



480W Switching Power Supply for Harsh Environment

**HEP-480** series



IP65 IP68 (optional)



UL62368-1 TPTC004 IEC62368-1



### ■ Features

- Universal AC input / Full range(up to 305VAC)
- Built-in active PFC function
- High efficiency up to 95%
- Fanless design, cooling by free air convection
- -55~+65°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.7)
- Protections: Short circuit / Overload / Over voltage / Over temperature
- 6 years warranty

### ■ Applications

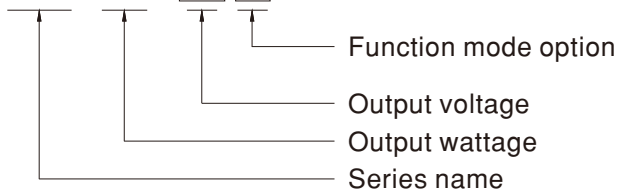
- Outdoor telecommunication equipment
- Outdoor electronic signage and billboard
- Petroleum plant or mine shaft facility

### ■ Description

HEP-480 is a 480W 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 95%, enabling HEP-480 perfectly work between -55°C and +65°C under free air convection.

### ■ Model Encoding

HEP - 480 - 24 A



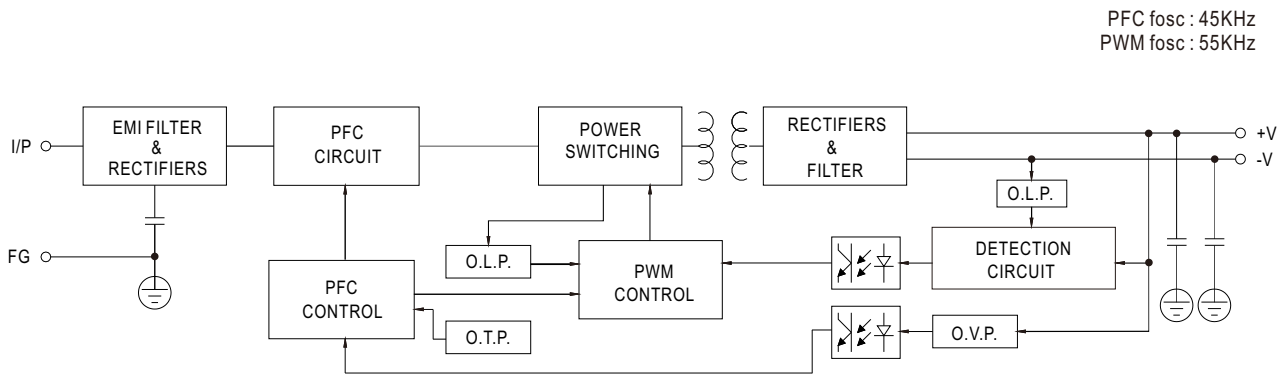
{ A : Standard model, IP65, Vo and Io level can be adjusted through internal potentiometer.  
Blank : Optional model, IP68, with fixed Vo and Io level.



