



MEAN WELL UHP-200 Series Slim Type with PFC Switching Power Supply Owner's Manual

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MEAN WELL UHP-200 Series Slim Type with PFC Switching Power Supply



Product Usage Instructions

Installation

To install the UHP-200 series power supply, follow these steps:

1. Ensure that the power supply is compatible with your device's voltage requirements.
2. Connect the AC input to a suitable power source within the specified voltage range (90 ~ 264VAC).
3. Connect the DC output to your device, ensuring the correct polarity.
4. Secure all connections to prevent accidental disconnection.

Power Adjustment

The UHP-200 series power supply allows voltage adjustment within the specified range. To adjust the voltage:

1. Locate the voltage adjustment knob or switch on the power supply.
2. Turn the knob or switch to the desired voltage value within the range of 3.2~3.5V.
3. Verify the output voltage using a multimeter or suitable measuring device.

Safety Precautions

When using the UHP-200 series power supply, please keep the following safety precautions in mind:

- Do not expose the power supply to water or moisture.
- Avoid operating the power supply in extreme temperatures or humid environments.
- Ensure proper ventilation around the power supply to prevent overheating.
- Do not attempt to disassemble or modify the power supply.
- Keep the power supply away from flammable materials.
- Only use the power supply with compatible devices and within the specified voltage and current ratings.

Frequently Asked Questions (FAQ)

- **Q:** Can I use the UHP-200 series power supply with devices that require a higher voltage?
- **A:** No, the UHP-200 series power supply provides a fixed range of DC voltages (3.3V, 4.2V, 5V, 12V, 15V, 24V, 36V, 48V, and 55V). Make sure to use the appropriate model that matches your device's voltage requirements.
- **Q:** How can I determine if the power supply is functioning correctly?
- **A:** You can use a multimeter or suitable measuring device to verify the output voltage of the power supply. Additionally, check if your device is receiving power and operating as expected when connected to the power supply.
- **Q:** Can I adjust the voltage beyond the specified range?
- **A:** No, it is recommended to only adjust the voltage within the specified range of 3.2~3.5V. Adjusting the voltage outside this range may cause damage to your device or the power supply.

Features

- Slim and Low profile (26mm)
- Fanless design, 200W convection
- 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 active signal and redundant function (option)
- Operating altitude up to 5000 meters (Note.5)
- 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
- LED display application
- Power Source Equipment for PoE (55V model)

GTIN CODE

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

UHP-200 series is a 200W single-output slim type power supply with 26mm of low profile design. Adopting the full range 90~264VAC input, the entire series provides an output voltage line of 3.3V, 4.2V, 5V, 12V, 15V, 24V, 36V, 48V and 55V. In addition to the high efficiency of up to 94%, that the whole series operates from -30°C ~ 70°C under air convection without a fan. UHP-200 has complete protection functions and 5G anti-vibration capability; It has complied with international safety regulations such as TUV BS EN/EN62368-1, BS EN/EN60335-1, UL 62368-1 and GB4943. UHP-200 series serves as a high-performance power supply solution for various industrial applications.

UHP - 200 - 5

Output Voltage

Blank

R

Rated wattage

Series name

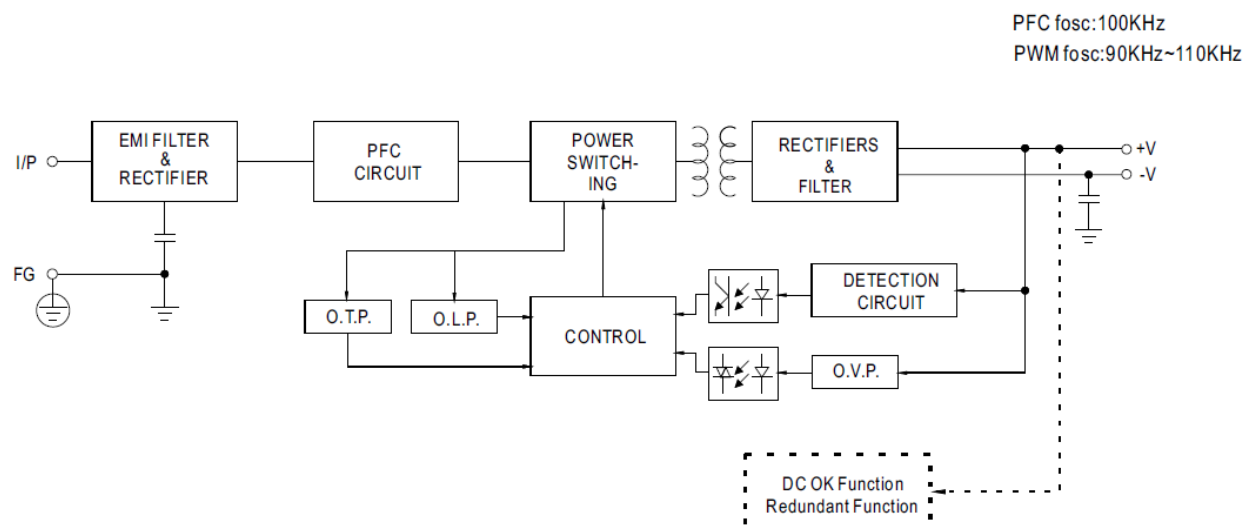
Type	Description	Note
Blank	Enclosed	In Stock
R	Built-in DC OK active signal and redundant function.	In Stock

