

Features

- High Efficiency (Up to 86%)
- Active Power Factor Correction (Typical 0.86)
- Constant Output Voltage
- Waterproof (IP67)
- All-Round Protection: OVP, SCP
- Comply With UL8750 & EN61347 Safety Regulations



Description

The EWV-030SxxxSS Series operate from a 90 ~ 264 Vac input range. These units will provide up to a 24 V of output voltage and a maximum output current of 2500 mA for 30 W maximum output power. They are designed to be highly efficient and highly reliable. Features include over voltage protection, short circuit protection.

Models

Output Voltage	Input Voltage	Max. Output Current	Max. Output Power	Typical Efficiency (1)	Power Factor		Model Number (2)
					110Vac	220Vac	
12 Vdc	90 ~ 264 Vac	2500 mA	30 W	83%	0.85	0.83	EWV-030S012SS (3)
24 Vdc	90 ~ 264 Vac	1250 mA	30 W	85%	0.86	0.84	EWV-030S024SS (3)

- Notes:** (1) Measured at full load and 220 Vac input.
 (2) A suffix –xxx may be added to denote variations or modifications to the base product, where x can be any alphanumeric character or blank.
 (3) Class 2 output (USR & CNR).

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90 V	-	264 V	
Input Frequency	47 Hz	-	63 Hz	
Input AC Current	-	-	0.43 A	Measured at full load and 100 Vac input.
	-	-	0.25 A	Measured at full load and 220 Vac input.
Inrush Current	-	-	65 A	At 230Vac input 25°C Cold Start

Specifications are subject to changes without notice.

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Voltage Range $V_O = 12\text{ V}$ $V_O = 24\text{ V}$	11.4 V 22.8 V	- -	12.6 V 25.2 V	
Output Current Range $V_O = 12\text{ V}$ $V_O = 24\text{ V}$	0 mA 0 mA	- -	2500 mA 1250 mA	
Ripple and Noise (pk-pk)	-	-	2% V_O	Measured by 20 MHz bandwidth oscilloscope and the output paralleled a 0.1 uF ceramic capacitor and a 10 uF electrolytic capacitor.
Line Regulation	-	-	1%	
Load Regulation	-	-	3%	
Turn-on Delay Time	-	0.6 S	0.8 S	Measured at 110Vac input.
	-	0.26 S	0.3 S	Measured at 220Vac input.
Output Overshoot / Undershoot	-	-	10%	When power on or off.

Note: All specifications are typical at 25 °C unless otherwise stated.

Protection Functions

Parameter	Min.	Typ.	Max.	Notes
Over Voltage Protection $V_O = 12\text{ V}$ $V_O = 24\text{ V}$	14 V 29 V	16 V 32 V	18 V 36 V	Latch mode. The power supply shall return to normal operation only after the power is turn-on again.
Over Current Protection	120% I_O	130% I_O	170% I_O	Hiccup mode. The power supply shall be self-recovery when the fault condition is removed.
Short Circuit Protection	No damage shall occur when any output operating in a short circuit condition. The power supply shall be self-recovery when the fault condition is removed.			

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General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency $V_O = 12\text{ V}$ $V_O = 24\text{ V}$	81.5% 83.5%	82.5% 84.5%	- -	Measured at full load, 110Vac input, 25°C ambient temperature, after the unit is thermally stabilized. It will be lower about 1%, if measured immediately after startup.
Efficiency $V_O = 12\text{ V}$ $V_O = 24\text{ V}$	82.0% 84.0%	83.0% 85.0%	- -	Measured at full load, 220Vac input, 25°C ambient temperature, after the unit is thermally stabilized. It will be lower about 1%, if measured immediately after startup.
No Load Power Dissipation	≤ 1.0 W			Measured at 230 Vac input.
MTBF	943,000 hours			For 24V output model, measured at 110Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F).
Life Time	177,000 hours			For 24V output model, measured at 110Vac input, 80%Load and 45°C ambient temperature
Dimensions Inches (L x W x H) Millimeters (L x W x H)	6.38 x 1.67 x 1.36 162 x 42.5 x 34.5			
Net Weight	-	460 g	-	

Note: All specifications are typical at 25 °C unless otherwise stated.

