



IP65 IP68 (optional)             



■ Characteristic

- Full Range AC input (up to 305vac)
- With active PFC function
- Efficiency up to 95%
- Fan free design, natural-cooling
- -55 ~ +65 °C working temperature range
- Aluminum casing, filled with thermal conductive adhesive
- IP65 protection grade, and IP68 protection grade can be selected
- Lightning surge capacity up to 6kV
- Vibration test: 10G
- Can work at an altitude of 5000m (Note 7)
- Protection: short circuit / overload / over-voltage / over temperature
- 6-year warranty

■ Applications

- Outdoor communication equipment
- Outdoor electronic billboards and billboards
- Oil plant or pit area equipment

■ Global transaction item identifying code

■ Description

Hep-480 is a 480W industrial AC to DC power supply, which is characterized by its excellent ability to be used in harsh environments with high humidity, high dust, oil and high vibration. The whole series are made of aluminum shell, and the body is filled with thermal conductive silica gel. Due to the advanced technology, the working efficiency could up to 95%, making the HEP-480 operate between -55 °C and +65 °C ambient temperature under natural air cooling.

■ Model Code

HEP - 480 - 24 A

Function Mode
Option
Output Voltage
Output Power
Series

Standard Type: the output voltage and output current can be adjusted by an internal potentiometer
Optional Type: fixed output voltage and current values

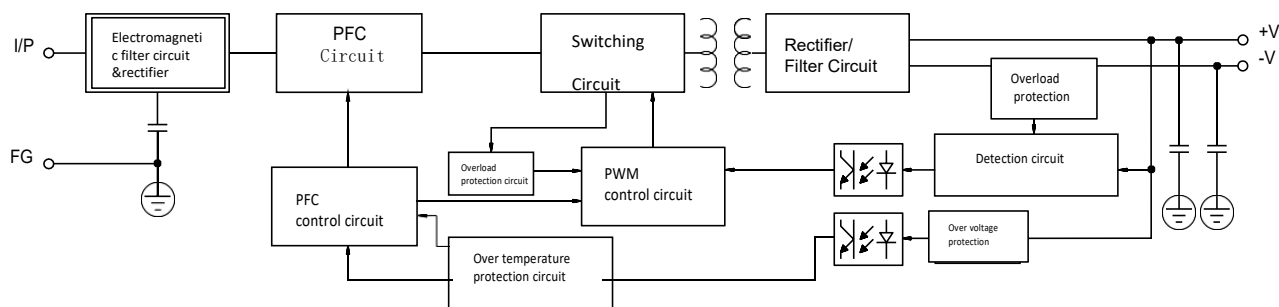
Electrical specifications

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 and noise (max) Remark 2	200mVp-p	250mVp-p	250mVp-p	350mVp-p
	Voltage adjustment range (Remark 5)	A type only((via internal potentiometer)			
		20.4 ~ 25.2V	30.6 ~ 37.8V	40.8 ~ 50.4V	45.9 ~ 56.7V
	Current adjustment range	A type only((via internal potentiometer)			
		10 ~ 20A	6.6 ~ 13.3A	5 ~ 10A	4.4 ~ 8.9A
	Voltage accuracy (Remark 3)	±1.0%	±1.0%	±1.0%	±1.0%
	Linear adjustment rate	±0.5%	±0.5%	±0.5%	±0.5%
	Load adjustment rate	±0.5%	±0.5%	±0.5%	±0.5%
	Start and rise time (remark 4)	500ms,80ms/115VAC/230VAC			
	Hold time (Typ.)	16ms 230VAC /115VAC			
Input	Voltage range (Remark 5)	85 ~ 264VAC(working in 277VAC) 120 ~ 370VDC(working in 390VDC)			
	Frequency range	47 ~ 63Hz			
	PF(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			
	Surge current(Typ.)	cold boot35A/230VAC			
	Leakage current	<0.75mA / 277VAC			
Protection	Over current	105%~ 125%			
		Constant current limit, which can be recovered automatically after the abnormal load conditions are removed			
	Short circuit	Constant current limit, which can be recovered automatically after the abnormal load conditions are removed			
	Over voltage	27 ~ 33V	40 ~ 50V	53 ~ 63V	60 ~ 70V
		Turn off output voltage and resume after restart			
Environment	Over temperature	Turn off output voltage and resume after restart			
	Operating temperature	-55 ~ +65℃ (Please refer to "Derating Curve")			
	Working humidity	20 ~ 95% RH, non-condensing			
	Storage temperature, humidity	-60 ~ +80℃, 10 ~ 95% RH			

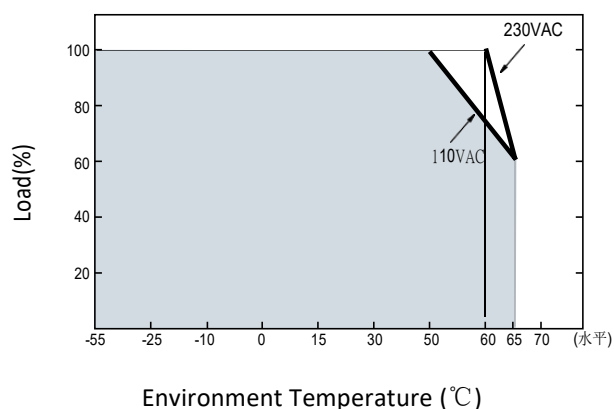
	Temperature coefficient	$\pm 0.02\%/^{\circ}\text{C}$ (0 ~ 60 $^{\circ}\text{C}$)
	vibration resistance	20 ~ 500Hz, 10G 12 min/cycle, 72 min each X, Y, Z
Safety regulations and electromagnetic compatibility	safety norm	UL62368-1, IEC62368-1, IP65 (or HEP-480 Blank IP68), EAC TP TC 004 approved ; Design reference BS EN/EN62368-1
	pressure resistance	I/P-O/P: 3.75KVAC I/P-FG: 2KVAC O/P-FG: 1.5KVAC
	Insulation impedance	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms/500VDC/ 25 $^{\circ}\text{C}$ / 70% RH
	electromagnetic compatibility emission	Conforms to BS EN/EN55032 (CISPR32) Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020
	Electromagnetic compatibility immunity	Compliant with BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, Light Industrial Standard (Surge 6KV) , EAC TP TC 020
Others	MTBF	1036.8K hrs min. Telcordia SR-332 (Bellcore) ; 89.8K hrs min. MIL-HDBK-217F (25 $^{\circ}\text{C}$)
	Dimension	262*125*43.8mm (L*W*H)
	Package	2.8Kg; 4pcs/11.5Kg/0.58CUFT
Remark	<ol style="list-style-type: none"> All specifications are measured at 230VAC input, rated load, and 25$^{\circ}\text{C}$ ambient temperature, unless otherwise noted. Ripple and noise measurement method: Use a 12" twisted pair cable, while terminating with 0.1uF and 47uF capacitors in parallel, and measure at 20MHz bandwidth. Accuracy: contains setting error, linearity adjustment rate and load adjustment rate. Start-up time is measured at cold start-up, frequent switching on and off may increase the start-up time. Reduced output is required for low input voltages, please refer to the "Static Curve" section for details. The power supply is considered as a component to be used in conjunction with the end device, and since EMC is affected by the complete unit, the end device manufacturer needs to re-check EMC for the complete unit. IP68 means that it is water resistant and can be placed underwater at a depth of 1 meter for one month. When the operating altitude is higher than 2000m (6500ft), the operating loop temperature needs to be adjusted down by 3.5$^{\circ}\text{C}$/1000m for fanless models and 5$^{\circ}\text{C}$/1000m for models with fans. 	

Diagram

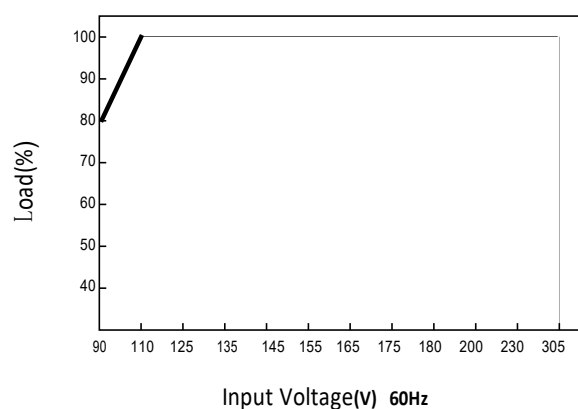
PFC oscillation frequency:45KHz
PWM oscillation frequency:55KHz



