200W Slim Type with PFC Switching Power Supply UHP-200 series

R33100 RoHS | GB4943 | UL60950-1 | EN60950-1 EN60335-1 | IEC60950-1

LED Display | ECO | Household | Automate | Industrial | Security | Network | Telecom

Features

- Slim and Low profile (26mm)
- Fanless design,200W convection
- Withstand 300VAC surge input for 5 seconds
- Built-in active PFC function
- 150% peak load capability(100ms)
- -30~+70℃ working temperature
- Protections: Short circuit / Overload / Over voltage / Over temperature
- DC OK active signal and redundant function(option)
- Operating altitude up to 5000 meter (Note.5)
- LED indicator for power on
- 3 years warranty

Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipments or apparatus
- Household appliances
- LED display application

Description

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 and 48V. In addition to the high efficiency up to 94%, that the whole series operates from -30℃ ~ 70℃ under air convection without fan. UHP-200 has the complete protection functions and 5G anti-vibration capability;It is complied with the international safety regulations such as TUV EN60950-1, EN60335-1, UL60950-1 and GB4943. UHP-200 series serves as a high performance power supply solution for various industrial applications.

Model Encoding

UHP - 200 □ - 5

- 5 — Output Voltage
- □ — Blank / R
- 200 — Rated wattage
- UHP — Series name

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

200W Slim Type with PFC Switching Power Supply UHP-200 series

SPECIFICATION

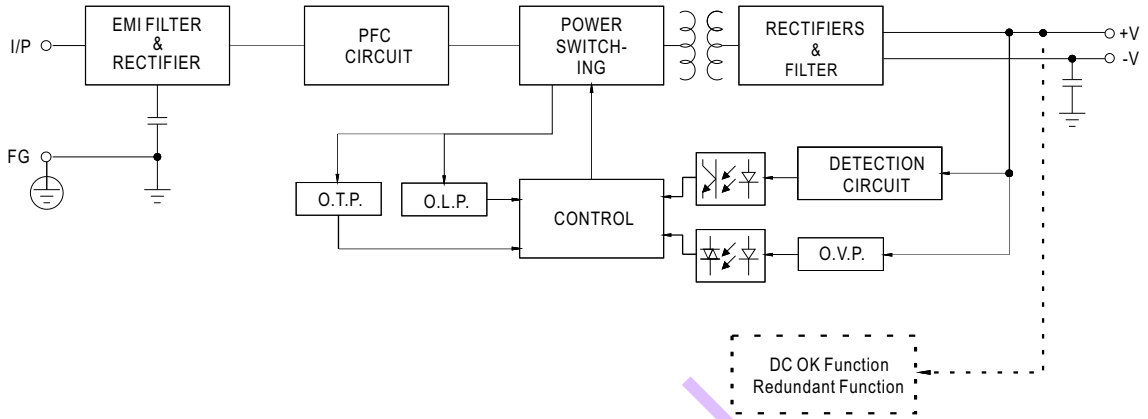
MODEL		UHP-200□-3.3	UHP-200□-4.2	UHP-200□-5	UHP-200□-12	UHP-200□-15	UHP-200□-24	UHP-200□-36	UHP-200□-48
OUTPUT	DC VOLTAGE	3.3V	4.2V	5V	12V	15V	24V	36V	48V
	RATED CURRENT	40A	40A	40A	16.7A	13.4A	8.4A	5.6A	4.2A
	RATED POWER(convection)	132W	168W	200W	200.4W	201W	201.6W	201.6W	201.6W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	200mVp-p	240mVp-p	240mVp-p	240mVp-p	240mVp-p	300mVp-p
	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
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±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%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	2000ms, 80ms/230VAC 3000ms, 80ms/115VAC at full load							
	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%
	AC CURRENT (Typ.)	2.2A/115VAC 1.1A/230VAC							
	INRUSH CURRENT (Typ.)	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
		Protection type :Shut down O/P voltage,re-power on to recover							
	OVER TEMPERATURE	Protection type :Shut down O/P voltage, 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	UL60950-1,TUV EN60950-1,EN60335-1, CCC GB4943, EAC TP TC 004, BSMI CNS14336-1 approved, Design refer to EN61558-1,-2-16							
	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 EN55032,GB9254,Class B, EN55014,EN61000-3-2,-3,EAC TP TC 020,BSMI CNS13438							
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11;EN61000-6-2 (EN50082-2), heavy industry level ,criterial A,EAC TP TC 020							
OTHERS	MTBF	257K hrs min. MIL-HDBK-217F (25℃)							
	DIMENSION	194*55*26mm (L*W*H)							
	PACKING	0.468kg;24pcs/12.2kg/0.49CUFT							

NOTE

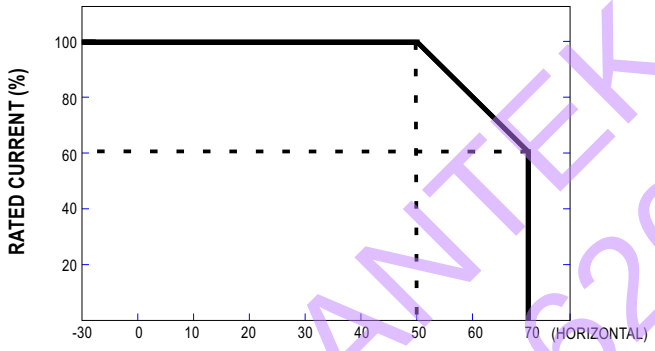
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance :includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. The ambient temperature derating of 5℃/1000m is needed for operating altitude greater than 2000m(6500ft)
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 http://www.meanwell.com)

■ Block Diagram

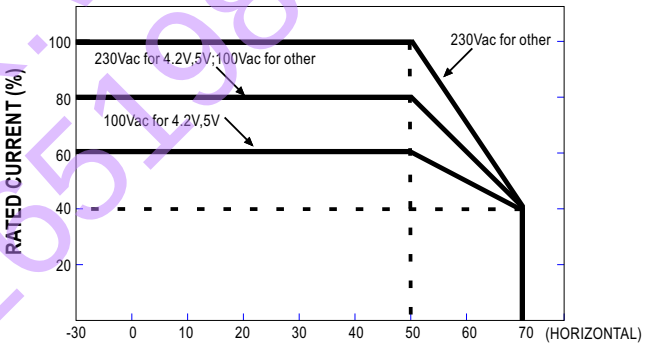
PFC fosc:100KHz
PWM fosc:90KHz~110KHz



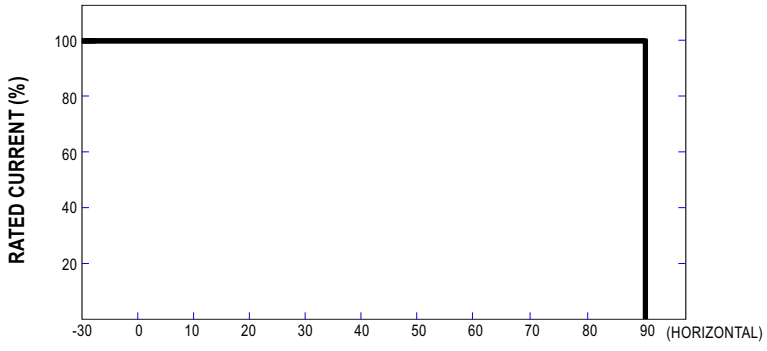
■ Derating Curve



AMBIENT TEMPERATURE (℃)

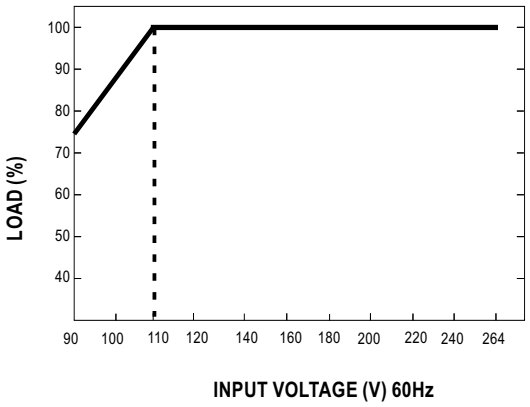


AMBIENT TEMPERATURE WITHOUT ALUMINUM PLATE(℃)



Tcase (℃)

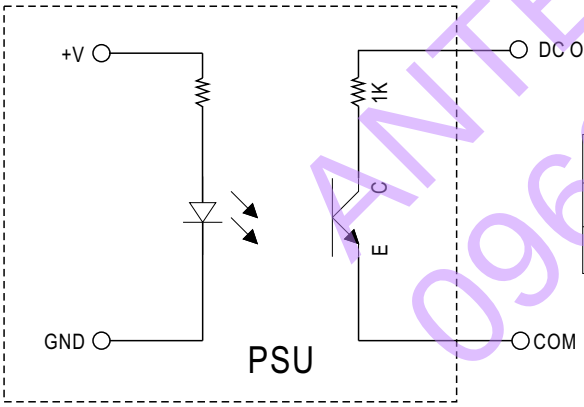
■ STATIC CHARACTERISTIC



■ Function Manual

1.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.

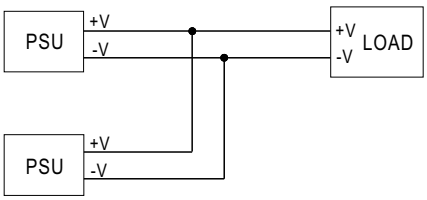


Optocoupler C-E Pin Conduction	PSU turns on	DC ok
Optocoupler C-E Pin Open	PSU turns off	DC fail
Optocoupler Rating(max.)	15Vdc/10mA resistive load	

2.Redundant function

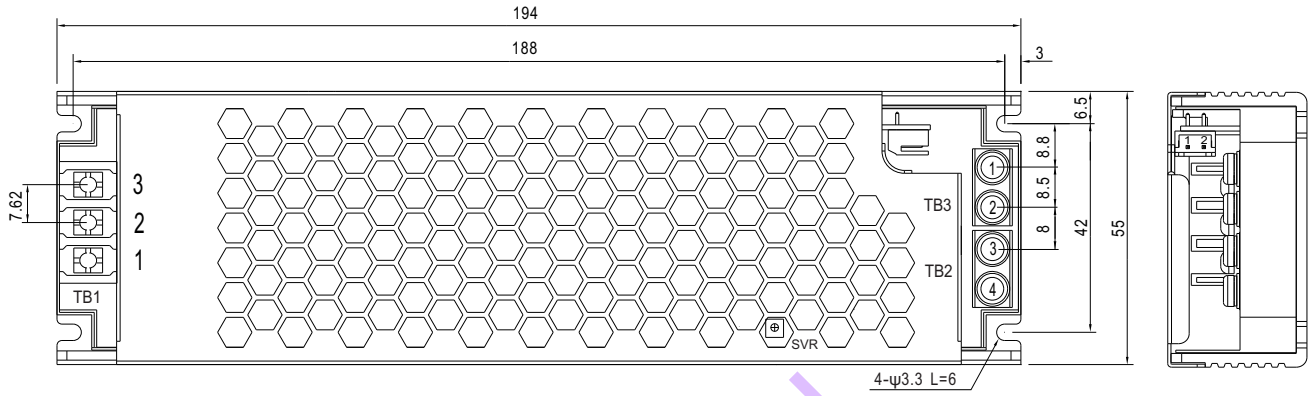
(1) UHP-200R is built-in redundant function and can be connected 2 units in parallel .

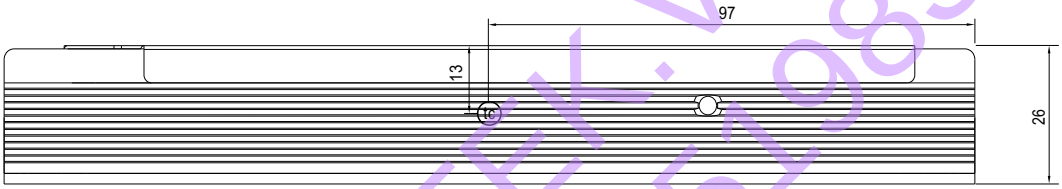
(2) When in parallel operation the maximum load should not be greater than the rated power of any PSU.



■ Mechanical Specification

CASE NO.:249B Unit:mm





• ⓣⓒ : 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 requivalent

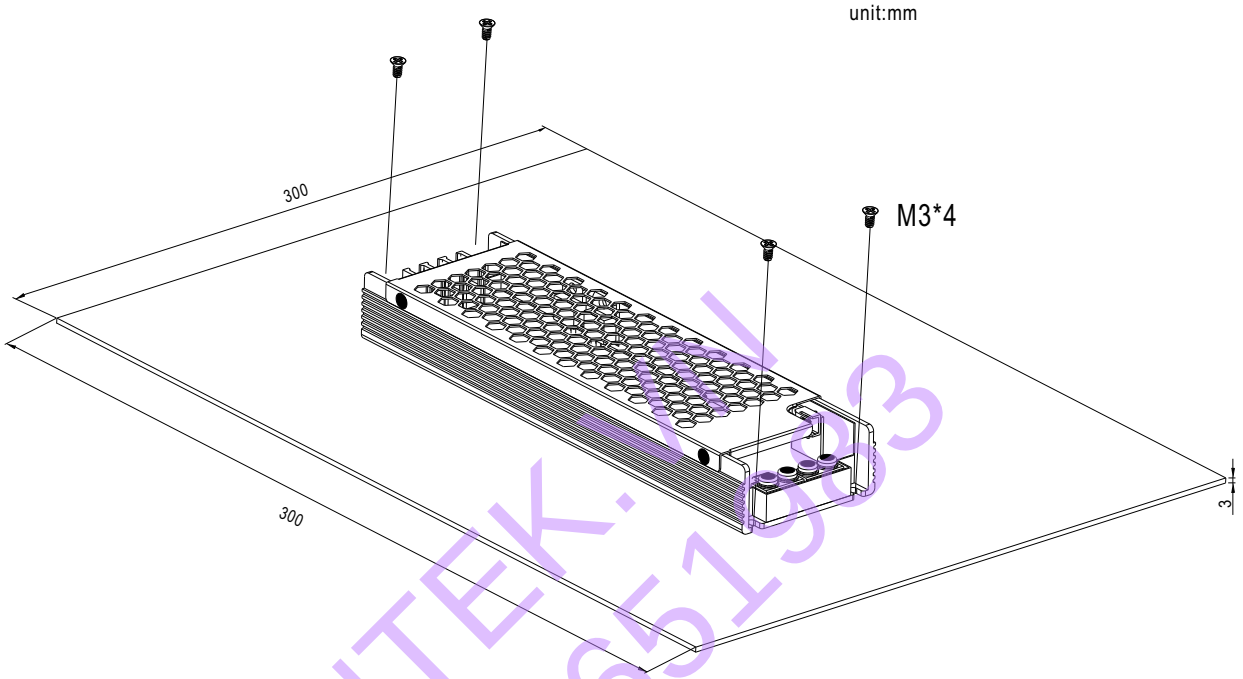
Pin No.	Assignment	Mating Housing	Terminal
1	DC COM	JST PHR-2 or requivalent	JST SPH-002T-P0.5S or requivalent
2	DC OK +V		

■ Installation

1.Operate with additional aluminum plate

In order to meet the"Derating Curve"and the "Static Characteristics" ,UHP-200 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-200 series must be firmly mounted at the center of the aluminum plate.

unit:mm



350W Slim Type with PFC Switching Power Supply UHP-350 series

R33100 RoHS | GB4943 | UL60950-1 | EN60950-1 EN60335-1 | IEC60950-1

LED Display | Household | Automate | Industrial | Security | Network | Telecom

Features

- Slim Low profile (31mm)
- Fanless design,350W convection
- Withstand 300VAC surge input for 5 seconds
- Built-in active PFC function
- 150% peak load capability(100ms)
- -30~+70℃ working temperature
- Protections: Short circuit / Overload / Over voltage / Over temperature
- DC OK active signal and redundant function(option)
- Operating altitude up to 5000 meter (Note.5)
- LED indicator for power on
- 3 years warranty

Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipments or apparatus
- Household appliances
- LED display application

Description

UHP-350 series is a 350W single-output slim type power supply with 31mm 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 and 48V. In addition to the high efficiency up to 94%, that the whole series operatesfrom -30℃ ~ 70℃ under air convection without fan. UHP-350 has the complete protection functions and 5G anti-vibration capability;It is complied with the international safety regulations such as TUV EN60950-1, EN60335-1, UL60950-1 and GB4943. UHP-350 series serves as a high performance power supply solution for various industrial applications.

Model Encoding

UHP - 350 □ - 5

- 5 — Output Voltage
- □ — Blank / R
- 350 — Rated wattage
- UHP — Series name

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

350W Slim Type with PFC Switching Power Supply UHP-350 series

SPECIFICATION

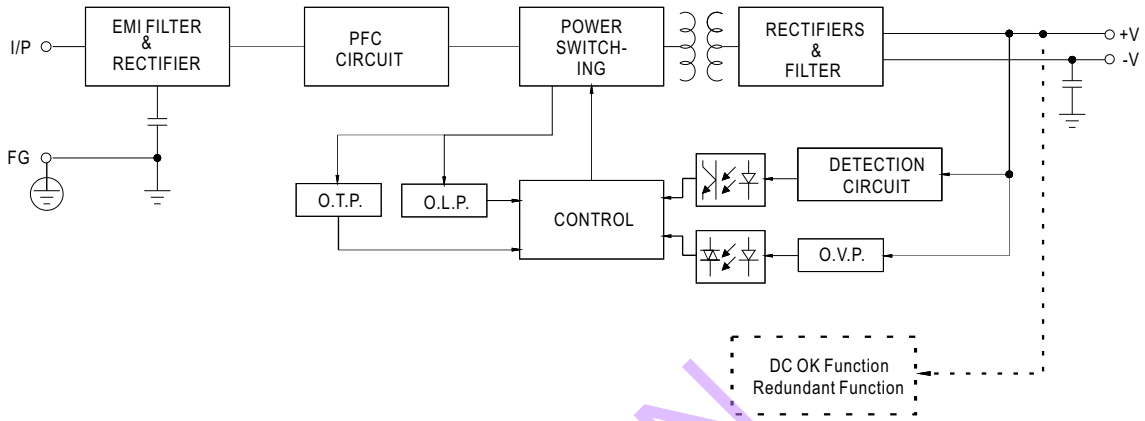
MODEL		UHP-350□-3.3	UHP-350□-4.2	UHP-350□-5	UHP-350□-12	UHP-350□-15	UHP-350□-24	UHP-350□-36	UHP-350□-48
OUTPUT	DC VOLTAGE	3.3V	4.2V	5V	12V	15V	24V	36V	48V
	RATED CURRENT	60A	60A	60A	29.2A	23.4A	14.6A	9.75A	7.3A
	RATED POWER(convection)	198W	252W	300W	350.4W	351W	350.4W	351W	350.4W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	200mVp-p	200mVp-p	200mVp-p	240mVp-p	240mVp-p	240mVp-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
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±2.0%	±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%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	2000ms, 80ms/230VAC 3000ms, 80ms/115VAC at full load							
	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.)	88.5%	89%	90%	91%	92%	94%	94%	94%
	AC CURRENT (Typ.)	4A/115VAC 2A/230VAC							
	INRUSH CURRENT (Typ.)	Cold start 30A/115VAC 60A/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
		Protection type :Shut down O/P voltage,re-power on to recover							
	OVER TEMPERATURE	Protection type :Shut down O/P voltage, 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	UL60950-1,TUV EN60950-1,EN60335-1,CCC GB4943,BSMI CNS14336-1,EAC TP TC 004 approved,Design refer to EN61558-1,-2-16							
	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 EN55032,GB9254,Class B, EN55014,EN61000-3-2,-3, BSMI CNS13438, EAC TP TC 020							
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11;EN61000-6-2 (EN50082-2), heavy industry level ,criterial A,EAC TP TC 020							
OTHERS	MTBF	285 K hrs min. MIL-HDBK-217F (25℃)							
	DIMENSION	220*62*31mm (L*W*H)							
	PACKING	0.68 kg;16 pcs/11.88 kg/0.63CUFT							

NOTE

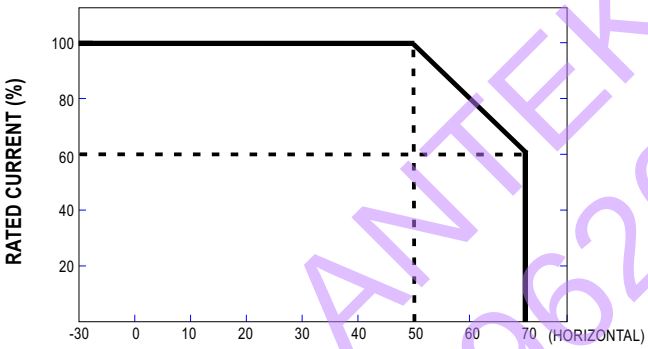
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance :includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft)
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 http://www.meanwell.com)

■ Block Diagram

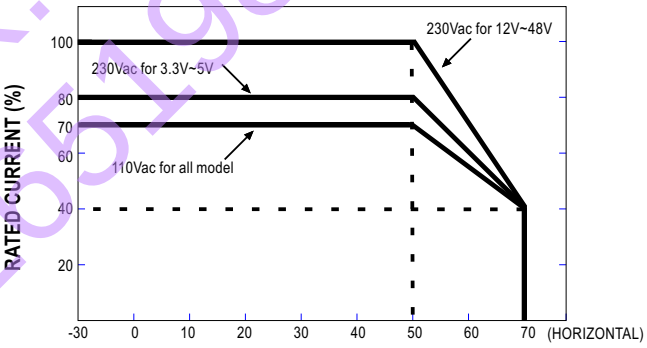
PFC fosc:65KHz
PWM fosc:70KHz~90KHz



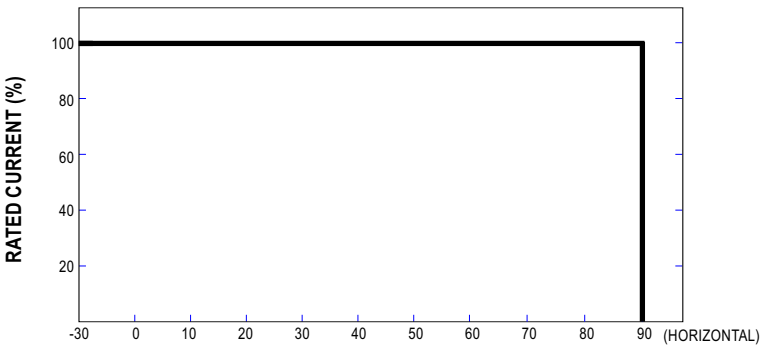
■ Derating Curve



AMBIENT TEMPERATURE (℃)

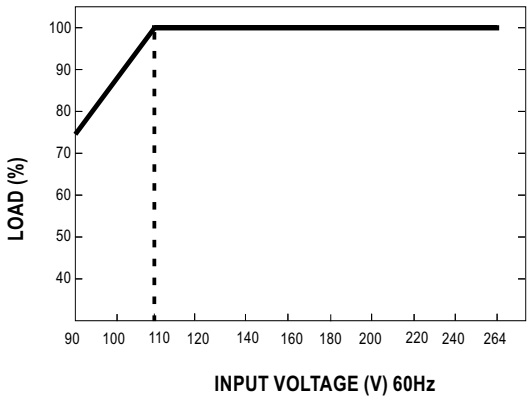


AMBIENT TEMPERATURE WITHOUT ALUMINUM PLATE(℃)



Tcase (℃)

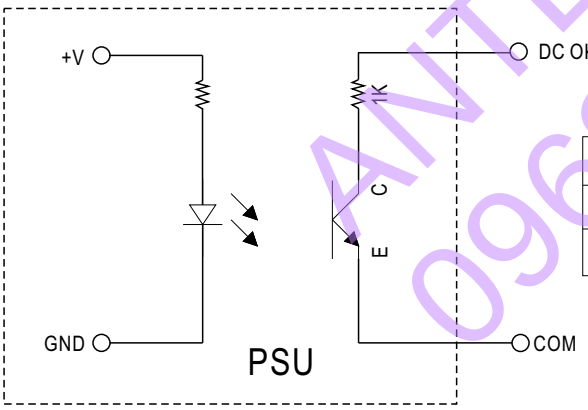
■ STATIC CHARACTERISTIC



■ Function Manual

1.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.

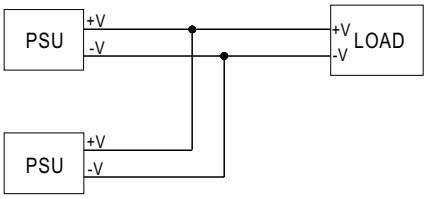


Optocoupler C-E Pin Conduction	PSU turns on	DC ok
Optocoupler C-E Pin Open	PSU turns off	DC fail
Optocoupler Rating(max.)	15Vdc/10mA resistive load	

2.Redundant function

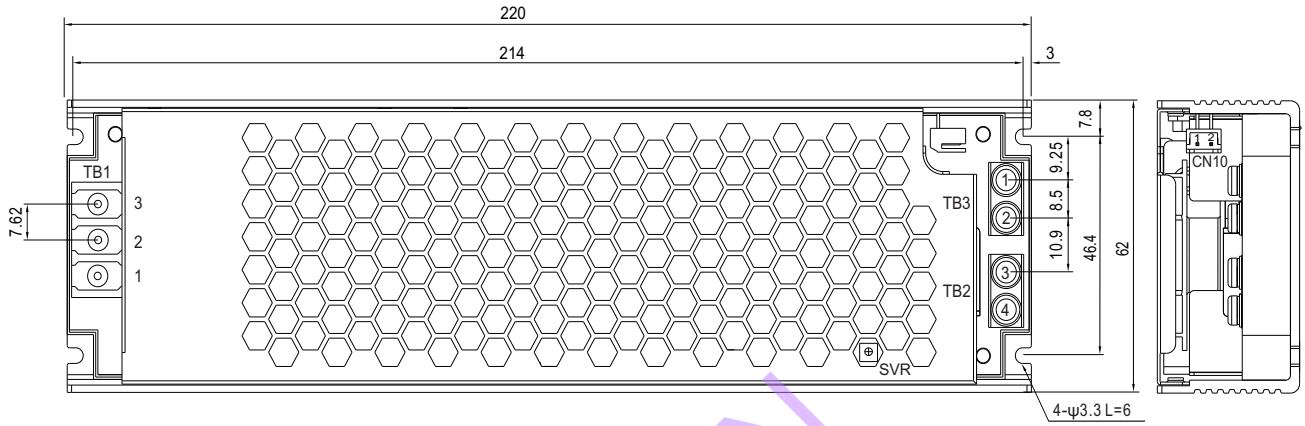
(1) UHP-350R is built-in redundant function and can be connected 2 units in parallel .

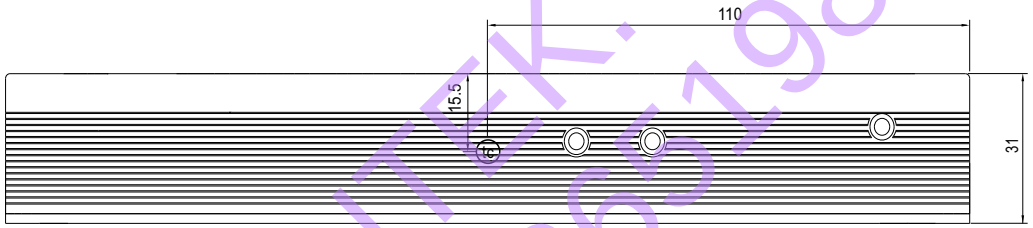
(2) When in parallel operation the maximum load should not be greater than the rated power of any PSU.



■ Mechanical Specification

CASE NO.:232C Unit:mm





• 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 requivalent

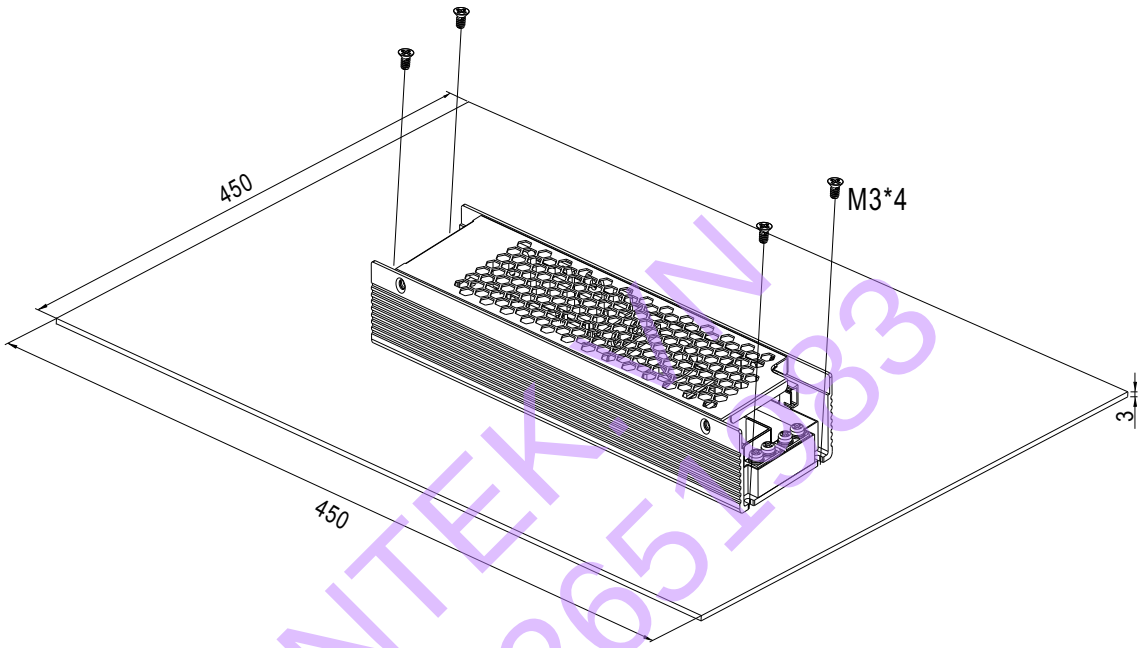
Pin No.	Assignment	Mating Housing	Terminal
1	DC COM	JST PHR-2 or requivalent	JST SPH-002T-P0.5S or requivalent
2	DC OK +V		

■ Installation

1.Operate with additional aluminum plate

In order to meet the"Derating Curve"and the "Static Characteristics" ,UHP-350 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-350 series must be firmly mounted at the center of the aluminum plate.

unit:mm



MEAN WELL

500W Slim Type with PFC Switching Supply

UHP-500 series

R33100 RoHS | GB4943 | UL60950-1 | EN60950-1 | IEC60950-1

LED Display | Automate | Industrial | Security | Network | Telecom

Features

- Slim and Low profile (31mm)
- Fanless design,500W convection
- Withstand 300VAC surge input for 5 seconds
- Built-in active PFC function
- 150% peak load capability(100ms)
- -20~+70℃ working temperature
- Protections: Short circuit / Overload / Over voltage / Over temperature
- DC OK active signal and redundant function(option)
- Operating altitude up to 5000 meter (Note.5)
- LED indicator for power on
- 3 years warranty

Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipments or apparatus
- LED display application

Description

UHP-500 series is a 500W single-output slim type power supply with 31mm of low profile design. Adopting the full range 90~264VAC input, the entire series provides an output voltage line of 4.2V, 5V, 12V, 15V, 24V, 36V and 48V. In addition to the high efficiency up to 95%, that the whole series operates from -20℃ ~ 70℃ under air convection without fan. UHP-500 has the complete protection functions and 5G anti-vibration capability ; It is complied with the international safety regulations such as TUV EN60950-1, UL60950-1 and GB4943. UHP-500 series serves as a high performance power supply solution for various industrial applications.

Model Encoding

UHP - 500 □ - 5

- 5 — Output Voltage
- □ — Blank / R
- 500 — Rated wattage
- UHP — Series name

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

MEAN WELL

500W Slim Type with PFC Switching Supply

UHP-500 series

SPECIFICATION

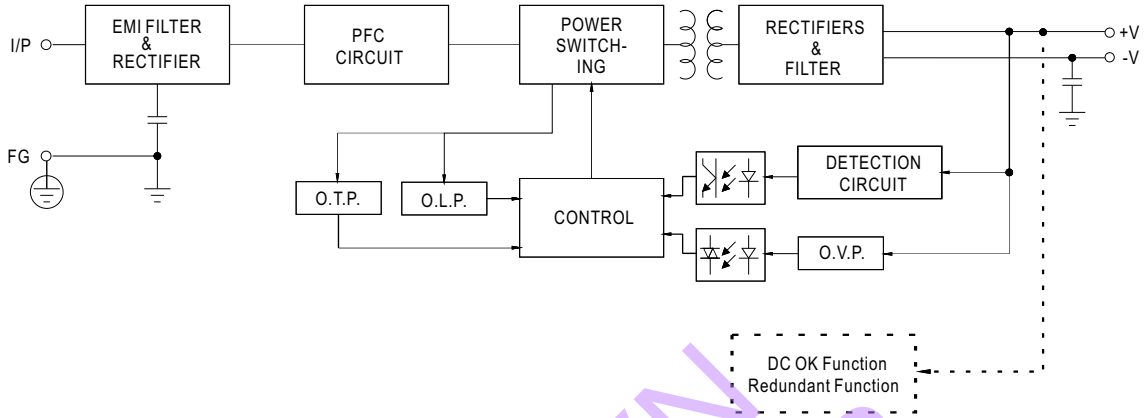
MODEL		UHP-500□-4.2	UHP-500□-5	UHP-500□-12	UHP-500□-15	UHP-500□-24	UHP-500□-36	UHP-500□-48
OUTPUT	DC VOLTAGE	4.2V	5V	12V	15V	24V	36V	48V
	RATED CURRENT	80A	80A	41.7A	33.4A	20.9A	13.9A	10.45A
	RATED POWER(convection)	336W	400W	500.4W	501W	501.6W	500.4W	501.6W
	RIPPLE & NOISE (max.) Note.2	200mVp-p	200mVp-p	200mVp-p	200mVp-p	240mVp-p	360mVp-p	360mVp-p
	VOLTAGE ADJ. RANGE	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
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.3%	±0.3%	±0.3%	±0.3%	±0.3%
	LOAD REGULATION	±1.0%	±1.0%	±0.5%	±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≥0.98/115VAC at full load						
	EFFICIENCY (Typ.)	89%	90%	94%	94%	94.5%	95%	95%
	AC CURRENT (Typ.)	4.85A/115VAC 2.6A/230VAC						
	INRUSH CURRENT (Typ.)	Cold start 30A/115VAC 60A/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	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
		Protection type :Shut down O/P voltage,re-power on to recover						
	OVER TEMPERATURE	Protection type :Shut down O/P voltage, recovers automatically after temperature goes down						
FUNCTION	DC OK SIGNAL(Optional)	Contact rating(max.):30Vdc/1A 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	UL60950-1,TUV EN60950-1, CCC GB4943, BSMI CNS14336-1, EAC TP TC 004 approved;Design refer to EN60335-1,EN61558-2-16						
	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 EN55032,GB/T9254,Class B, EN61000-3-2,-3, BSMI CNS13438, EAC TP TC 020						
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11;EN61000-6-2 (EN50082-2), heavy industry level ,criterial A,EAC TP TC 020						
OTHERS	MTBF	168K hrs min. MIL-HDBK-217F (25℃)						
	DIMENSION	232*81*31mm (L*W*H)						
	PACKING	0.905kg; 16pcs/15.48kg/0.82CUFT						

NOTE

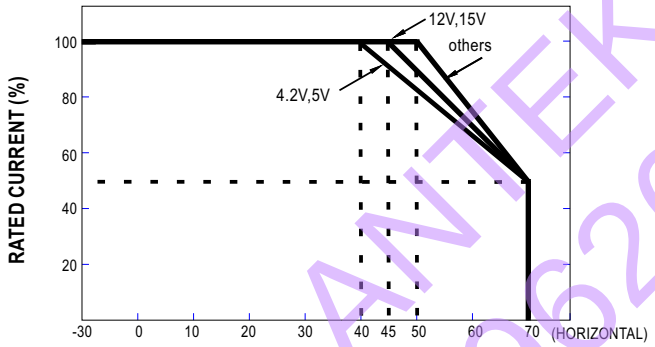
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance :includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. The ambient temperature derating of 3.5℃/1000m is needed for operating altitude greater than 2000m(6500ft)
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 http://www.meanwell.com)

■ Block Diagram

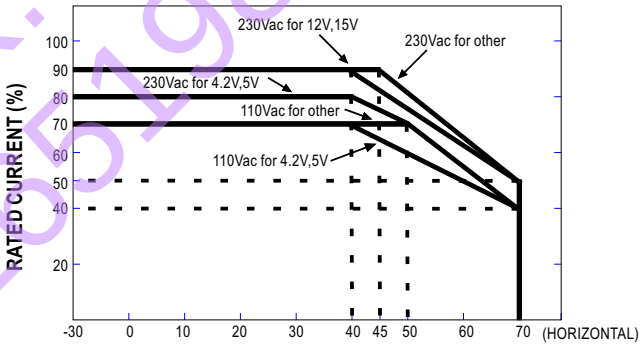
PFC fosc:60KHz
PWM fosc:65KHz~75KHz



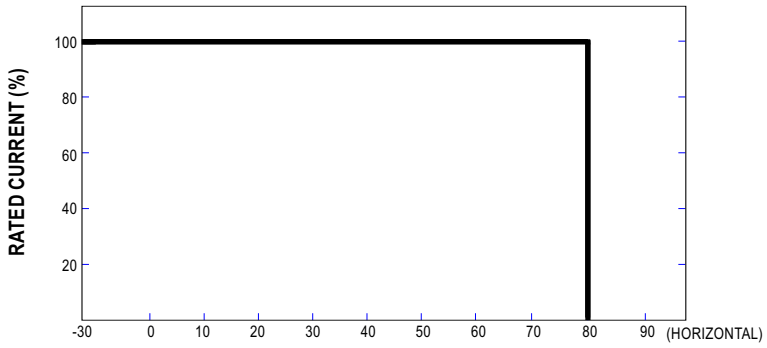
■ Derating Curve



AMBIENT TEMPERATURE (℃)

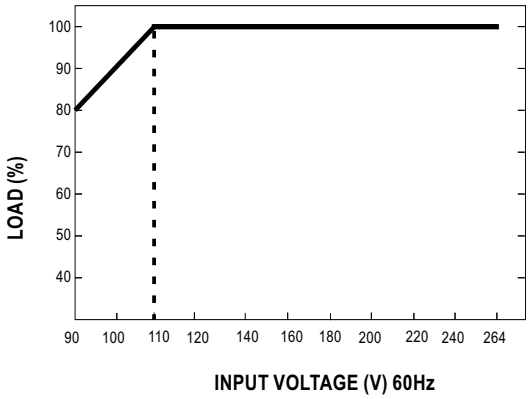


AMBIENT TEMPERATURE WITHOUT ALUMINUM PLATE(℃)



Tcase (℃)

■ STATIC CHARACTERISTIC



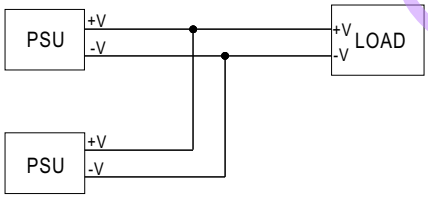
■ DC OK Relay Contact

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

■ Redundant function

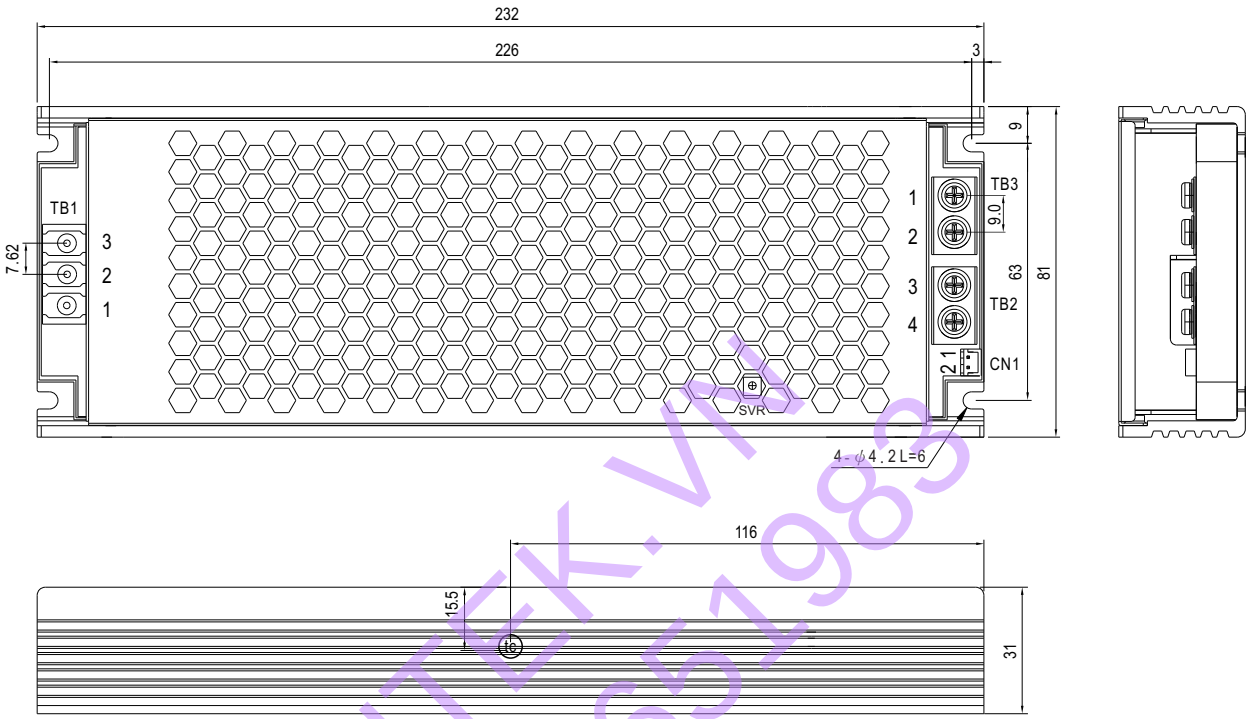
(1) UHP-500R is built-in redundant function and can be connected 2 units in parallel .

(2) When in parallel operation the maximum load should not be greater than the rated power of any PSU.



■ Mechanical Specification

CASE NO.:233D Unit:mm



• 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) MEL-400-02P	8Kgf-cm
3,4	+V		

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

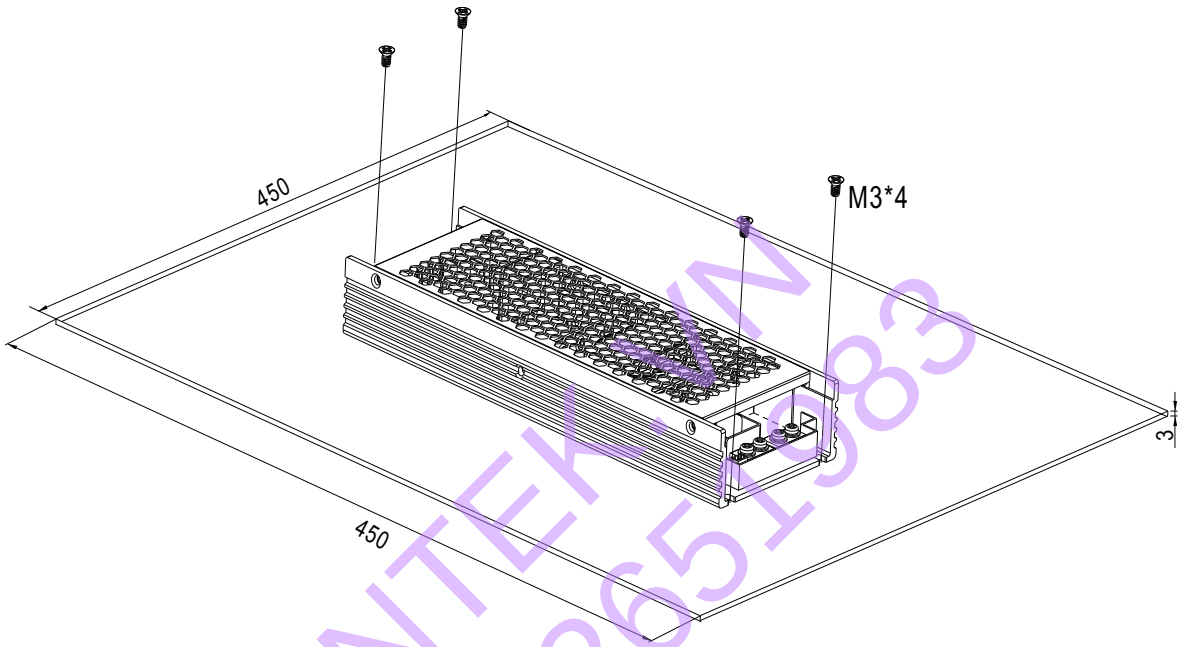
Pin No.	Assignment	Mating Housing	Terminal
1	DC COM1	JST PHR-2 or requivalent	JST SPH-002T-P0.5S or requivalent
2	DC COM2		

■ Installation

1.Operate with additional aluminum plate

In order to meet the"Derating Curve"and the "Static Characteristics" ,UHP-500 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-500 series must be firmly mounted at the center of the aluminum plate.

unit:mm



UHP-750 series

750W Slim Type with PFC Switching Supply

UL62368-1 EN62368-1 TPTC004 IEC62368-1

Household Automate Industrial Security Network Telecom

Features

- Slim and Low profile (41mm)
- Fanless and conduction-cooled design
- Withstand 300VAC surge input for 5 seconds
- Built-in active PFC function
- -30~+70℃ 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

Certificates

- Safety: UL/EN62368-1
- EMC: EN 55032 / 55024

Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipment or apparatus
- Household appliances

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℃ ~ 70℃ 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

- 12 — Output Voltage
- 750 — Rated wattage
- UHP — Series name

750W Slim Type with PFC Switching Supply — UHP-750 series

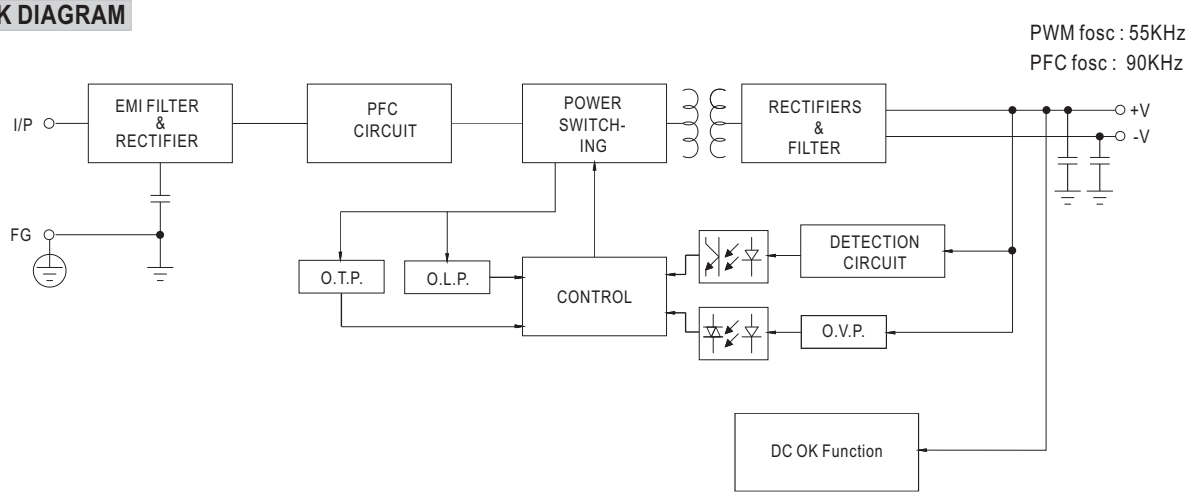
SPECIFICATION

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(convection)	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
		Protection type: Shut down O/P voltage, re-power on to recover			
	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℃ (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 90% 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.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℃/ 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℃)			
	DIMENSION	237*100*41mm (L*W*H)			
	PACKING	1.4kg; 10pcs/15kg/0.8CUFT			

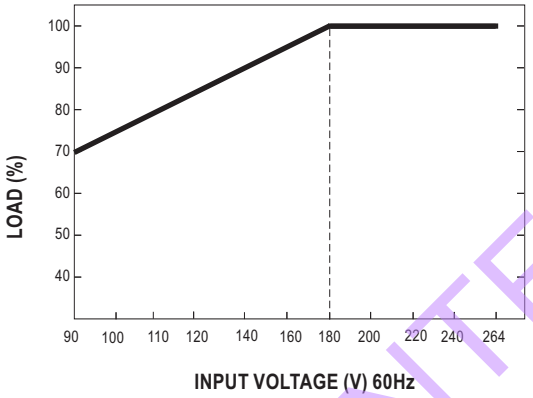
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance :includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. 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 http://www.meanwell.com)
6. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).

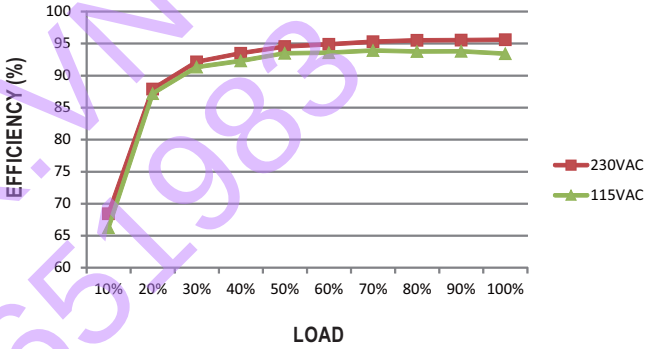
BLOCK DIAGRAM



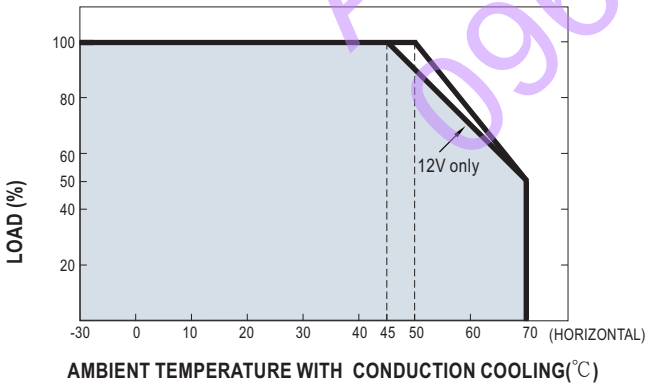
STATIC CHARACTERISTIC

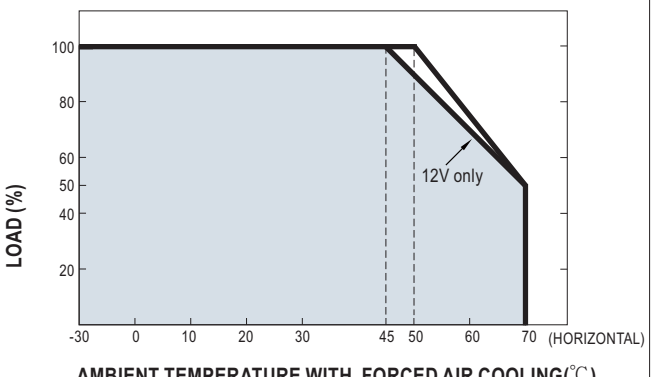


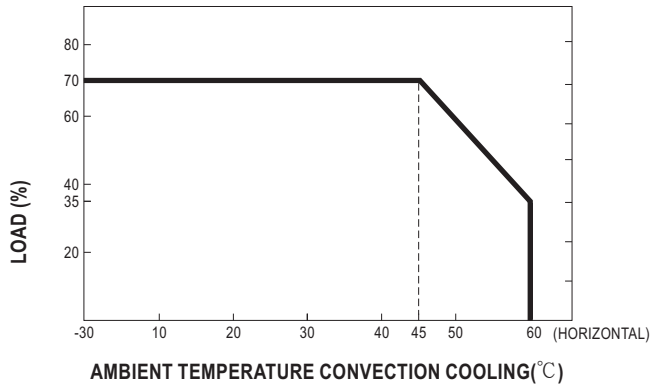
EFFICIENCY VS LOAD (48V MODEL)

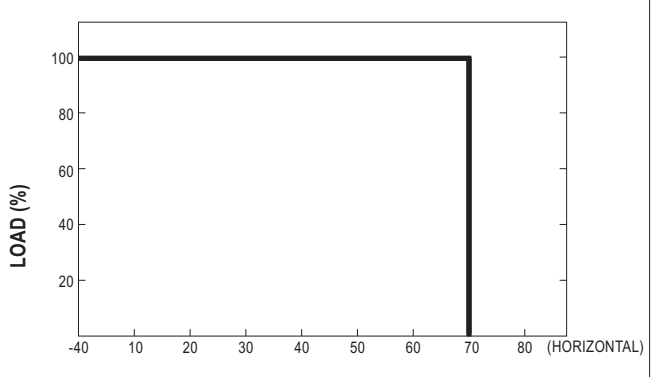


DERATING CURVE







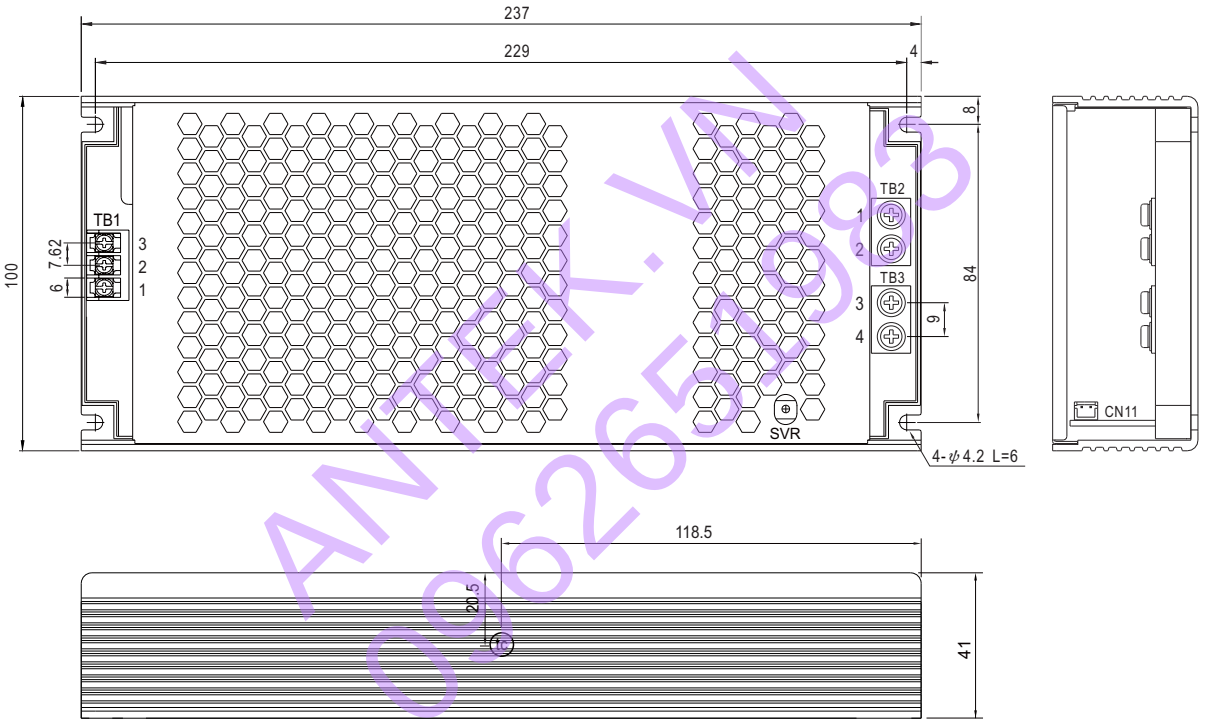


■ DC OK RELAY CONTACT

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) NEL-400-02P	8Kgf-cm
3,4	-V		

