



# TECHNICAL SPECIFICATION

MODEL NO.:APVM-150-12    DOCUMENT NO.:\_\_\_\_\_

CUSTOMER NO.:\_\_\_\_\_    DATA.:\_\_\_\_\_

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# APVM-150-12

# IP67 Waterproof LED Power Supply



- ★ Constant Voltage + Constant Current Mode
- ★ 200-240VAC Input voltage, High efficiency up to 91%
- ★ Protection: Over Current/Short Circuit/Over voltage Over Temperature
- ★ Class II Power Unit, NO FG
- ★ IP67 waterproof full sealed with Plastic Housing
- ★ Compliance to ERP SELV EMC LVD requirement
- ★ 50,000Hours long life span, low temperature rise









## TECHNICAL PARAMETERS

### 1. Output

Items	Specs	Unit	Conditions
Rated Output voltage	12	VDC	Ta , rated input voltage, output with rated power
Rated Output Current	12	A	Ta ,rated input voltage
Rated Output Power	144	W	Ta , rated input voltage
Tcase Max	85	C°	Ta: 50C° ,230VAC,full load
Efficiency	≥91 (Typical 92)	%	25°C,rated input voltage, output with max. rated power
Line Regulation	±1.0	%	/
Load Regulation	±2.0	%	/
Voltage tolerance	±3.5	%	/
Ripple & Noise (max)	≤120	mVp-p	Measured at 20MHZ of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47 uf parallel capacitor
Setup time, Rise time	1000ms, 25ms	mS	25C° , full load
Switch off Hold Up time	18	ms	230VAC, full load

## 2. Input

Items	Specs	Unit	Conditions
Rated Input voltage	200-240	VAC	25°C
Input voltage range	180-264	VAC	25°C
Input Frequency	47-63(Typical 50/60)	Hz	25°C
Input Current Max	<1.5	A	Vin=180Vac, Full Load
Inrush Current	≤60	A	220Vac, full load, 25C°
Leakage Current	<0.25	mA	240VAC

## 3. Protection

Current Limiting	1.1-1.4 times of rated output current		Constant current limiting,Auto-recovery after fault condition is removed
Over Voltage	14-16	V	Shut down output voltage, re-power on to recover
Over Temperature	Yes	C°	Shut down output voltage, Auto-recovery after temperature goes down
Short circuit	Yes		Hiccup Mode, Auto-recovery after fault condition is removed

## 4. Temperature and others

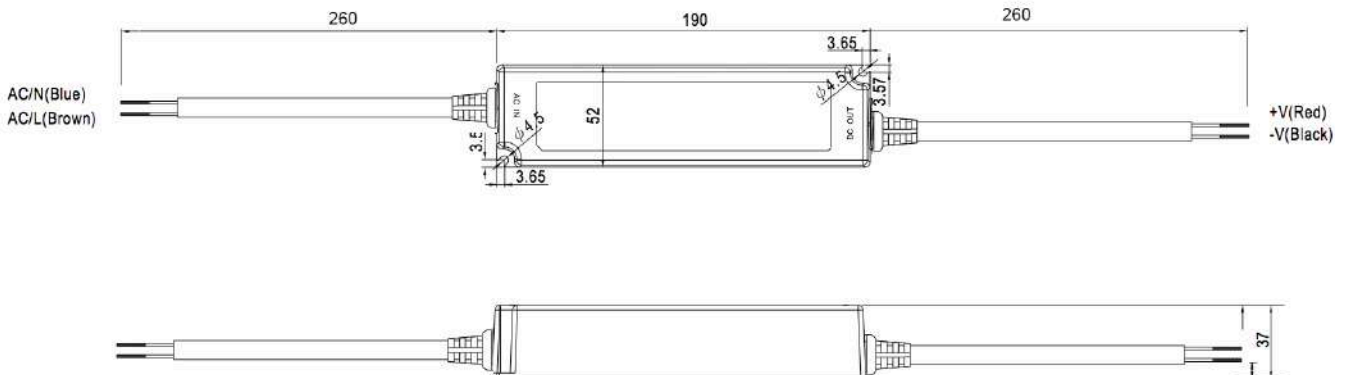
Operating Temperature range	-30 to +70 (Typical25)	C°	Refer to Derating Curve
Storage Temperature range	-40 to +80 (Typical25)	C°	
Humidity	10 ~ 95	%	NON-Condensing
Max Case Temperature	85	C°	50C° ambient temperature, full load
Waterproof Level	IP67 full sealed with silicon gel		
Cooling method	Air convection		
Temperature Coefficient	0.03%/C° (0-60C° )		
Vibration	10-500Hz, 5G 12min./1cycle, period for 72 min, each along X.Y. Z axes		
Lifespan	50,000hours, Max.Ta, rated input voltage, max rated output power		
Dimension/Packing	190*52*37mm (L*W*H) , 0.7Kg;20pcs/15Kg/0.029CBM		