MODEL		UHP-200□-3.3	UHP-200□-4.2	UHP-200□-5	UHP-200□-12	UHP-200□-15	UHP-200□-24	UHP-200□-36	UHP-200□-48	UHP-200□-55
OUTPUT	DC VOLTAGE	3.3V	4.2V	5V	12V	15V	24V	36V	48V	55V
	RATED CURRENT	40A	40A	40A	16.7A	13.4A	8.4A	5.6A	4.2A	3.6A
	RATED POWER	132W	168W	200W	200.4W	201W	201.6W	201.6W	201.6W	201.6W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	200mVp-p	240mVp-p	240mVp-p	240mVp-p	240mVp-p	300mVp-p	360mVp-p
	VOLTAGE ADJ. RANGE	3.2~3.5V	3.6~4.4V	4.5~5.5V	11.4~12.6V	14.3~15.8V	22.8~25.2V	34.2~37.8V	45.6~50.4V	45~58V
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	±0.3%	±0.3%	±0.3%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	2000ms, 80ms/230VAC; 3000ms, 80ms/115VAC at full load; 550ms/230VAC for 55V setup time								
	HOLD UP TIME (Typ.)	10ms/230VAC 10ms/115VAC								
INPUT	VOLTAGE RANGE Note.4	90 ~ 264VAC 127 ~ 370VDC								
	FREQUENCY RANGE	47 ~ 63Hz								
	POWER FACTOR (Typ.)	PF≥0.94/230VAC PF≥0.98/115VAC at full load								
	EFFICIENCY (Typ.)	89%	90%	91%	93%	94%	94%	94%	94%	94%
	AC CURRENT (Typ.)	2.2A/115VAC 1.1A/230VAC								
	INRUSH CURRENT (Typ.)Note.8	Cold start 40A/115VAC 80A/230VAC								
	LEAKAGE CURRENT	<0.75mA / 240VAC								
	PROTECTION	OVERLOAD	110~140% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed							
OVER VOLTAGE		3.8~ 4.6V	4.62 ~ 5.46V	5.75 ~ 6.75V	13.2 ~ 15.6V	16.5 ~ 19.5V	26.4 ~ 31.2V	39.6 ~46.8V	52.8 ~ 62.4V	60 ~ 69V
		Protection type : Shut down O/P voltage, re-power on to recover								
OVER TEMPERATURE		Protection type : Shut down O/P voltage or Hiccup mode, recovers automatically after temperature goes down								
FUNCTION	DC OK SIGNAL(Optional)	Contact rating(max.): 15Vdc/10mA resistive load								
	REDUNDANT(Optional)	For parallel connection protection: For parallel applications, when one PSU can not work , the another one will be automatically enabled. This can prevent the system crash, and provide the reliability of system								

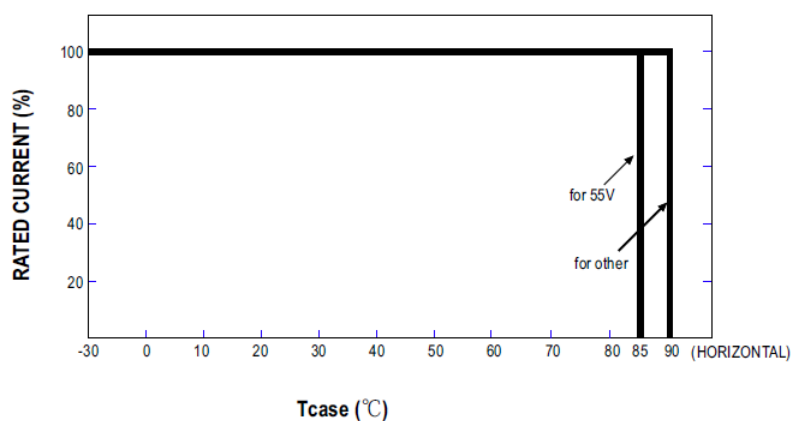
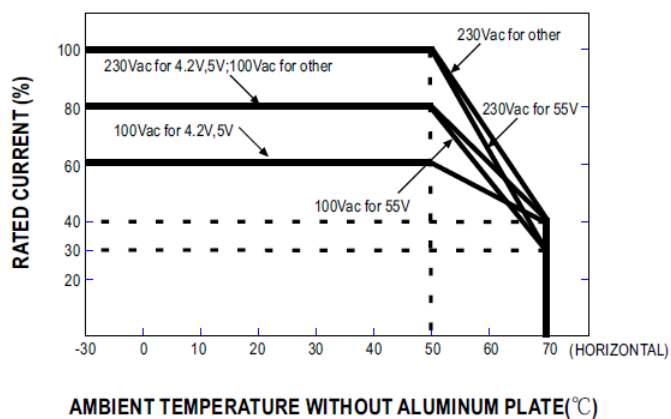
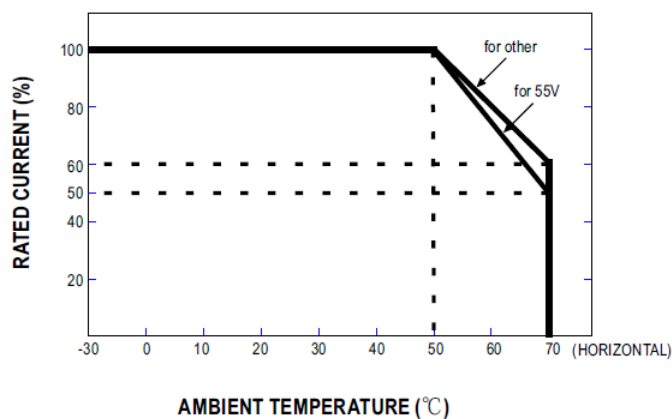
ENVIRONMENT	WORKING TEMP.	-30 ~ +70℃ (Refer to "Derating Curve")
	WORKING HUMIDITY	20 ~ 95% RH non-condensing
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH non-condensing
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes
SAFETY & EMC (Note.6)	SAFETY STANDARDS	UL 62368-1, TUV BS EN/EN62368-1, BS EN/EN60335-1(Except for 55V), CCC GB4943, EAC TP TC 004, BS EN/EN61558-1, BS EN/EN61558-2-16, BSMI CNS14336-1 approved
	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℃/70%RH
	EMC EMISSION	Compliance to BS EN/EN55032, GB9254, Class B, BS EN/EN55014, BS EN/EN61000-3-2, -3, EAC TP TC 020, BSMI CNS13438
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2, 3, 4, 5, 6, 8, 11; BS EN/EN61000-6-2 (BS EN/EN50082-2), BS EN/EN55035, heavy industry level, EAC TP TC 020
OTHERS	MTBF	2472.1 K hrs min. Telcordia SR-332 (Bellcore); 257.0K hrs min. MIL-HDBK-217F (25℃)
	DIMENSION	194*55*26mm (L*W*H)
	PACKING	0.468kg; 24pcs/12.2kg/0.49CUFT
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ 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 :includes set up tolerance, line regulation and load regulation.</p> <p>4. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> <p>5. The ambient temperature derating of 5℃/1000m is needed for operating altitude greater than 2000m(6500ft)</p> <p>6. The power supply is considered a component which will be installed into a final equipment. 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</p> <p>7. R type efficiency slightly less than the Blank type, according to the actual measurement.</p> <p>8. Inrush current parameter has 10% tolerance .</p> <p>9. RCM is on voluntary basis and meets relevant IEC or AS/NZS standards complying with AS/NZS 4417.1.</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to</p>	

- <http://www.meanwell.com>).
- <https://www.meanwell.com/serviceDisclaimer.aspx>.

