HDP-190

190W Dual Output with PFC Function

■ Features :

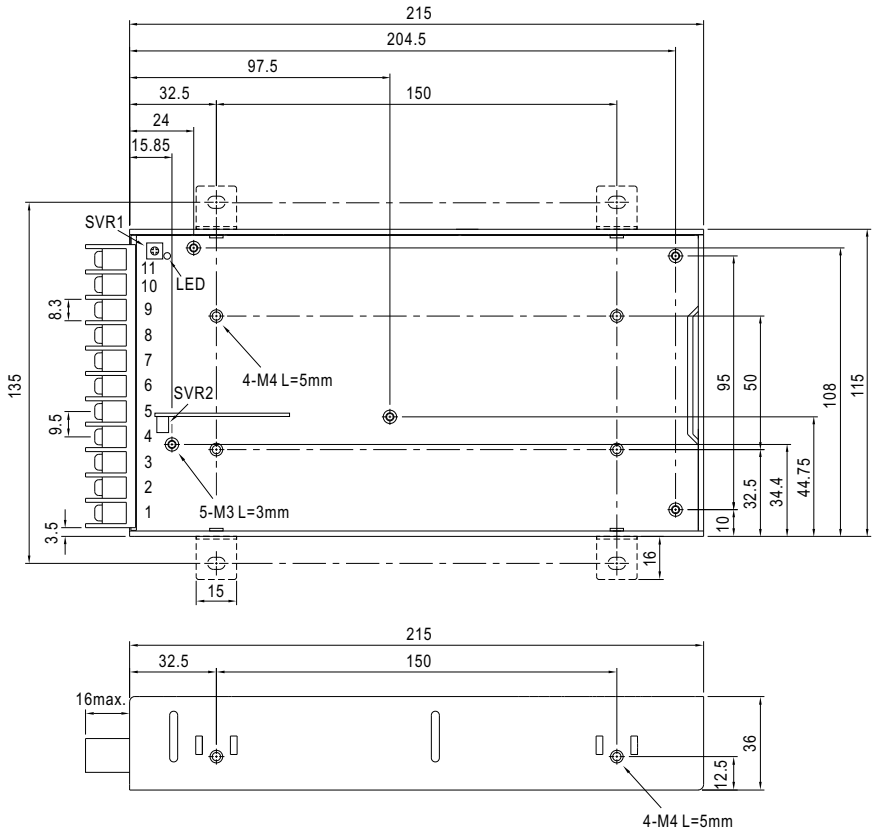
- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 86%
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- 1U low profile 36mm
- Conformal coated
- ZVS technology to reduce power dissipation
- LED indicator for power on
- 3 years warranty

SPECIFICATION

MODEL		HDP-190	
OUTPUT	OUTPUT NUMBER	V1	V2
	DC VOLTAGE	+3.8V	+2.8V
	RATED CURRENT	33A	20A
	CURRENT RANGE (max.)	0 ~ 40A	0 ~ 22A
	RATED POWER	181.4W (typ.) 192W (max.)	
	OUTPUT POWER (max.)	192W continue. V1 total power output shall not exceed 160W (max. 40A) ; V2 total power output shall not exceed 66W (max. 22A) (The V1 & V2 combine total power output shall not exceed 192W)	
	RIPPLE & NOISE (max.) Note.2	100mVp-p	100mVp-p
	VOLTAGE ADJ. RANGE Note.6	3.6 ~ 4V	2.5 ~ 3V
	VOLTAGE TOLERANCE Note.3	±2.0%	±2.0%
	LINE REGULATION	±0.5%	±0.5%
	LOAD REGULATION	±2.0%	±2.0%
	SETUP, RISE TIME	1000ms, 50ms/230VAC 2500ms, 50ms/115VAC at full load	
	HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC at full load	
INPUT	VOLTAGE RANGE Note.5	90 ~ 264VAC 127 ~ 370VDC	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF≧0.94/230VAC PF≧0.98/115VAC at full load	
	EFFICIENCY (Typ.)	86%	
	AC CURRENT (Typ.)	2.7A/115VAC 1.1A/230VAC	
	INRUSH CURRENT (Typ.)	30A/115VAC 45A/230VAC	
	LEAKAGE CURRENT	<0.7mA / 240VAC	
PROTECTION	OVERLOAD	V1+V2: 105 ~ 150% max. output power ; or V2: 125 ~ 170% rated current	
		Protection type: Hiccup mode, recovers automatically after fault condition is removed	
	OVER VOLTAGE	V1: 4.37 ~ 5.13V	V2: 3.22 ~ 3.78V
		Protection type : Shut down o/p voltage, re-power on to recover	
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recovery	
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 ~ 50℃)	
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes	
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1, CCC GB4943.1 approved	
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC 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 EN55032 (CISPR32), GB9254, class B, EN61000-3-2,-3, GB17625.1	
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2, heavy industry level, criteria A	
OTHERS	MTBF	111.3K hrs min. MIL-HDBK-217F (25℃)	
	DIMENSION	215*115*36mm (L*W*H)	
	PACKING	0.95Kg; 15pcs/15.3Kg/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. 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) 5. Derating may be needed under low input voltages. Please check the derating curve for more details. 6. Output voltage between V1 and V2 should be higher than 1.0V(V1-V2≧1.0V).		

