



## ■ Features :

- Universal AC input / Full range
- Withstand 300VAC surge input for 5 seconds
- Built-in active PFC function
- Low leakage current<1mA
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Low profile:31mm
- Conformal coated
- LED indicator for power on
- 3 years warranty

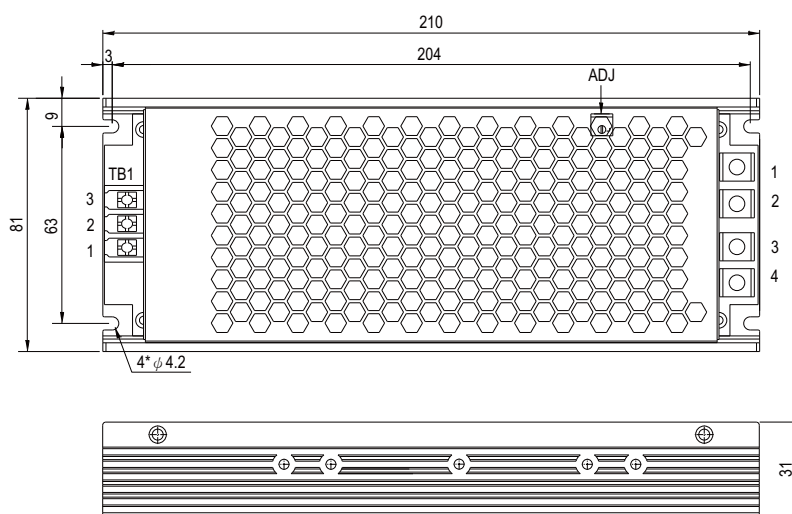


## SPECIFICATION

MODEL		HSP-300-2.8		HSP-300-4.2		HSP-300-5	
OUTPUT	DC VOLTAGE	2.8V		4.2V		5V	
	RATED CURRENT	60A		60A		60A	
	CURRENT RANGE <small>Note.5</small>	0 ~ 60A		0 ~ 60A		0 ~ 60A	
	RATED POWER(convection)	168W		252W		300W	
	RIPPLE & NOISE (max.) <small>Note.2</small>	110mVp-p		150mVp-p		150mVp-p	
	VOLTAGE ADJ. RANGE	2.5~3V		3.6~4.4V		4.5~5.5V	
	VOLTAGE TOLERANCE <small>Note.3</small>	±2.0%		±2.0%		±2.0%	
	LINE REGULATION	±0.5%		±0.5%		±0.5%	
	LOAD REGULATION	±1.0%		±1.0%		±1.0%	
	SETUP, RISE TIME	2000ms, 100ms/230VAC      3000ms, 100ms/115VAC at full load					
HOLD UP TIME (Typ.)	8ms/230VAC      8ms/115VAC at full load						
INPUT	VOLTAGE RANGE <small>Note.4</small>	180 ~ 264VAC      254 ~ 370VDC or 90~135VAC      127~190VDC					
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF ≥0.93/230VAC      PF ≥0.98/115VAC at full load					
	EFFICIENCY (Typ.)	80%				85%	
	AC CURRENT (Typ.)	2.8A/115VAC      1.4A/230VAC		3.9A/115VAC      1.95A/230VAC		4.7A/115VAC      2.35A/230VAC	
	INRUSH CURRENT (Typ.)	Cold start 30A/115VAC 60A/230VAC					
	LEAKAGE CURRENT	<1mA / 240VAC					
PROTECTION	OVERLOAD	105~135% rated output power Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	SHORT CIRCUIT	Protection type : Hiccup mode, recovers automatically after fault condition is removed					
	OVER VOLTAGE	3.22 ~ 3.78V		4.6 ~ 5.4V		5.7 ~ 7.0V	
		Protection type : Shut down o/p voltage, re-power on to recover					
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after fault condition is removed					
ENVIRONMENT	WORKING TEMP.	-30 ~ +70℃ (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 90% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH					
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 60℃ )					
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes					
SAFETY & EMC <small>(Note 5)</small>	SAFETY STANDARDS	UL60950-1,EN60950-1 approved; Refer to CCC GB4943.1-2011					
	WITHSTAND VOLTAGE	I/P-O/P:3.0KVAC    I/P-FG:2.0KVAC    O/P-FG:0.5KVAC					
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC/25℃ / 70%RH					
	EMC EMISSION	Compliance to EN55022 (CISPR22) Class B,EN61000-3-2,EN61000-3-3,GB9254-2008					
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11;EN55024, light industry level (surge 4KV), criteria A,GB17625.1-2003					
OTHERS	MTBF	263.2K hrs min.      MIL-HDBK-217F (25℃)					
	DIMENSION	210*81*31mm (L*W*H)					
	PACKING	0.8kg; 15pcs/ 12.1kg/ 0.7CUFT					
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 static characteristics for more details. 5. Please refer to "Static Characteristics". 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.						

