

## Features

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



## Description

The EWC-030SxxxSS Series operate from a 90 ~ 264 Vac input range. These units will provide up to 2500 mA of output current and a maximum output voltage of 85 V for 30 W output model. They are designed to be highly efficient and highly reliable. Features include over voltage protection, short circuit protection and over temperature protection.

## Models

Output Current (1)	Input Voltage	Max. Output Voltage	Max. Output Power	Typical Efficiency (1)	Power Factor		Model Number (2)
					110Vac	220Vac	
2500 mA	90 ~ 264 Vac	12 Vdc	30 W	83%	0.85	0.83	EWC-030S250SS
1660 mA	90 ~ 264 Vac	18 Vdc	30 W	84%	0.86	0.84	EWC-030S166SS
1250 mA	90 ~ 264 Vac	24 Vdc	30 W	85%	0.86	0.84	EWC-030S125SS
830 mA	90 ~ 264 Vac	36 Vdc	30 W	86%	0.86	0.84	EWC-030S083SS
700 mA	90 ~ 264 Vac	42 Vdc	30 W	86%	0.86	0.84	EWC-030S070SS
450 mA	90 ~ 264 Vac	66 Vdc	30 W	86%	0.86	0.84	EWC-030S045SS
350 mA	90 ~ 264 Vac	86 Vdc	30 W	87%	0.86	0.84	EWC-030S035SS

**Notes:** (1) Measured at full load and 220 Vac input.

(2) A suffix -xxxx may be added to denote variations or modifications to the base product, where x can be any alphanumeric character or blank.

## 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 Current Range				
$I_o = 2500 \text{ mA}$	2375 mA	-	2625 mA	
$I_o = 1660 \text{ mA}$	1580 mA	-	1740 mA	
$I_o = 1250 \text{ mA}$	1190 mA	-	1310 mA	
$I_o = 830 \text{ mA}$	790 mA	-	870 mA	
$I_o = 700 \text{ mA}$	665 mA	-	735 mA	
$I_o = 450 \text{ mA}$	428 mA	-	472 mA	
$I_o = 350 \text{ mA}$	333 mA	-	367 mA	
Output Voltage Range				
$I_o = 2500 \text{ mA}$	7 V	-	12 V	
$I_o = 1660 \text{ mA}$	9 V	-	18 V	
$I_o = 1250 \text{ mA}$	13 V	-	24 V	
$I_o = 830 \text{ mA}$	18 V	-	36 V	
$I_o = 700 \text{ mA}$	21 V	-	42 V	
$I_o = 450 \text{ mA}$	33 V	-	66 V	
$I_o = 350 \text{ mA}$	43 V	-	86 V	
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			3 S	
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				
$I_o = 2500 \text{ mA}$	14 V	16 V	18 V	Latch mode. The power supply shall return to normal operation only after the power is turn-on again.
$I_o = 1660 \text{ mA}$	22 V	24 V	27 V	
$I_o = 1250 \text{ mA}$	29 V	32 V	36 V	
$I_o = 830 \text{ mA}$	43 V	48 V	54 V	
$I_o = 700 \text{ mA}$	50 V	57 V	63 V	
$I_o = 450 \text{ mA}$	79 V	89 V	99 V	
$I_o = 350 \text{ mA}$	103 V	116 V	129 V	
Over Temperature Protection	-	110 °C	-	Maximum temperature of components inside the case.
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 I <sub>o</sub> = 2500 mA I <sub>o</sub> = 1660 mA I <sub>o</sub> = 1250 mA I <sub>o</sub> = 830 mA I <sub>o</sub> = 700 mA I <sub>o</sub> = 450 mA I <sub>o</sub> = 350 mA	81.5% 82.5% 83.5% 84.5% 84.5% 84.5% 85.5%	82.5% 83.5% 84.5% 85.5% 85.5% 85.5% 86.5%	- - - - - - -	Measured at full load and 110 Vac input.
Efficiency I <sub>o</sub> = 2500 mA I <sub>o</sub> = 1660 mA I <sub>o</sub> = 1250 mA I <sub>o</sub> = 830 mA I <sub>o</sub> = 700 mA I <sub>o</sub> = 450 mA I <sub>o</sub> = 350 mA	82.0% 83.0% 84.0% 85.0% 85.0% 85.0% 86.0%	83.0% 84.0% 85.0% 86.0% 86.0% 86.0% 87.0%	- - - - - - -	Measured at full load and 220 Vac input.
No Load Power Dissipation	≤ 1.0 W			Measured at 230 Vac input.
MTBF	300,000 hours			At 110Vac input, full load and 25°C ambient temperature (MIL-HDBK-217F)
Life Time	80,000 hours			At 25°C ambient temperature.
Dimensions Inches (L x W x H) Millimeters (L x W x H)	6.38 x 1.36 x 1.67 162 x 34.5 x 42.5			
Net Weight	-	460 g	-	

