

600 Watts
AC-DC Switching Power Supply

KEY FEATURES

- Universal Input: 90-264 VAC
- With P.F.C. Function, PF>0.95
- Remote ON/OFF Function
- Current Share Function
- Power Good Function
- High Efficiency up to 90~93%
- Protections: Over Load / Over Voltage /Over Temperature / Short Circuit
- High Power Density
- RoHS Compliant Design



ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.		HD600-112	HD600-124	HD600-148	HD600-154
Max Output Wattage (Convection) (W)		540W	600W	600W	600W
Input	Voltage	90-264 VAC or 120-370 VDC			
	Frequency (Hz)	47-63 Hz			
	Current (Full load)	< 8.0 A max. (115 VAC) / < 3.5 A max. (230 VAC)			
	Inrush Current (<2ms)	< 15 A max. (115 VAC) / < 30 A max. (230 VAC)			
	Leakage Current	< 3.5 mA max.(240VAC 63Hz)			
	Power Factor	PF>0.99 (115 VAC) / PF>0.95 (230 VAC) at Full Load			
Output	Voltage (V.DC.)	12V	24V	48V	54V
	Trim	±5%			
	Voltage Accuracy	±2%			
	Current (Convection) (A) max	45	25	12.5	11.1
	Line Regulation (LL-HL) (typ.)	±1%			
	Load Regulation (5-100%) (typ.)	±1%			
	Minimum Load	1%			
	Maximum Capacitive Load	60,000 uF	50,000 uF	20,000 uF	10,000 uF
	Ripple & Noise (max.)	< 1% Vout			
	Efficiency (typ.)	90%	92%	92%	93%
	Hold-up Time	12 ms min.			
Protection	Over Power Protection	Auto recovery			
	Over Voltage Protection	Auto recovery			
	Over Temperature	Auto recovery			
	Short Circuit Protection	Latch off			
Isolation	Input-Output (V.AC)	3000VAC or 4242VDC			
	Input-FG (V.AC)	1500V			
	Output-FG (V.AC)	500V			
Function	5V Stand by (18CFM FAN)	5VSB: 5V@0.6A ; Tolerance ±10% , Ripple & Noise: 100m Vp-p (max.)			
	DC OK Signal (Power Good)	Turn ON: 3.7~5.7V ; Turn OFF: 0~1V			
	Remote Control	+RC / -RC: Power ON=open ; Power OFF=short			
	Current Share	CN4:CS, +V, -V are connected mutually in parallel.			
Environment	Operating Temperature	-25°C...+70°C (with derating)			
	Storage Temperature	-25°C...+85°C			
	Temperature Coefficient	±0.03%/°C (0~50°C)			
	Humidity	95% RH			
	MTBF	>100,000 h @ 25°C (MIL-HDBK-217F)			
	Vibration	10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes.			

