



200W Single Output with PFC Function

# UHP-200A-5

User's Manual



## ■ 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

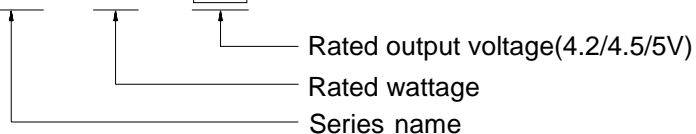
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

## ■ Description

UHP-200A-5 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

UHP - 200A - 5





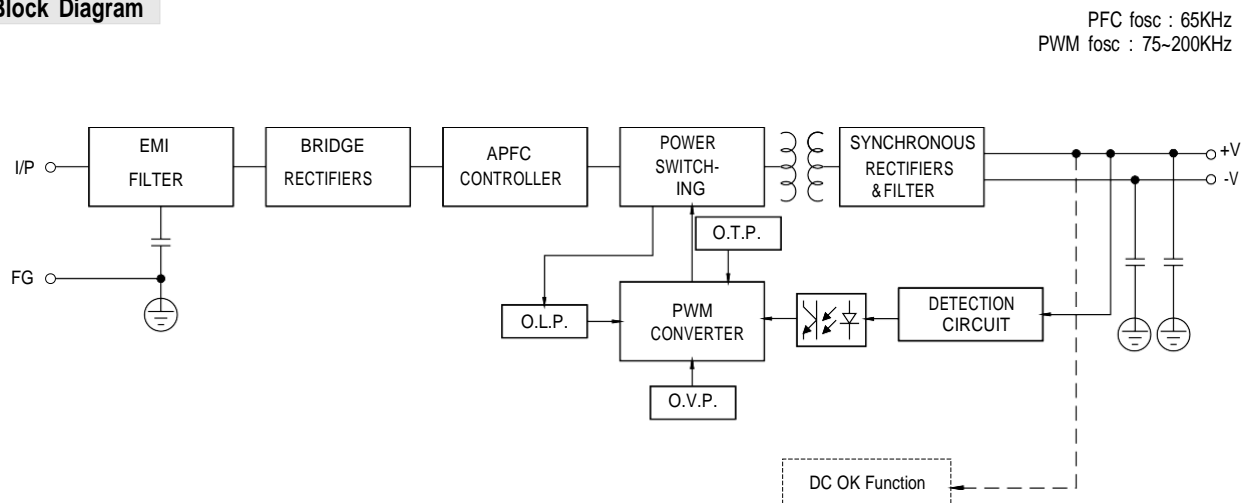
200W Single Output with PFC Function

UHP-200A-5

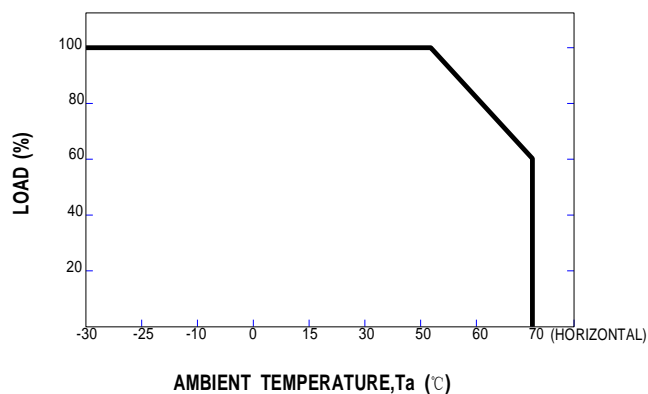
## SPECIFICATION

MODEL		UHP-200A-5
OUTPUT	DC VOLTAGE	5V
	RATED CURRENT	40A
	CURRENT RANGE	0~40A
	RATED POWER	200W
	RIPPLE & NOISE <sub>(max.)</sub> Note.2	200mVp-p
	VOLTAGE ADJ. RANGE	4.7~5.3V
	VOLTAGE TOLERANCE Note.3	±4.0%
	LINE REGULATION	±0.5%
	LOAD REGULATION	±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.)	88.5%
	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	5.6 ~ 7.1V Protection type : Hiccup mode, recovers automatically after fault condition is removed
	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,CCC GB4943, 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),GB9254,Class A, BS EN/EN61000-3-2,-3,GB17625.1,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 &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 : 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 <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</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 <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>	