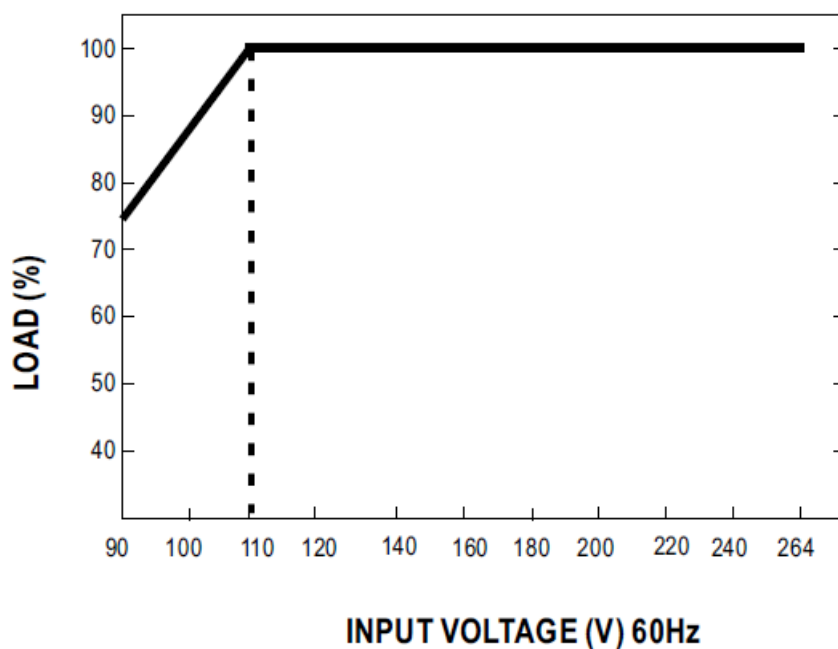
Block Diagram



Derating Curve



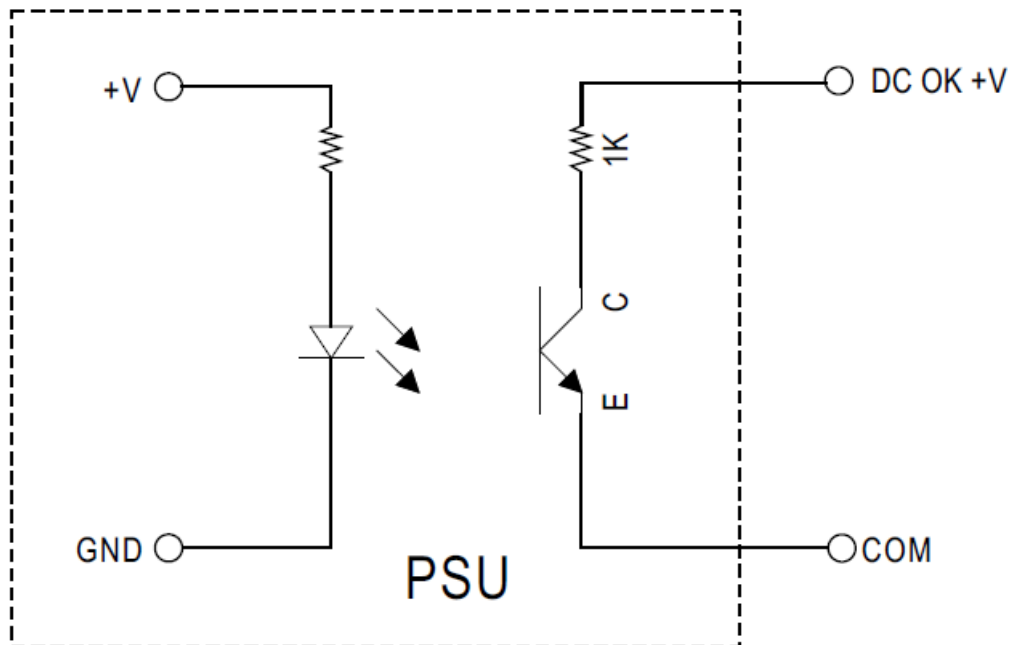
STATIC CHARACTERISTIC



Function Manual

DC_OK Signal

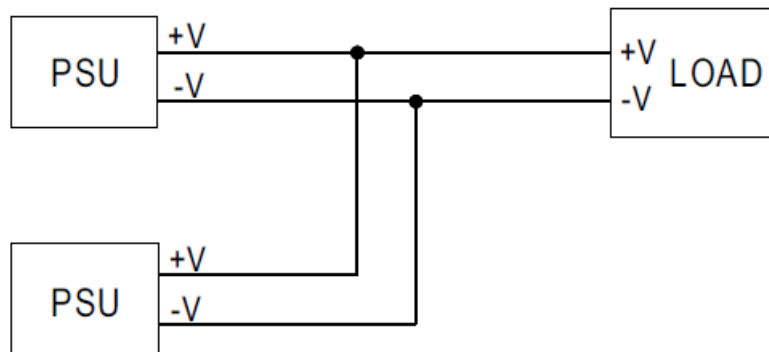
DC_OK is a collector shorted signal. It is used by an optocoupler in the power supply which indicates the output status of the power supply as exhibited below.



