



200W Single Output with PFC Function

UHP-200A series



■ Features

- Universal AC input / Full range
- Withstand 300VAC surge input for 5 seconds
- Low profile:26mm
- Built-in active PFC function
- Fanless design, cooling by free air convection
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Low leakage current<1.0mA
- LED indicator for power on
- 3 years warranty

■ Applications

- LED signage display
- Moving sign
- LED channel letter
- LED TV wall

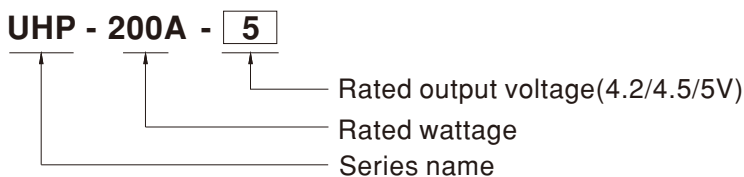
■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

■ Description

UHP-200A series is a 200W LED display power solution. The ultra low profile design that allows the height and weight of the sign module to be slim. It greatly simplifies the delivery and installation process. Accounting for high efficiency and energy saving, the series effectively achieves electricity reduction. It is suitable for LED signage display, moving sign, LED channel letter and LED TV wall etc.

■ Model Encoding

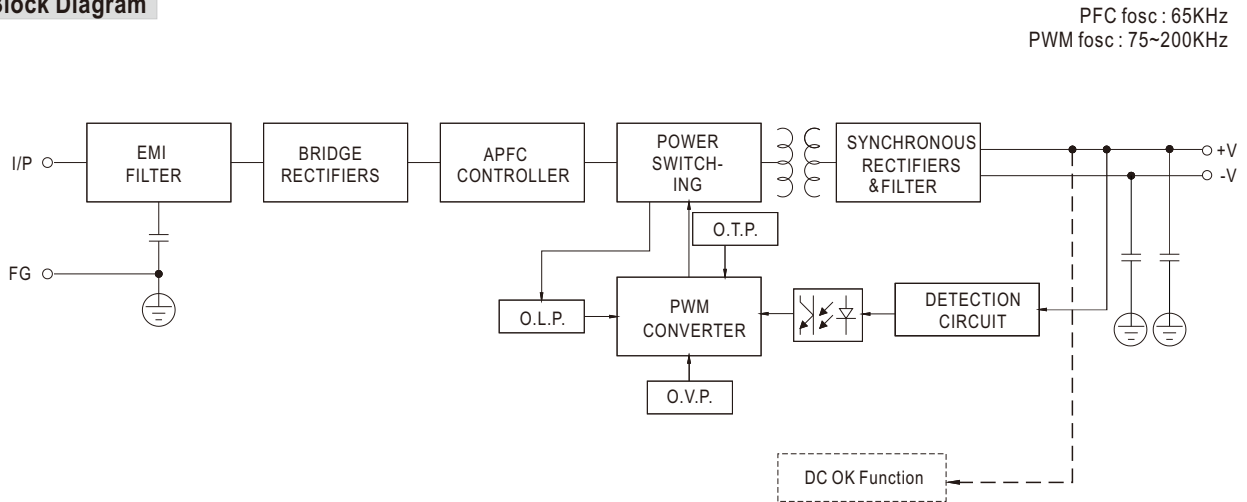




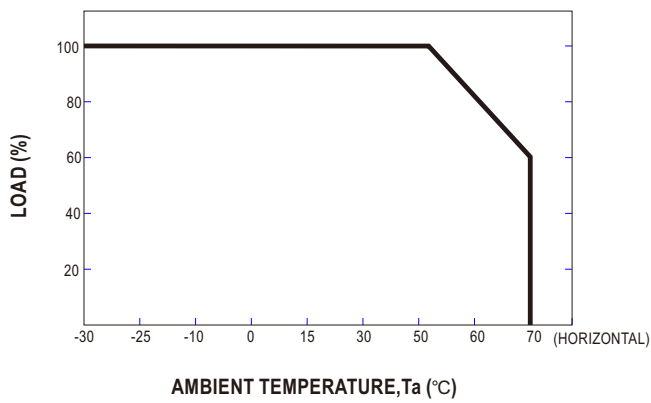
SPECIFICATION

| MODEL | | UHP-200A-4.2 | UHP-200A-4.5 | UHP-200A-5 |
|-----------------------|---|---|--------------|------------|
| OUTPUT | DC VOLTAGE | 4.2V | 4.5V | 5V |
| | RATED CURRENT | 40A | 40A | 40A |
| | CURRENT RANGE | 0~40A | 0~40A | 0~40A |
| | RATED POWER | 168W | 180W | 200W |
| | RIPPLE & NOISE(max.) Note.2 | 200mVp-p | 200mVp-p | 200mVp-p |
| | VOLTAGE ADJ. RANGE | 4.0~4.4V | 4.3~4.7V | 4.7~5.3V |
| | VOLTAGE TOLERANCE Note.3 | ±4.0% | ±4.0% | ±4.0% |
| | LINE REGULATION | ±0.5% | ±0.5% | ±0.5% |
| | LOAD REGULATION | ±2.5% | ±2.5% | ±2.5% |
| | SETUP, RISE TIME | 2000ms, 200ms/230VAC at full load, 3000ms, 200ms/115VAC at 80% load | | |
| | HOLD UP TIME (Typ.) | 10ms/230VAC 10ms/115VAC | | |
| DC OK FUNCTION | PSU Turns on:DC ok; PSU turns off:DC fail | | | |
| INPUT | VOLTAGE RANGE Note.4 | 90 ~ 264VAC 127 ~ 370VDC | | |
| | FREQUENCY RANGE | 47 ~ 63Hz | | |
| | POWER FACTOR (Typ.) | PF ≥ 0.97/115VAC PF ≥ 0.95/230VAC at full load | | |
| | EFFICIENCY (Typ.) | 88% | 88% | 88.5% |
| | AC CURRENT (Typ.) | 2.4A/115VAC 1.2A/230VAC | | |