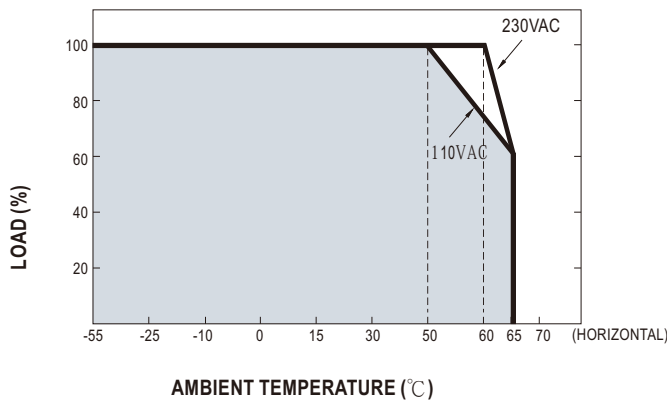
**SPECIFICATION**

MODEL	HEP-480-24□	HEP-480-36□	HEP-480-48□	HEP-480-54□	
OUTPUT	DC VOLTAGE	24V	36V	48V	54V
	RATED CURRENT	20A	13.3A	10A	8.9A
	RATED POWER	480W	478.8W	480W	480.6W
	RIPPLE & NOISE (max.) Note.2	200mVp-p	250mVp-p	250mVp-p	350mVp-p
	VOLTAGE ADJ. RANGE Note.5	Adjusted for A-type only (via built-in potentiometer)			
		20.4 ~ 25.2V	30.6 ~ 37.8V	40.8 ~ 50.4V	45.9 ~ 56.7V
	CURRENT ADJ. RANGE	Adjusted for A-type only (via built-in potentiometer)			
		10 ~ 20A	6.6 ~ 13.3A	5 ~ 10A	4.4 ~ 8.9A
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%
LOAD REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	
SETUP, RISE TIME Note.4	500ms, 80ms 115VAC/230VAC				
HOLD UP TIME (Typ.)	16ms 115VAC/230VAC				
INPUT	VOLTAGE RANGE Note.5	85~264VAC (277VAC operational)		120~370VDC (390VDC operational)	
	FREQUENCY RANGE	47 ~ 63Hz			
	POWER FACTOR (Typ.)	PF ≥ 0.98/115VAC, PF ≥ 0.97/230VAC, PF ≥ 0.95/277VAC at full load			
	EFFICIENCY (Typ.)	94%	95%	94.5%	95%
	AC CURRENT (Typ.)	5A / 115VAC	2.45A / 230VAC	2A/277VAC	
	INRUSH CURRENT(Typ.)	COLD START 35A at 230VAC			
LEAKAGE CURRENT	<0.75mA / 277VAC				
PROTECTION	OVER CURRENT	105 ~ 125%			
	SHORT CIRCUIT	Constant current limiting, recovers automatically after fault condition is removed			
	OVER VOLTAGE	27 ~ 33V	40 ~ 50V	53 ~ 63V	60 ~ 70V
	OVER TEMPERATURE	Shut down output voltage, re-power on to recover			
ENVIRONMENT	WORKING TEMP.	-55 ~ +65°C (Refer to "Derating Curve")			
	WORKING HUMIDITY	20 ~ 95% RH non-condensing			
	STORAGE TEMP., HUMIDITY	-60 ~ +80°C, 10 ~ 95% RH non-condensing			
	TEMP. COEFFICIENT	±0.02%/°C (0 ~ 60°C)			
	VIBRATION	20 ~ 500Hz, 10G 12min./1cycle, period for 72min. each along X, Y, Z axes			
SAFETY & EMC	SAFETY STANDARDS Note.7	UL62368-1, IEC62368-1, IP65 (or IP68 for HEP-480 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°C / 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/EN55024, light industry level (surge 6KV), criteria A, EAC TP TC 020			
OTHERS	MTBF	89.8K hrs min. MIL-HDBK-217F (25°C)			
	DIMENSION	262*125*43.8mm (L*W*H)			
	PACKING	2.8Kg;4pcs/11.5Kg/0.55CUFT			
NOTE	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance : includes set up tolerance, line regulation and load regulation.</p> <p>4. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the setup time.</p> <p>5. Derating may be needed under low input voltages. Please refer to the "STATIC CHARACTERISTICS" for more details.</p> <p>6. The power supply shall be regarded as one component of the final system. The EMC performance will be affected by the complete system installation and/or configuration, the final system manufacturers must re-verify overall EMC directive with the complete installation and/or configuration.</p> <p>7. The water protection level test for the IP68 rating is performed 1000mm below the surface of the water for 1 month.</p> <p>8. Please refer to the warranty statement on MEAN WELL's website at <a href="http://www.meanwell.com">http://www.meanwell.com</a></p> <p>9. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>				

