



# 125W Dual Output Switching Power Supply

# RD-125 series



### ■ Features :

- Protections: Short circuit / Overload / Over voltage
- Cooling by free air convection
- LED indicator for power on
- 100% full load burn-in test
- All using 105°C long life electrolytic capacitors
- Withstand 300VAC surge input for 5 second
- High operating temperature up to 70°C
- Withstand 5G vibration test
- High efficiency, long life and high reliability
- 3 years warranty



## SPECIFICATION

| MODEL                                | RD-125A  |   | RD-125B  |   |          |
|--------------------------------------|--|---|----------|---|----------|
| OUTPUT                               | OUTPUT NUMBER  | CH1   | CH2      | CH1   | CH2      |
|                                      | DC VOLTAGE   | 5V  | 12V      | 5V  | 24V      |
|                                      | RATED CURRENT  | 7.7A  | 7.7A     | 4.6A  | 4.6A     |
|                                      | CURRENT RANGE <small>Note.6</small>  | 0 ~ 12A   | 0 ~ 10A  | 0 ~ 10A   | 0 ~ 5A   |
|                                      | RATED POWER <small>Note.6</small>  | 130.9W  |          | 133.4W  |          |
|                                      | RIPPLE & NOISE (max.) <small>Note.2</small>  | 80mVp-p   | 120mVp-p | 80mVp-p   | 120mVp-p |
|                                      | VOLTAGE ADJ. RANGE   | CH1: 4.75 ~ 5.5V  |          | CH1: 4.75 ~ 5.5V  |          |
|                                      | VOLTAGE TOLERANCE <small>Note.3</small>  | ±5.0%   | ±7.0%    | ±5.0%   | ±7.0%    |
|                                      | LINE REGULATION <small>Note.4</small>  | ±1.0%   | ±2.0%    | ±1.0%   | ±2.0%    |
|                                      | LOAD REGULATION <small>Note.5</small>  | ±3.0%   | ±4.0%    | ±3.0%   | ±4.0%    |
| SETUP, RISE TIME                     | 500ms, 20ms/230VAC    1200ms, 30ms/115VAC at full load   |   |          |   |          |
| HOLD UP TIME (Typ.)                  | 25ms/230VAC    30ms/115VAC at full load  |   |          |   |          |
| INPUT                                | VOLTAGE RANGE  | 88 ~ 132VAC / 176 ~ 264VAC selected by switch   |          | 248 ~ 373VDC(Withstand 300VAC surge for 5sec. Without damage) |          |
|                                      | FREQUENCY RANGE  | 47 ~ 63Hz   |          |   |          |
|                                      | EFFICIENCY (Typ.)  | 82%   |          | 85%   |          |
|                                      | AC CURRENT (Typ.)  | 3A/115VAC    2A/230VAC  |          |   |          |
|                                      | INRUSH CURRENT (Typ.)  | COLD START 50A/230VAC   |          |   |          |
| LEAKAGE CURRENT                      | <2mA / 240VAC  |   |          |   |          |
| PROTECTION                           | OVERLOAD   | 110 ~ 150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |          |   |          |
|                                      | OVER VOLTAGE   | CH1: 5.75 ~ 6.75V<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed             |          |   |          |
| ENVIRONMENT                          | WORKING TEMP.  | -25 ~ +70°C (Refer to "Derating Curve")   |          |   |          |
|                                      | WORKING HUMIDITY   | 20 ~ 90% RH non-condensing  |          |   |          |
|                                      | STORAGE TEMP., HUMIDITY  | -40 ~ +85°C, 10 ~ 95% RH  |          |   |          |
|                                      | TEMP. COEFFICIENT  | ±0.03%/°C (0 ~ 50°C) on CH1 output  |          |   |          |
| SAFETY & EMC <small>(Note 7)</small> | VIBRATION  | 10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes   |          |   |          |
|                                      | SAFETY STANDARDS   | UL62368-1, TUV EN62368-1, EAC TP TC 004 approved  |          |   |          |
|                                      | WITHSTAND VOLTAGE  | I/P-O/P:3KVAC    I/P-FG:2KVAC    O/P-FG:0.5KVAC   |          |   |          |
|                                      | ISOLATION RESISTANCE   | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH  |          |   |          |
|                                      | EMC EMISSION   | Compliance to EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020  |          |   |          |
| OTHERS                               | EMC IMMUNITY   | Compliance to EN61000-4-2,3,4,5,6,8,11, EN61000-6-2 (EN50082-2), heavy industry level, criteria A, EAC TP TC 020        |          |   |          |
|                                      | MTBF   | 232.4Khrs min.    MIL-HDBK-217F (25°C)  |          |   |          |
|                                      | DIMENSION  | 199*98*38mm (L*W*H)   |          |   |          |
|                                      | PACKING  | 0.7Kg; 20pcs/15Kg/0.8CUFT   |          |   |          |
| NOTE                                 | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Line regulation is measured from low line to high line at rated load.</p> <p>5. Load regulation is measured from 20% to 100% rated load, and other output at 60% rated load.</p> <p>6. Each output can work within current range. But total output power can't exceed rated output power.</p> <p>7. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</p> <p>8. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time.</p> <p>9. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> |   |          |   |          |



