

## 400W Single Output Switching Power Supply



### ■ Features :

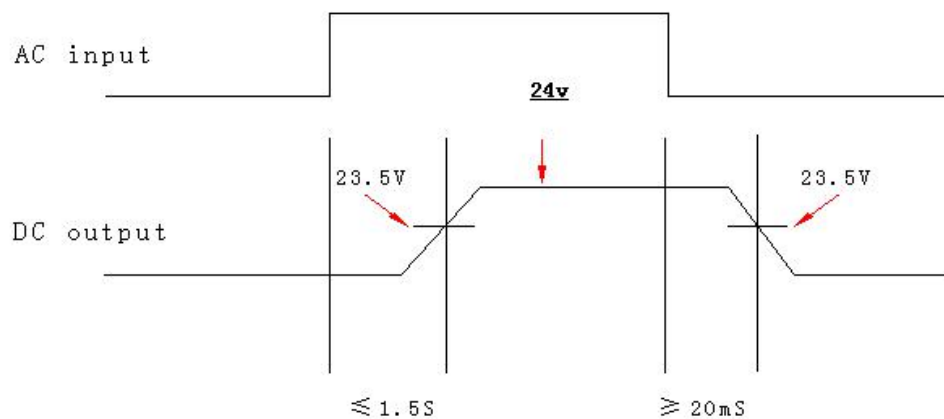
- Constant voltage design
- 100~130 or 200~250VAC input by switch
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Over load / Over voltage
- Cooling by free air convection
- Fully encapsulate Operating altitude up to 5000 meters
- LED indicator for power on
- No load power consumption<0.75W
- Suitable for LED related fixture or appliance
- 100% full load burn-in test
- Low cost, high reliability

**IP20 CE**

### SPECIFICATION

MODEL		HRM-400-12	HRM-400-24			
OUTPUT	DC VOLTAGE	12V	24V			
	RATED CURRENT	33.3A	16.7A			
	CURRENT RANGE	0 ~ 33.3A	0 ~ 16.7A			
	RATED POWER	400W	400W			
	RIPPLE & NOISE (max.)	200mVp-p	250mVp-p			
	VOLTAGE TOLERANCE	±2.0%	±2.0%			
	LINE REGULATION	±1.0%				
	LOAD REGULATION	±6.0%	±2.0%			
	SETUP, RISE TIME	500ms, 20ms / 230VAC				
HOLD UP TIME (Typ.)	40ms/230VAC at full load					
INPUT	VOLTAGE RANGE	100-130V or 200-250VAC by switch				
	FREQUENCY RANGE	47 ~ 63Hz				
	EFFICIENCY (Typ.)	86%	87%			
	AC CURRENT (Typ.)	2.65A/230VAC				
	INRUSH CURRENT(Typ.)	COLD START 65A at 230VAC				
	LEAKAGE CURRENT	0.75mA / 240VAC				
OVER LOAD	110 ~ 150% rated output power					
PROTECTION	OVER VOLTAGE	Protection type : Hiccup mode, recovers automatically after fault condition is removed				
		Protection type : Shut down o/p voltage, re-power on to recover				
ENVIRONMENT	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	WORKING TEMP.	-10 ~ +60°C				
	STORAGE TEMP., HUMIDITY	-20 ~ +80°C, 10 ~ 95% RH				
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes				
SAFETY STANDARDS	EN 55032:2015, EN 55035:2017, EN 6100-3-2:2014, EN 6100-3-3:2013					
SAFETY	WITHSTAND VOLTAGE	I/P-O/P:1.5KVAC				
	ISOLATION RESISTANCE	I/P-O/P:>100M Ohms / 500VDC / 25°C/ 70% RH				
	MTBF	605Khrs min.				
OTHERS	DIMENSION	215*115*30mm (L*W*H)				
	PACKING	0.63Kg; 30pcs/19.5KG				
NOTE						

## Switching Time Curve:



### I. About this LED power supply (LED driver, switching power supply)

Our high efficiency LED power supply provides you stable power output with stable current, 100% burn-in tested, and interference of fluctuation from input current which is benefit for the life span of LED appliances.