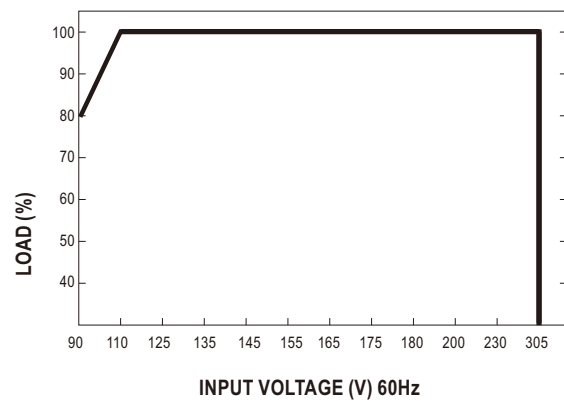
■ Block Diagram



■ Derating Curve



■ Static Characteristics

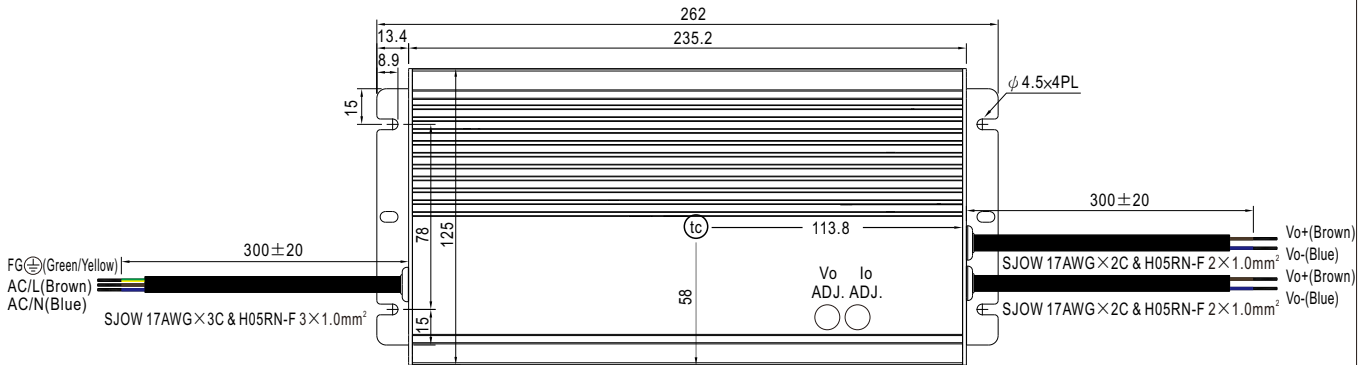


**Mechanical Specification**

Case No. 251 Unit:mm

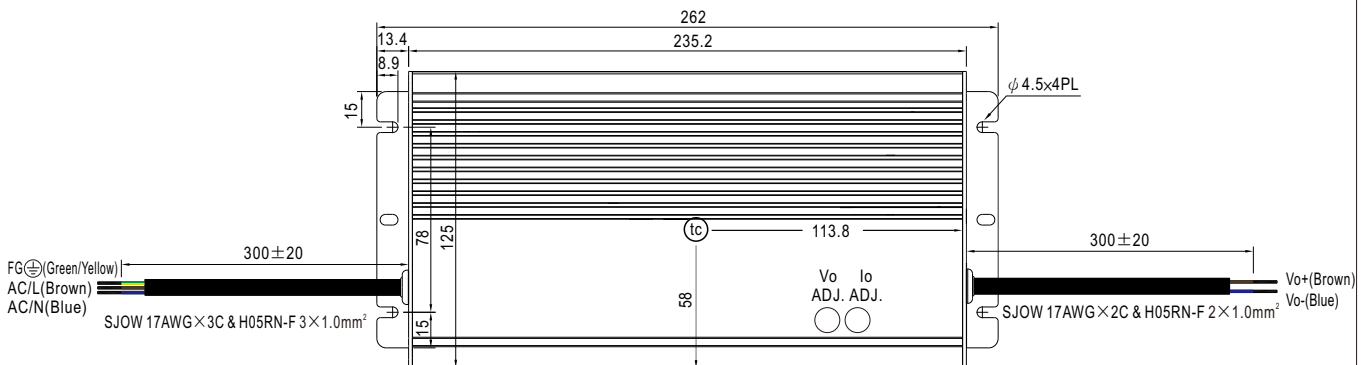
※ **A-Type (standard model)**

For 24V,36V