■ Features :

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- Cooling by free air convection
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**SPECIFICATION**

| MODEL                                |  | RD-125-1224   |                                  | RD-125-1248   |          | RD-125-2448       |          |
|--------------------------------------|--|---|----------------------------------|---|----------|-------------------|----------|
| OUTPUT                               | OUTPUT NUMBER  | CH1   | CH2                              | CH1   | CH2      | CH1               | CH2      |
|                                      | DC VOLTAGE   | 12V   | 24V                              | 12V   | 48V      | 24V               | 48V      |
|                                      | RATED CURRENT  | 3.7A  | 3.7A                             | 2.3A  | 2.3A     | 2A                | 2A       |
|                                      | CURRENT RANGE <small>Note.6</small>  | 0 ~ 7A  | 0 ~ 5A                           | 0 ~ 7A  | 0 ~ 2.5A | 0 ~ 4A            | 0 ~ 2.5A |
|                                      | RATED POWER <small>Note.6</small>  | 133.2W  |                                  | 138W  |          | 144W              |          |
|                                      | RIPPLE & NOISE (max.) <small>Note.2</small>  | 120mVp-p  | 200mVp-p                         | 120mVp-p  | 240mVp-p | 200mVp-p          | 240mVp-p |
|                                      | VOLTAGE ADJ. RANGE   | CH1: 11.4 ~ 13.2V   |                                  | CH1: 11.4 ~ 13.2V   |          | CH1: 22.8 ~ 26.4V |          |
|                                      | VOLTAGE TOLERANCE <small>Note.3</small>  | ±2.0%   | ±8.0%                            | ±2.0%   | ±8.0%    | ±1.0%             | ±6.0%    |
|                                      | LINE REGULATION <small>Note.4</small>  | ±0.5%   | ±1.0%                            | ±0.5%   | ±1.0%    | ±0.5%             | ±1.0%    |
|                                      | LOAD REGULATION <small>Note.5</small>  | ±1.0%   | ±5.0%                            | ±1.0%   | ±5.0%    | ±1.0%             | ±5.0%    |
| SETUP, RISE TIME                     | 500ms, 20ms/230VAC   |   | 1200ms, 30ms/115VAC at full load |   |          |                   |          |
| HOLD UP TIME (Typ.)                  | 25ms/230VAC  |   | 30ms/115VAC at full load         |   |          |                   |          |
| INPUT                                | VOLTAGE RANGE  | 88 ~ 132VAC / 176 ~ 264VAC selected by switch   |                                  | 248 ~ 373VDC(Withstand 300VAC surge for 5sec. Without damage) |          |                   |          |
|                                      | FREQUENCY RANGE  | 47 ~ 63Hz   |                                  |   |          |                   |          |
|                                      | EFFICIENCY (Typ.)  | 85%   |                                  | 86%   |          | 86%               |          |
|                                      | AC CURRENT (Typ.)  | 3A/115VAC 2A/230VAC   |                                  |   |          |                   |          |
|                                      | INRUSH CURRENT (Typ.)  | COLD START 50A/230VAC   |                                  |   |          |                   |          |
| LEAKAGE CURRENT                      | <2mA / 240VAC  |   |                                  |   |          |                   |          |
| PROTECTION                           | OVERLOAD   | 110 ~ 150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |                                  |   |          |                   |          |
|                                      | OVER VOLTAGE   | CH1: 13.8 ~ 16.2V   |                                  | CH1: 13.8 ~ 16.2V   |          | CH1: 27.6 ~ 32.4V |          |
| ENVIRONMENT                          | WORKING TEMP.  | -25 ~ +70°C (Refer to "Derating Curve")   |                                  |   |          |                   |          |
|                                      | WORKING HUMIDITY   | 20 ~ 90% RH non-condensing  |                                  |   |          |                   |          |
|                                      | STORAGE TEMP., HUMIDITY  | -40 ~ +85°C, 10 ~ 95% RH  |                                  |   |          |                   |          |
|                                      | TEMP. COEFFICIENT  | ±0.03%/°C (0 ~ 50°C) on CH1 output  |                                  |   |          |                   |          |
|                                      | VIBRATION  | 10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes   |                                  |   |          |                   |          |
| SAFETY & EMC <small>(Note 7)</small> | SAFETY STANDARDS   | UL62368-1, TUV EN62368-1, EAC TP TC 004 approved  |                                  |   |          |                   |          |
|                                      | WITHSTAND VOLTAGE  | I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC   |                                  |   |          |                   |          |
|                                      | ISOLATION RESISTANCE   | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH  |                                  |   |          |                   |          |
|                                      | EMC EMISSION   | Compliance to EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020  |                                  |   |          |                   |          |
| OTHERS                               | EMC IMMUNITY   | Compliance to EN61000-4-2,3,4,5,6,8,11, EN61000-6-2 (EN50082-2), heavy industry level, criteria A, EAC TP TC 020        |                                  |   |          |                   |          |
|                                      | MTBF   | 218.2Khrs min. MIL-HDBK-217F (25°C)   |                                  |   |          |                   |          |
|                                      | DIMENSION  | 199*98*38mm (L*W*H)   |                                  |   |          |                   |          |
|                                      | PACKING  | 0.7Kg; 20pcs/15Kg/0.8CUFT   |                                  |   |          |                   |          |
| NOTE                                 | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Line regulation is measured from low line to high line at rated load.</p> <p>5. Load regulation is measured from 20% to 100% rated load, and other output at 60% rated load.</p> <p>6. Each output can work within current range. But total output power can't exceed rated output power.</p> <p>7. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</p> <p>8. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time.</p> <p>9. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> |   |                                  |   |          |                   |          |