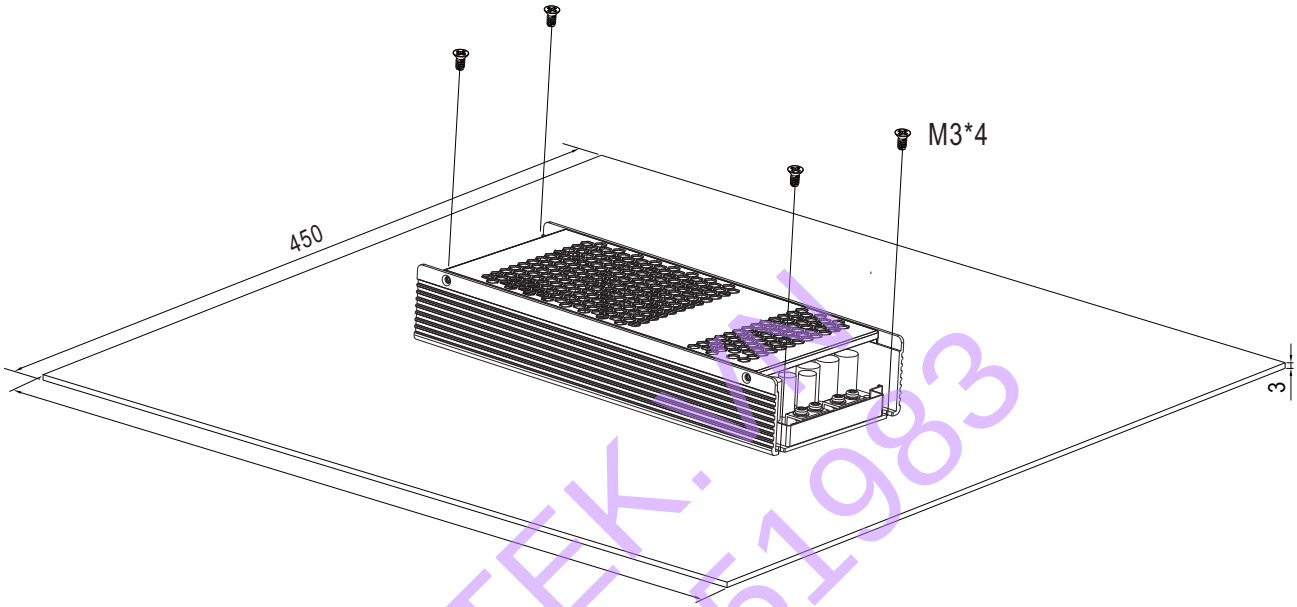
DC OK Connector(CN11):JST S2B-PH-KL or requivalent

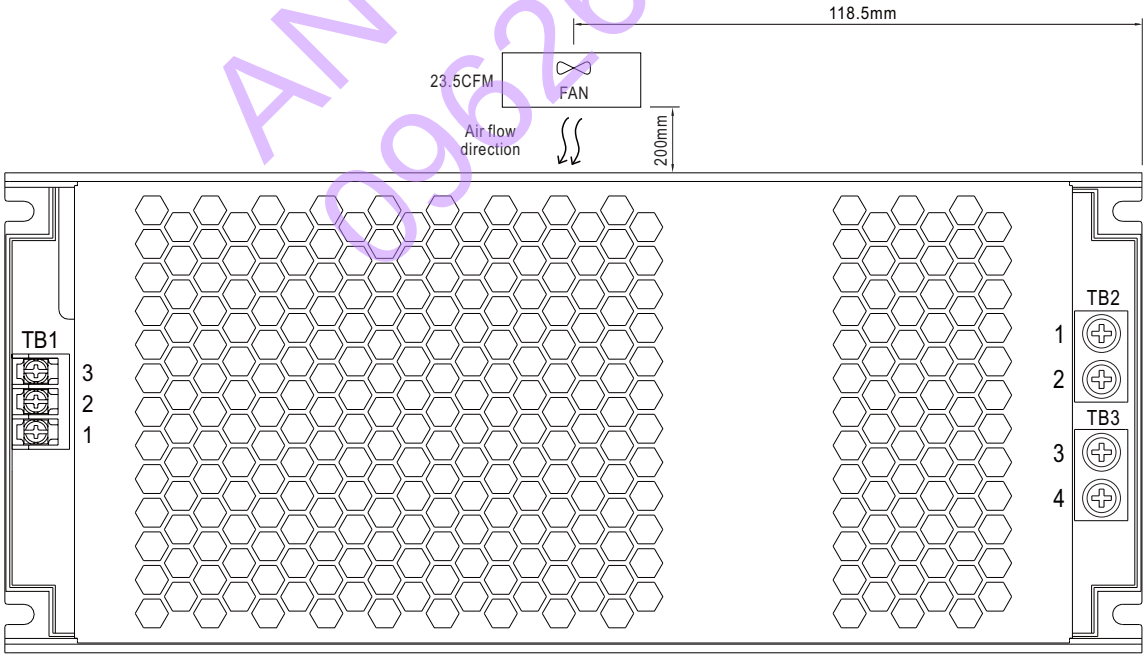
Pin No.	Assignment	Mating Housing	Terminal
1	DC COM1	JST PHR-2 or requivalent	JST SPH-002T-P0.5S or requivalent
2	DC COM2		

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





■ INSTALLATION MANUAL

Please refer to : http://www.meanwell.com/manual.html

1000W Slim Type with PFC Switching Supply UHP-1000 series

UL62368-1 EN62368-1 TPTC004 IEC62368-1

Household Automate Industrial Security Network Telecom

Features

- Slim and Low profile (41mm)
- Fanless and conduction-cooled design
- Withstand 300VAC surge input for 5 seconds
- Built-in active PFC function
- -30~+70℃ working temperature
- Output voltage and constant current level programmable
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in remote ON-OFF control
- DC OK active signal
- Operating altitude up to 5000 meter (Note.5)
- LED indicator for power on
- 5 years warranty

Certificates

- Safety: UL/EN62368-1
- EMC: EN 55032 / 55024

Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipment or apparatus
- Test and measurement instrument
- Laser related machine
- Charging related equipment
- Household appliances

Description

UHP-1000 series is a 1000W 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 96%, that the whole series operates from -30℃ ~ 70℃ under air convection without fan. UHP-1000 has the complete protection functions and 5G anti-vibration capability; It is complied with the international safety regulations such as TUV EN62368-1, UL62368-1, and design refers to EN61558-1 and EN60335-1. UHP-1000 series serves as a high performance power supply solution for various industrial applications.

Model Encoding

UHP - 1000 - 12

- 12 — Output voltage
- 1000 — Rated wattage
- UHP — Series name

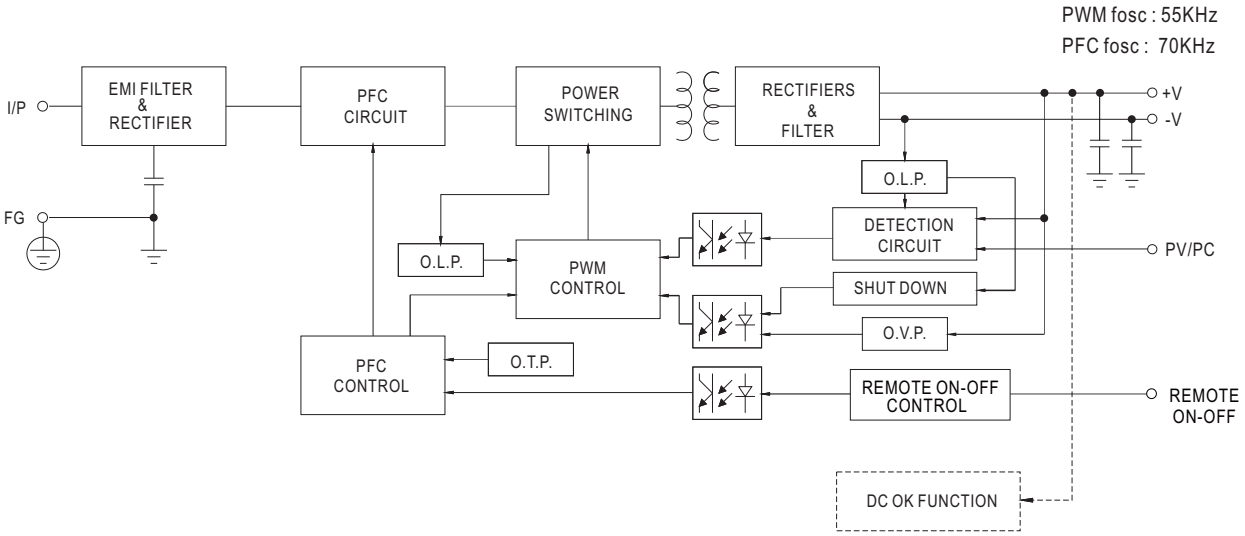
SPECIFICATION

MODEL		UHP-1000-12	UHP-1000-24	UHP-1000-36	UHP-1000-48
OUTPUT	DC VOLTAGE	12V	24V	36V	48V
	RATED CURRENT	80A	42A	28A	21A
	RATED POWER(convection)	960W	1008W	1008W	1008W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	240mVp-p	240mVp-p	300mVp-p
	VOLTAGE ADJ. RANGE	By built-in potentiometer, SVR			
		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 250 ~ 370VDC			
	FREQUENCY RANGE	47 ~ 63Hz			
	POWER FACTOR (Typ.)	PF⩾0.95/230VAC PF⩾0.99/115VAC at full load			
	EFFICIENCY (Typ.)	94%	95%	95.5%	96%
	AC CURRENT (Typ.)	10.1A/115VAC 5.3A/230VAC			
	INRUSH CURRENT (Typ.)	Cold start 20A/115VAC 40A/230VAC			
	LEAKAGE CURRENT	<0.75mA / 240VAC			
PROTECTION	OVERLOAD	105~120% rated output power			
		Protection type: Constant current limiting with delay shutdown after 3 seconds, re-power on to recover			
	SHORT CIRCUIT	Protection type: Constant current limiting with delay shutdown after 3 seconds, re-power on to recover			
	OVER VOLTAGE	14.5 ~ 16V	29 ~ 33V	43.5 ~ 49V	59 ~ 66V
		Protection type: Shut down O/P voltage, re-power on to recover			
	OVER TEMPERATURE	Protection type: Shut down O/P voltage, recovers automatically after temperature goes down			
FUNCTION	OUTPUT VOLTAGE PROGRAMMABLE(PV) Note 5	Adjustment of output voltage is allowable to 50 ~ 120% of nominal output voltage Please refer to the Function Manual.			
	OUTPUT CURRENT PROGRAMMABLE(PC) Note 5	Adjustment of constant current level is allowable to 20 ~ 100% of rated current. Please refer to the Function Manual.			
	REMOTE ON/OFF CONTROL	Power ON: "Low" <0 ~ 0.5V or Short circuit Power OFF: "Hi" >2 ~ 5V or Open circuit			
	AUXILIARY POWER	12V@0.5A tolerance±10%, ripple 150mVp-p			
	DC-OK SIGNAL	The TTL signal out, PSU turn on = 4.5 ~ 5.5V; PSU turn off = -0.1 ~ 0.5V. Please refer to the Function Manual.			
ENVIRONMENT	WORKING TEMP.	-30 ~ +70℃ (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 90% 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	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℃/ 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	218.86K hrs min. Telcordia SR-332 (Bellcore) ; 69.81K hrs min. MIL-HDBK-217F (25℃)			
	DIMENSION	240*115*41mm (L*W*H)			
	PACKING	1.74kg ; 8pcs/14.9kg/0.74CUFT			

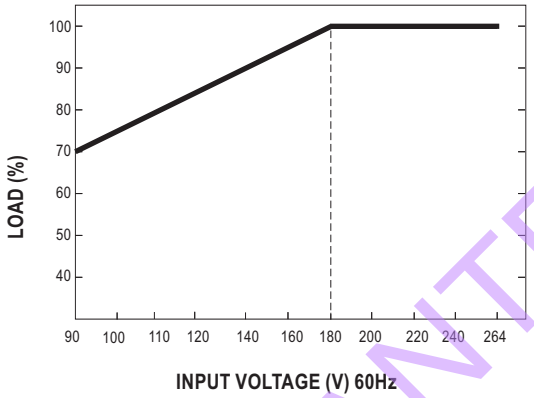
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance: includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. PV/PC functions when users do not use SVR.
6. 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 http://www.meanwell.com)
7. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).

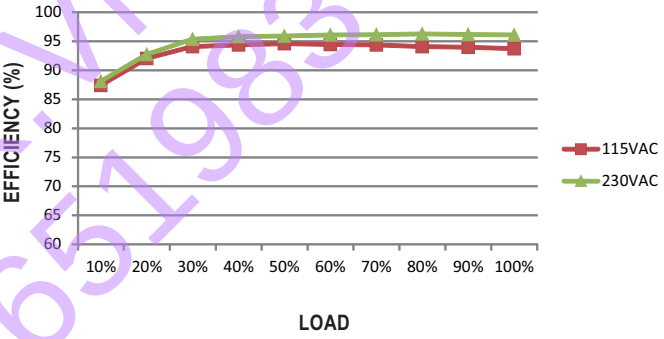
BLOCK DIAGRAM



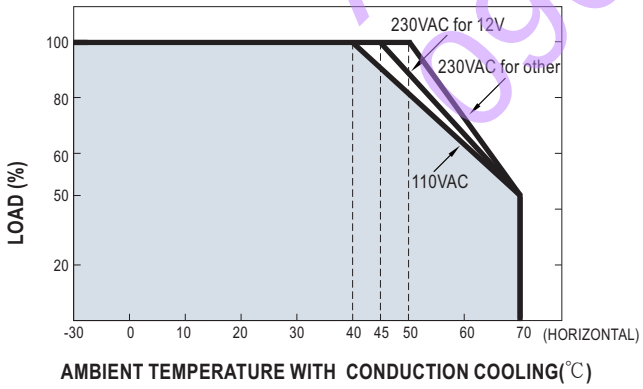
STATIC CHARACTERISTIC



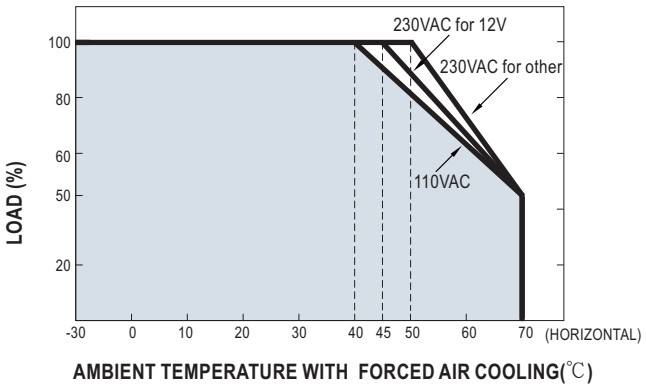
EFFICIENCY VS LOAD (48V MODEL)



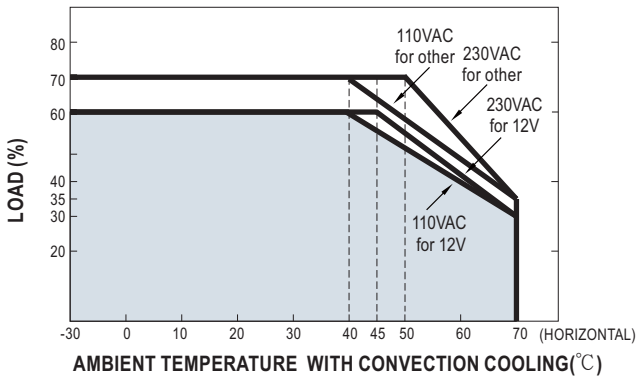
DERATING CURVE



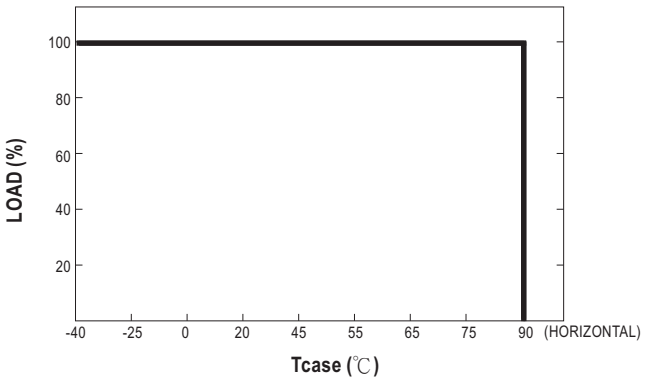
AMBIENT TEMPERATURE WITH CONDUCTION COOLING(℃)



AMBIENT TEMPERATURE WITH FORCED AIR COOLING(℃)



AMBIENT TEMPERATURE WITH CONVECTION COOLING(℃)

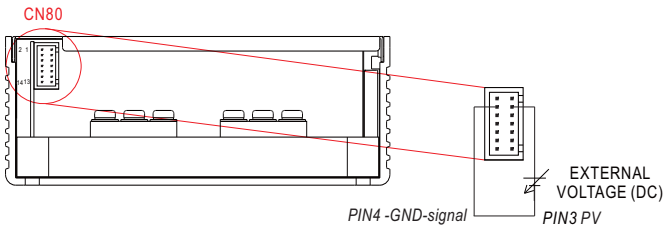


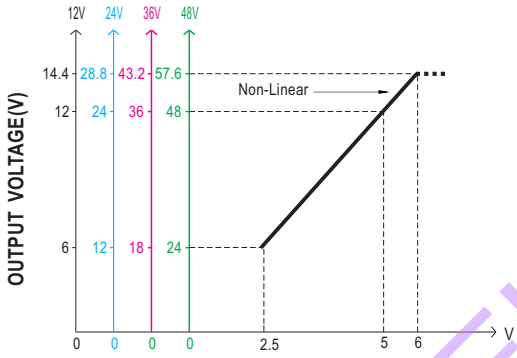
Tcase (℃)

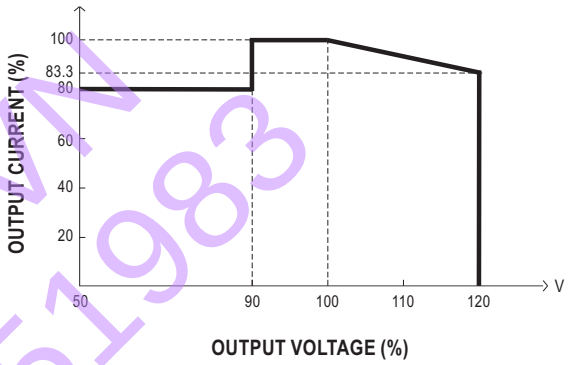
■ FUNCTION MANUAL

1.Output Voltage Programming (or, PV / remote voltage programming / remote adjust / margin programming / dynamic voltage trim)

※ In addition to the adjustment via the built-in potentiometer, the output voltage can be trimmed by applying EXTERNAL VOLTAGE.





