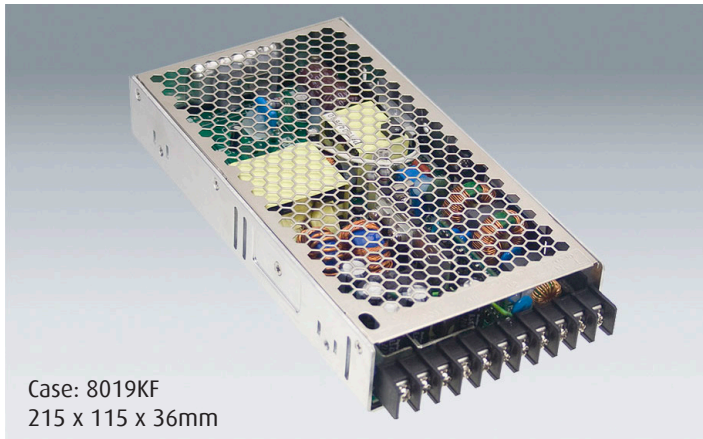


# HDP-190 Series

## 190W Dual Output Power Supply with PFC function



### Features

- Universal AC Input/Full range
- Built-in active PFC function, PF>0.94
- 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

INPUT	Voltage	90 ~ 264VAC	127 ~ 370VDC
	Frequency	47 ~ 63 Hz	
	Power Factor	PF≥0.94/230VAC	PF≥0.98/115VAC at full load
	Efficiency	86%	86%
	AC Current	2.7A/115VAC	1.1A/230VAC
	Inrush Current (Typ.)	30A/115VAC	45A/230VAC
	Leakage Current	<0.7mA/240VAC	
	MODEL No.		<b>HDP-190</b>
OUTPUT	Output number	<b>V1</b>	<b>V2</b>
	Voltage	+3.8V	+2.8V
	Rated Current	33A	20A
	Current Range	0 ~ 40A	0 ~ 22A
	Rated Power (convection)	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.	100mVp-p	100mVp-p
	Voltage Adj. Range	3.6 ~ 4V	2.5 ~ 3V
	Voltage Tolerance	± 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
Holdup Time (Typ.)	16ms/230VAC	16ms/115VAC at full load	
PROTECTION	Overload	V1+V2: 105 ~ 150% max. Output power; or V1: 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
	Over Temperature	Shut down O/P voltage, re-power on to recovery	
ENVIRONMENT	Working Temp.	-30 ~ +70°C (Refer to "Derating Curve")	
	Working Humidity	20 ~ 90% RH non-condensing	
	Storage Temp., Humidity	-40 ~ +85°C, 10~95%RH	
	Temp. Co-efficient	±0.03% / °C (0~50°C)	
SAFETY & EMC	Vibration	10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes	
	Safety Standards	UL60950-1, EN60950-1 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°C/70% RH	
	EMC Emission	Compliance to EN55032 (CISPR32), GB9254, class B, EN61000-3-2,-3, GB17625.1	
OTHERS	EMC Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2, heavy industry level, criteria A	
	M.T.B.F.	111.3K hrs min. MIL-HDBK-217F (25°C)	
	Packaging	0.95Kg; 15pcs/15.3Kg/0.7CUFT	

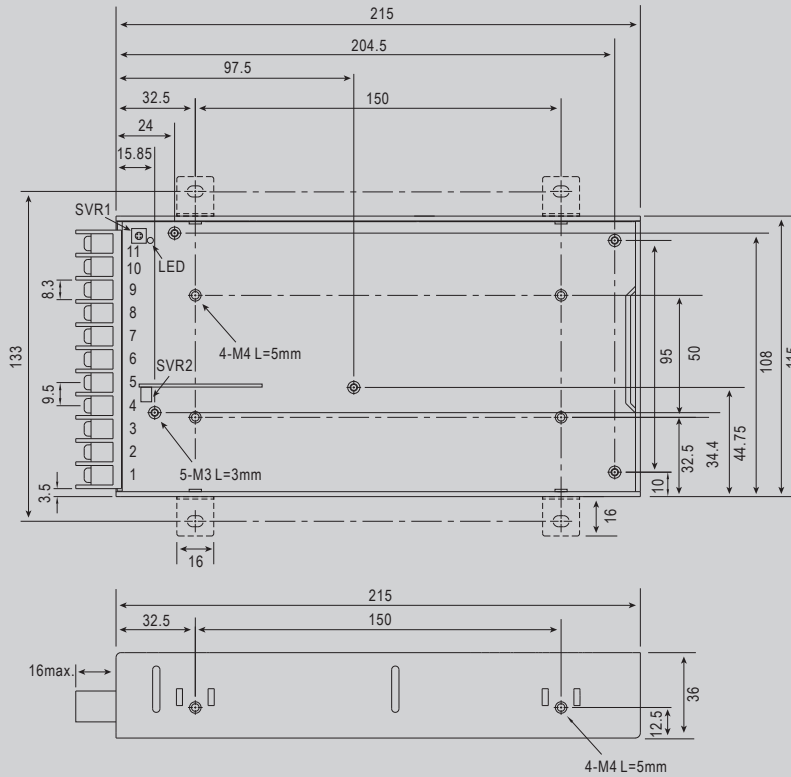
1. All measurements not specially mentioned are based on 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance: Includes set up tolerance, line regulation and load regulation.
4. The power supply is considered a component which will be installed into 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."
5. Derating may be needed under low input voltages. Please check the static characteristics for more details.
6. Output voltage between V1 and V2 should be higher than 1.0V (V1-V2≥1.0V)

# HDP-190 Series

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### Mechanical Diagram

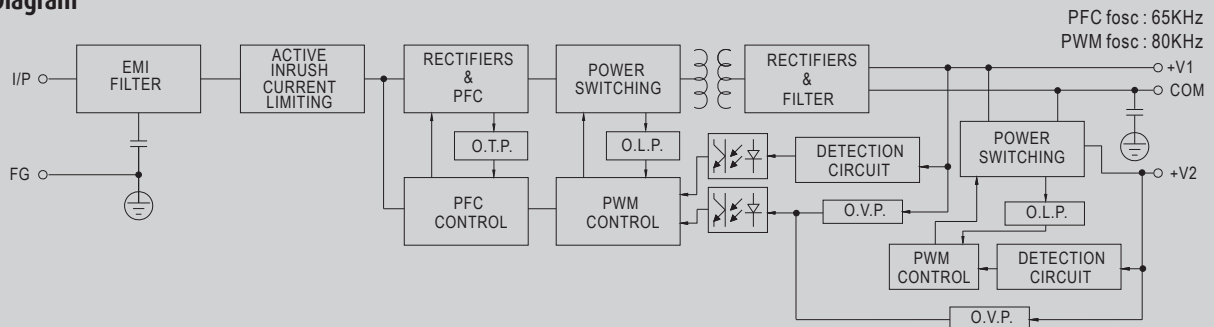


#### Terminal Pin No. Assignment :

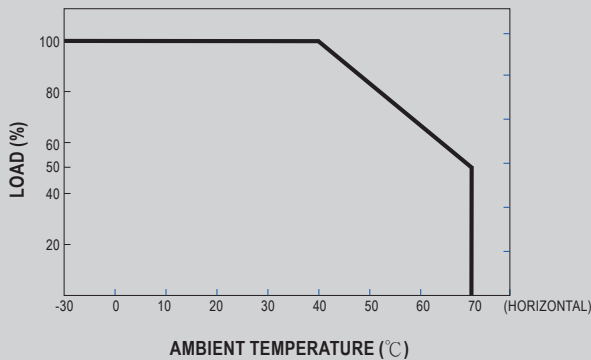
Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	V2(+2.8V)
2	AC/N	6,7	V1(+3.8V)
3	FG $\perp$	8,9,10,11	COM

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

### Block Diagram



### Derating Curve



### Output Derating Vs Input Voltage

