

Features

- High Efficiency (Up to 88%)
- Active Power Factor Correction (Typical 0.87)
- Constant Output Current
- Waterproof (IP67)
- All-Round Protection: OVP, SCP, OTP
- Comply With UL8750 & EN61347 Safety Regulations



Description

The EWC-050SxxxSS Series operate from a 90 ~ 264 Vac input range. These units will provide up to a 3000 mA of output current and a maximum output voltage of 142 V for 50 W maximum output power. 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	
3000 mA	90 ~ 264 Vac	12 Vdc	36 W	84%	0.86	0.84	EWC-050S300SS
2770 mA	90 ~ 264 Vac	18 Vdc	50 W	85%	0.87	0.85	EWC-050S277SS
2100 mA	90 ~ 264 Vac	24 Vdc	50 W	86%	0.87	0.85	EWC-050S210SS
1400 mA	90 ~ 264 Vac	36 Vdc	50 W	87%	0.87	0.85	EWC-050S140SS
1190 mA	90 ~ 264 Vac	42 Vdc	50 W	87%	0.87	0.85	EWC-050S119SS
1050 mA	90 ~ 264 Vac	48 Vdc	50 W	88%	0.87	0.85	EWC-050S105SS
700 mA	90 ~ 264 Vac	72 Vdc	50 W	88%	0.87	0.85	EWC-050S070SS
450 mA	90 ~ 264 Vac	111 Vdc	50 W	88%	0.87	0.85	EWC-050S045SS
350 mA	90 ~ 264 Vac	142 Vdc	50 W	88%	0.87	0.85	EWC-050S035SS

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	-	-	0.7 A	Measured at full load and 100 Vac input.
	-	-	0.35 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				
$I_o = 3000$ mA	2850 mA	-	3150 mA	
$I_o = 2770$ mA	2635 mA	-	2905 mA	
$I_o = 2100$ mA	1995 mA	-	2205 mA	
$I_o = 1400$ mA	1330 mA	-	1470 mA	
$I_o = 1190$ mA	1130 mA	-	1250 mA	
$I_o = 1050$ mA	997 mA	-	1102 mA	
$I_o = 700$ mA	665 mA	-	735 mA	
$I_o = 450$ mA	428 mA	-	472 mA	
$I_o = 350$ mA	333 mA	-	367 mA	
Output Voltage Range				
$I_o = 3000$ mA	7 V	-	12 V	
$I_o = 2770$ mA	9 V	-	18 V	
$I_o = 2100$ mA	13 V	-	24 V	
$I_o = 1400$ mA	18 V	-	36 V	
$I_o = 1190$ mA	21 V	-	42 V	
$I_o = 1050$ mA	24 V	-	48 V	
$I_o = 700$ mA	36 V	-	72 V	
$I_o = 450$ mA	56 V	-	111 V	
$I_o = 350$ mA	71 V	-	142 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	-	-	3S	
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				
$I_o = 3000$ 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.
$I_o = 2770$ mA	22 V	24 V	27 V	
$I_o = 2100$ mA	29 V	32 V	36 V	
$I_o = 1400$ mA	43 V	48 V	54 V	
$I_o = 1190$ mA	50 V	57 V	63 V	
$I_o = 1050$ mA	58 V	65 V	72 V	
$I_o = 700$ mA	86 V	97 V	108 V	
$I_o = 450$ mA	133 V	150 V	167 V	
$I_o = 350$ mA	170 V	192 V	213 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.			