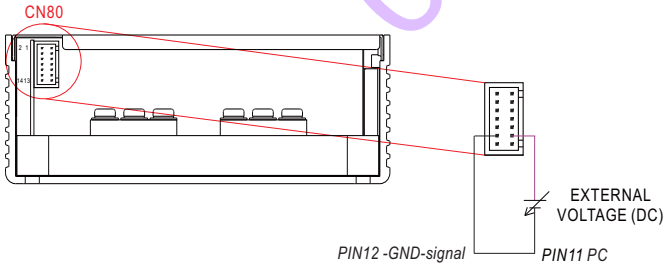


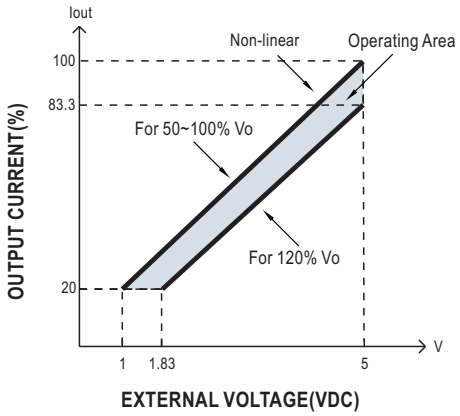
※ Caution: By factory default, the Output Voltage Programming is not activated, and *PV (pin1)* and *PV-DIS(pin2)* are shorted by connector. Whenever this function is not needed to activate, as assumed in other sections' diagrams, please keep *PV (pin1)* and *PV-DIS(pin2)* shorted ; otherwise the power supply will have no output.

※ Caution: When this function is needed to activate, please keep PV(pin1) and PV-DIS(pin2) opened.

2.Output Current Programming (or, PC / remote current programming / dynamic current trim)

※ The output current can be trimmed to 20~100% of the rated current by applying EXTERNAL VOLTAGE.



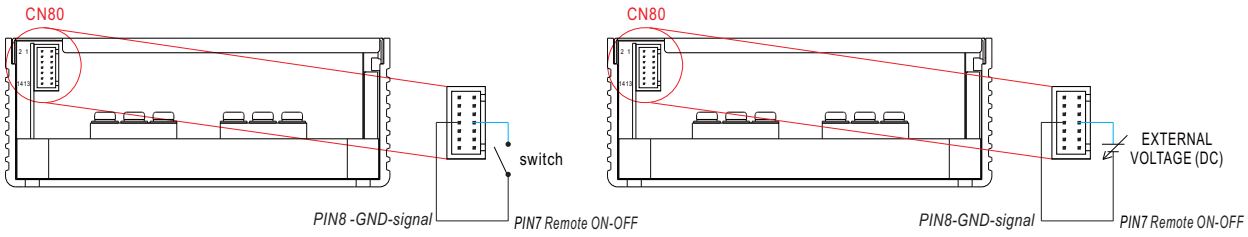


※ Caution: By factory default, the Output Current Programming is not activated, and *VCCS(pin13)* and *PC-DIS(pin14)* are shorted by connector. Whenever this function is not needed to activate, as assumed in other sections' diagrams, please keep *VCCS(pin13)* and *PC-DIS(pin14)* shorted ; otherwise, the power supply will have no output.

※ Caution: When this function is needed to activate, please keep VCCS(pin13) and PV-DIS(pin14) opened.

3.Remote ON-OFF Control

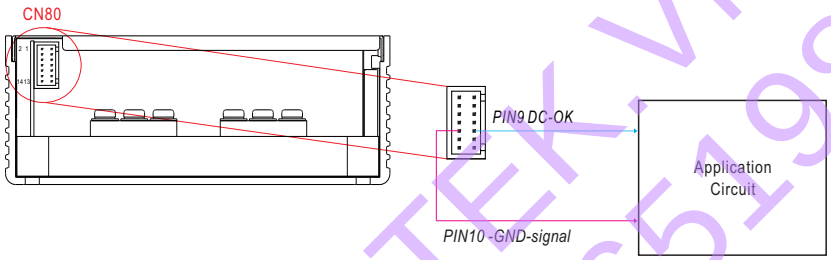
The power supply can be turned ON/OFF individually or along with other units in parallel by using the "Remote ON-OFF" function.



Remote ON-OFF	Power Supply Status
"Low" <0~0.5V or Short circuit	ON
"Hi" >2~5V or Open circuit	OFF

4.DC-OK Signal

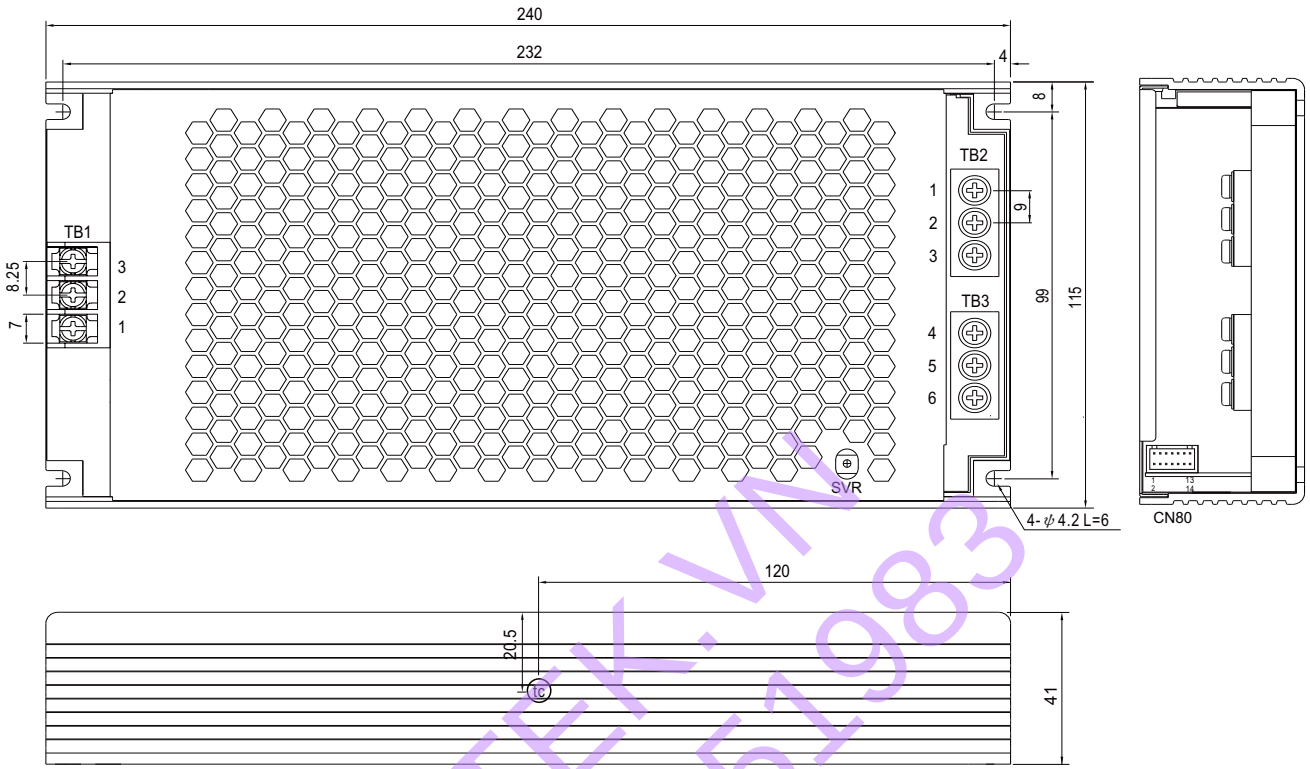
DC-OK signal is a TTL level signal. The maximum sink current is 10mA and the maximum external voltage is 5.6V.



DC-OK signal	Power Supply Status
"Hi" >4.5~5.5V	ON
"Low" <-0.1~0.5V	OFF

■ MECHANICAL SPECIFICATION

Case No.:272A Unit:mm



• ⓣc : Max. Case Temperature

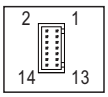
AC Input Terminal(TB1) Pin NO. Assignment

Pin No.	Assignment	Terminal	Max mounting torque
1	AC/L	DECA T42-ES11-03	13.8Kgf-cm
2	AC/N		
3	⏚		

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

Pin No.	Assignment	Terminal	Max mounting torque
1,2,3	+V	(MW) NEL-400	8Kgf-cm
4,5,6	-V		

※Control Pin No. Assignment(CN80): HRS DF11-14DP-2DS or equivalent



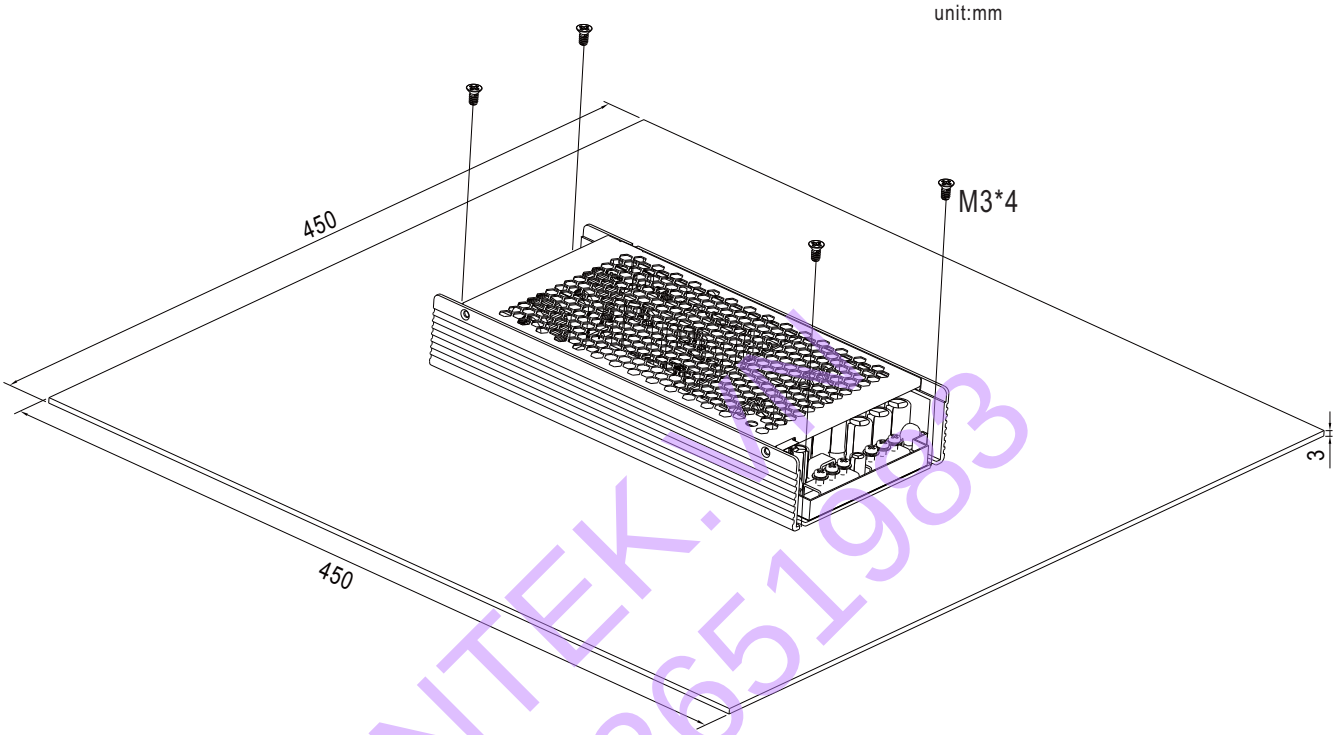
Mating Housing	HRS DF11-14DS or equivalent
Terminal	HRS DF11-**SC or equivalent

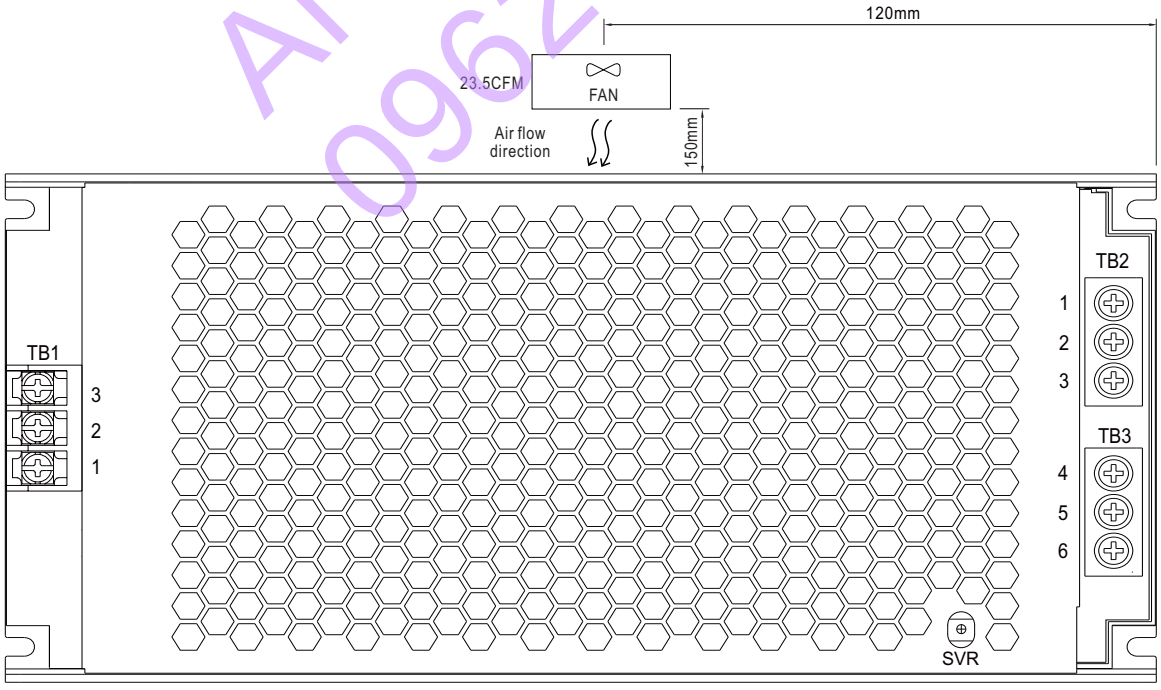
Pin No.	Function	Description
1,3	PV	Connection for output voltage programming.
2	PV-DIS	Short connecting between PV (pin1) and PV-DIS (pin2) if output voltage programming function is not activated.
4,8,10,12	GND (Signal)	Negative output voltage signal.
5	+12V-AUX	Auxiliary voltage output, 10.8~13.2V, referenced to GND-AUX (pin6). The maximum load current is 0.5A. This output is not controlled by “Remote ON-OFF”.
6	GND-AUX	Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V).
7	Remote ON-OFF	The unit can turn the output ON/OFF by electrical signal or dry contact between Remote ON/OFF. Short (0 ~ 0.5V): Power ON; Open (2 ~ 5V): Power OFF ; The maximum input voltage is 5.5V.
9	DC-OK	Low (-0.1 ~ 0.5V): When the Vout≦80%±5%. High (4.5 ~ 5.5V): When Vout≧80%±5%. The maximum sink current is 10mA and only for output.
11	PC	Connection for constant current level programming.
13	Vccs	Positive output voltage signal.
14	PC-DIS	Short connecting between Vccs (pin13) and PC-DIS (pin14) if output current programming function is not activated.

Operate with additional aluminum plate and fan

In order to meet the "Derating Curve" and the "Static Characteristics" , UHP-1000 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-1000 series must be firmly mounted at the center of the aluminum plate.

unit:mm





■ INSTALLATION MANUAL

Please refer to : http://www.meanwell.com/manual.html

1500W Conduction Cooling with PFC Switching Supply UHP-1500 series

UL62368-1 TPTC004 IEC62368-1

Household Automate Industrial Security Network Telecom

Features

- Slim and Low profile (41mm)
- Fanless and conduction-cooled design
- Built-in active PFC function
- -30~+70℃ working temperature
- Output voltage and constant current level programmable
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in remote ON-OFF control
- DC OK active signal
- Operating altitude up to 5000 meter (Note.7)
- LED indicator for power on
- Optional PMBus or CANBus protocol
- 5 years warranty

Certificates

- Safety: UL/EN62368-1
- EMC: EN55032 / 55024

Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipment or apparatus
- Test and measurement instrument
- Laser related machine
- Charging related equipment
- Household appliances

Description

UHP-1500 series is a 1500W 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 24V and 48V. In addition to the high efficiency up to 96%, that the whole series operates from -30℃ ~ 70℃ under air convection without fan. UHP-1500 has the complete protection functions and 5G anti-vibration capability; It is complied with the international safety regulations such as TUV EN62368-1, UL62368-1, and the design refers to EN61558-1 and EN60335-1. UHP-1500 series serves as a high performance power supply solution for various industrial applications.