ELECTRICAL SPECIFICATIONS

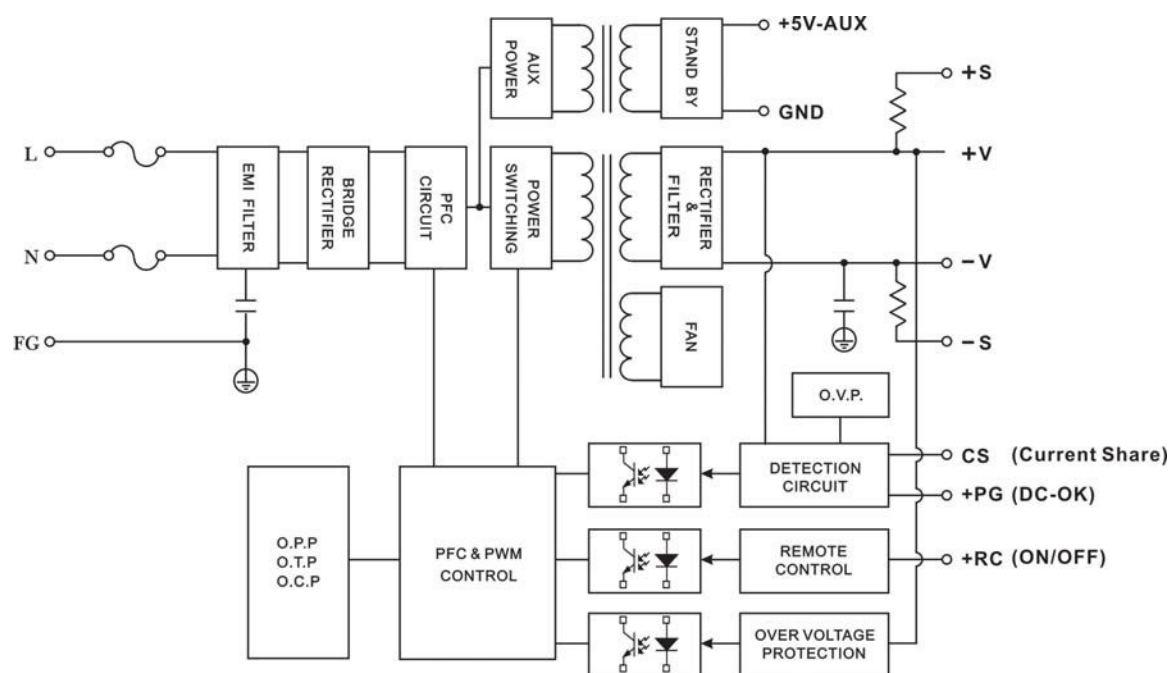
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.		HD600-112	HD600-124	HD600-148	HD600-154
Physical	Dimensions (L x W x H)	9.0 x 4.13 x 1.72 Inches (228.5 x 105.0 x 44.0 mm) Tolerance ±0.5 mm			
	Weight	1024±50 g			
	Cooling	Integral fan			
Safety	Agency Approvals	CE, UL60950-1			
EMC	EMI (Conducted & Radiated Emission)	EN 55032 class B, Radiated Class A			
	EMS (Noise Immunity)	EN 55024			
	Surge	1KV L-N, 2KV L N-FG			

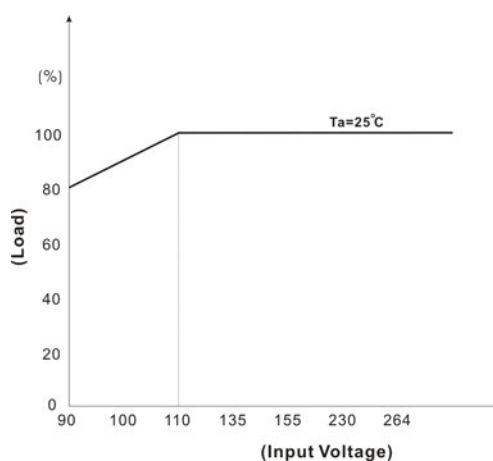
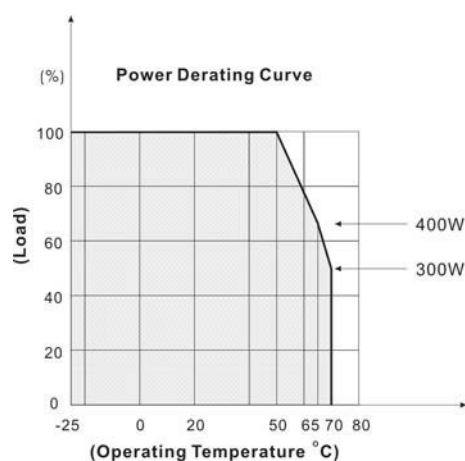
NOTE

1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. Strongly recommend to conduct this test with DC Voltage. If customer wishes to test with AC Voltage, please disconnect all Y-Capacitors from Digital Power Corporation power supply.