General Specifications

Parameter	Min.	Typ.	Max.	Notes
Efficiency I _o = 3000 mA I _o = 2770 mA I _o = 2100 mA I _o = 1400 mA I _o = 1190 mA I _o = 1050 mA I _o = 700 mA I _o = 450 mA I _o = 350 mA	82.5% 83.5% 84.5% 85.5% 85.5% 86.5% 86.5% 86.5% 86.5%	83.5% 84.5% 85.5% 86.5% 86.5% 87.5% 87.5% 87.5% 87.5%	- - - - - - - - -	Measured at full load and 110 Vac input.
Efficiency I _o = 3000 mA I _o = 2770 mA I _o = 2100 mA I _o = 1400 mA I _o = 1190 mA I _o = 1050 mA I _o = 700 mA I _o = 450 mA I _o = 350 mA	83.0% 84.0% 85.0% 86.0% 86.0% 87.0% 87.0% 87.0% 87.0%	84.0% 85.0% 86.0% 87.0% 87.0% 88.0% 88.0% 88.0% 88.0%	- - - - - - - - -	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 110 Vac 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

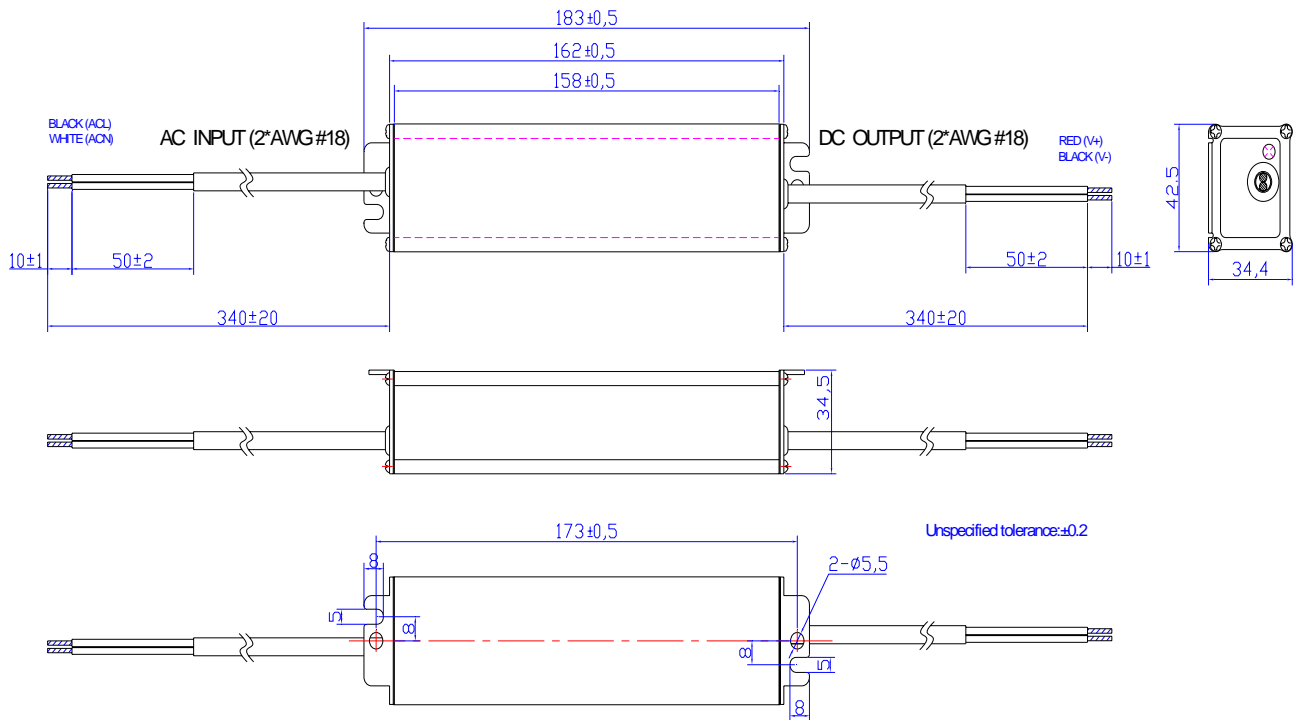
Parameter	Min.	Typ.	Max.	Notes
Operating Temperature	-35 °C	-	+60 °C	Humidity: 10% RH to 100% RH
Storage Temperature	-40 °C	-	+85 °C	Humidity: 5% RH to 100% RH

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.