Derating curve



Static characteristic curve



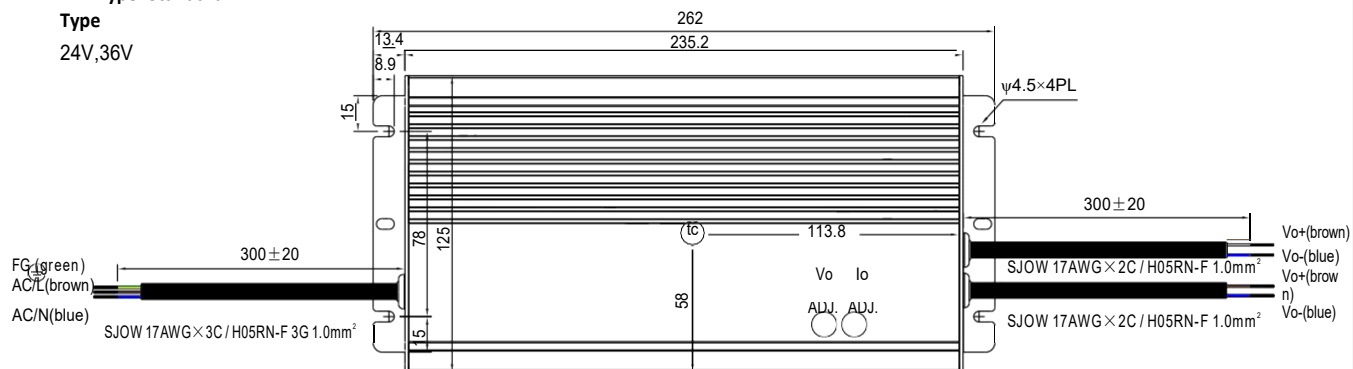
Mechanism size

机壳型号:251 单位:mm

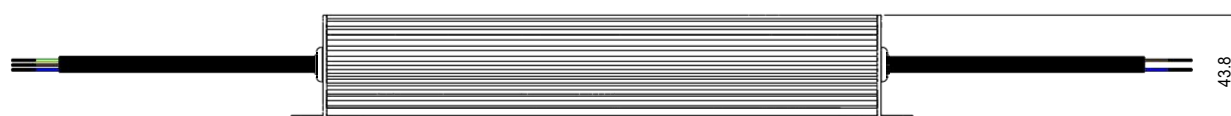
※A Type: Standard

Type

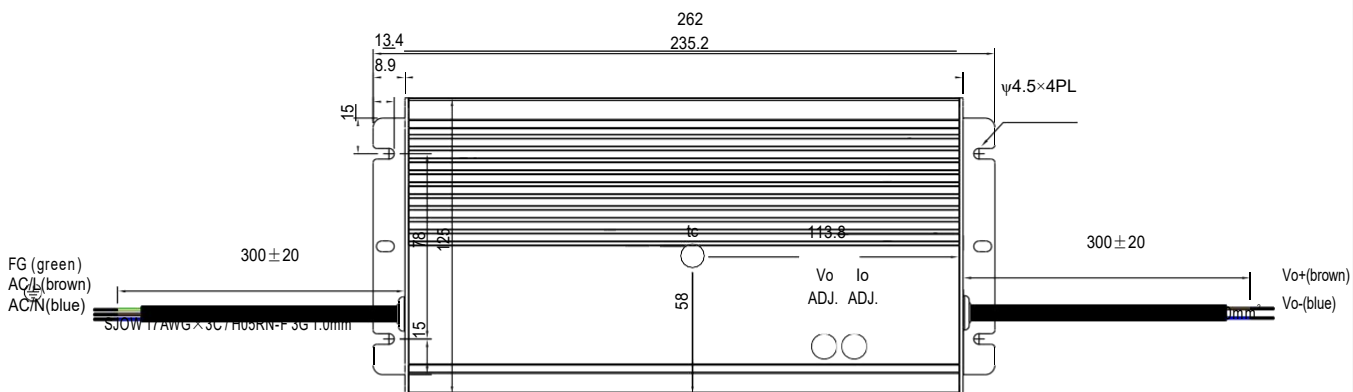
24V,36V



- t_c : 机壳最高温度



Other

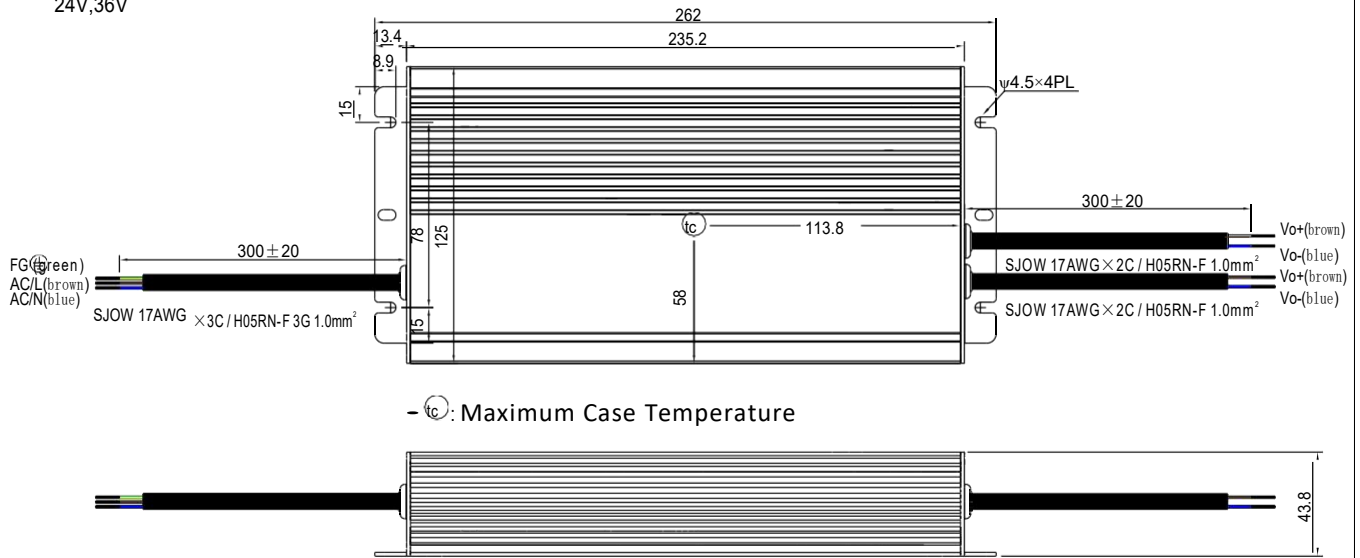


- t_c : Maximum Case Temperature



※ Blank Type
(optional)

24V,36V



Other