| | INRUSH CURRENT (Typ.) | Cold start 85A/230VAC | | |
| | LEAKAGE CURRENT | <1.0mA / 240VAC | | |
| PROTECTION | OVERLOAD | 110~140% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed | | |
| | SHORT CIRCUIT | Protection type : Hiccup mode, recovers automatically after fault condition is removed | | |
| | OVER VOLTAGE | 4.6 ~ 6V | 5 ~ 6.4V | 5.6 ~ 7.1V |
| | OVER TEMPERATURE | Protection type : Shut down O/P voltage, recovers automatically after fault condition is removed | | |
| ENVIRONMENT | WORKING TEMP. | -30 ~ +70°C (Refer to "OUTPUT LOAD vs TEMPERATURE") | | |
| | WORKING HUMIDITY | 20 ~ 95% RH non-condensing | | |
| | STORAGE TEMP., HUMIDITY | -40 ~ +85°C, 10 ~ 95% RH | | |
| | 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 | UL 62368-1,TUV BS EN/EN62368-1,GB 4943.1, EAC TP TC 004 approved | | |
| | WITHSTAND VOLTAGE | I/P-O/P:3.0KVAC 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 Note.8 | Compliance to BS EN/EN55032 (CISPR32),GB17625.1,GB/T 9254.1, BS EN/EN61000-3-2,-3,EAC TP TC 020 | | |
| | EMC IMMUNITY | Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11;BS EN/EN55035, light industry level (surge 4KV),EAC TP TC 020 | | |
| OTHERS | MTBF | 1949.0 K hrs min. Telcordia SR-332 (Bellcore); 211.7K hrs min. MIL-HDBK-217F (25°C) | | |
| | DIMENSION | 167*55*26mm (L*W*H) | | |
| | PACKING | 0.42kg; 20pcs/ 11.4kg/0.76CUFT | | |
| 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 & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.</p> <p>3. Tolerance : line regulation and load regulation.</p> <p>4. Derating may be needed under low input voltages. Please check the static characteristics for more details.</p> <p>5. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.</p> <p>6. Transient response measure shall be made with 10% load at least.</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 https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf)</p> <p>8. Warning: This equipment is compliant with Class A of CISPR 32. In a residential environment may cause radio interference.</p> <p>⊗ Product Liability Disclaimer : For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx</p> | | | |