Model Encoding

UHP - 1500 - 24 ☐

- ☐ Communication protocol option
- 24 Output voltage(24V/48V)
- 1500 Rated wattage
- UHP Series name

Type	Communication Protocol	Note
Blank	None	In Stock
PM	PMBus protocol	By request
CAN	CANBus protocol	By request

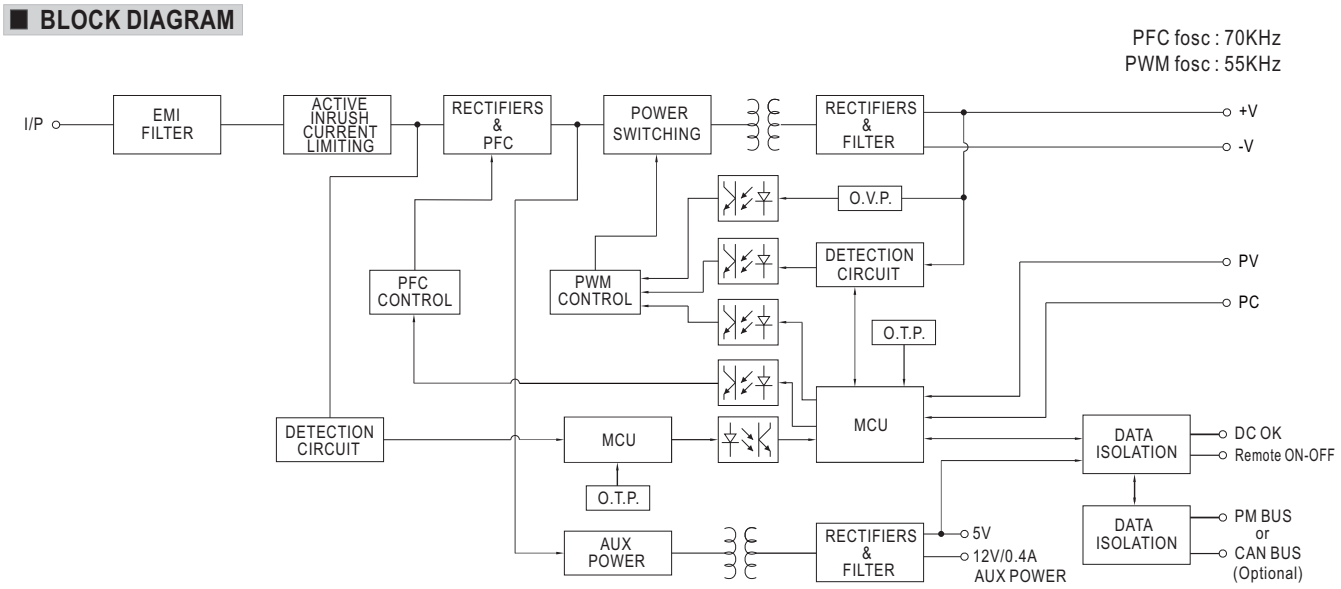
SPECIFICATION

MODEL		UHP-1500-24	UHP-1500-48
OUTPUT	DC VOLTAGE	24V	48V
	RATED CURRENT	62.5A	31.5A
	RATED POWER(convection)	1500W	1512W
	RIPPLE & NOISE (max.) Note.2	240mVp-p	350mVp-p
	VOLTAGE ADJ. RANGE	By built-in potentiometer, SVR	
		24~28.8V	48~57.6V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%
	LOAD REGULATION	±0.5%	±0.5%
	SETUP, RISE TIME	1800ms, 60ms/230VAC at full load	
	HOLD UP TIME (Typ.)	16ms/230VAC at 75% load 10ms/230VAC at full load	
INPUT	VOLTAGE RANGE Note.4	90 ~ 264VAC 250 ~ 370VDC	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF≥0.95/230VAC at full load	
	EFFICIENCY (Typ.)	95%	96%
	AC CURRENT (Typ.)	8A/230VAC	
	INRUSH CURRENT (Typ.)	Cold start 60A/230VAC	
	LEAKAGE CURRENT	<0.75mA / 240VAC	
PROTECTION	OVERLOAD	105~125% rated output power	
		Protection type : Constant current limiting, unit will shutdown after 5 sec, re-power on to recover.	
	SHORT CIRCUIT	Constant current limiting, unit will shutdown after 5 sec, re-power on to recover.	
	OVER VOLTAGE	30 ~ 35V	60 ~ 67V
		Protection type :Shut down O/P voltage,re-power on to recover	
	OVER TEMPERATURE	Protection type :Shut down O/P voltage, recovers automatically after temperature goes down	
FUNCTION	OUTPUT VOLTAGE PROGRAMMABLE(PV) Note 5	Adjustment of output voltage is allowable to 50 ~ 120% of nominal output voltage Please refer to the Function Manual.	
	OUTPUT CURRENT PROGRAMMABLE(PC) Note 5	Adjustment of constant current level is allowable to 20 ~ 100% of rated current. Please refer to the Function Manual.	
	REMOTE ON/OFF CONTROL	Power ON : Short circuit Power OFF : Open circuit	
	AUXILIARY POWER	12V @ 0.4A tolerance ±10%, ripple=150mVp-p	
	DC-OK SIGNAL	The TTL signal out, PSU turn on = 4.4 ~ 5.5V ; PSU turn off = -0.5 ~ 0.5V. Please refer to the Function Manual.	
ENVIRONMENT	WORKING TEMP.	-30 ~ +70℃ (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 90% 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	UL62368-1,TUV EN62368-1, EAC TP TC 004 approved; Design refers to EN61558-1, EN60335-1(by request)	
	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	**Parameter**	**Standard** / **Test Level / Note**
		Conducted	EN55032 (CISPR32) / Class B
		Radiated	EN55032 (CISPR32) / Class A
		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	181.47K hrs min. Telcordia SR-332 (Bellcore) ; 56.72K hrs min. MIL-HDBK-217F (25℃)	
	DIMENSION	290*140*41mm (L*W*H)	
	PACKING	2.51kg ; 6pcs/16.06kg/0.86CUFT	

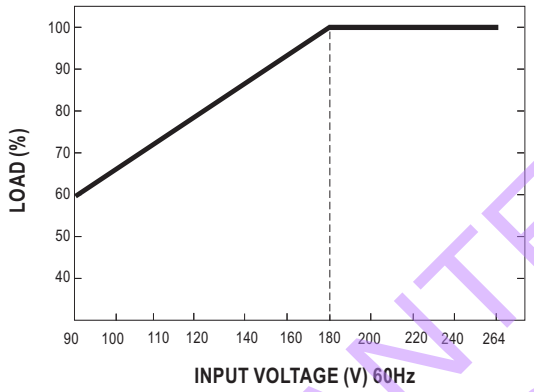
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance :includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. PV/PC functions when users do not use SVR.
6. 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 720mm*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 http://www.meanwell.com)
7. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).

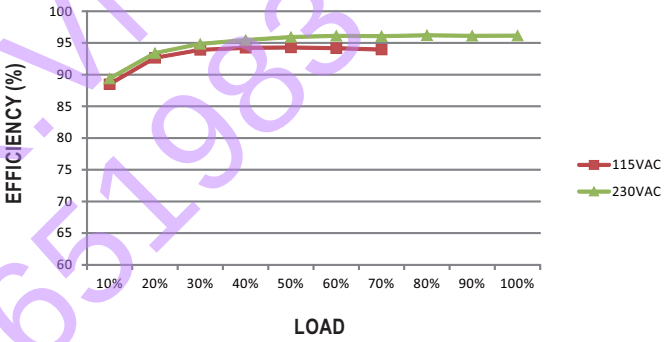
BLOCK DIAGRAM



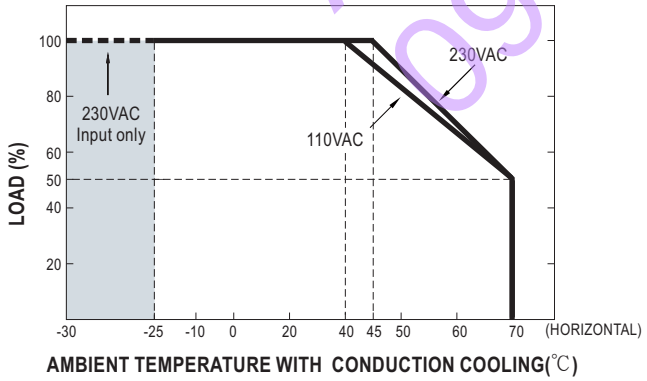
STATIC CHARACTERISTIC

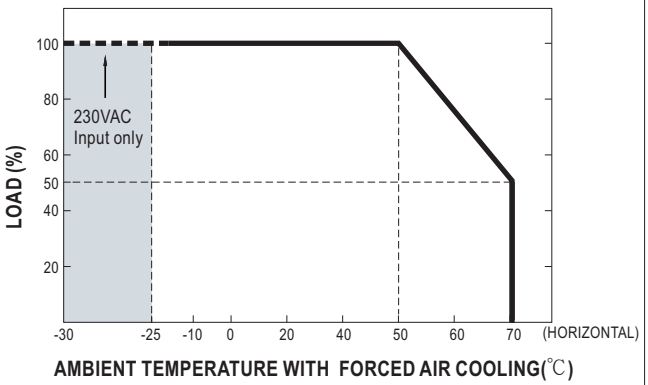


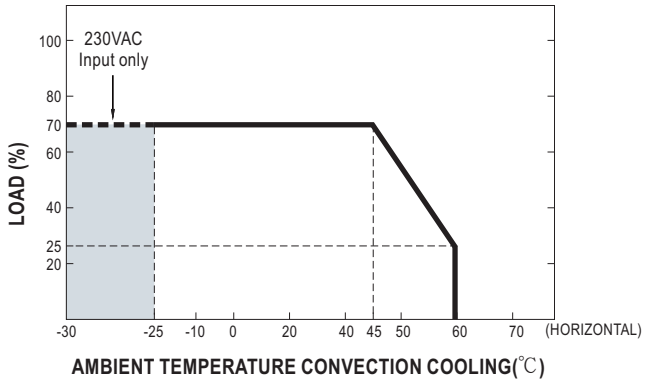
EFFICIENCY VS LOAD (48V MODEL)

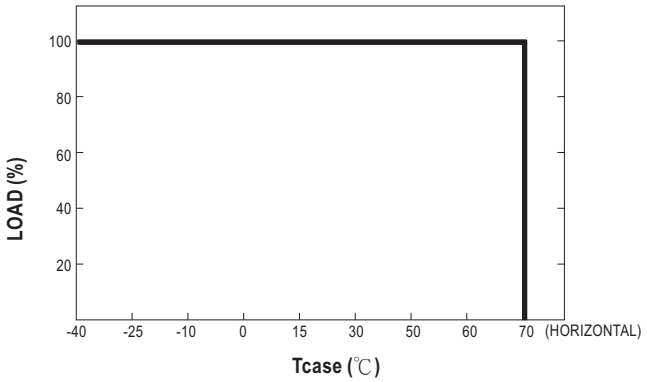


DERATING CURVE





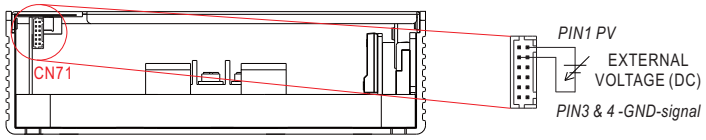


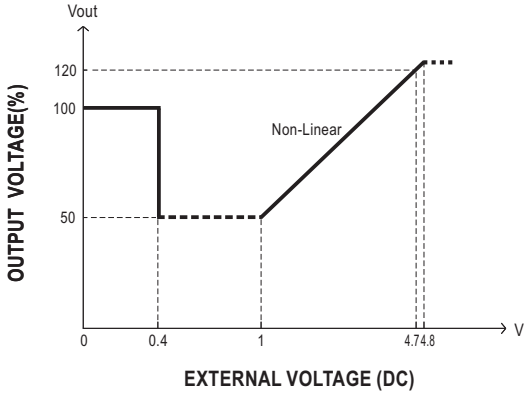


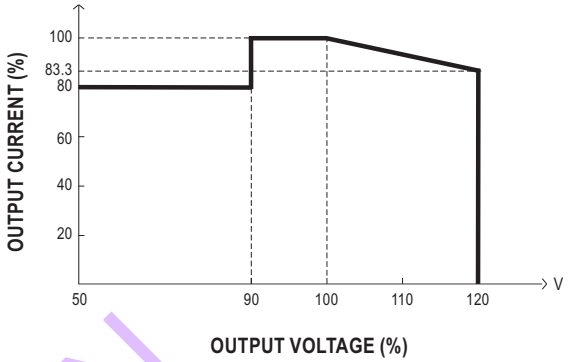
■ FUNCTION MANUAL

1.Output Voltage Programming (or, PV / remote voltage programming / remote adjust / margin programming / dynamic voltage trim)

※ In addition to the adjustment via the built-in potentiometer, the output voltage can be trimmed by applying EXTERNAL VOLTAGE.



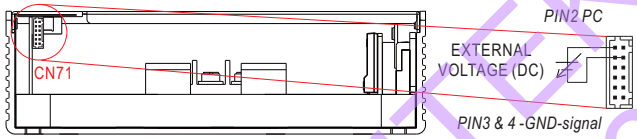


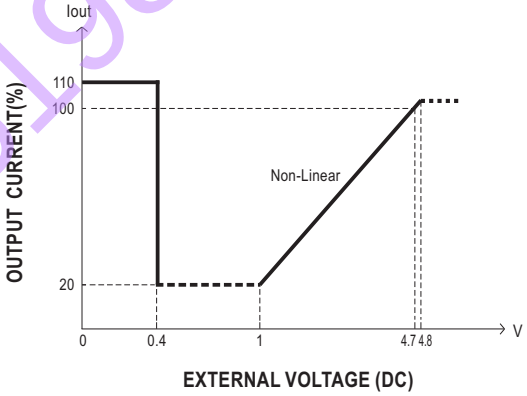


◎ The rated current should change with the Output Voltage Programming accordingly.

2.Constant Current Programming (or, PC / remote current programming / dynamic current trim)

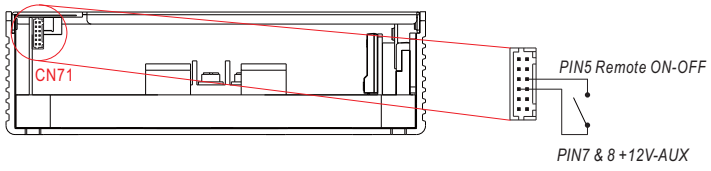
※ The output current can be trimmed to 20~100% of the rated current by applying EXTERNAL VOLTAGE.





3.Remote ON-OFF Control

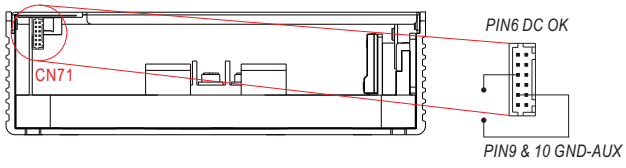
The power supply can be turned ON/OFF individually or along with other units in parallel by using the "Remote ON-OFF" function.



Remote ON-OFF	Power Supply Status
Short circuit	ON
Open circuit	OFF

4.DC-OK Signal

DC-OK signal is a TTL level signal. The maximum sink current is 10mA and the maximum external voltage is 5.6V.



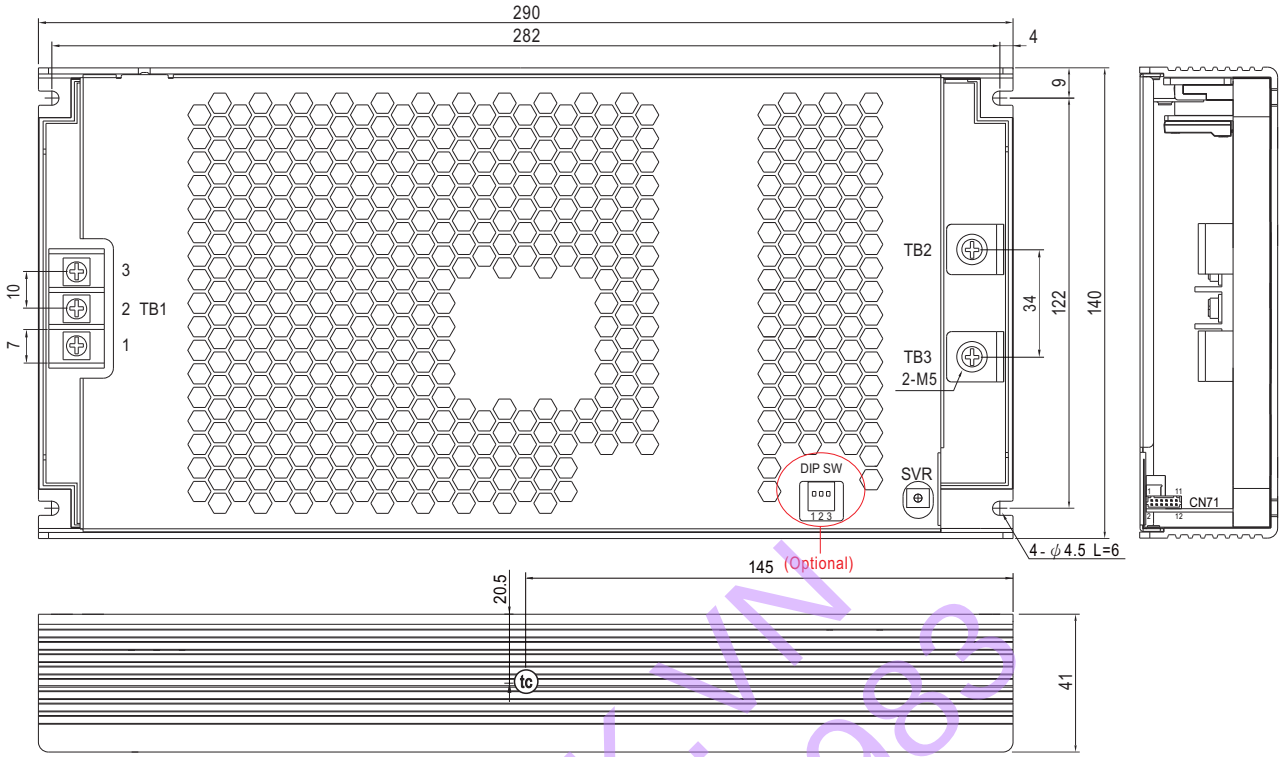
DC-OK signal	Power Supply Status
“High” >4.4~5.5V	ON
“Low” <-0.5~0.5V	OFF

5.PMBus Communication Interface

UHP-1500 supports PMBus Rev. 1.1 with maximum 100KHz bus speed, allowing information reading, status monitoring, output trimming, etc. For details, please refer to the Function Manual.