•  $t_c$  : Max. Case Temperature

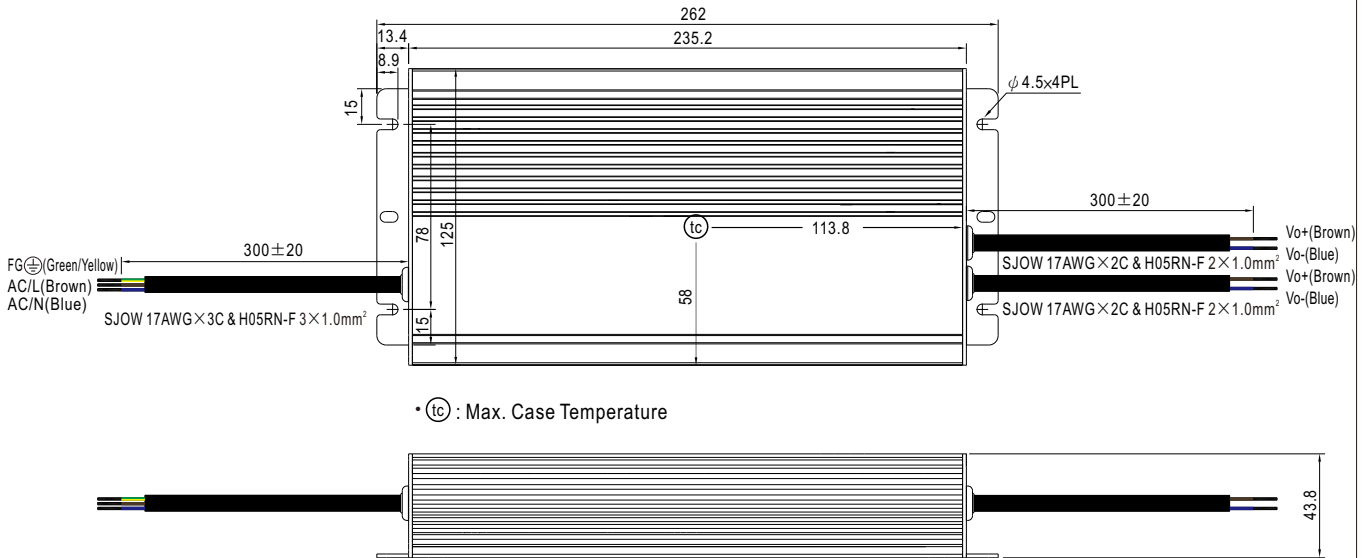
For Others



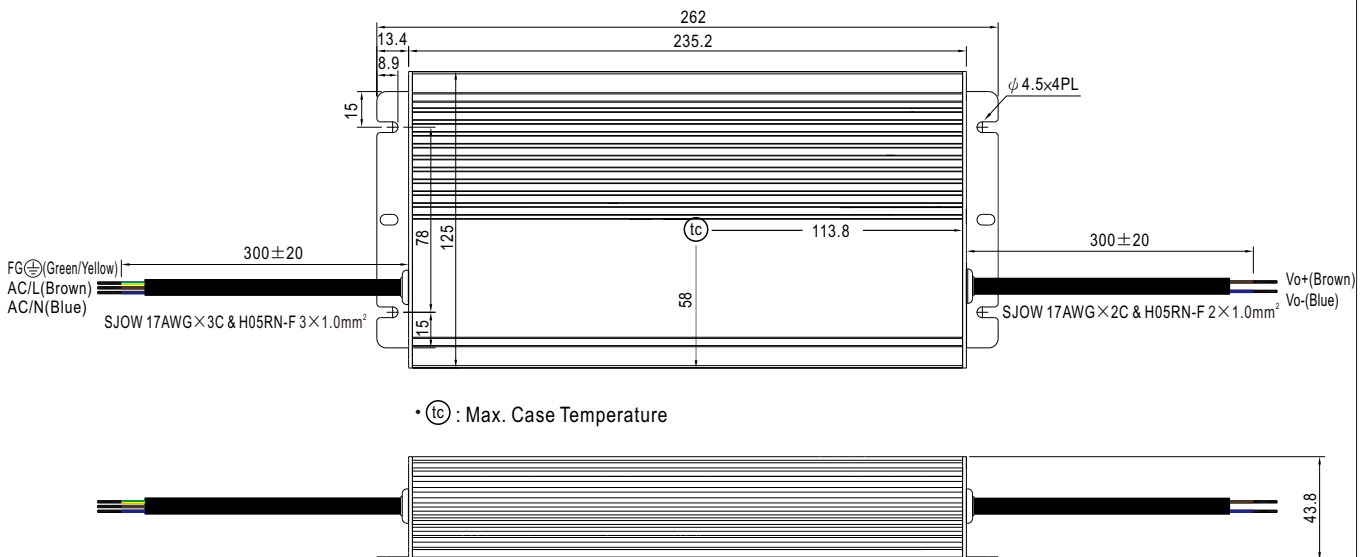
•  $t_c$  : Max. Case Temperature

※Blank-Type (optional model)

For 24V,36V



For Others



■ INSTALLATION MANUAL

Please refer to : <http://www.meanwell.com/manual.html>