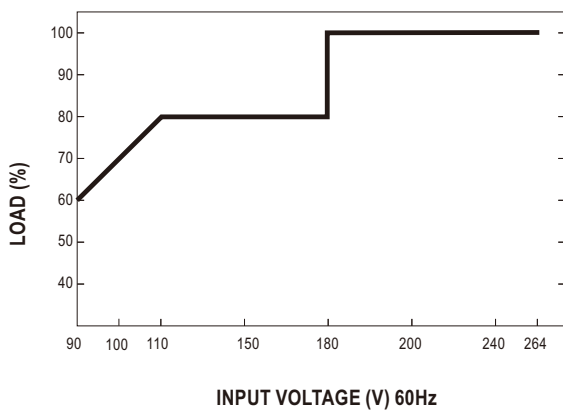
Block Diagram



OUTPUT LOAD vs TEMPERATURE



STATIC CHARACTERISTIC

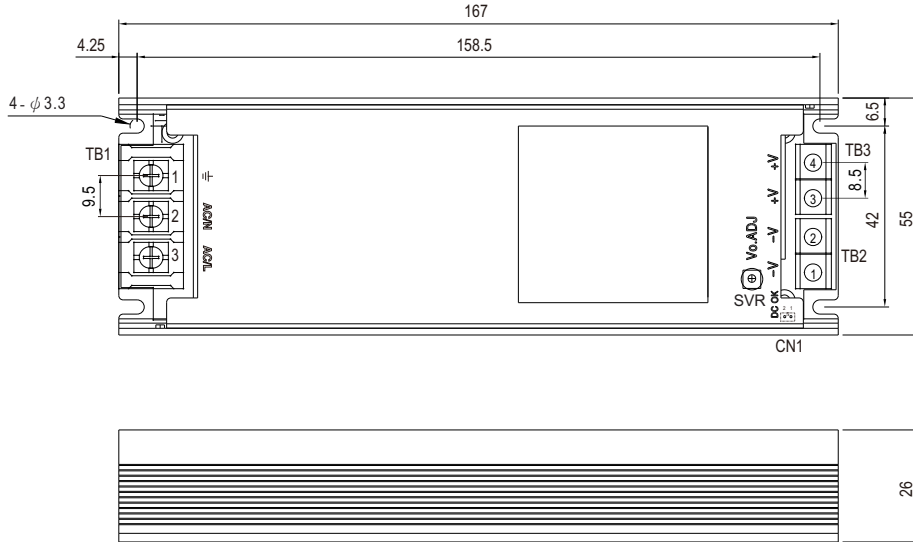


Mechanical Specification

CASE NO.: 249A

Unit:mm

Tolerance:±1



AC Input Terminal(TB1) pin NO. Assignment

| Pin No. | Assignment | Terminal | Max mounting torque |
|---------|------------|--------------------------|---------------------|
| 1 | AC/L | (DECA) T14-EM11033703 | 13Kgf-cm |
| 2 | AC/N | | |
| 3 | ⊕ | | |

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

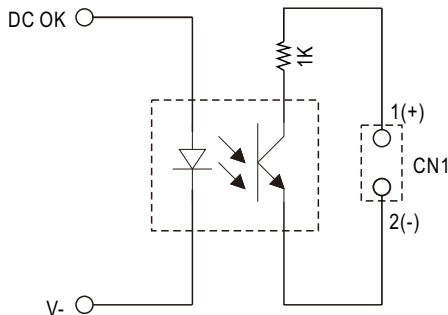
| Pin No. | Assignment | Terminal | Max mounting torque |
|---------|------------|----------------|---------------------|
| 1,2 | -V | (MW) | 8Kgf-cm |
| 3,4 | +V | TB-HTP-200-40A | |

DC OK Connector(CN1):JST B2B-PH-K-S or equivalent

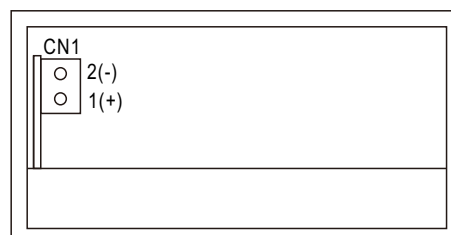
| Pin No. | Assignment | Mating Housing | Terminal |
|---------|------------|----------------------------|-------------------------------------|
| 1 | DC OK +V | JST PHR-2 or equivalent | JST SPH-002T-P0.5S or equivalent |
| 2 | DC COM | | |

Function manual

1.Internal circuit of DC ok



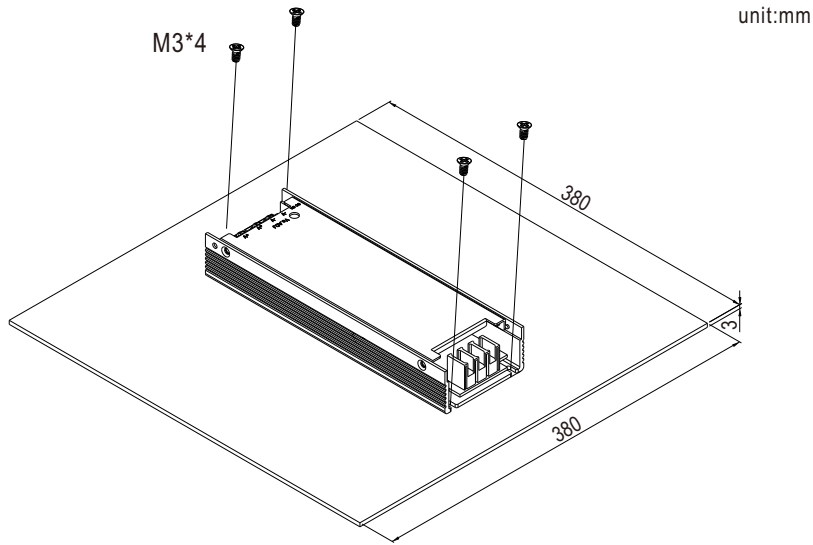
| | | |
|----------------------|---------------|---------|
| Contact Close | PSU turns on | DC ok |
| Contact Open | PSU turns off | DC fail |
| Contact Rating(max.) | 10Vdc/1mA | |



■ Installation

1. Operate with additional aluminum plate

In order to meet the "Derating Curve" and the "Static Characteristics", UHP-200A series must be installed onto an aluminum plate (or the cabinet of the same size) on the bottom. The size of the suggested aluminum plate is 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-200A series must be firmly mounted at the center of the aluminum plate.



2. For heat dissipation, at least 5cm installation distance around the PSU should be kept, shown as below:

