

Features

- Ultra High Efficiency (Up to 92%)
- Active Power Factor Correction (0.99 Typical)
- Constant Current Output
- Lightning Protection
- All-Round Protection: SCP, OTP, OVP
- Waterproof (IP67)
- Comply With UL8750 & EN61347 Safety Regulations



Description

The EUC-120SxxxST Series operate from a 90 ~ 305 Vac input range. These units will provide up to a 4.9 A of output current and a maximum output voltage of 343 V for 120 W maximum output power. They are designed to be highly efficient and highly reliable. The standard features include lightning protection, over voltage protection, short circuit protection, and over temperature protection.

Models

Output Current	Input Voltage	Max. Output Voltage	Max. Output Power	Typical Efficiency (1)	Power Factor		Model Number (2)
					110Vac	220Vac	
350 mA	90 ~ 305 Vac	343 Vdc	120 W	92.0%	0.99	0.96	EUC-120S035ST★
450 mA	90 ~ 305 Vac	266 Vdc	120 W	92.0%	0.99	0.96	EUC-120S045ST
700 mA	90 ~ 305 Vac	171 Vdc	120 W	92.0%	0.99	0.96	EUC-120S070ST★
1050 mA	90 ~ 305 Vac	114 Vdc	120 W	91.0%	0.99	0.96	EUC-120S105ST
1400 mA	90 ~ 305 Vac	86 Vdc	120 W	91.0%	0.99	0.96	EUC-120S140ST★
1750 mA	90 ~ 305 Vac	68 Vdc	120 W	91.0%	0.99	0.96	EUC-120S175ST★
2100 mA	90 ~ 305 Vac	57 Vdc	120 W	91.0%	0.99	0.96	EUC-120S210ST★
2450 mA	90 ~ 305 Vac	49 Vdc	120 W	91.0%	0.99	0.96	EUC-120S245ST★
2800 mA	90 ~ 305 Vac	43 Vdc	120 W	91.0%	0.99	0.96	EUC-120S280ST
3150 mA	90 ~ 305 Vac	38 Vdc	120 W	90.5%	0.99	0.96	EUC-120S315ST★
3500 mA	90 ~ 305 Vac	34 Vdc	120 W	90.5%	0.99	0.96	EUC-120S350ST★
4200 mA	90 ~ 305 Vac	28 Vdc	120 W	90.5%	0.99	0.96	EUC-120S420ST
4900 mA	90 ~ 305 Vac	24 Vdc	120 W	90.5%	0.99	0.96	EUC-120S490ST

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.

(3) ★: Popular model.

Specifications are subject to changes without notice.

Input Specifications

Parameter	Min.	Typ.	Max.	Notes
Input Voltage	90 V	-	305 V	
Input Frequency	47 Hz	-	63 Hz	
Leakage Current	-	-	1 mA	At 277Vac 50Hz input
Input AC Current	-	-	1.5 A	Measured at full load and 100 Vac input.
	-	-	0.7 A	Measured at full load and 220 Vac input.
Inrush current	-	-	65 A	At 230Vac input 25°C Cold start

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Range				
$I_o = 350 \text{ mA}$	332 mA	350 mA	368 mA	
$I_o = 450 \text{ mA}$	427 mA	450 mA	473 mA	
$I_o = 700 \text{ mA}$	665 mA	700 mA	735 mA	
$I_o = 1050 \text{ mA}$	997 mA	1050 mA	1102 mA	
$I_o = 1400 \text{ mA}$	1330 mA	1400 mA	1470 mA	
$I_o = 1750 \text{ mA}$	1662 mA	1750 mA	1837 mA	
$I_o = 2100 \text{ mA}$	1995 mA	2100 mA	2205 mA	
$I_o = 2450 \text{ mA}$	2327 mA	2450 mA	2572 mA	
$I_o = 2800 \text{ mA}$	2660 mA	2800 mA	2940 mA	
$I_o = 3150 \text{ mA}$	2992 mA	3150 mA	3307 mA	
$I_o = 3500 \text{ mA}$	3325 mA	3500 mA	3675 mA	
$I_o = 4200 \text{ mA}$	3990 mA	4200 mA	4410 mA	
$I_o = 4900 \text{ mA}$	4655 mA	4900 mA	5145 mA	
Output Voltage Range				
$I_o = 350 \text{ mA}$	206 V	-	343 V	
$I_o = 450 \text{ mA}$	160 V	-	266 V	
$I_o = 700 \text{ mA}$	103 V	-	171 V	
$I_o = 1050 \text{ mA}$	68 V	-	114 V	
$I_o = 1400 \text{ mA}$	52 V	-	86 V	
$I_o = 1750 \text{ mA}$	41 V	-	68 V	
$I_o = 2100 \text{ mA}$	34 V	-	57 V	
$I_o = 2450 \text{ mA}$	29 V	-	49 V	
$I_o = 2800 \text{ mA}$	26 V	-	43 V	
$I_o = 3150 \text{ mA}$	23 V	-	38 V	
$I_o = 3500 \text{ mA}$	20 V	-	34 V	
$I_o = 4200 \text{ mA}$	17 V	-	28 V	
$I_o = 4900 \text{ mA}$	14 V	-	24 V	
Ripple and Noise (pk-pk)	-	-	3% 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	-	-	5%	
Turn-on Delay Time	-	0.6 S	1.0 S	Measured at 110Vac input.
	-	0.6 S	1.0 S	Measured at 220Vac input.