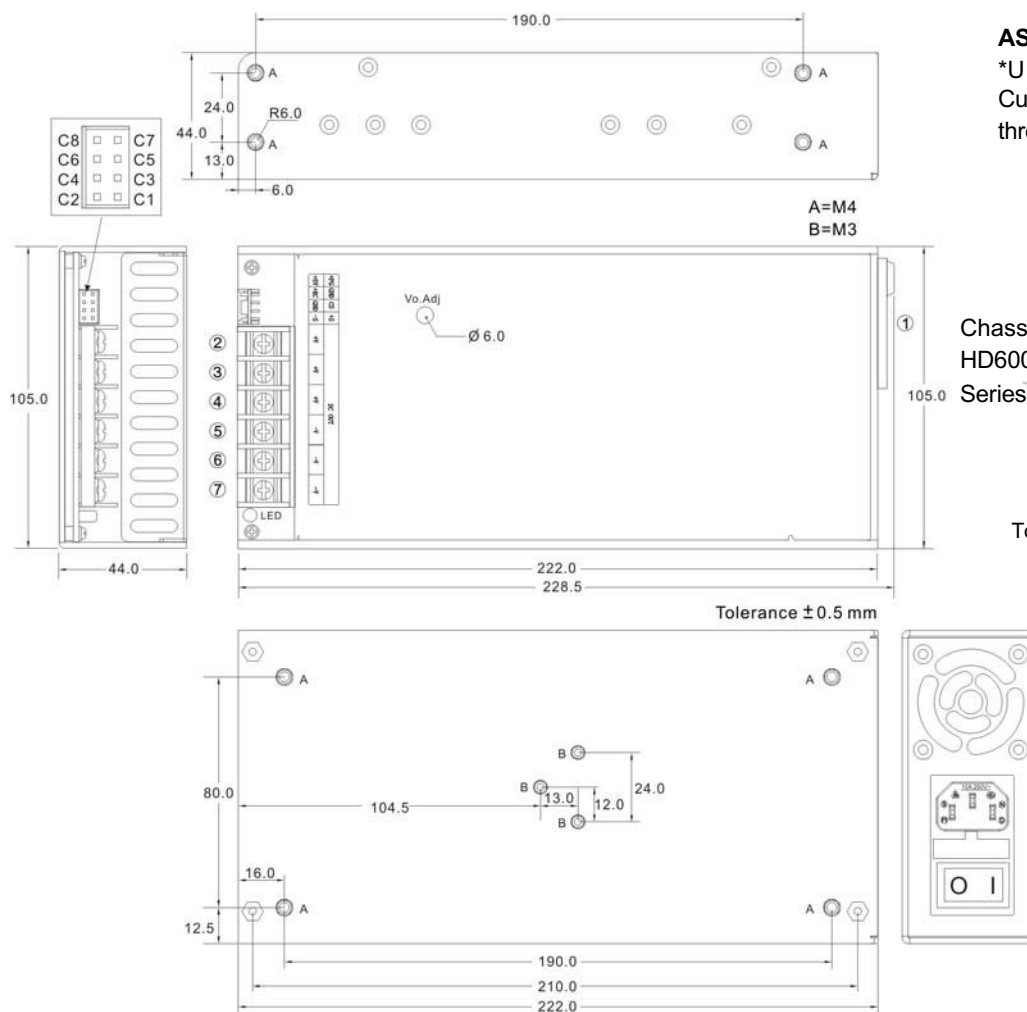
BLOCK DIAGRAM



DERATING



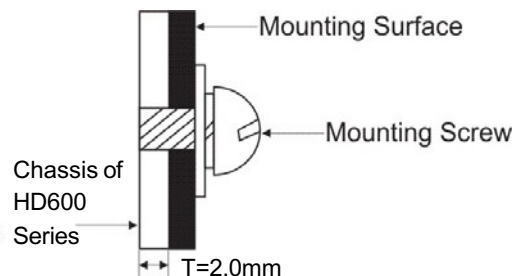
MECHANICAL DIMENSIONS



ASSEMBLY INSTRUCTIONS

*U Case T=2.0mm

Customer is advised to screw into the threads no more than 2.0mm



Torque: 3 ± 0.5 Kgf.cm

Brands					
PIN#	Single	Terminal			
1	AC IN	—	—	—	—
2~4	+DC OUT	DINKLE DT-49-B01W-06			
5~7	-DC OUT				

Connector Pin (CN4)					
Brands		Cheng Weei		JST	
PIN#	Single	Mating Housing	Terminal	Mating Housing	Terminal
C1	+S	PHD-H20-2X4P	PHD-T20	PHDR-08VS	SPHD-001T-P0.5
C2	-S				
C3	CS				
C4	GND				
C5	GND				
C6	+RC				
C7	+PG				
C8	+5V-AUX				

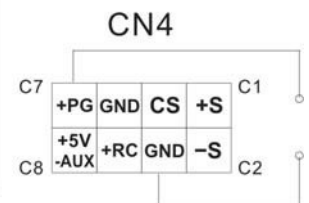
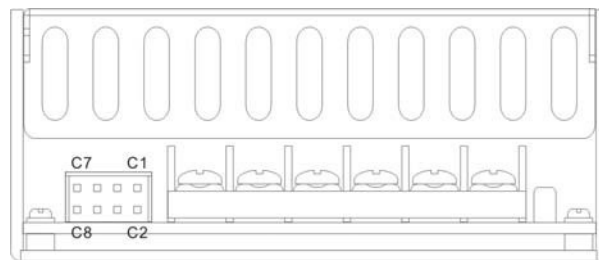
FUNCTION DESCRIPTION of CN4

Pin No.	Function	Description
C1	+S	Current Share Function Pin
C2	-S	
C3	CS	
C4	GND	This pin connects to the negative terminal(-V). Return for DC-OK signal output.
C5	GND	This pin connects to the negative terminal(-V). Return for DC-OK signal output.
C6	+RC	Turns the output on and off by electrical or dry contact between pin C4 (-RC), Short: Power OFF, Open: Power ON.
C7	+PG	DC-OK Signal is a DC output, referenced to pinC6(DC-OK GND).
C8	+5V-AUX	Stand by voltage output ground 4.5~5.5V, referenced to pin C4 or C5(GND). The maximum load current is 0.6A.

FUNCTION MANUAL & APPLICATION NOTE

1. DC-OK Signal

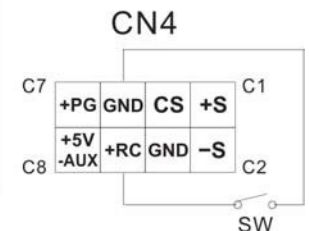
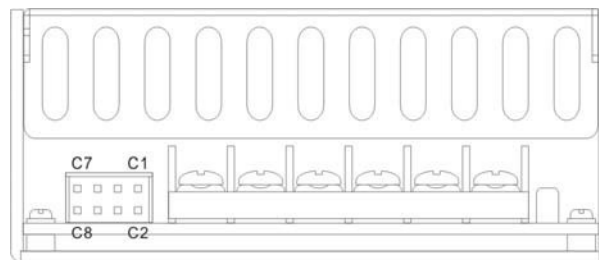
Between DC-OK(pinC5) and GND(pinC6)	Output Status
3.7~5.7V	ON
0~1V	OFF



2. Remote Control

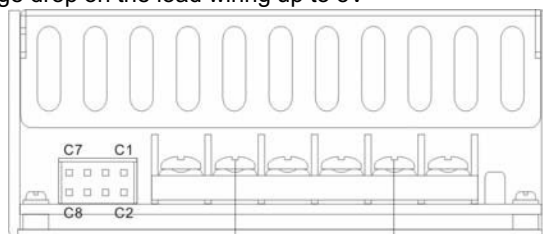
It can be turned ON/OFF by using the "Remote Control" function.

Between RC+(pinC3) and RC-(pinC4)	Output Status
SW ON (Short)	OFF
SW OFF (Open)	ON



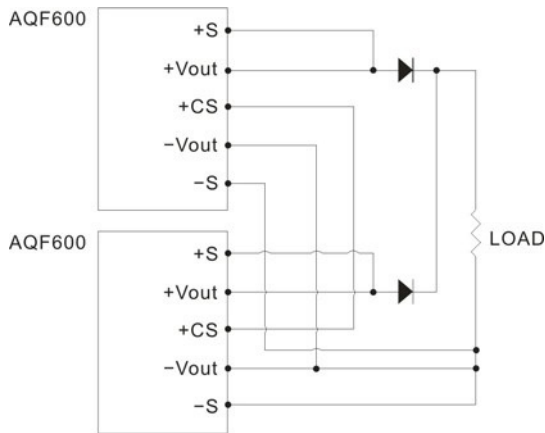
3. Current Share

1. Difference in Vout among paralleled units should be less than +/-1%
2. Output Power at Parallel Operation = Rated Power per Unit x Number of Unit x 80%
3. Connect in parallel no more than 2 units. Please contact Digital Power Corporation for advice if more than 2 is needed.
4. Shorter wiring to each unit is recommended, as well as twisting +S and -S in pairs, as shown below
5. The remote sensing compensates voltage drop on the load wiring up to 5V



Sense lines should be twisted in pairs

4. 1+1 Redundancy : Using 1 more HD600 as the redundant unit



5. 1+N Redundancy: Using 1 more HD600 as the redundant units to increase the reliability