■ Mechanical Specification

Case No.206A Unit:mm



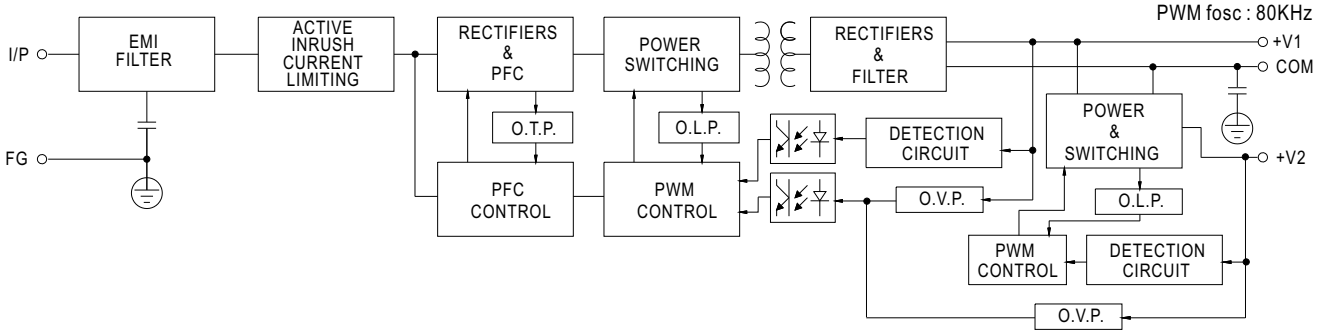
Terminal Pin No. Assignment :

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	V2(+2.8V)
2	AC/N	6,7	V1(+3.8V)
3	FG ⏚	8,9,10,11	COM

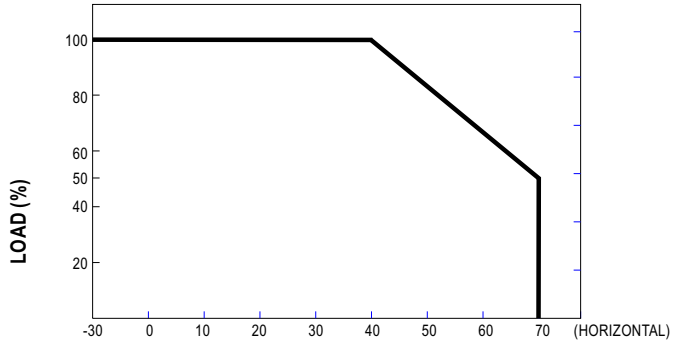
SVR1: V1(+3.8V)ADJ.
SVR2: V2(+2.8V)ADJ.

■ Block Diagram

PFC fosc : 65KHz
PWM fosc : 80KHz

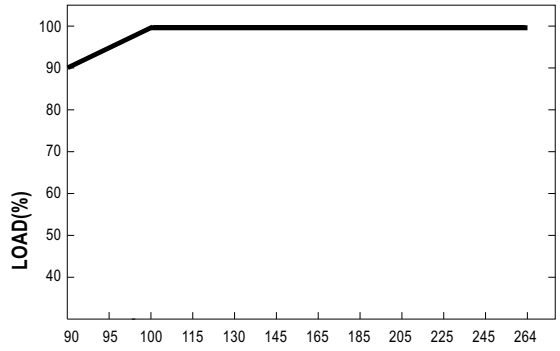


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



INPUT VOLTAGE (V) 60Hz