



E-Star Power Development Co., Ltd. (E-STAR)
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 22069, Taiwan (R.O.C.)
 Phone : 886-2-2957 5580 Fax : 886-2-2957 7473

750W Enclosed type single output power supply > HUP-750



Features

- Slim and Low profile (41 mm)
- Fanless and conduction-cooled design
- Withstand 300VAC surge input for 5 seconds
- Built-in active PFC function
- -30~+70°C working temperature
- Protections: Short circuit / Overload / Over voltage / Over temperature
- DC OK relay contact
- Operating altitude up to 5000 meter (Note.6)
- LED indicator for power on
- 3 years warranty

Applications

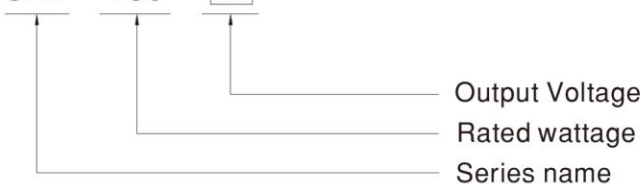
- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipment or apparatus
- Household appliances
- Power Sourcing Equipment of PoE (48V model: DC O/P range 48~57.6V)

Description

UHP-750 series is a 750W single-output slim type power supply with 41mm of low profile design. Adopting the full range 90~264VAC input, the entire series provides an output voltage line of 12V, 24V,36V and 48V. In addition to the high efficiency up to 95%, that the whole series operates from -30°C ~ 70°C under air convection without fan. UHP-750 has the complete protection functions and 5G anti-vibration capability; It is complied with the international safety regulations such as TUV EN62368-1 and UL62368-1. and design refers to EN61558-1 and EN60335-1. UHP-750 series serves as a high performance power supply solution for various industrial applications.

Model Encoding

UHP - 750 - 12





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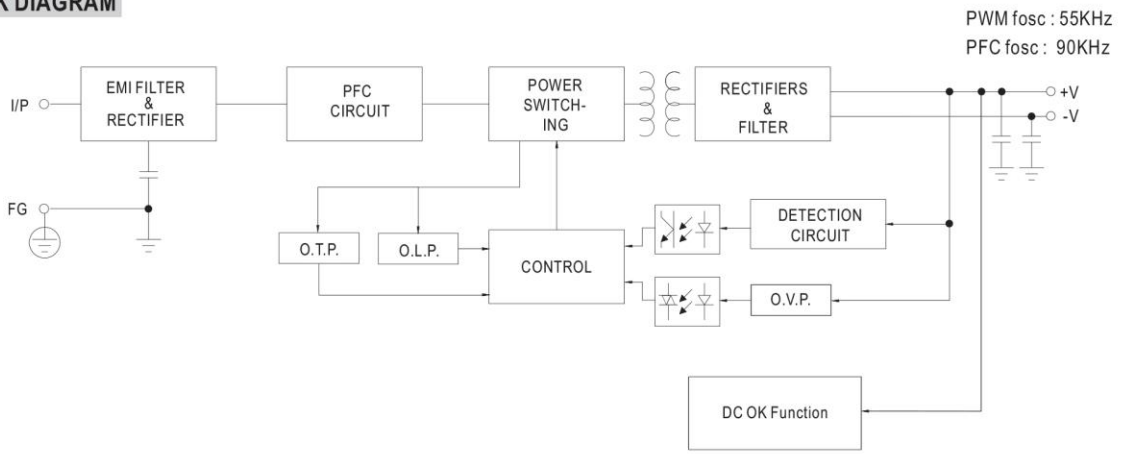
SPECIFICATION

| MODEL | | UHP-750-12 | UHP-750-24 | UHP-750-36 | UHP-750-48 | |
|--------------------------------|--|--|--|------------|---|--|
| OUTPUT | DC VOLTAGE | 12V | 24V | 36V | 48V | |
| | RATED CURRENT | 60A | 31.3A | 20.9A | 15.7A | |
| | RATED POWER | 720W | 751.2W | 752.4W | 753.6W | |
| | RIPPLE & NOISE (max.) Note.2 | 150mVp-p | 200mVp-p | 250mVp-p | 250mVp-p | |
| | VOLTAGE ADJ. RANGE | 12~14.4V | 24~28.8V | 36~43.2V | 48~57.6V | |
| | VOLTAGE TOLERANCE Note.3 | ±1.0% | ±1.0% | ±1.0% | ±1.0% | |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% | ±0.5% | |
| | LOAD REGULATION | ±0.5% | ±0.5% | ±0.5% | ±0.5% | |
| | SETUP, RISE TIME | 1000ms, 50ms/230VAC 1000ms, 50ms/115VAC at full load | | | | |
| | HOLD UP TIME (Typ.) | 12ms/230VAC | 12ms/115VAC | | | |
| INPUT | VOLTAGE RANGE Note.4 | 90 ~ 264VAC | 127 ~ 370VDC | | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | | | |
| | POWER FACTOR (Typ.) | PF ≥ 0.95/230VAC PF ≥ 0.99/115VAC at full load | | | | |
| | EFFICIENCY (Typ.) | 93.5% | 95% | 95% | 95% | |
| | AC CURRENT (Typ.) | 7.5A/115VAC 3.8A/230VAC | | | | |
| | INRUSH CURRENT (Typ.) | Cold start 20A/115VAC 40A/230VAC | | | | |
| | LEAKAGE CURRENT | <0.75mA / 240VAC | | | | |
| PROTECTION | OVERLOAD | 105~125% rated output power Protection type: Hiccup mode, recovers automatically after fault condition is removed | | | | |
| | OVER VOLTAGE | 14.5 ~ 16V | 29 ~ 33V | 43.5 ~ 49V | 59 ~ 66V | |
| | OVER TEMPERATURE | Protection type: Shut down O/P voltage, recovers automatically after temperature goes down | | | | |
| FUNCTION | DC-OK SIGNAL | Contact rating(max.): 30Vdc/1A resistive load | | | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +70°C (Refer to "Derating Curve") | | | | |
| | WORKING HUMIDITY | 20 ~ 90% RH non-condensing | | | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH non-condensing | | | | |
| | TEMP. COEFFICIENT | ±0.03%/°C (0 ~ 50°C) | | | | |
| | VIBRATION | 10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes | | | | |
| SAFETY & EMC (Note.5) | SAFETY STANDARDS | UL62368-1, TUV EN62368-1, EAC TP TC 004 approved; design refer to EN61558-1, EN60335-1 | | | | |
| | WITHSTAND VOLTAGE | I/P-O/P: 3.75KVAC I/P-FG: 2KVAC O/P-FG: 1.25KVAC | | | | |
| | ISOLATION RESISTANCE | I/P-O/P, I/P-FG, O/P-FG: 100M Ohms/500VDC/25°C / 70%RH | | | | |
| | EMC EMISSION | Parameter | Standard | | Test Level / Note | |
| | | Conducted | EN55032 (CISPR32) | | Class B | |
| | | Radiated | EN55032 (CISPR32) | | Class B | |
| | | Harmonic Current | EN61000-3-2 | | Class A | |
| | | Voltage Flicker | EN61000-3-3 | | ----- | |
| | EMC IMMUNITY | EN55024, EN61000-6-2 | | | | |
| | | Parameter | Standard | | Test Level / Note | |
| | | ESD | EN61000-4-2 | | Level 3, 8KV air ; Level 2, 4KV contact | |
| | | Radiated | EN61000-4-3 | | Level 3 | |
| | | EFT / Burst | EN61000-4-4 | | Level 3 | |
| | | Surge | EN61000-6-2 | | 2KV/Line-Line 4KV/Line-Earth | |
| | | Conducted | EN61000-4-6 | | Level 3 | |
| Magnetic Field | | EN61000-4-8 | | Level 4 | | |
| Voltage Dips and Interruptions | EN61000-4-11 | | >95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods | | | |
| OTHERS | MTBF | 279.97K hrs min. Telcordia SR-332 (Bellcore); 104.86K hrs min. MIL-HDBK-217F (25°C) | | | | |
| | DIMENSION | 237*100*41mm (L*W*H) | | | | |
| | PACKING | 1.4kg; 10pcs/15kg/0.8CUFT | | | | |
| NOTE | <ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance :includes set up tolerance, line regulation and load regulation. Derating may be needed under low input voltages. Please check the derating curve for more details. 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." 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). | | | | | |