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

Specifications are subject to changes without notice.

Protection Functions

Parameter	Min.	Typ.	Max.	Notes
Over Voltage Protection				Latch mode. The power supply shall return to normal operation only after the power is turn-on again.
Io = 350 mA	411 V	446 V	480 V	
Io = 450 mA	319 V	346 V	373 V	
Io = 700 mA	205 V	222 V	240 V	
Io = 1050 mA	136 V	148 V	160 V	
Io = 1400 mA	103 V	112 V	121 V	
Io = 1750 mA	81 V	88 V	96 V	
Io = 2100 mA	68 V	74 V	80 V	
Io = 2450 mA	58 V	64 V	69 V	
Io = 2800 mA	51 V	56 V	61 V	
Io = 3150 mA	45 V	49 V	54 V	
Io = 3500 mA	40 V	44 V	48 V	
Io = 4200 mA	33 V	36 V	40 V	
Io = 4900 mA	28 V	31 V	34 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				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.
Io = 350 mA	89.0%	90.0%	-	
Io = 450 mA	89.0%	90.0%	-	
Io = 700 mA	89.0%	90.0%	-	
Io = 1050 mA	88.0%	89.0%	-	
Io = 1400 mA	88.0%	89.0%	-	
Io = 1750 mA	88.0%	89.0%	-	
Io = 2100 mA	88.0%	89.0%	-	
Io = 2450 mA	88.0%	89.0%	-	
Io = 2800 mA	88.0%	89.0%	-	
Io = 3150 mA	87.5%	88.5%	-	
Io = 3500 mA	87.5%	88.5%	-	
Io = 4200 mA	87.5%	88.5%	-	
Io = 4900 mA	87.5%	88.5%	-	
Efficiency				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.
Io = 350 mA	91.0%	92.0%	-	
Io = 450 mA	91.0%	92.0%	-	
Io = 700 mA	91.0%	92.0%	-	
Io = 1050 mA	90.0%	91.0%	-	
Io = 1400 mA	90.0%	91.0%	-	
Io = 1750 mA	90.0%	91.0%	-	
Io = 2100 mA	90.0%	91.0%	-	
Io = 2450 mA	90.0%	91.0%	-	
Io = 2800 mA	90.0%	91.0%	-	
Io = 3150 mA	89.5%	90.5%	-	
Io = 3500 mA	89.5%	90.5%	-	
Io = 4200 mA	89.5%	90.5%	-	
Io = 4900 mA	89.5%	90.5%	-	
MTBF				Measured at 110Vac input, 80%Load and 25° C ambient temperature (MIL-HDBK-217F).
Io = 4900 mA	227,000 hours			
Io = 350 mA	474,000 hours			
Life Time				Measured at 220Vac input, 80%Load and 45° C ambient temperature.
Io = 4900 mA	122,000 hours			
Io = 350 mA	122,000 hours			
Dimensions				
Inches (L × W × H)	7.64 × 2.66 × 1.46			
Millimeters (L × W × H)	194 × 67.5 × 37			
Net Weight	-	1000 g	-	

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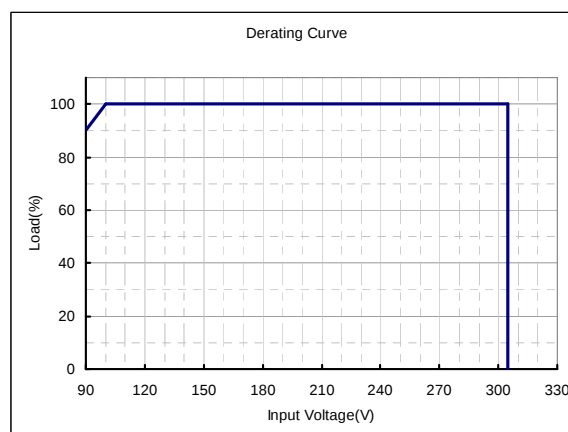
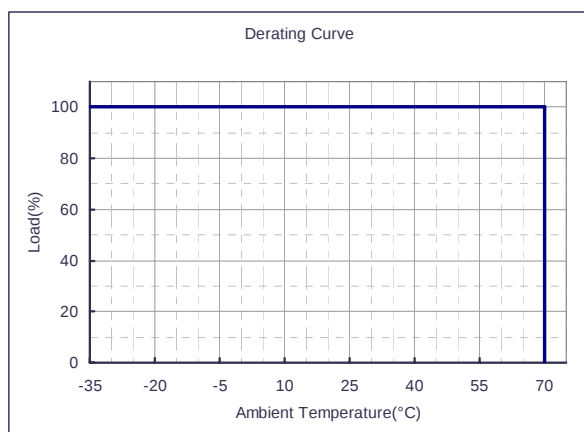
Environmental Specifications

