



600W Single Output Switching Power Supply

HEP-600 series



■ Features

- Universal AC input / Full range (up to 305VAC)
- 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
- -40 ~ +70°C wide operating range
- Aluminum case and filling with heat-conducted glue
- Withstand 10G vibration test
- Output voltage and output current can be adjusted through internal potentiometer
- Protections: Short circuit / Over current / Over voltage / Over temperature
- LED indicator for power on
- Operating altitude up to 5000 meters (Note.7)
- 6 years warranty (Note.8)

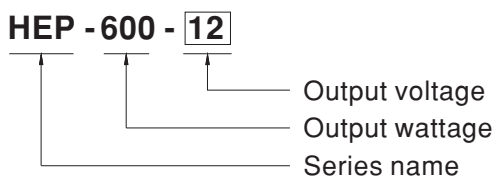
■ Applications

- Outdoor telecommunication equipment
- Outdoor electronic signage and billboard
- Petroleum plant or mine shaft facility

■ Description

HEP-600 is a 600W industrial AC/DC power supply featuring the outstanding capability to operate under highly humid, dusty, oily, and high-vibration harsh environment. The entire series is housed with the aluminum case and fully potted with heat-conducted silicone. Thanks to state-of-the-art design, the working efficiency is up to 96%, enabling HEP-600 perfectly work between -40°C and +70°C under free air convection.

■ Model Encoding





SPECIFICATION

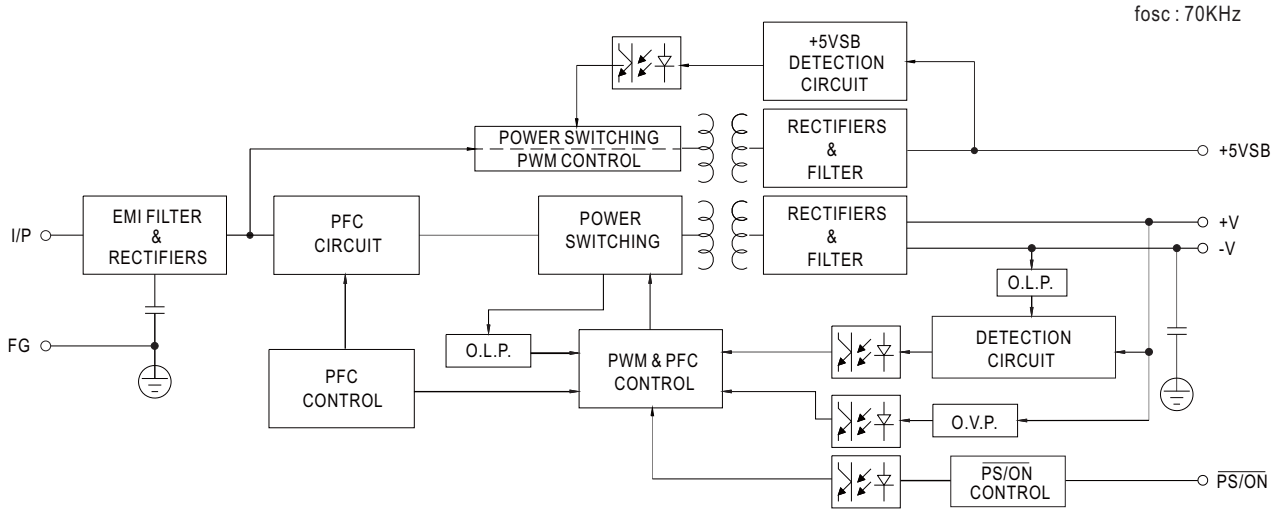
MODEL	HEP-600-12	HEP-600-15	HEP-600-20	HEP-600-24	HEP-600-30	HEP-600-36	HEP-600-42	HEP-600-48	HEP-600-54		
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V	
	RATED CURRENT	40A	36A	28A	25A	20A	16.7A	14.3A	12.5A	11.2A	
	RATED POWER	480W	540W	560W	600W	600W	601.2W	600.6W	600W	604.8W	
	RIPPLE & NOISE (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 ~ 305VAC		127 ~ 431VDC							
	FREQUENCY RANGE	47 ~ 63Hz									
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.95/230VAC, PF>0.93/277VAC at full load									
	EFFICIENCY (Typ.)	93%	94%	95%	95%	95.5%	95.5%	96%	96%	96%	
	AC CURRENT (Typ.)	7A / 115VAC		3.3A / 230VAC		2.9A / 277VAC					
	INRUSH CURRENT(Typ.)	COLD START 70A(twidth=1000µs measured at 50% Ipeak) at 230VAC									
LEAKAGE CURRENT	<0.75mA / 277VAC										
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°C (Refer to "Derating Curve")									
	WORKING HUMIDITY	20 ~ 95% RH non-condensing									
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH									
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 60°C)									
	VIBRATION	20 ~ 500Hz, 10G 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:3.75KVAC 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°C / 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°C)									
	DIMENSION	280*144*48.5mm (L*W*H)									
	PACKING	3.9Kg; 4pcs/16.6Kg/0.9CUFT									
NOTE	<ol style="list-style-type: none"> All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. Tolerance : includes set up tolerance, line regulation and load regulation. Derating may be needed under low input voltages. Please check the static characteristics for more details. 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. 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. The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft). Refer to warranty statement. 										



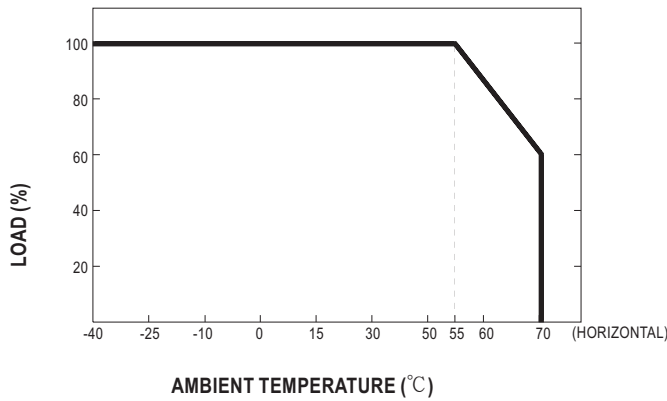
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■ Block Diagram



■ Derating Curve



■ Static Characteristics