■ Features :

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- Cooling by free air convection
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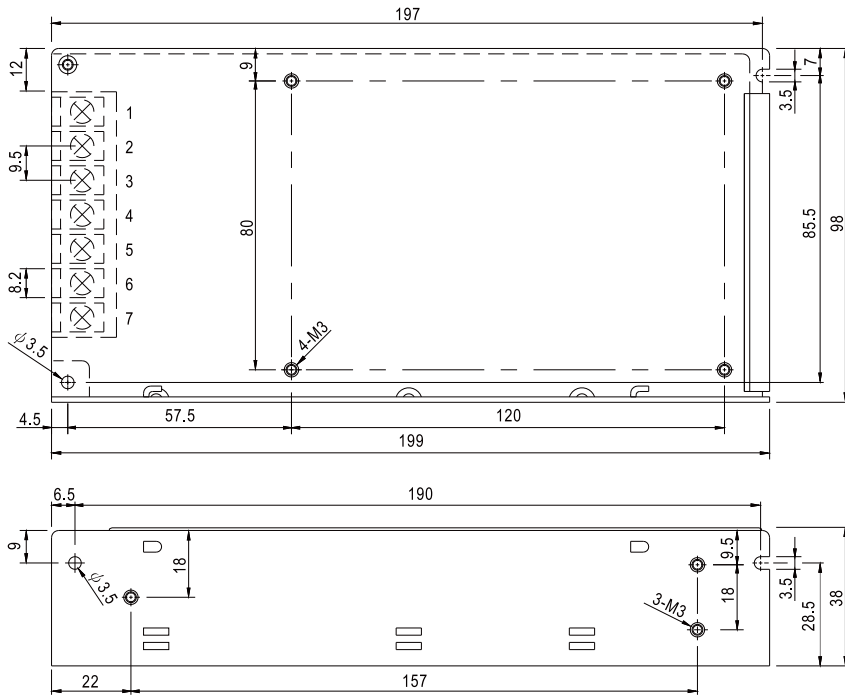