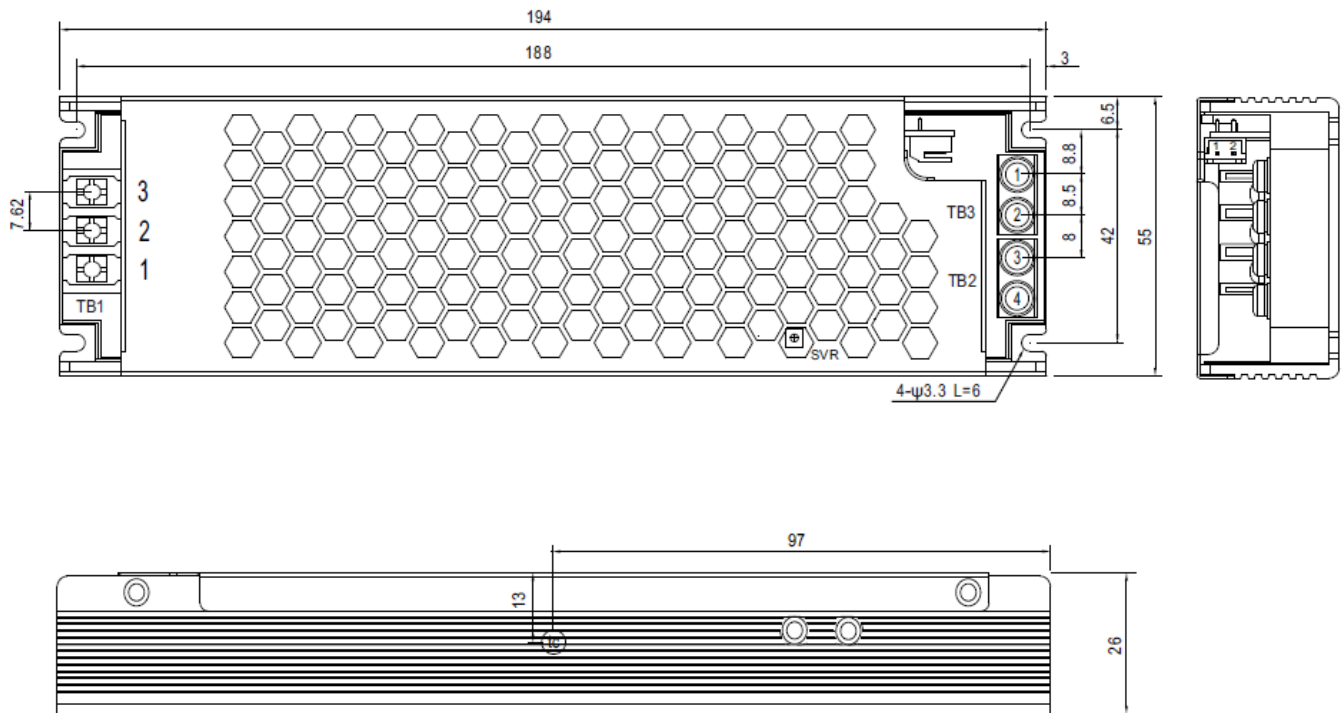
Optocoupler C-E Pin Conduction	PSU turns on	DC ok
Optocoupler C-E Pin Open	PSU turns off	DC fail
Optocoupler Rating(max.)	15Vdc/10mA resistive load	

Redundant function

- UHP-200R is a built-in redundant function and can be connected to 2 units in parallel.
- When in parallel operation the maximum load should not be greater than the rated power of any PSU.