## Mechanical Specification

CASE NO.: 233B Unit:mm



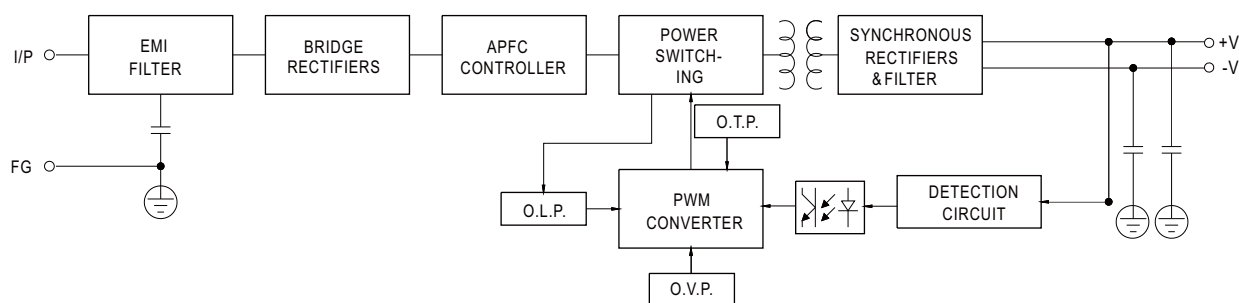
AC Input Terminal(TB1) pin NO. Assignment

Pin No.	Assignment	Terminal
1	AC/L	DG28C-B-03P-13-00AH
2	AC/N	
3	⏏	

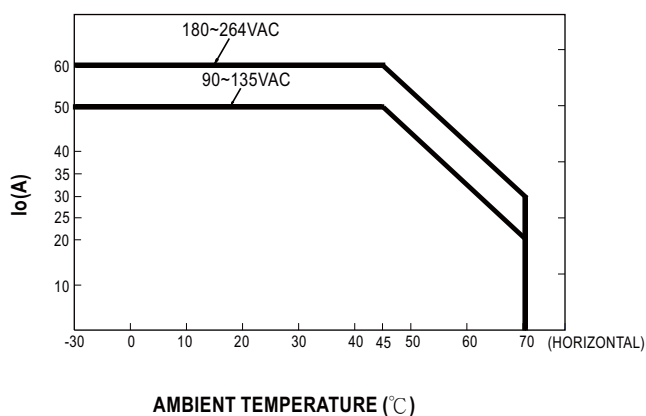
DC Output Terminal pin NO. Assignment

Pin No.	Assignment	Terminal
1,2	+V	NEL-400-02P
3,4	-V	

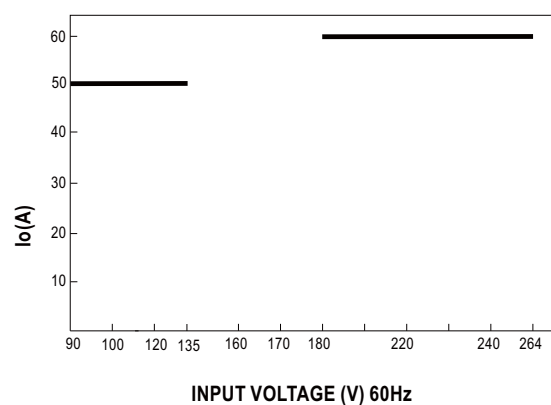
## Block Diagram



## Derating Curve



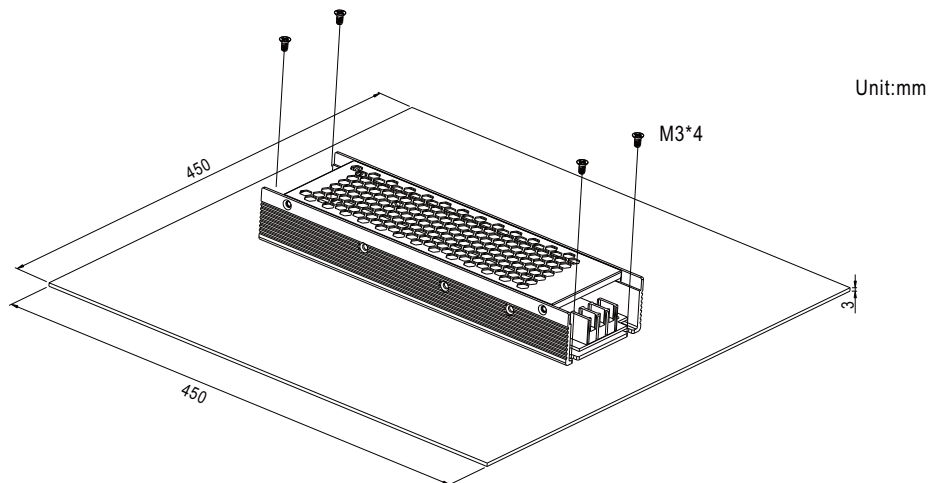
## Static Characteristics



## ■ Installation

### 1. Operate with additional aluminum plate

In order to meet the "Derating Curve" and the "Static Characteristics", HSP-300 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 HSP-300 series must be firmly mounted at the center of the aluminum plate.



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