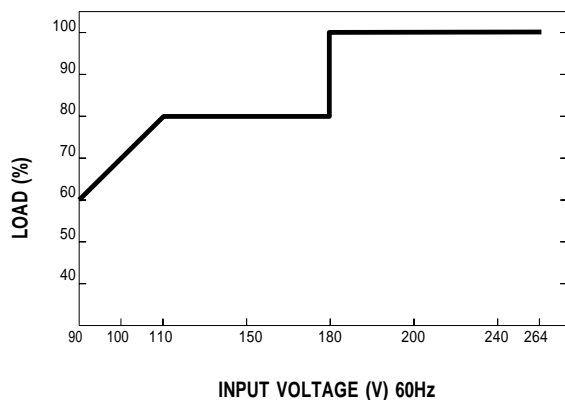
## Block Diagram



## OUTPUT LOAD vs TEMPERATURE



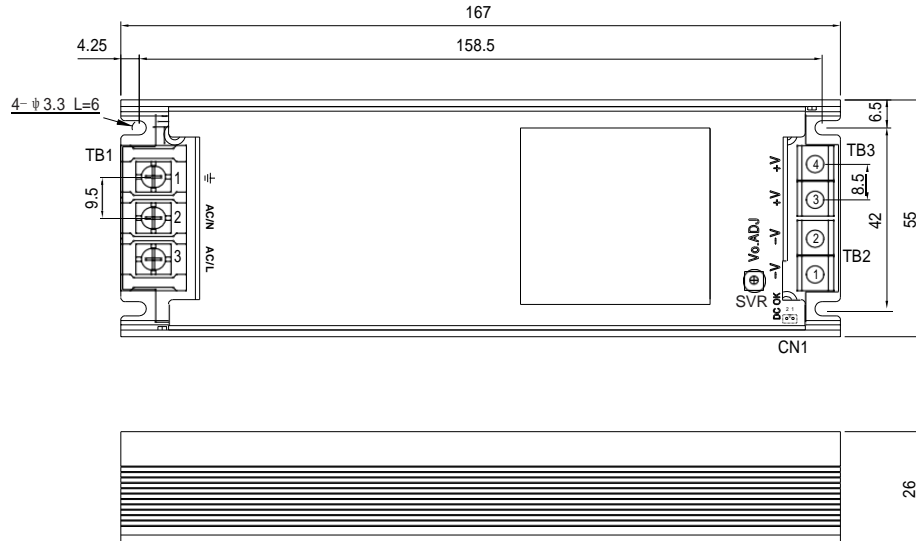
## STATIC CHARACTERISTIC



## Mechanical Specification

CASE NO.: 249A

Unit:mm



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

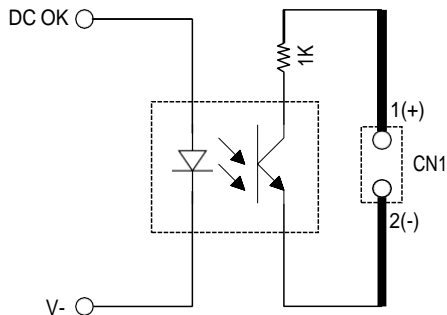
Pin No.	Assignment	Terminal	Max mounting torque
1,2	-V	(MW) TB-HTP-200-40A	8Kgf-cm
3,4	+V		