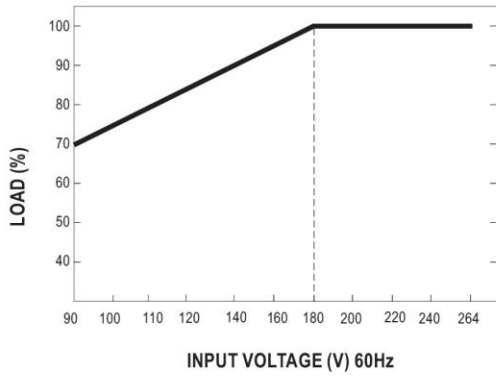


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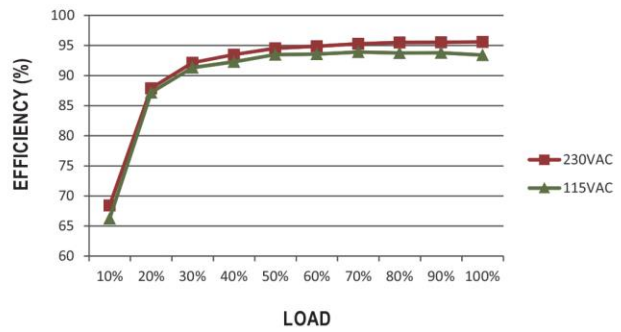
BLOCK DIAGRAM



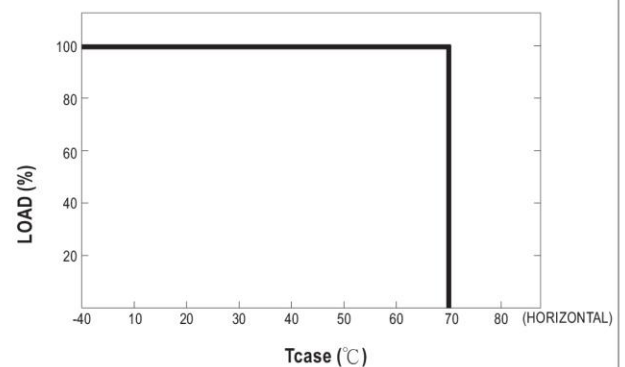
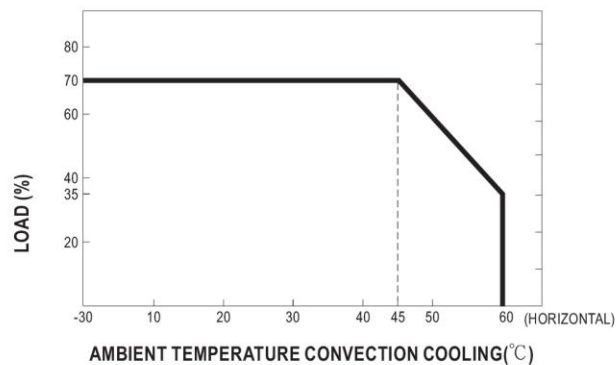
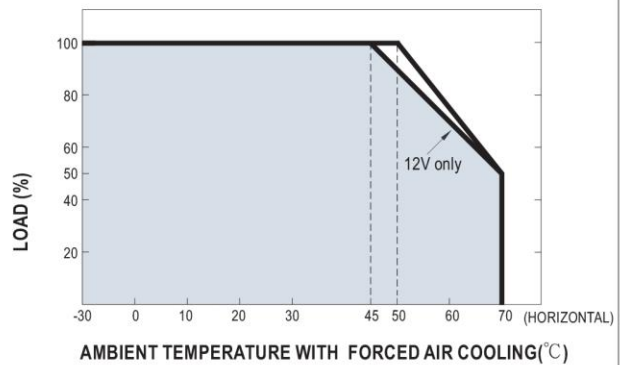
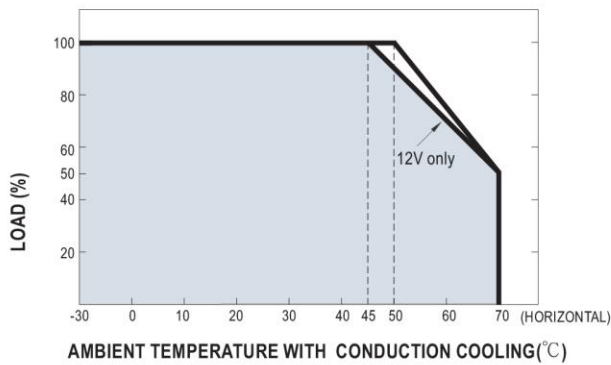
STATIC CHARACTERISTIC



EFFICIENCY VS LOAD (48V MODEL)



