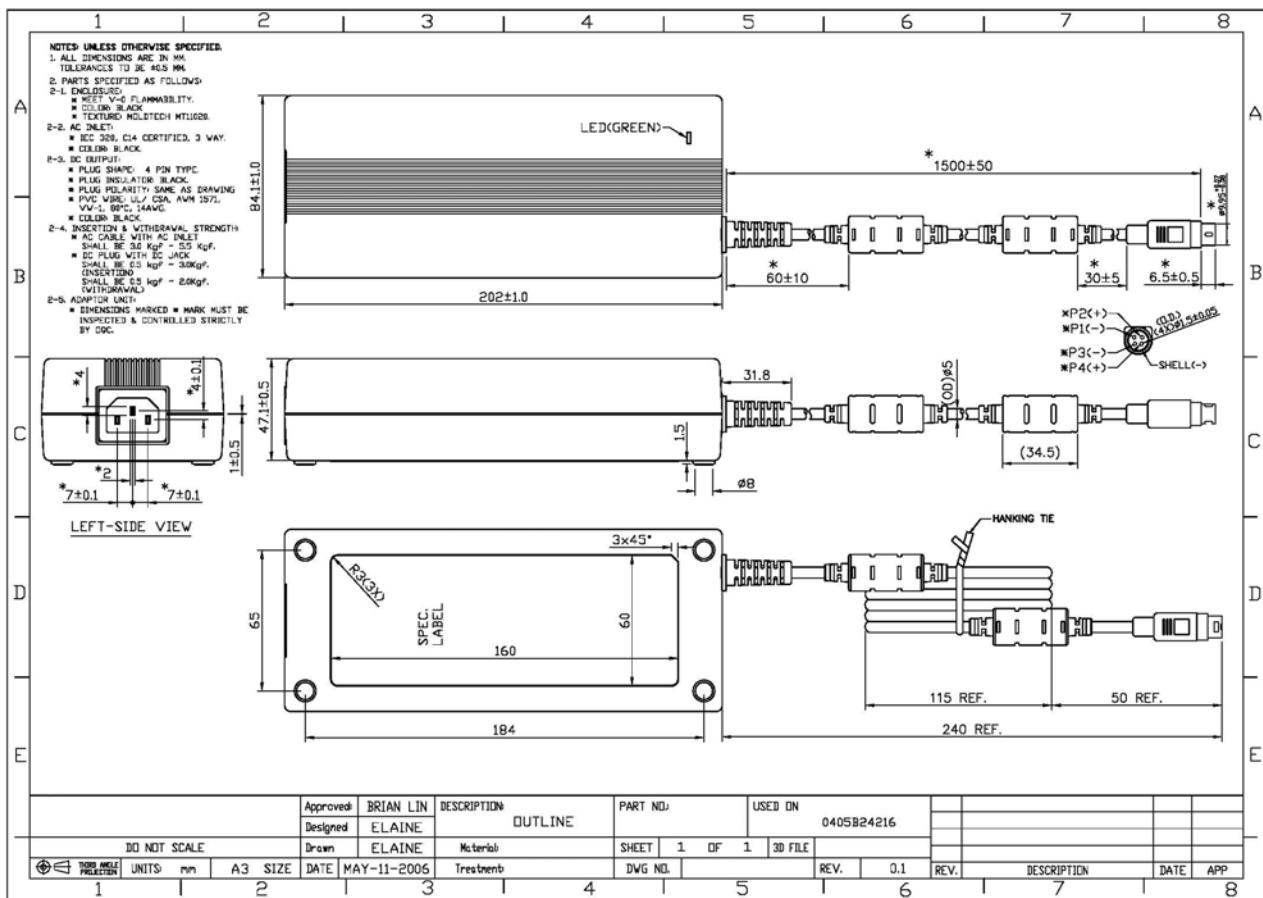
6.2 Physical Size :

200mm(L) * **85**mm (W) * **46**mm (H).

6.3 DC cord:

1500 mm, UL **1571**, **14**AWG wires.

6.4 Weight : 1300g.



| | | | | | | |
|----------|-----------|-------------|---------|----------|---------|------------|
| Approved | BRIAN LIN | DESCRIPTION | OUTLINE | PART NO. | USED ON | 0405B24216 |
| Designed | ELAINE | | | | | |
| Drawn | ELAINE | Material | | SHEET | 1 OF 1 | 3D FILE |
| | | Treatment | | DWG NO. | | REV. 0.1 |

| | | | | | | | |
|--------------|--|-----------|---------|-------------------|-------------|------|-----|
| DO NOT SCALE | | UNITS: mm | A3 SIZE | DATE: MAY-11-2006 | DESCRIPTION | DATE | APP |
|--------------|--|-----------|---------|-------------------|-------------|------|-----|

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