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

## Environmental Specifications

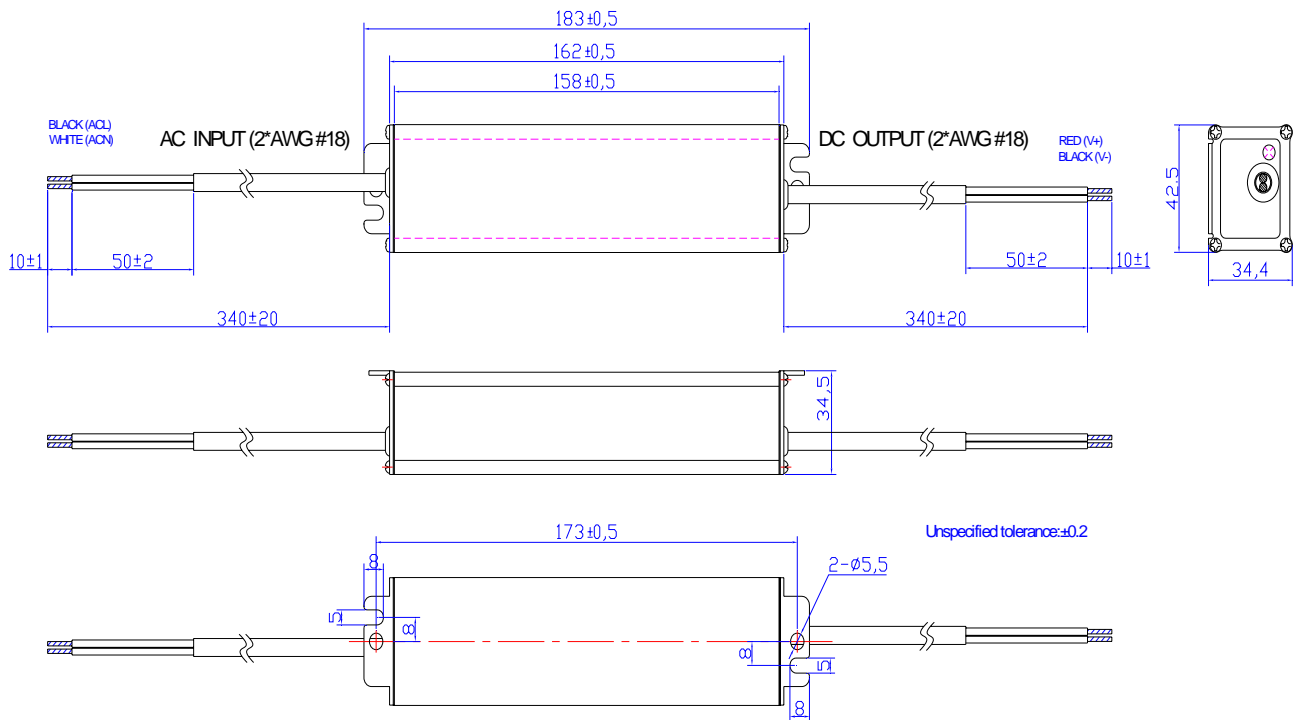
Parameter	Min.	Typ.	Max.	Notes
Operating Temperature	-35 °C	-	+60 °C	Humidity: 10% RH to 100% RH
Storage Temperature	-40 °C	-	+85 °C	Humidity: 5% RH to 100% RH

## 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.