■ MECHANICAL SPECIFICATION

Case No.277A Unit:mm



• ⓣc : Max. Case Temperature

AC Input Terminal(TB1) Pin NO. Assignment

Pin No.	Assignment	Terminal	Max mounting torque
1	AC/L	DECA T25	18Kgf-cm
2	AC/N		
3	⏚		

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

Pin No.	Assignment	Terminal	Max mounting torque
TB2	+V	(MW) HS455A	8Kgf-cm
TB3	-V		

※DIP SW:

Pin No.	Function	Description
1	A0	PMBus / CANBus interface address switch.
2	A1	
3	A2	

※Control Pin No. Assignment(CN71) : HRS DF11-12DP-2DS or equivalent

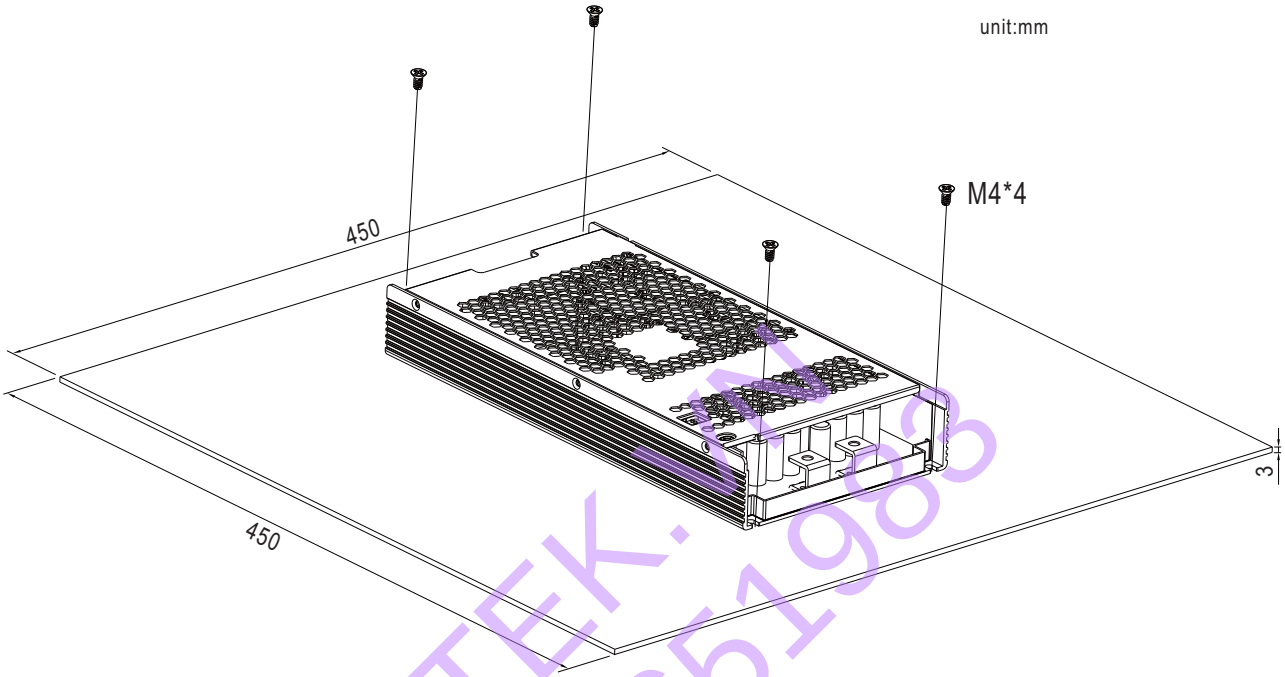
Mating Housing	HRS DF11-12DS or equivalent
Terminal	HRS DF11-**SC or equivalent

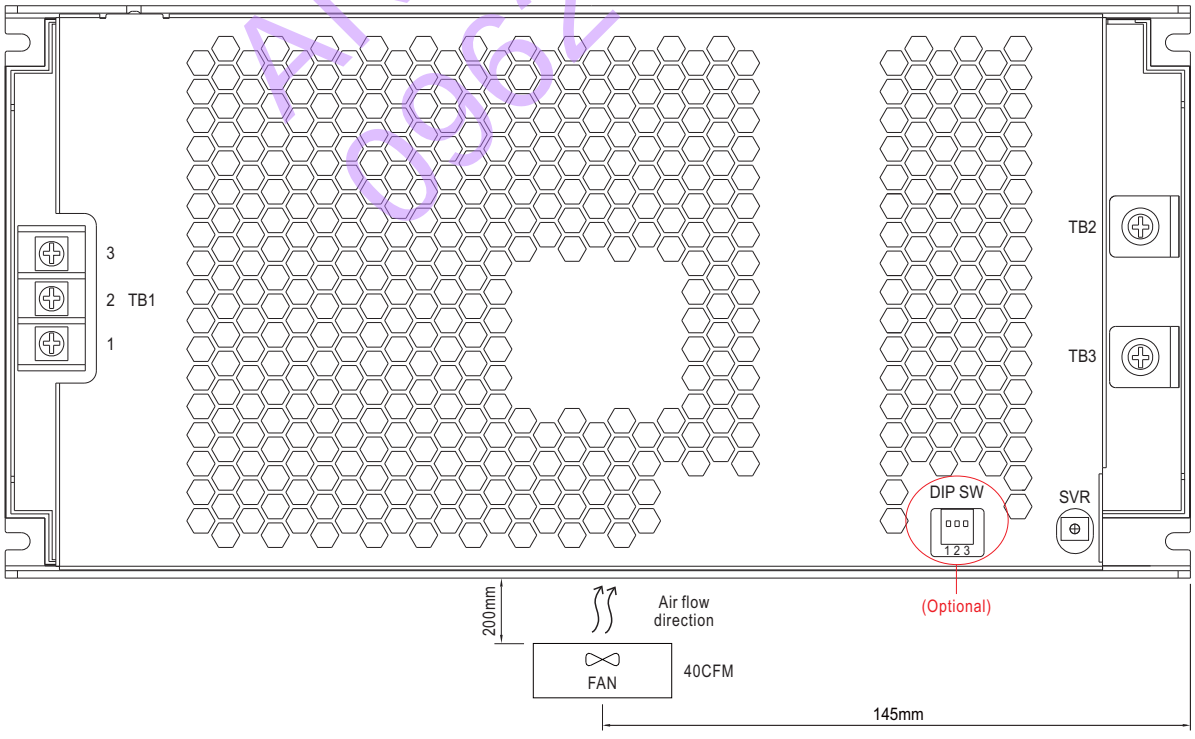
Pin No.	Function	Description
1	PV	Connection for output voltage programming.(Note1)
2	PC	Connection for constant current level programming.(Note.1)
3,4	GND (Signal)	Negative output voltage signal.
5	Remote ON-OFF	The unit can turn the output ON/OFF by dry contact between Remote ON/OFF and 12-AUX.(Note.2) Short (10.8 ~ 13.2V) : Power ON ; Open(0 ~ 0.5V) : Power OFF ; The maximum input voltage is 13.2V
6	DC-OK	Low (-0.5 ~ 0.5V) : When the Vout≦80%±6%. High (4.4 ~ 5.5V) : When Vout≧80%±6%. The maximum sourcing current is 10mA and only for output.(Note.2)
7,8	+12V-AUX	Auxiliary voltage output, 10.6~13.2V, referenced to GND-AUX (pin3 & 4). The maximum load current is 0.4A. This output is not controlled by "Remote ON-OFF".
9,10	GND-AUX	Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V).
11	SDA	For PMBus model: Serial Data used in the PMBus interface. (Note.2)
	CANH	For CANBus model: Data line used in CANBus interface. (Note.2)
12	SCL	For PMBus model: Serial Clock used in the PMBus interface. (Note.2)
	CANL	For CANBus model: Data line used in CANBus interface. (Note.2)

Note1: Non-isolated signal, referenced to [GND(signal)].
Note2: Isolated signal, referenced to GND-AUX.

Operate with additional aluminum plate

In order to meet the"Derating Curve"and the "Static Characteristics" ,UHP-1500 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-1500 series must be firmly mounted at the center of the aluminum plate.





■ INSTALLATION MANUAL

Please refer to : http://www.meanwell.com/manual.html

UL62368-1 TPTC004 IEC62368-1

Household Automate Industrial Security Network Telecom

Features

- Slim and Low profile (60mm)
- Fanless and conduction-cooled design
- Built-in active PFC function
- -30~+70℃ working temperature
- Output voltage and constant current level programmable
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Built-in remote ON-OFF control
- DC OK active signal
- Operating altitude up to 5000 meter (Note.7)
- LED indicator for power on
- Optional PMBus or CANBus protocol
- 5 years warranty

Certificates

- Safety: UL/EN62368-1
- EMC: EN55032 / 55024

Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipment or apparatus
- Test and measurement instrument
- Laser related machine
- Charging related equipment
- Household appliances

Description

UHP-2500 series is a 2500W single-output slim type power supply with 60mm of low profile design. Adopting the full range 90~264VAC input, the entire series provides an output voltage line of 24V and 48V. In addition to the high efficiency up to 96%, that the whole series operates from -30℃~ 70℃ under air convection without fan. UHP-2500 has the complete protection functions and 2G anti-vibration capability; It is complied with the international safety regulations such as TUV EN62368-1, UL62368-1, and design refers to EN61558-1 and EN60335-1. UHP-2500 series serves as a high performance power supply solution for various industrial applications.

Model Encoding

UHP - 2500 - 24 ☐

- ☐ Communication protocol option
- 24 Output voltage(24V/48V)
- 2500 Rated wattage
- UHP Series name

Type	Communication Protocol	Note
Blank	None	In Stock
PM	PMBus protocol	By request
CAN	CANBus protocol	By request

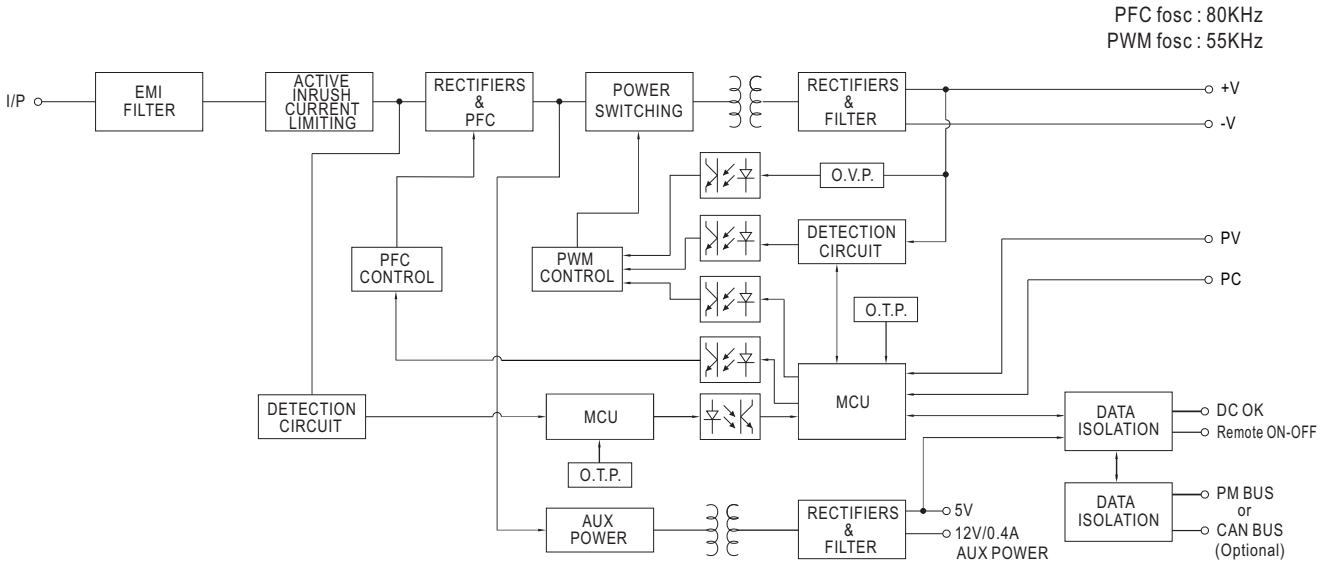
SPECIFICATION

MODEL		UHP-2500-24	UHP-2500-48
OUTPUT	DC VOLTAGE	24V	48V
	RATED CURRENT	104.2A	52.1A
	RATED POWER(convection)	2500.8W	2500.8W
	RIPPLE & NOISE (max.) Note.2	300mVp-p	480mVp-p
	VOLTAGE ADJ. RANGE	By built-in potentiometer, SVR	
		24~28.8V	48~57.6V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±0.5%
	SETUP, RISE TIME	1800ms, 60ms/230VAC at full load	
	HOLD UP TIME (Typ.)	16ms/230VAC at 75% load 10ms/230VAC at full load	
INPUT	VOLTAGE RANGE Note.4	90 ~ 264VAC 250 ~ 370VDC	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF≥0.95/230VAC at full load	
	EFFICIENCY (Typ.)	95%	96%
	AC CURRENT (Typ.)	14.3A/230VAC	
	INRUSH CURRENT (Typ.)	Cold start 60A/230VAC	
	LEAKAGE CURRENT	<0.75mA / 240VAC	
PROTECTION	OVERLOAD	105 ~ 115% rated output power	
		Protection type : Constant current limiting, unit will shutdown after 5 sec. re-power on to recover.	
	OVER VOLTAGE	30 ~ 35V	60 ~ 67V
		Protection type :Shut down O/P voltage,re-power on to recover	
	OVER TEMPERATURE	Protection type :Shut down O/P voltage, recovers automatically after temperature goes down	
FUNCTION	OUTPUT VOLTAGE PROGRAMMABLE(PV) Note 5	Adjustment of output voltage is allowable to 50 ~ 120% of nominal output voltage Please refer to the Function Manual.	
	OUTPUT CURRENT PROGRAMMABLE(PC) Note 5	Adjustment of constant current level is allowable to 20 ~ 100% of rated current. Please refer to the Function Manual.	
	REMOTE ON/OFF CONTROL	Power ON : Short circuit Power OFF : Open circuit	
	AUXILIARY POWER	12V@0.4A tolerance±10%, ripple 150mVp-p	
	DC-OK SIGNAL	The TTL signal out, PSU turn on = 4.5 ~ 5.5V ; PSU turn off = -0.5 ~ 0.5V. Please refer to the Function Manual.	
ENVIRONMENT	WORKING TEMP.	-30 ~ +70℃ (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 90% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH non-condensing	
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)	
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes	
SAFETY & EMC (Note.6)	SAFETY STANDARDS	UL62368-1,TUV EN62368-1, EAC TP TC 004 approved; design refers to EN61558-1, EN60335-1(by request)	
	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	**Parameter**	**Standard** / **Test Level / Note**
		Conducted	EN55032 (CISPR32) / Class B
		Radiated	EN55032 (CISPR32) / Class A
		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	166.12K hrs min. Telcordia SR-332 (Bellcore) ; 48.91K hrs min. MIL-HDBK-217F (25℃)	
	DIMENSION	310*140*60mm (L*W*H)	
	PACKING	3.5kg; 4pcs/15kg/1.76CUFT	

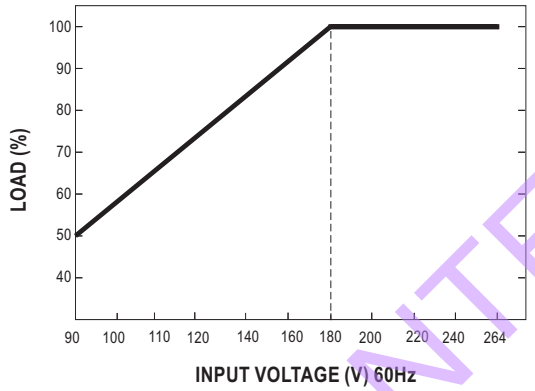
NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance :includes set up tolerance, line regulation and load regulation.
4. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. PV/PC functions when users do not use SVR.
6. 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 1100mm*650mm 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 http://www.meanwell.com)
7. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).

