



## ■ 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

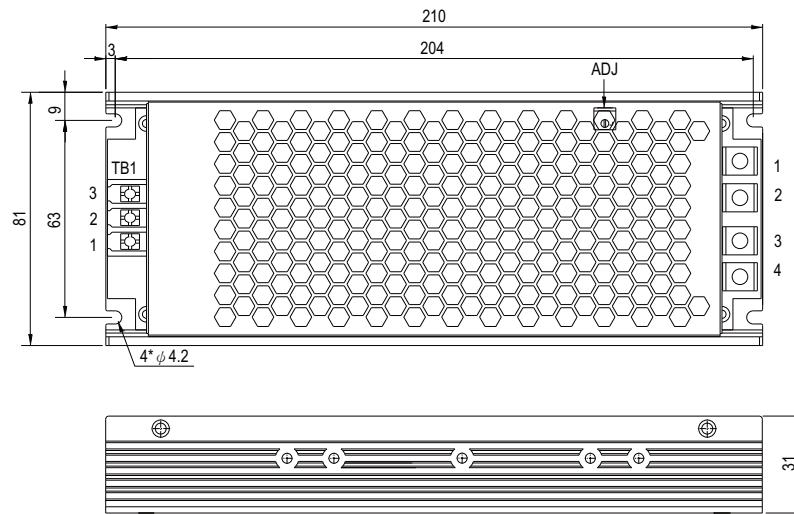
## SPECIFICATION



MODEL	HSP-300-2.8	HSP-300-4.2	HSP-300-5
OUTPUT	DC VOLTAGE	2.8V	4.2V
	RATED CURRENT	60A	60A
	CURRENT RANGE Note.5	0 ~ 60A	0 ~ 60A
	RATED POWER(convective)	168W	252W
	RIPLLE & NOISE (max.) Note.2	110mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	2.5~3V	3.6~4.4V
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%
	LINE REGULATION	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%
	SETUP, RISE TIME	2000ms, 100ms/230VAC	3000ms, 100ms/115VAC at full load
INPUT	HOLD UP TIME (Typ.)	8ms/230VAC	8ms/115VAC at full load
	VOLTAGE RANGE Note.4	180 ~ 264VAC	254 ~ 370VDC or 90~135VAC
	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
PROTECTION	INRUSH CURRENT (Typ.)	Cold start 30A/115VAC	60A/230VAC
	LEAKAGE CURRENT	<1mA / 240VAC	
	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	
ENVIRONMENT	OVER VOLTAGE	3.22 ~ 3.78V	4.6 ~ 5.4V
		Protection type : Shut down o/p voltage, re-power on to recover	5.7 ~ 7.0V
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after fault condition is removed	
	WORKING TEMP.	-30 ~ +70°C (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 90% RH non-condensing	
SAFETY & EMC (Note 5)	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)	
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes	
	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
OTHERS	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC/25°C / 70%RH	O/P-FG:0.5KVAC
	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	
	MTBF	263.2K hrs min.	MIL-HDBK-217F (25°C)
	DIMENSION	210*81*31mm (L*W*H)	
NOTE	PACKING	0.8kg; 15pcs/ 12.1kg/ 0.7CUFT	
	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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



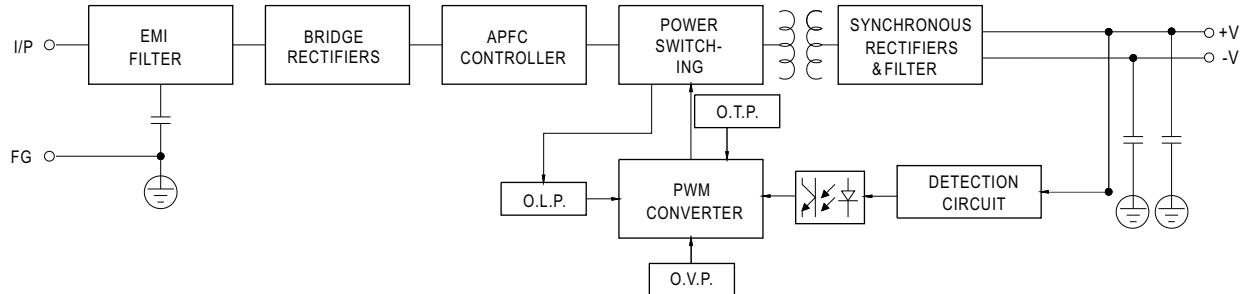
## AC Input Terminal(TB1) pin NO. Assignment