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

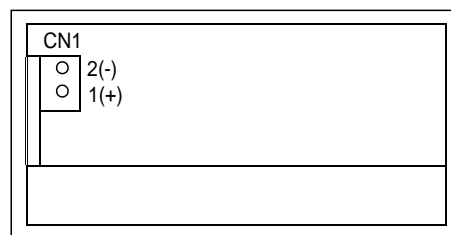
Pin No.	Assignment	Mating Housing	Terminal
1	DC OK +V	JST PHR-2 or equivalent	JST SPH-002T-P0.5S or equivalent
2	DC COM		

## Function manual

### 1.Internal circuit of DC ok



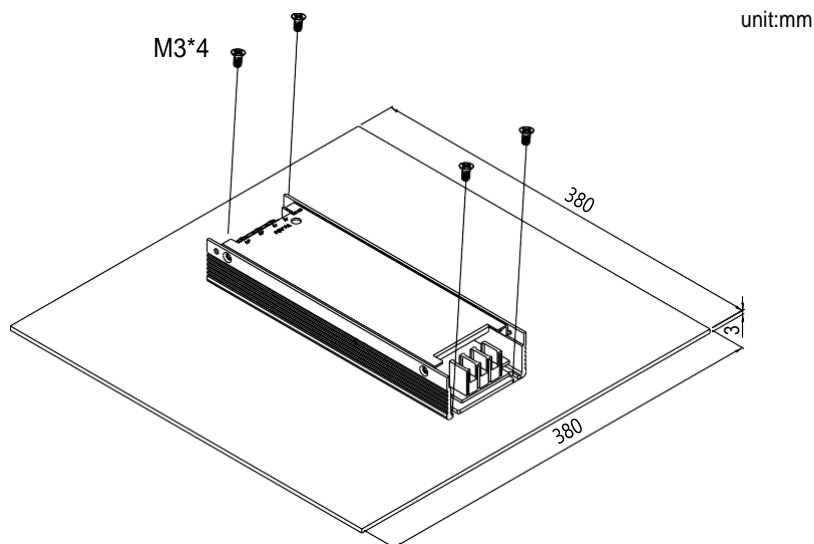
Contact Close	PSU turns on	DC ok
Contact Open	PSU turns off	DC fail
Contact Rating(max.)	10Vdc/1mA	



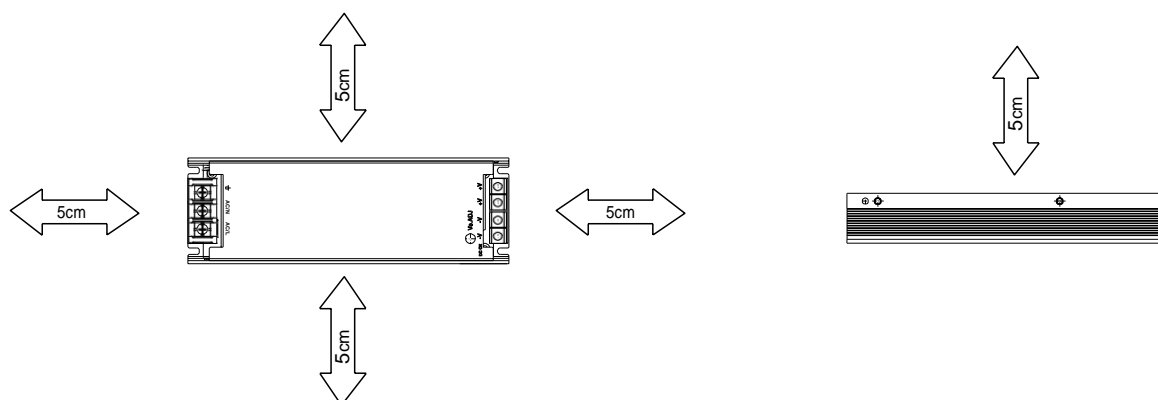
## ■ Installation

### 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:



Get more info to : <https://www.led-card.com/manufacture/meanwell/>