SPECIFICATION

| MODEL                                | RD-125-2412  |   | RD-125-4812                      |  | RD-125-4824 |                   |          |
|--------------------------------------|--|---|----------------------------------|--|-------------|-------------------|----------|
| OUTPUT                               | OUTPUT NUMBER  | CH1   | CH2                              | CH1  | CH2         | CH1               | CH2      |
|                                      | DC VOLTAGE   | 24V   | 12V                              | 48V  | 12V         | 48V               | 24V      |
|                                      | RATED CURRENT  | 3.7A  | 3.7A                             | 2.3A   | 2.3A        | 2A                | 2A       |
|                                      | CURRENT RANGE <small>Note.6</small>  | 0 ~ 5A  | 0 ~ 7A                           | 0 ~ 2.5A   | 0 ~ 7A      | 0 ~ 2.5A          | 0 ~ 4A   |
|                                      | RATED POWER <small>Note.6</small>  | 133.2W  |                                  | 138W   |             | 144W              |          |
|                                      | RIPPLE & NOISE (max.) <small>Note.2</small>  | 200mVp-p  | 120mVp-p                         | 240mVp-p   | 120mVp-p    | 240mVp-p          | 240mVp-p |
|                                      | VOLTAGE ADJ. RANGE   | CH1: 22.8 ~ 26.4V   |                                  | CH1: 45.6 ~ 52.8V  |             | CH1: 45.6 ~ 52.8V |          |
|                                      | VOLTAGE TOLERANCE <small>Note.3</small>  | ±2.0%   | ±10%                             | ±2.0%  | ±10%        | ±1.0%             | ±8.0%    |
|                                      | LINE REGULATION <small>Note.4</small>  | ±0.5%   | ±1.0%                            | ±0.5%  | ±1.0%       | ±0.5%             | ±1.0%    |
|                                      | LOAD REGULATION <small>Note.5</small>  | ±1.0%   | ±5.0%                            | ±1.0%  | ±5.0%       | ±1.0%             | ±5.0%    |
| SETUP, RISE TIME                     | 500ms, 20ms/230VAC   |   | 1200ms, 30ms/115VAC at full load |  |             |                   |          |
| HOLD UP TIME (Typ.)                  | 25ms/230VAC  |   | 30ms/115VAC at full load         |  |             |                   |          |
| INPUT                                | VOLTAGE RANGE  | 88 ~ 132VAC / 176 ~ 264VAC selected by switch   |                                  | 248 ~ 373VDC (Withstand 300VAC surge for 5sec. Without damage) |             |                   |          |
|                                      | FREQUENCY RANGE  | 47 ~ 63Hz   |                                  |  |             |                   |          |
|                                      | EFFICIENCY (Typ.)  | 85%   |                                  | 86%  |             | 86%               |          |
|                                      | AC CURRENT (Typ.)  | 3A/115VAC 2A/230VAC   |                                  |  |             |                   |          |
|                                      | INRUSH CURRENT (Typ.)  | COLD START 50A/230VAC   |                                  |  |             |                   |          |
| LEAKAGE CURRENT                      | <2mA / 240VAC  |   |                                  |  |             |                   |          |
| PROTECTION                           | OVERLOAD   | 110 ~ 150% rated output power<br>Protection type : Hiccup mode, recovers automatically after fault condition is removed |                                  |  |             |                   |          |
|                                      | OVER VOLTAGE   | CH1: 27.6 ~ 32.4V   |                                  | CH1: 55.2 ~ 64.8V  |             | CH1: 55.2 ~ 64.8V |          |
| ENVIRONMENT                          | WORKING TEMP.  | -25 ~ +70°C (Refer to "Derating Curve")   |                                  |  |             |                   |          |
|                                      | WORKING HUMIDITY   | 20 ~ 90% RH non-condensing  |                                  |  |             |                   |          |
|                                      | STORAGE TEMP., HUMIDITY  | -40 ~ +85°C, 10 ~ 95% RH  |                                  |  |             |                   |          |
|                                      | TEMP. COEFFICIENT  | ±0.03%/°C (0 ~ 50°C) on CH1 output  |                                  |  |             |                   |          |
|                                      | VIBRATION  | 10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes   |                                  |  |             |                   |          |
| SAFETY & EMC <small>(Note 7)</small> | SAFETY STANDARDS   | UL62368-1, TUV EN62368-1, EAC TP TC 004 approved  |                                  |  |             |                   |          |
|                                      | WITHSTAND VOLTAGE  | I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC   |                                  |  |             |                   |          |
|                                      | ISOLATION RESISTANCE   | I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25°C / 70% RH  |                                  |  |             |                   |          |
|                                      | EMC EMISSION   | Compliance to EN55032 (CISPR32) Class B, EN61000-3-2,-3, EAC TP TC 020  |                                  |  |             |                   |          |
| OTHERS                               | EMC IMMUNITY   | Compliance to EN61000-4-2,3,4,5,6,8,11, EN61000-6-2 (EN50082-2), heavy industry level, criteria A, EAC TP TC 020        |                                  |  |             |                   |          |
|                                      | MTBF   | 232.4Khrs min. MIL-HDBK-217F (25°C)   |                                  |  |             |                   |          |
|                                      | DIMENSION  | 199*98*38mm (L*W*H)   |                                  |  |             |                   |          |
|                                      | PACKING  | 0.7Kg; 20pcs/15Kg/0.8CUFT   |                                  |  |             |                   |          |
| NOTE                                 | <p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF &amp; 47uF parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Line regulation is measured from low line to high line at rated load.</p> <p>5. Load regulation is measured from 20% to 100% rated load, and other output at 60% rated load.</p> <p>6. Each output can work within current range. But total output power can't exceed rated output power.</p> <p>7. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 360mm*360mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</p> <p>8. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time.</p> <p>9. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> |   |                                  |  |             |                   |          |