Environmental Specifications

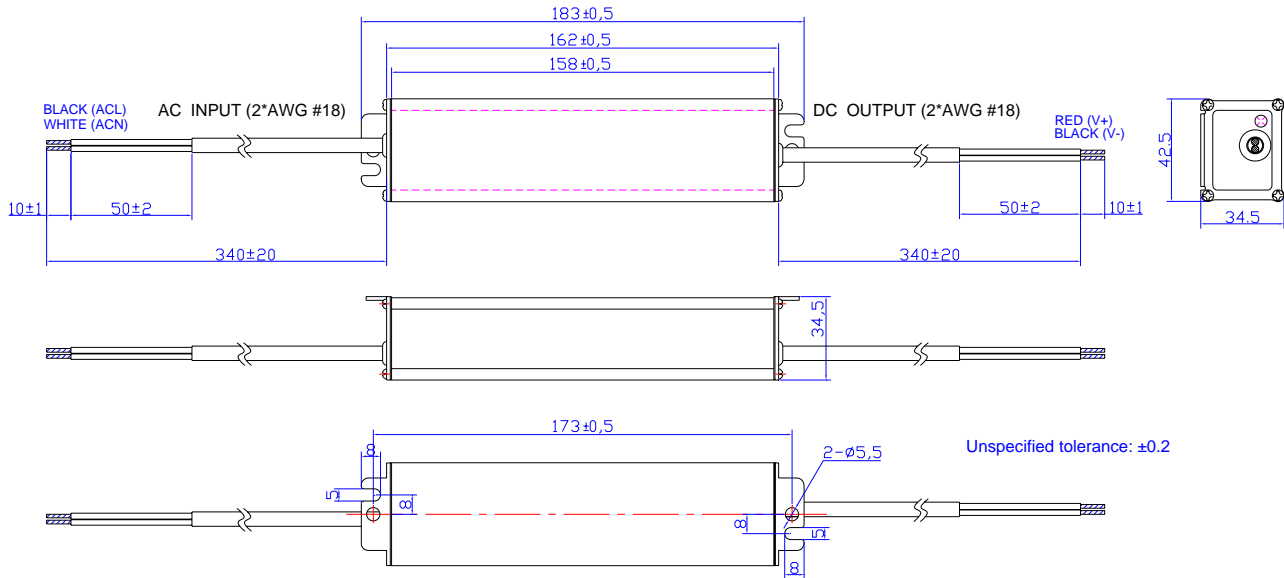
Parameter	Min.	Typ.	Max.	Notes
Operating Temperature	-35 °C	-	+60 °C	Humidity: 10% RH to 100% RH
Storage Temperature	-40 °C	-	+85 °C	Humidity: 5% RH to 100% RH

Safety & EMC Compliance

Safety Category	Country	Standard
CUL	USA & Canada	UL8750 Compliance to UL1310 Class2, UL1012 UL935, CAN/CSA-C22.2 No. 0, CSA-C22.2 No. 107.1, CSA-C22.2 No. 250.0
CE	Europe	EN 61347-1, EN61347-2-13
EMI Standards		Notes
EN 55015		Conducted emission Test & Radiated emission Test with 6 dB margin
EMS Standards		Notes
EN 61000-3-2		Harmonic current emissions
EN 61000-3-3		Voltage fluctuations & flicker
EN 61000-4-2		Electrostatic Discharge (ESD): 8 kV air discharge, 4 kV contact discharge
EN 61000-4-3		Radio-Frequency Electromagnetic Field Susceptibility Test-RS
EN 61000-4-4		Electrical Fast Transient / Burst-EFT
EN 61000-4-6		Conducted Radio Frequency Disturbances Test-CS
EN 61000-4-8		Power Frequency Magnetic Field Test
EN 61000-4-11		Voltage Dips
EN 61547		Electromagnetic Immunity Requirements Applies to Lighting Equipment

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Mechanical Outline



RoHS Compliance

Our products comply with the European Directive 2002/95/EC, calling for the elimination of lead and other hazardous substances from electronic products.

Revision History

Rev.	Description of Change	Changed Date	Note
A	Change Features/Safety and Efficiency.	2009-07-24	
B	Change MTBF and Life Time. Delete OTP content.	2009-09-02	
C	Change Turn-on Delay Time	2009-09-11	
D	Add one note of UL1310 Class 2 for all models.	2009-10-15	
E	Change notes of efficiency.	2009-11-10	

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