## 5. Safety & EMC Standards

Safety	U8750, EN60950-1, EN 62368-1
Withstand Voltage	I/P-O/P:3.0KVAC
Isolation Resistance	I/P-O/P:>100M Ohms / 500VDC /25C°/70% RH
EMI Conduction	Compliance to EN55015, EN55032 (CISPR22) Class B
EMS Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61547, light industry level , criteria A
Temperature Coefficient	0.03%/C° (0-60C° )
Vibration	10-500Hz, 5G 12min./1cycle, period for 72 min, each along X.Y. Z axes

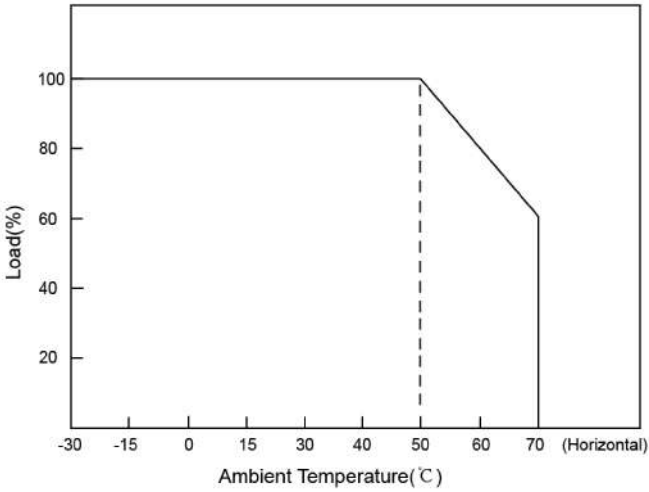
## 6. Mechanical Mounting

Case Material	Pure PC, Fire-proof level V0
Mounting ways	Striped
Insulation type	Class II, NO FG
IP grade	IP67
Input cables dimension	H05RN-F 2X1.0mm <sup>2</sup> , 17AWG, 300±10mm, AC/N-Blue, AC/L-Brown
output cables dimension	H05RN-F 2X1.5mm <sup>2</sup> , 16AWG, 300±10mm,V+: Red, V-:Black
Dimension	190*52*37mm (L*W*H)

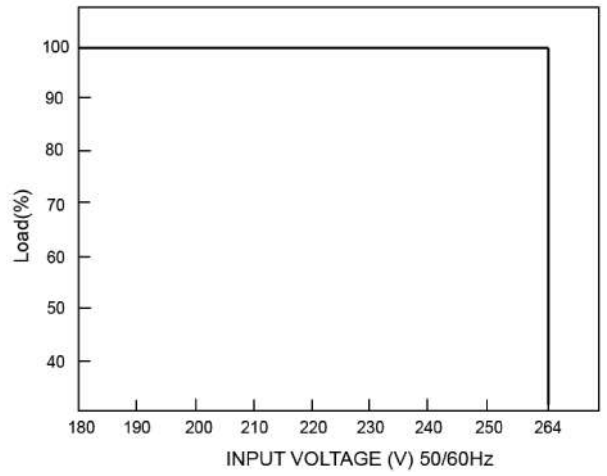


# 7. Characteristics & Derating

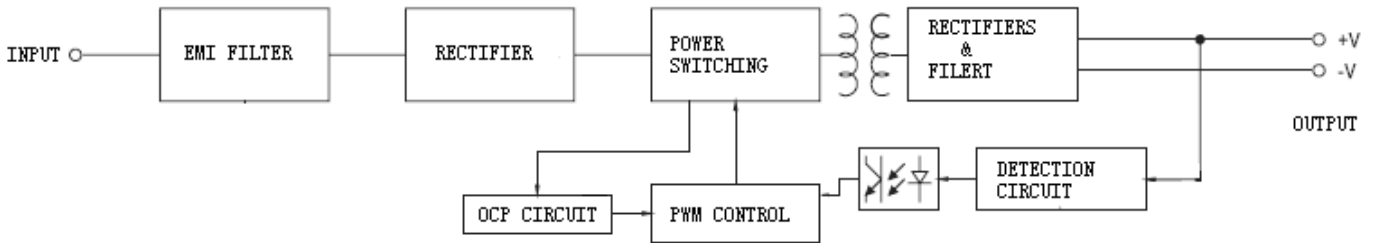
**OUTPUT LOAD vs TEMPERATURE**



**STATIC CHARACTERISTIC**



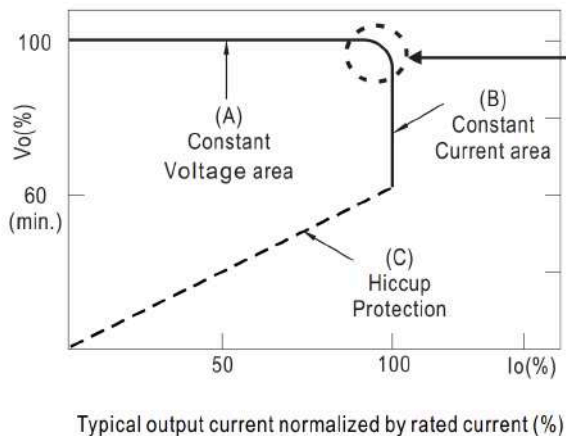
# 8. Block Diagram



# 9. Product Label

<ul style="list-style-type: none"> <li>● AC/N(BLUE)</li> <li>● AC/L(BROWN)</li> </ul>	<b>PRI</b>  YOUR IDEA, WE MAKE IT  ROHS	<p><b>APVM-150-12</b> Class 2 Power Supply</p> <p>PRI: 200-240VAC, 1.5A Max, 50/60Hz,                  SEC: +12V = 12.0A</p> <p>Rated Output Power: <b>144W</b> Max                  Constant Voltage + Constant Current Mode</p> <p>Protection: Over Voltage/Over Current/Over Temperature/Short Circuit</p> <p>S/N: _____      ta:50°C, tc:85°C Max</p>	<b>SEC</b> Vo- (BLACK) ● Vo+ (RED) ● MADE IN CHINA
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## 10. Drive Mode



In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.

## 11. Installation Manual

- (1). Before commencing any installation or maintenance work, please disconnect the power supply from the utility. Ensure that it cannot be re-connected inadvertently.
- (2). Keep proper ventilation around the unit and do not put any object on it. 15-20cm clearance must be kept when the adjacent device is a heat source
- (3). Operating under high ambient temperature may cause the internal component temperature and will require a de-rating in output load
- (4). Install in wet condition need use waterproof connectors, make sure there is no space between the unit and lighting fixtures.
- (5). Output current and output wattage must not exceed the rated values on the specifications
- (6). Wiring
  - Connect the ACL wire (Brown) of the LED power supply to Live (black or brown).
  - Connect the ACN wire (Blue) of the LED power supply to Neutral (white or blue)
- (7). Risk of electrical shock and energy hazard. All failure should be examined by a qualified technician. Please do not remove the case of the power supply by yourself!
- (8). Can't be installed under water or buried in soil directly
- (9). Please do not install LED power supplies in places with high ambient temperature or close to fire source
- (10). If the external flexible cable or cord of this switching power supply is damaged, it shall be exclusively replaced by the manufacturer or similar qualified person in order to avoid a hazard.
- (11). DO NOT SOAK the power supply under water.