**Mechanical Specification**

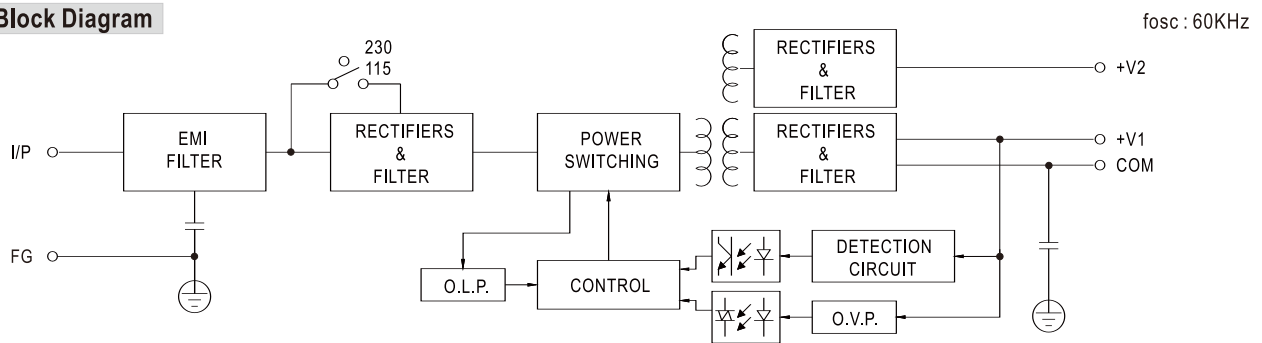
Case No. 902A Unit:mm



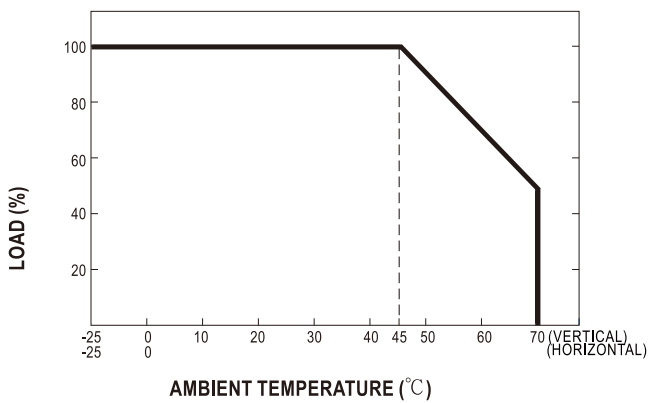
Terminal Pin No. Assignment

| Pin No. | Assignment | Pin No. | Assignment    |
|---------|------------|---------|---------------|
| 1       | AC/L       | 4,6     | DC OUTPUT COM |
| 2       | AC/N       | 5       | DC OUTPUT +V2 |
| 3       | FG $\perp$ | 7       | DC OUTPUT +V1 |

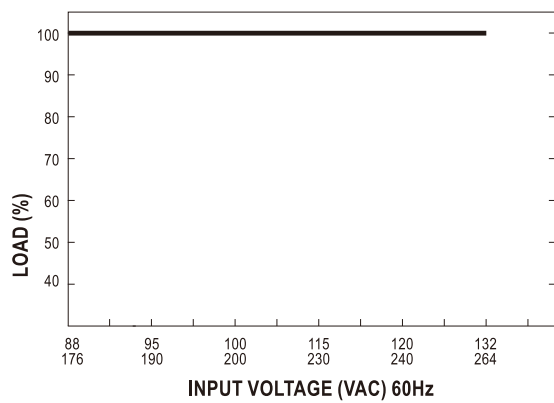
**Block Diagram**



**Derating Curve**



**Static Characteristics**





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.