Parameter	Min.	Typ.	Max.	Notes
Operating Temperature	-35 °C	-	+70 °C	Humidity: 10% RH to 100% RH
Storage Temperature	-40 °C	-	+85 °C	Humidity: 5% RH to 100% RH

Safety & EMC Compliance

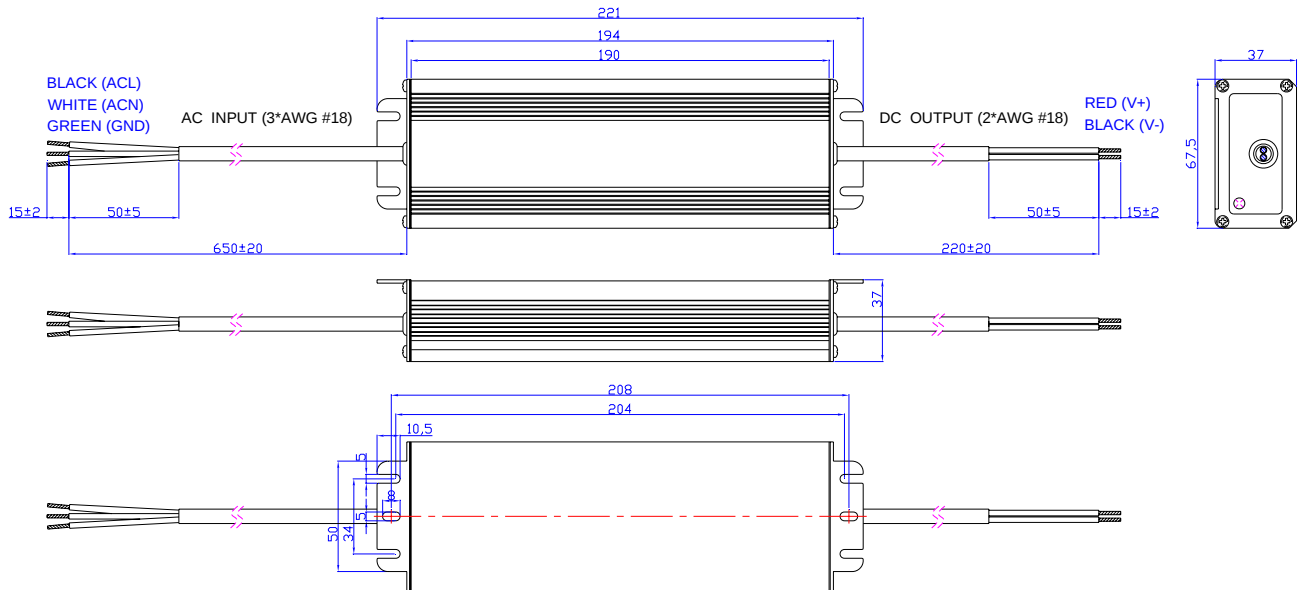
Safety Category	Country	Standard
CUL	USA & Canada	UL8750, UL935, UL1012, CSA-C22.2 No. 107.1
CE	Europe	EN 61347-1, EN61347-2-13
EMI Standards		Notes
EN 55015		Conducted emission Test & Radiated emission Test with 6 dB margin
EMS Standards		Notes
EN 61000-3-2		Harmonic current emissions
EN 61000-3-3		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 61000-4-5		Surge Immunity Test: AC Power Line: line to line 2 kV, line to earth 4 kV
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

Derating Curve



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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

Change Date	Rev.	Description of Change		
		Item	From	To
2009-09-02	A	Change MTBF and Life Time. Add the model of 350mA.		
2009-09-11	B	Change Turn-on Delay Time		
2009-10-15	C	Delete "UL1310 Class2" in Safety & EMC Compliance		
2009-11-10	D	Change notes of efficiency.		
2010-05-31	E	Add star rank for recommended models	/	☆: Popular model.
		Add Leakage Current in Input Specifications	/	Max. 1 mA At 277Vac 50Hz input
		Standardize the tolerance in Mechanical Outline	/	/
2011-01-14	F	Change popular models	/	/
		Update MTBF & Life Time Date	For One Model	For Two Models

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