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

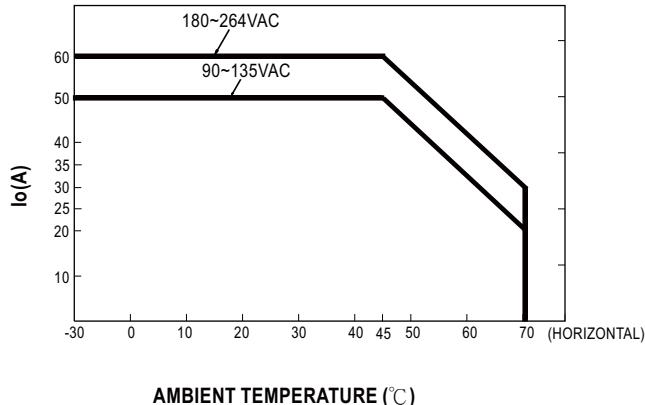
## DC Output Terminal pin NO. Assignment

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

## ■ Block Diagram

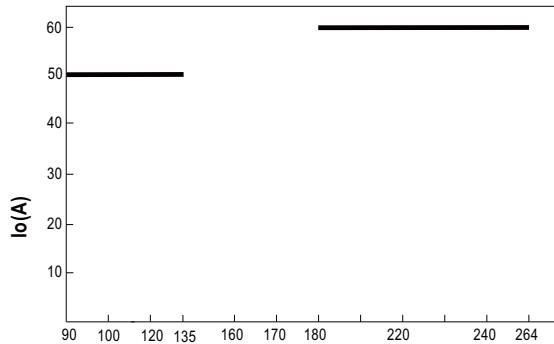


## ■ Derating Curve



AMBIENT TEMPERATURE (°C)

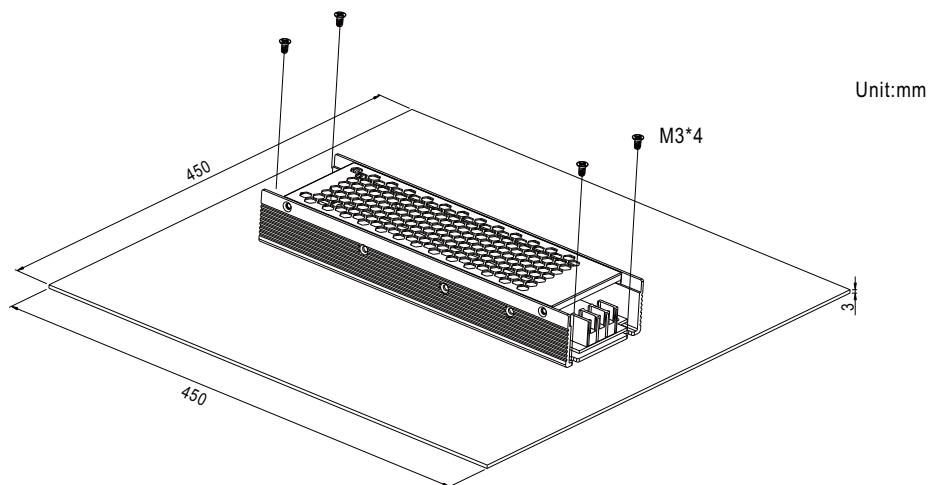
## ■ Static Characteristics



INPUT VOLTAGE (V) 60Hz

**■ 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:

