



240W Switching Power Supply for Harsh Environment

**HEP-240** series

User's Manual



**IP65 IP68** (optional)



**UL62368-1**

**TPTC004**

**IEC62368-1**

**UK CA**



## ■ Features

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 93.5%
- Fanless design, cooling by free air convection
- -55~+70°C wide operating range
- Aluminum case and filling with heat-conducted silicone
- IP65 design, optional IP68 rated model available
- Meet 6KV surge immunity level
- Withstand 10G vibration test
- Operating altitude up to 5000 meters (Note.8)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 6 years warranty (Note.10)

## ■ Applications

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

## ■ GTIN CODE

MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

## ■ Description

HEP-240 is a 240W industrial AC/DC power supply featuring the outstanding capability to operate under a harsh environment with high dust density, humidity, vibration and altitude. The entire series is housed with a robust aluminum case and fully potted with heat-conducted silicone. Thanks to state-of-the-art design, the working efficiency is up to 93.5%, enabling HEP-240, with a fanless design, perfectly work between -55°C and +70°C under free air convection.

## ■ Model Encoding

**HEP - 240 - 15 A**

Function mode option

Output voltage

Output wattage

Series name

- A : Standard model, IP65, Vo and Io level can be adjusted through internal potentiometer.
- Blank : Optional model, IP68, with fixed Vo and Io level.



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## HEP-240 series

## SPECIFICATION

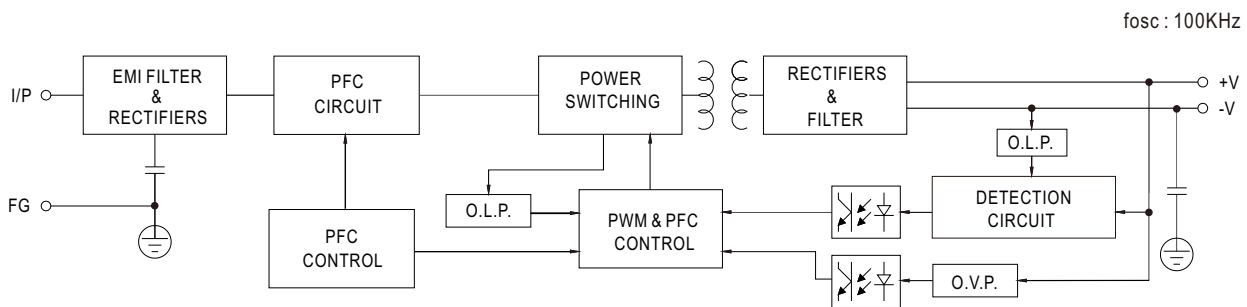
MODEL		HEP-240-12□	HEP-240-15□	HEP-240-24□	HEP-240-36□	HEP-240-48□	HEP-240-54□
OUTPUT	DC VOLTAGE	12V	15V	24V	36V	48V	54V
	RATED CURRENT	16A	15A	10A	6.7A	5A	4.45A
	RATED POWER	192W	225W	240W	241.2W	240W	240.3W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	250mVp-p	250mVp-p	350mVp-p
	VOLTAGE ADJ. RANGE Note.5	11.2 ~ 12.8V	14 ~ 16V	22.4 ~ 25.6V	33.5 ~ 38.5V	44.8 ~ 51.2V	50 ~ 57V
	CURRENT ADJ. RANGE	Can be adjusted by internal potentiometer for A type only					
		8 ~ 16A	7.5 ~ 15A	5 ~ 10A	3.3 ~ 6.7A	2.5 ~ 5A	2.23 ~ 4.45A
	VOLTAGE TOLERANCE Note.3	± 2.5%	± 2.0%	± 1.0%	± 1.0%	± 1.0%	± 1.0%
	LINE REGULATION	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%
	LOAD REGULATION	± 2.0%	± 1.5%	± 0.5%	± 0.5%	± 0.5%	± 0.5%
INPUT	SETUP, RISE TIME Note.6	1000ms,80ms/115VAC 500ms,80ms/230VAC at full load					
	HOLD UP TIME (Typ.)	15ms at full load 230VAC /115VAC					
	VOLTAGE RANGE Note.4	90~264VAC (277VAC operational) 128~370VDC(390VDC operational)					
	FREQUENCY RANGE	47 ~ 63Hz					
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.95/230VAC, PF>0.92/277VAC at full load					
	EFFICIENCY (Typ.)	90%	90%	92.5%	92.5%	93%	93.5%
	AC CURRENT (Typ.)	12V	2A / 115VAC	1.05A / 230VAC	0.9A/277VAC		
		15~54V	2.5A / 115VAC	1.3A / 230VAC	1.1A/277VAC		
PROTECTION	INRUSH CURRENT(Typ.)	COLD START 75A at 230VAC					
	LEAKAGE CURRENT	<0.75mA / 277VAC					
	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					
ENVIRONMENT	OVER VOLTAGE	13.5 ~ 18V	17.5 ~ 21.5V	27 ~ 34V	43 ~ 49V	55 ~ 63V	60 ~ 67V
		Protection type : Shut down and latch off o/p voltage, re-power on to recover					
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down					
SAFETY & EMC	WORKING TEMP.	-55 ~ +70℃ (Refer to "Derating Curve")					
	WORKING HUMIDITY	20 ~ 95% RH non-condensing					
	STORAGE TEMP., HUMIDITY	-60 ~ +80℃, 10 ~ 95% RH non-condensing					
	TEMP. COEFFICIENT	± 0.03%/℃ (0 ~ 60℃)					
	VIBRATION	20 ~ 500Hz, 10G 12min./1cycle, period for 72min. each along X, Y, Z axes					
OTHERS	SAFETY STANDARDS Note.8	UL62368-1, IEC62368-1, IP65 (or IP68 for HEP-240 Blank-Type), EAC TP TC 004 approved; Design refer to BS EN/EN62368-1					
	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℃ / 70% RH					
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020					
	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, light industry level (surge 6KV), EAC TP TC 020					
NOTE	MTBF	2008.7K hrs min. Telcordia SR-332 (Bellcore) ; 171.3Khrs min. MIL-HDBK-217F (25℃)					
	DIMENSION	244.2*68*38.8mm (L*W*H)					
	PACKING	1.3Kg; 12pcs/16.6Kg/0.84CUFT					
		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. A-Type only. 6. 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. 7. 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. (as available on <a href="https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf">https://www.meanwell.com/Upload/PDF/EMI_statement_en.pdf</a> ) 8. The water protection level test for the IP68 rating is performed 1000mm below the surface of the water for 1 month. 9. Refer to warranty statement. 10. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft). ※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a>					



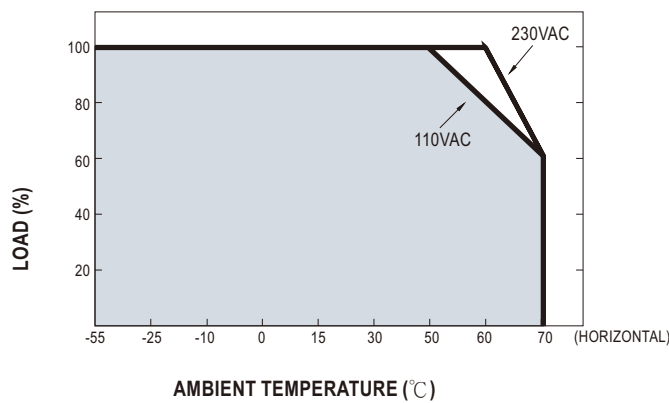
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### ■ Block Diagram



### ■ Derating Curve



### ■ Static Characteristics