Mechanical Specification



• (tc) : Max. Case Temperature

AC Input Terminal(TB1) pin NO. Assignment

Pin No.	Assignment	Terminal	Max mounting torque
1	AC/L	(DEGSON) DG28C-B-03P	5Kgf-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		

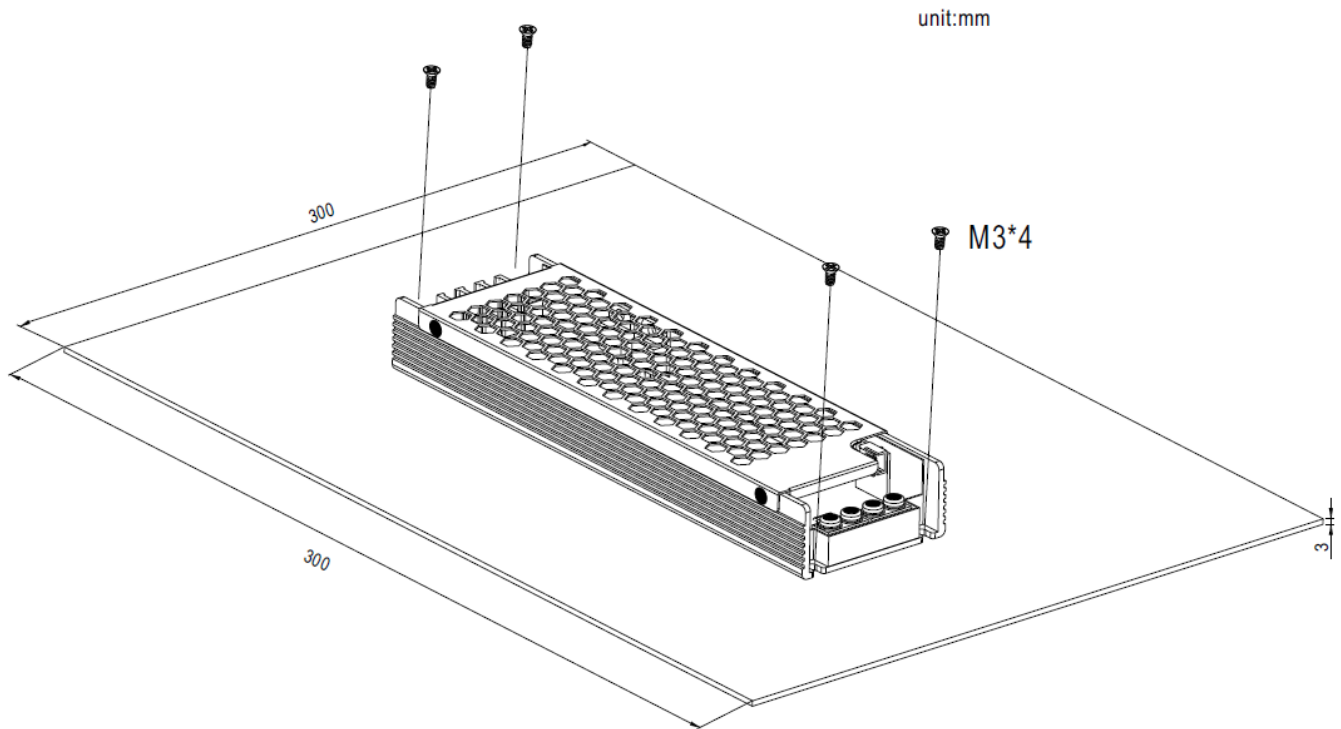
DC OK Connector(CN10):JST B2B-PH-K-S or equivalent

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

Installation

Operate with an additional aluminium plate

To meet the "Derating Curve" and the "Static Characteristics", the UHP-200 series must be installed onto an aluminium plate (or a cabinet of the same size) on the bottom. The size of the suggested aluminium plate is shown below. And for optimizing thermal performance, the aluminium plate must have an even and smooth surface (or be coated with thermal grease), and the UHP-200 series must be firmly mounted at the center of the aluminium plate.



[Arrow.com](https://www.arrow.com).



Documents / Resources

	<p>MEAN WELL UHP-200 Series Slim Type with PFC Switching Power Supply [pdf] Owner's M anual</p> <p>UHP-200 Series Slim Type with PFC Switching Power Supply, UHP-200 Series, Slim Type with PFC Switching Power Supply, Type with PFC Switching Power Supply, PFC Switching Power S upply, Switching Power Supply, Power Supply, Supply</p>
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References

- [Product Liability Disclaimer-MEAN WELL Switching Power Supply Manufacturer](#)
- [User Manual](#)