DERATING CURVE





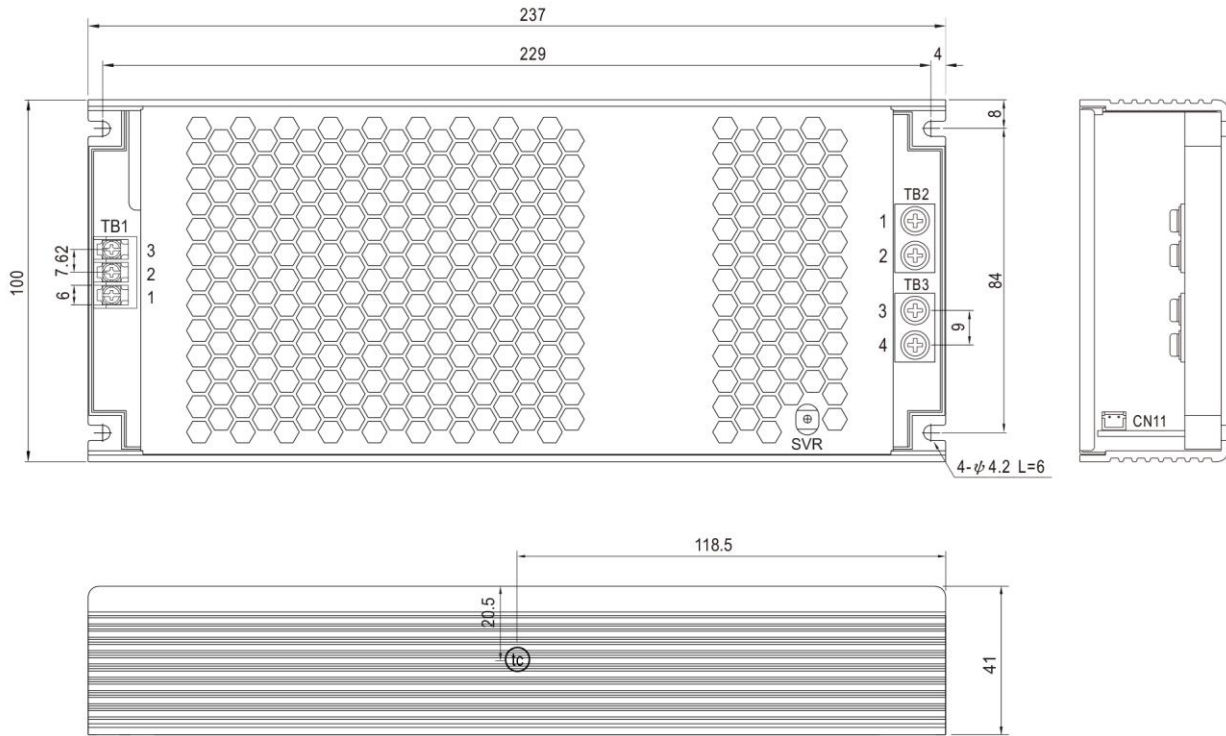
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■ DC OK RELAY CONTACT

| | |
|----------------------|-------------------------|
| Contact Close | PSU turns on/DC ok |
| Contact Open | PSU turns off/DC fail |
| Contact Rating(max.) | 30Vdc/1A resistive load |

■ MECHANICAL SPECIFICATION

Case No.270B Unit:mm



AC Input Terminal(TB1) pin NO. Assignment

| Pin No. | Assignment | Terminal | Max mounting torque |
|---------|------------|---------------------|---------------------|
| 1 | AC/L | DECA T21-EM10-03 | 9.2Kgf-cm |
| 2 | AC/N | | |
| 3 | ⊕ | | |

DC Output Terminal(TB2, TB3) pin NO. Assignment

| Pin No. | Assignment | Terminal | Max mounting torque |
|---------|------------|-------------|---------------------|
| 1,2 | +V | (MW) | 8Kgf-cm |
| 3,4 | -V | NEL-400-02P | |

DC OK Connector(CN11):JST S2B-PH-KL or equivalent

| Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|----------------------------|-------------------------------------|
| 1 | DC COM1 | JST PHR-2 or equivalent | JST SPH-002T-P0.5S or equivalent |
| 2 | DC COM2 | | |



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Operate with additional aluminum plate and fan

In order to meet the "Derating Curve" and the "Static Characteristics", UHP-750 series can be installed onto an aluminum plate (or the cabinet of the same size) on the bottom or apply forced air cooled solution. The size of the suggested aluminum plate and configuration of fan are shown as below. And for optimizing thermal performance, the aluminum plate must have an even and smooth surface (or coated with thermal grease), and UHP-750 series must be firmly mounted at the center of the aluminum plate.

unit:mm