### II. Product Features

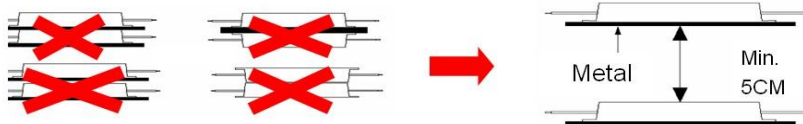
- 1) Over-load / over-current / short circuit protection
- 2) Please be advised to use the driver no more than 80% of full loading according to standard use
- 3) Comply with international power consumption standard of *stand by* status
- 4) Input electric current surge resisting ( 5 seconds under 300VAC input )
- 5) Choose 105°C electrolytic capacitor, suitable for tough work condition
- 6) High working efficiency, energy saving
- 7) Compact size and easy installation
- 8) Waterproof types are suitable for outdoor use, waterproof rate: IP67

### III. Installation and working environments

- 1) The input voltage must fall into 100~130VAC or 200~240VAC (some models are able to work under 100~250VAC input) 50/60HZ
- 2) Do not overload, also avoid free of load while a power supply is powered on, keep proper loading
- 3) Always keep good ventilation as below indicated



- 4) NO wood or flammable surface mounting, keep min. 5CM for power supplies each other



- 5) Keep away from inflammable or explosive environments

### IV. Wire Connection

#### Waterproof types:

AC Input: yellow/green lead is for grounding, rest leads are for electricity

DC Output: Red (brown) positive +, black (blue) negative -

Signal output: Red positive + for LED+, black negative - for LED-

#### Non-waterproof types:

Make sure wires are well connected, most of our models have multi-outlets, we recommend the following loading order: negative – positive- negative- positive- negative....etc. Please always keep balanced loading.

### **Cautions for Connecting Leads and Loading**

- 1) The power supply will be automatically protected and enter the abnormal state of intermittent connection if the load power exceeds the maximal rated output power (normally 5~20% exceeds).
- 2) **For models have multi-outlets, never connect all loading with single outlet, please keep balanced loading. If connecting with only single outlet is necessary, please connect all positive output leads together to provide electricity fully, also negative leads.**
- 3) Please be well noticed that too long connecting leads will cause to line loss. So please avoid too long extension with output leads.
- 4) Input/output lead's surface listed its diameter and industrial standard, please choose proper extension leads accordingly. In view of the line loss, the longer extension, the stronger leads is needed.
- 5) This power supply can be connected with plugs, but please make it well connected and insulated.

*The installation and wire connection of this power supply should be conducted by qualified technicians!*

### **LED POWER SUPPLY Trouble-shooting Tips**

There is a protection circuit in the Power Supply that will cut off (trip) the power whenever an short circuit or overload condition occurs, please make sure correct connection of positive and negative terminals(+, -) before power on.

#### **1. Power Supply does not work:**

- 1) Check the input power voltage.
- 2) Check power on/off status.
- 3) Check if there's short-circuit on output line.
- 4) Check if wrong positive and negative terminal connection.
- 5) Check if the output indication light is lighting (for the models which have this function).
- 6) Check if the fuse well connected (for the non-sealed models ).

#### **2. Over-heated of the Power Supply:**

- 1) Keep good ventilation.
- 2) Check the loading status, avoid over loading.

#### **3. Unsteady power output:**

- 1) Check if there's over-loading or improper output extension leads connected.
- 2) Check if there's strong interference in the working environment.
- 3) Check if there's magnetic field around the working environment.

#### **4. LED light works dark (weak light, LED not bright enough)**

- 1) Please check if the output voltage is good for your requirement(5V/12V/24V...etc.).
- 2) Choose proper wires in aspects of wire's diameter and voltage capacity.
- 3) Check if there's over-load or too long extension leads been used.

### **V. Working environment:**

- 1)Outdoor types: -25℃ ~+45℃ , Relative Humidity: 100%
- 2)Indoor type: -25℃ ~+45℃ , Relative Humidity: under 90%
- 3)Storage environment: -25℃ ~+80℃ , Relative Humidity: under 95%