MEAN WELL

600W Single Output Switching Power Supply

HEP-600 series

TAIWAN EXCELLENCE 2015

Features

- Universal AC input / Full range
- Built-in active PFC function
- No load power consumption <0.5W at remote OFF
- High efficiency up to 96%
- Fanless design, cooling by free air convection
- Output voltage and output current can be adjusted through internal potentiometer
- Aluminum case and filling with heat-conducted glue
- -40 ~ +70℃ wide operating range
- Withstand 300VAC surge input for 5 seconds
- Withstand 5G vibration test
- Protections: Short circuit / Over current / Over voltage / Over temperature
- LED indicator for power on
- 5 years warranty (Note.7)

Applications

- Humid and dusty industrial environment
- Outdoor telecommunication equipment
- No fan environment
- Signboard or billboards

Description

HEP-600 series is a high-efficiency and waterproof AC-to-DC industrial power supply up to 600W, fully potted by silicone and enclosed with the aluminum case. With state of the art design, HEP-600 works outstandingly with electronics under harsh environment: fan-less, high-vibration, dusty, humid, and oily environment. Remarkable features include supreme efficiency up to 96%, low no-load power consumption (<0.5W) at remote OFF, and wide working temperature ranges between -40℃ and +70℃.

Model Encoding

HEP - 600 - 12

- 12 — Output voltage
- 600 — Output wattage
- HEP — Series name

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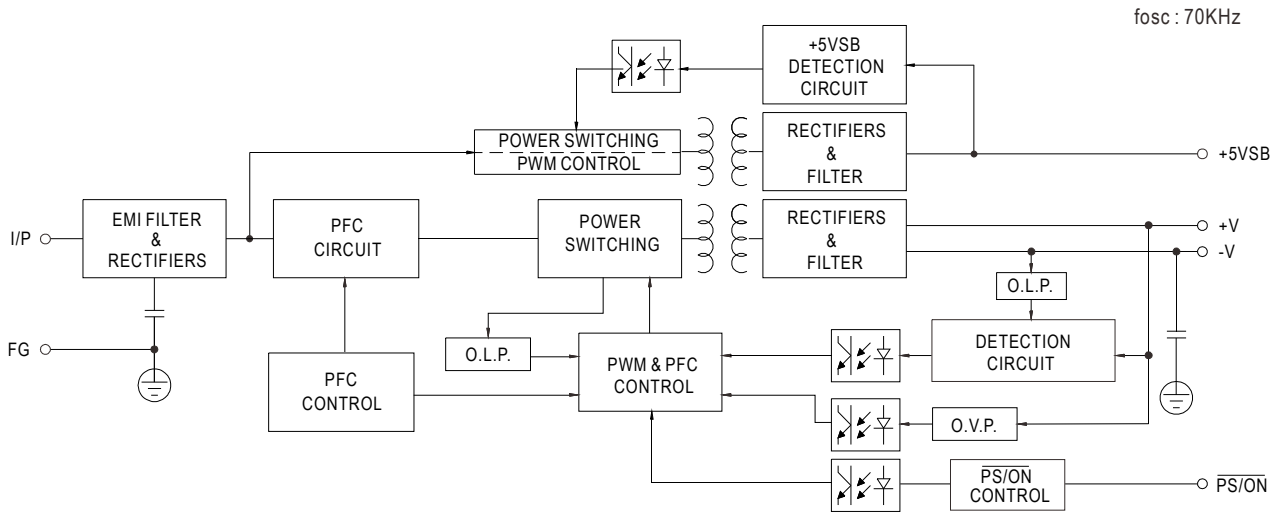
HEP-600 series

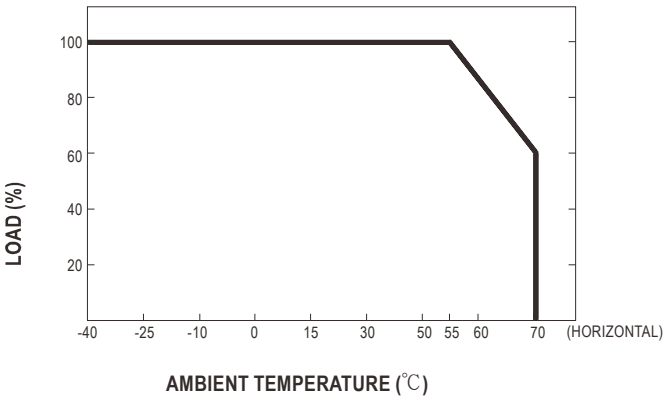
SPECIFICATION

MODEL		HEP-600-12	HEP-600-15	HEP-600-20	HEP-600-24	HEP-600-30	HEP-600-36	HEP-600-42	HEP-600-48	HEP-600-54
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V
	RATED CURRENT	40A	36A	28A	25A	20A	16.7A	14.3A	12.5A	11.2A
	RATED POWER	480W	540W	560W	600W	600W	601.2W	600.6W	600W	604.8W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	250mVp-p	250mVp-p	250mVp-p	350mVp-p
	VOLTAGE ADJ. RANGE	10.2 ~ 12.6V	12.7 ~ 15.8V	17 ~ 21V	20.4 ~ 25.2V	25.5 ~ 31.5V	30.6 ~ 37.8V	35.7 ~ 44.1V	40.8 ~ 50.4V	45.9 ~ 56.7V
	CURRENT ADJ. RANGE	Can be adjusted by internal potentiometer								
		20 ~ 40A	18 ~ 36A	14 ~ 28A	12.5 ~ 25A	10 ~ 20A	8.3 ~ 16.7A	7.1 ~ 14.3A	6.2 ~ 12.5A	5.6 ~ 11.2A
	VOLTAGE TOLERANCE Note.3	±3.0%	±2.0%	±1.5%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±2.0%	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME Note.5	500ms, 80ms at full load 230VAC /115VAC								
	HOLD UP TIME (Typ.)	15ms at full load 230VAC /115VAC								
INPUT	VOLTAGE RANGE Note.4	90 ~ 264VAC 127 ~ 373VDC								
	FREQUENCY RANGE	47 ~ 63Hz								
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.95/230VAC at full load								
	EFFICIENCY (Typ.)	93%	94%	95%	95%	95.5%	95.5%	96%	96%	96%
	AC CURRENT (Typ.)	7A / 115VAC 3.3A / 230VAC								
	INRUSH CURRENT(Typ.)	COLD START 70A(t_{width}=1000μs measured at 50% I_{peak}) at 230VAC								
	LEAKAGE CURRENT	<0.75mA / 240VAC								
PROTECTION	OVER CURRENT	105 ~ 125%								
		Protection type : Constant current limiting, recovers automatically after fault condition is removed								
	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed								
	OVER VOLTAGE	13 ~ 16V	16.5 ~ 20.5V	22 ~ 26V	26 ~ 30V	32.5 ~ 36.5V	39.5 ~ 43.5V	46 ~ 50V	52.5 ~ 56.5V	59 ~ 63V
		Protection type : Shut down o/p voltage, re-power on to recover								
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover								
FUNCTION	REMOTE ON/OFF CONTROL	Power on : "Hi" >2 ~ 5V or Open circuit Power off : "Low" <0 ~ 0.5V or Short circuit								
	5V STANDBY	$5V_{SB}$: 5V@0.5A ; tolerance ±5%, ripple : 100mVp-p(max.)								
ENVIRONMENT	WORKING TEMP.	-40 ~ +70℃ (Refer to "Derating Curve")								
	WORKING HUMIDITY	20 ~ 95% RH non-condensing								
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH								
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 60℃)								
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes								
SAFETY & EMC (Note.6)	SAFETY STANDARDS	UL60950-1, TUV EN60950-1 approved								
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:1.5KVAC								
	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,-3								
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, heavy industry level, criteria A								
OTHERS	MTBF	76.9K hrs min. MIL-HDBK-217F (25℃)								
	DIMENSION	280*144*48.5mm (L*W*H)								
	PACKING	3.9Kg; 4pcs/16.6Kg/0.9CUFT								
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. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time. 6. The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again. 7. Refer to warranty statement.									

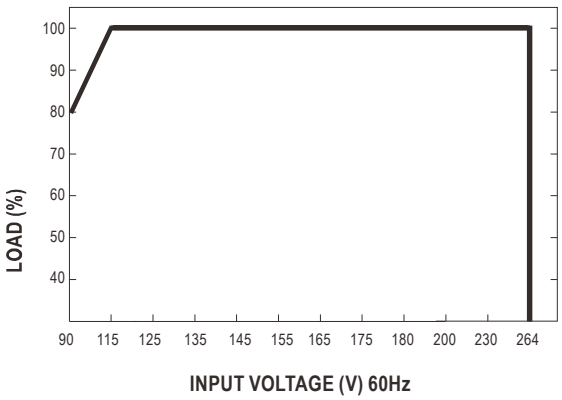
Block Diagram



Derating Curve

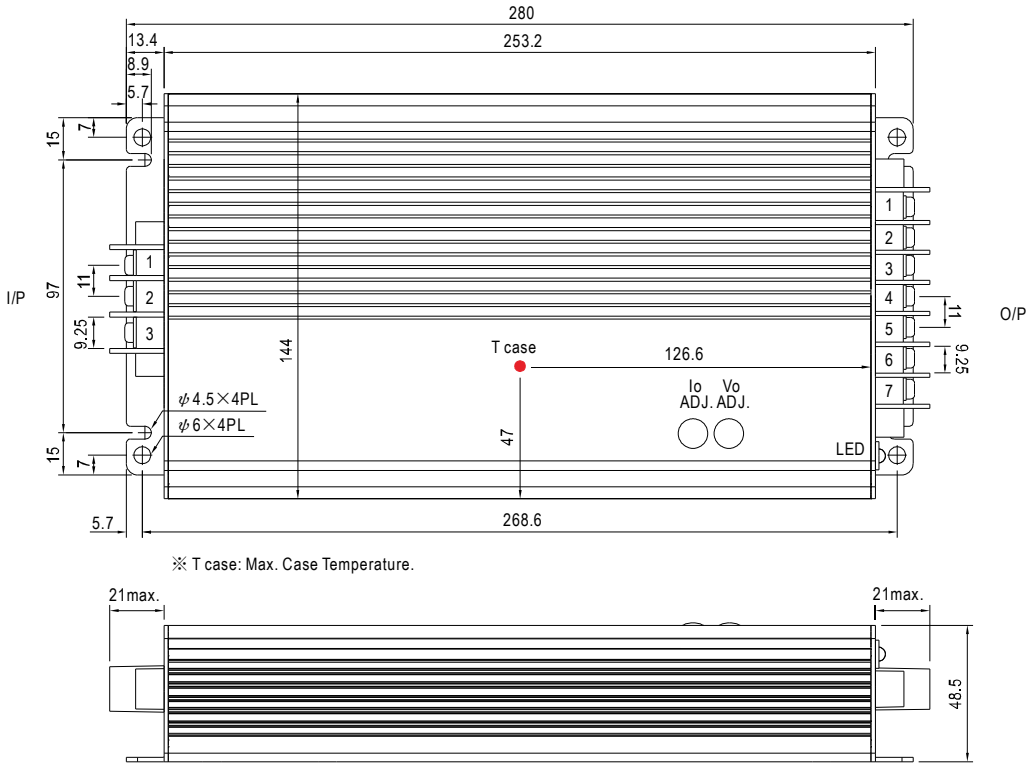


Static Characteristics



■ Mechanical Specification

Case No. 228A Unit:mm



※ T case: Max. Case Temperature.

※ Output voltage and constant current level can be adjusted through internal potentiometer.
(Can access by removing the rubber stopper on the case.)

AC Input Terminal Pin No. Assignment

Pin No.	Assignment
1	FG ⏚
2	AC/L
3	AC/N

DC Output Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	RC+	4,5	-V
2	RC- & GND	6,7	+V
3	+5VSB		

■ Installation Manual

Please refer to : http://www.meanwell.com/webnet/search/InstallationSearch.html