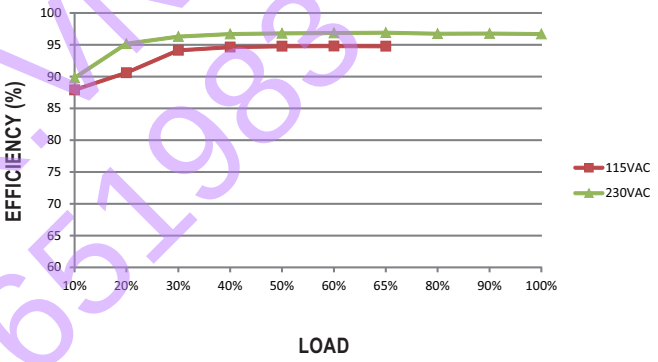
BLOCK DIAGRAM

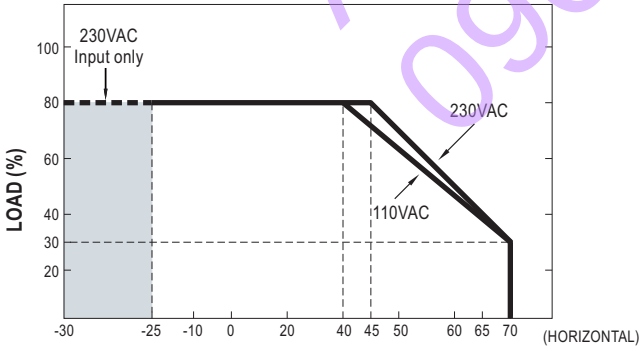


STATIC CHARACTERISTIC

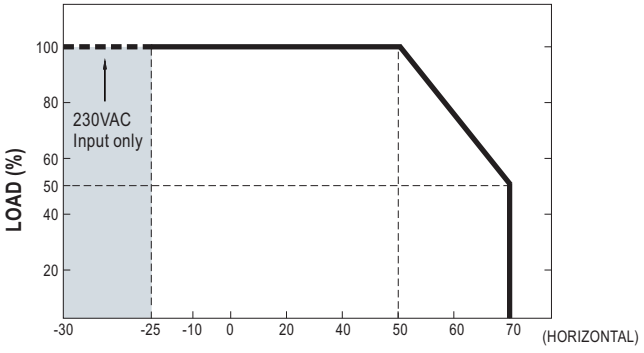


EFFICIENCY VS LOAD (48V MODEL)

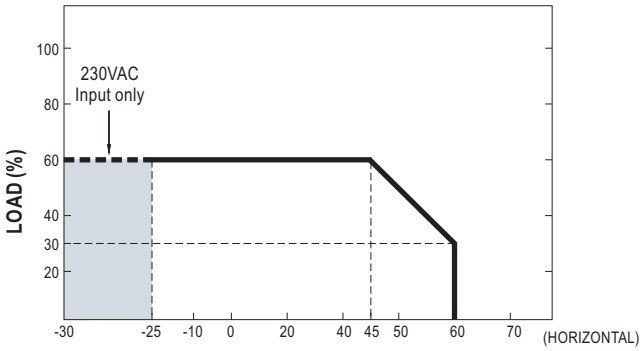




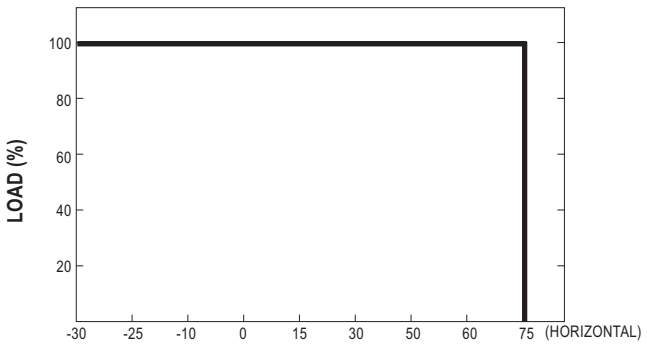
AMBIENT TEMPERATURE WITH ADDITIONAL ALUMINUM PLATE(℃)
(450x450x3mm)



AMBIENT TEMPERATURE WITH 45CFM FAN(℃)



AMBIENT TEMPERATURE WITHOUT ALUMINUM PLATE(℃)

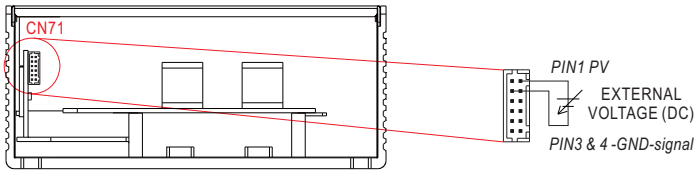


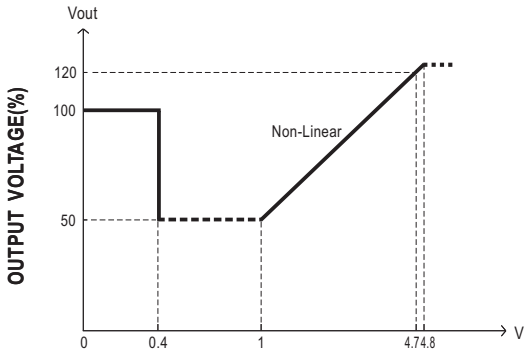
Tcase (℃)

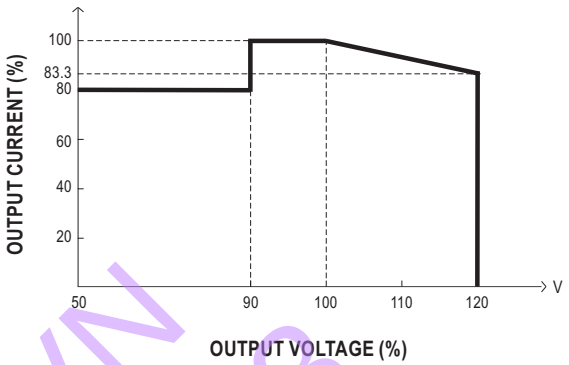
■ FUNCTION MANUAL

1.Output Voltage Programming (or, PV / remote voltage programming / remote adjust / margin programming / dynamic voltage trim)

※ In addition to the adjustment via the built-in potentiometer, the output voltage can be trimmed by applying EXTERNAL VOLTAGE.



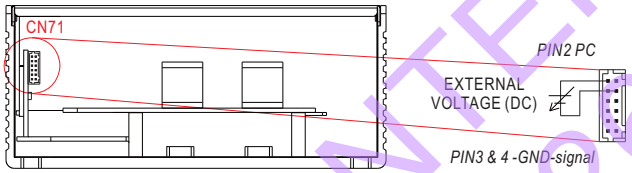


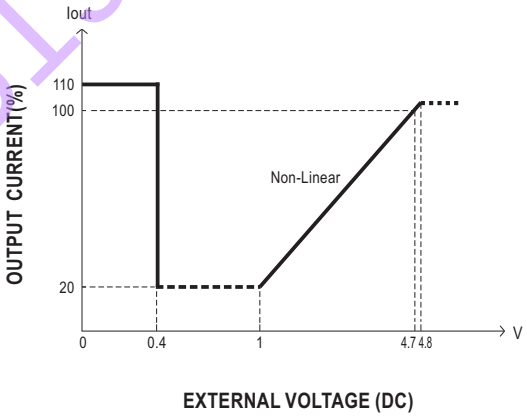


◎ The rated current should change with the Output Voltage Programming accordingly.

2.Constant Current Programming (or, PC / remote current programming / dynamic current trim)

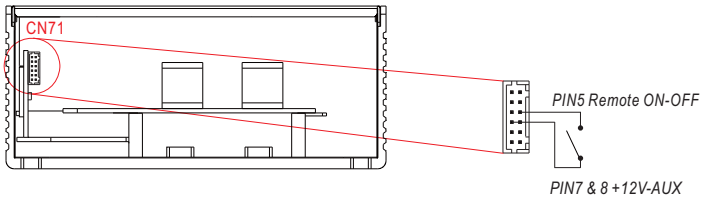
※ The output current can be trimmed to 20~100% of the rated current by applying EXTERNAL VOLTAGE.





3.Remote ON-OFF Control

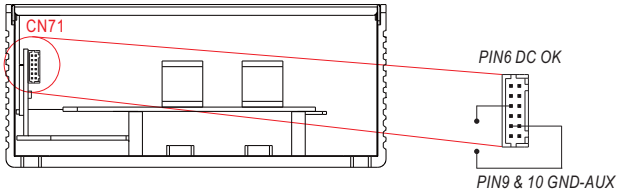
The power supply can be turned ON/OFF individually or along with other units in parallel by using the "Remote ON-OFF" function.



Remote ON-OFF	Power Supply Status
Short circuit	ON
Open circuit	OFF

4.DC-OK Signal

DC-OK signal is a TTL level signal. The maximum sourcing current is 10mA.



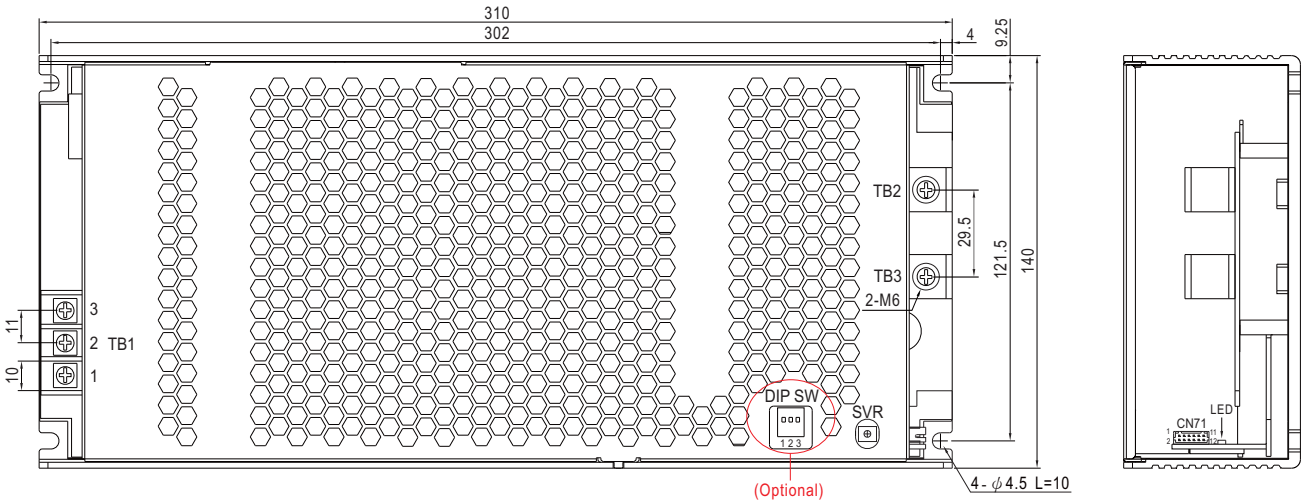
DC-OK signal	Power Supply Status
"High" >4.5~5.5V	ON
"Low" <-0.5~0.5V	OFF

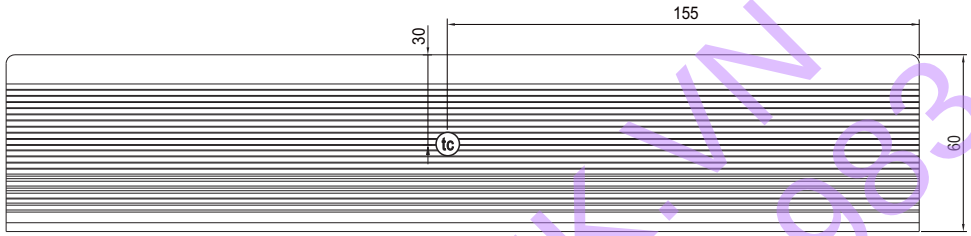
5.PMBus Communication Interface

UHP-2500 supports PMBus Rev. 1.1 with maximum 100KHz bus speed, allowing information reading, status monitoring, output trimming, etc. For details, please refer to the Function Manual.

■ MECHANICAL SPECIFICATION

Case No.276A Unit:mm





• tc : Max. Case Temperature

AC Input Terminal(TB1) Pin NO. Assignment

Pin No.	Assignment	Terminal	Max mounting torque
1	AC/L	DECA T36	13Kgf-cm
2	AC/N		
3	⏚		

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

Pin No.	Assignment	Terminal	Max mounting torque
TB2	+V	(MW) HS147	8Kgf-cm
TB3	-V		

※DIP SW(Optional):

Pin No.	Function	Description
1	A0	PMBus / CANBus interface address switch.
2	A1	
3	A2	

※Control Pin No. Assignment(CN71) : HRS DF11-12DP-2DS or equivalent

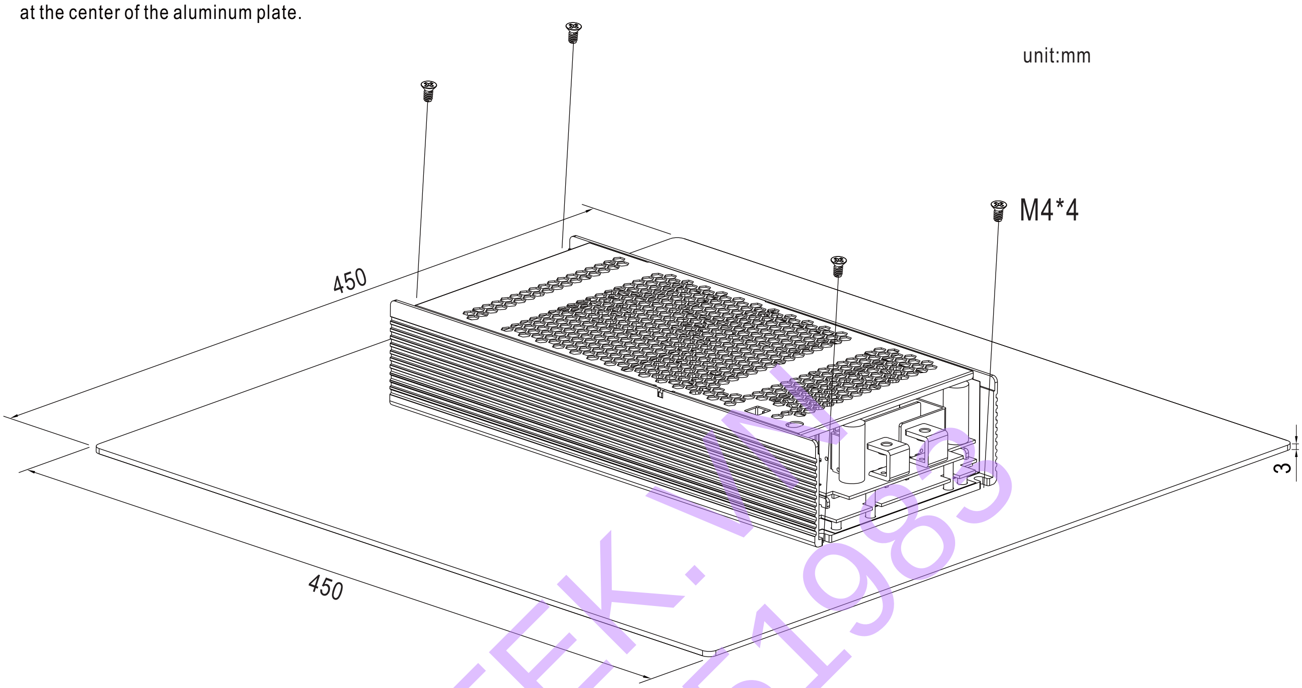
Mating Housing	HRS DF11-12DS or equivalent
Terminal	HRS DF11-**SC or equivalent

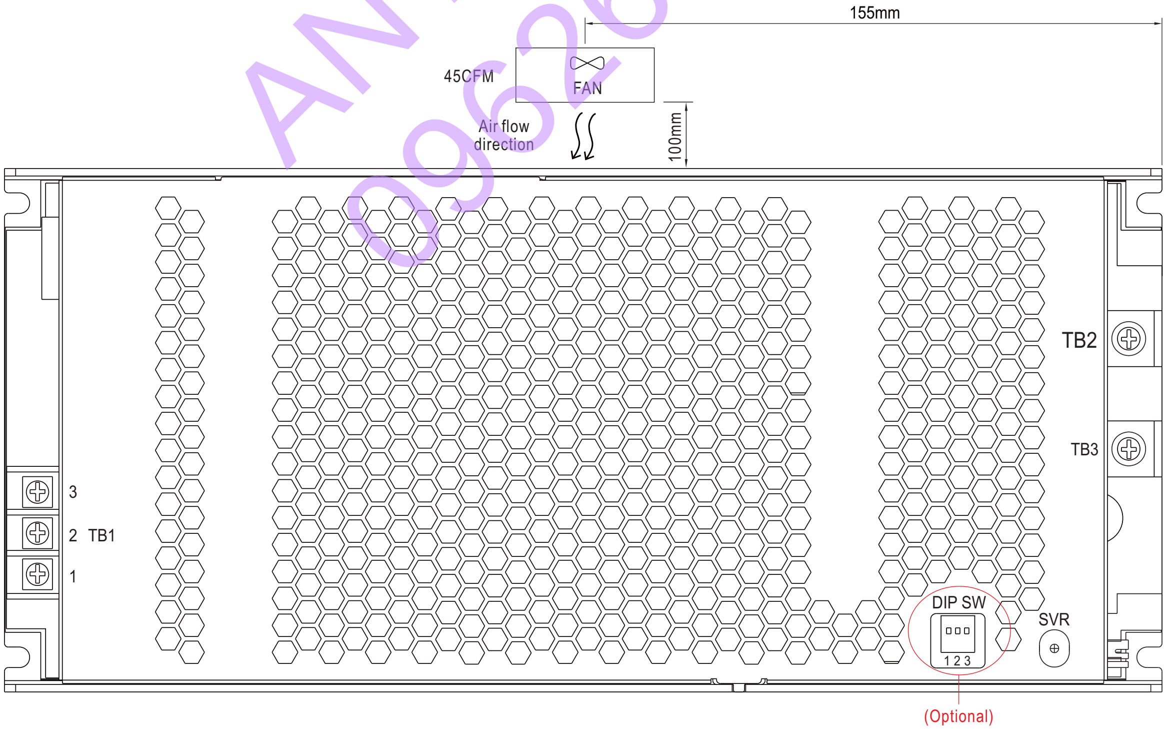
Pin No.	Function	Description
1	PV	Connection for output voltage programming.(Note1)
2	PC	Connection for constant current level programming.(Note.1)
3,4	GND (Signal)	Negative output voltage signal.
5	Remote ON-OFF	The unit can turn the output ON/OFF by dry contact between Remote ON/OFF and 12-AUX.(Note.2) Short (10.8 ~ 13.2V) : Power ON ; Open(0 ~ 0.5V) : Power OFF ; The maximum input voltage is 13.2V
6	DC-OK	Low (-0.5 ~ 0.5V) : When the Vout≦77%±6%. High (4.5 ~ 5.5V) : When Vout≧80%±6%. The maximum sourcing current is 10mA and only for output.(Note.2)
7,8	+12V-AUX	Auxiliary voltage output, 10.8~13.2V, referenced to GND-AUX (pin3 & 4). The maximum load current is 0.4A. This output is not controlled by "Remote ON-OFF".
9,10	GND-AUX	Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V).
11	SDA	For PMBus model: Serial Data used in the PMBus interface. (Note.2)
	CANH	For CANBus model: Data line used in CANBus interface. (Note.2)
12	SCL	For PMBus model: Serial Clock used in the PMBus interface. (Note.2)
	CANL	For CANBus model: Data line used in CANBus interface. (Note.2)

Note1: Non-isolated signal, referenced to [GND(signal)].
Note2: Isolated signal, referenced to GND-AUX.

Operate with additional aluminum plate and fan

In order to meet the “Derating Curve” and the “Static Characteristics” , UHP-2500 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-2500 series must be firmly mounted at the center of the aluminum plate.





■ INSTALLATION MANUAL

Please refer to : http://www.meanwell.com/manual.html