

Features

- High Efficiency (Up to 91%)
- Active Power Factor Correction (Up to 0.99)
- Constant Current Output
- Lightning Protection
- All-Round Protection: OVP, SCP, OTP
- Waterproof (IP67)
- Comply With UL8750 & EN61347 Safety Regulations



Description

The EUC-060SxxxST Series operate from a 90 ~ 305 Vac input range. These units will provide up to a 5 A of output current and a maximum output voltage of 170 V for 60 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	Input Voltage	Max. Output Voltage	Max. Output Power	Typical Efficiency (2)	Power Factor		Model Number (3)
					110Vac	220Vac	
350 mA (1)	90 ~ 305 Vac	170 Vdc	60 W	91%	0.99	0.95	EUC-060S035ST (4)★
450 mA (1)	90 ~ 305 Vac	134 Vdc	60 W	91%	0.99	0.95	EUC-060S045ST (4)
700 mA (1)	90 ~ 305 Vac	86 Vdc	60 W	91%	0.99	0.95	EUC-060S070ST (4)★
1050 mA (1)	90 ~ 305 Vac	58 Vdc	60 W	90%	0.99	0.95	EUC-060S105ST (5)★
1400 mA (1)	90 ~ 305 Vac	43 Vdc	60 W	90%	0.99	0.95	EUC-060S140ST (5)★
1700 mA (1)	90 ~ 305 Vac	36 Vdc	60 W	90%	0.99	0.95	EUC-060S170ST (6)★
2300 mA (1)	90 ~ 305 Vac	27 Vdc	60 W	89%	0.99	0.95	EUC-060S230ST (6)★
3300 mA (1)	90 ~ 305 Vac	18 Vdc	60 W	88%	0.99	0.95	EUC-060S330ST (6)
5000 mA	90 ~ 305 Vac	12 Vdc	60 W	87%	0.99	0.95	EUC-060S500ST (6)

- Notes:** (1) The output current is adjustable at factory from 50% to 100%.
 (2) Measured at full load and 220 Vac input.
 (3) A suffix -xxxx may be added to denote variations or modifications to the base product, where x can be any alphanumeric character or blank.
 (4) Non-Class 2 output (USR & CNR).
 (5) Class 2 output (USR), Non-Class 2 output (CNR).
 (6) Class 2 output (USR & CNR).
 (7) ★: Popular model.

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

Specifications are subject to changes without notice.

Input Specifications (Continued)

Parameter	Min.	Typ.	Max.	Notes
Input AC Current	-	-	0.8 A	Measured at full load and 100 Vac input.
	-	-	0.36 A	Measured at full load and 220 Vac input.
Inrush Current	-	-	50 A	At 230Vac input 25°C Cold Start

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Tolerance	-5%	-	5%	
Output Voltage Range				
$I_o = 350$ mA	85 V	-	170 V	
$I_o = 450$ mA	67 V	-	134 V	
$I_o = 700$ mA	43 V	-	86 V	
$I_o = 1050$ mA	29 V	-	58 V	
$I_o = 1400$ mA	21 V	-	43 V	
$I_o = 1700$ mA	18 V	-	36 V	
$I_o = 2300$ mA	13 V	-	27 V	
$I_o = 3300$ mA	9 V	-	18 V	
$I_o = 5000$ mA	6 V	-	12 V	
Ripple and Noise (pk-pk)	-	-	5% 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	-	0.8 s	1.2 s	Measured at 110Vac input.
	-	0.4 s	0.6 s	Measured at 220Vac input.

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

Protection Functions

Parameter	Min.	Typ.	Max.	Notes
Over Voltage Protection				
$I_o = 350$ mA	-	195 V	215 V	Latch mode. The power supply shall return to normal operation only after the power is turn-on again.
$I_o = 450$ mA	-	145 V	160 V	
$I_o = 700$ mA	-	92 V	102 V	
$I_o = 1050$ mA	-	65 V	70 V	
$I_o = 1400$ mA	-	50 V	55 V	
$I_o = 1700$ mA	-	42 V	45 V	
$I_o = 2300$ mA	-	31 V	38 V	
$I_o = 3300$ mA	-	22 V	25 V	
$I_o = 5000$ mA	-	15 V	17 V	
Over Temperature Protection	-	110 °C	-	Latch mode. The power supply shall return to normal operation only after the power is turn-on again.
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				
Io = 350 mA	87%	89%	-	Measured at full load, 110Vac input, 25°C ambient temperature, after the unit is thermally stabilized. It will be lower about 2%, if measured immediately after startup.
Io = 450 mA	87%	89%	-	
Io = 700 mA	87%	89%	-	
Io = 1050 mA	86%	88%	-	
Io = 1400 mA	86%	88%	-	
Io = 1700 mA	86%	88%	-	
Io = 2300 mA	85%	87%	-	
Io = 3300 mA	84%	86%	-	
Io = 5000 mA	83%	85%	-	
Efficiency				
Io = 350 mA	89%	91%	-	Measured at full load, 220Vac input, 25°C ambient temperature, after the unit is thermally stabilized. It will be lower about 2%, if measured immediately after startup.
Io = 450 mA	89%	91%	-	
Io = 700 mA	89%	91%	-	
Io = 1050 mA	88%	90%	-	
Io = 1400 mA	88%	90%	-	
Io = 1700 mA	88%	90%	-	
Io = 2300 mA	87%	89%	-	
Io = 3300 mA	86%	88%	-	
Io = 5000 mA	85%	87%	-	
MTBF	546,000 hours			For 2300 mA output model, measured at 110Vac input, 80%Load and 25°C ambient temperature (MIL-HDBK-217F).
Life Time	80,000 hours			For 2300 mA output model, measured at 110Vac input, 80%Load and 45°C ambient temperature
Dimensions				
Inches (L x W x H)	5.91 x 2.66 x 1.46			
Millimeters (L x W x H)	150 x 67.5 x 37			
Net Weight	-	750 g	-	

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

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

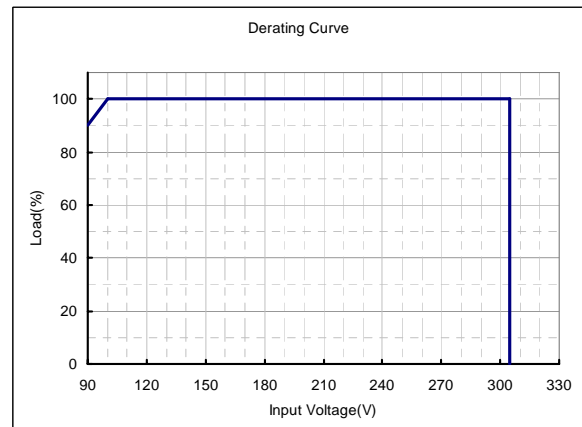
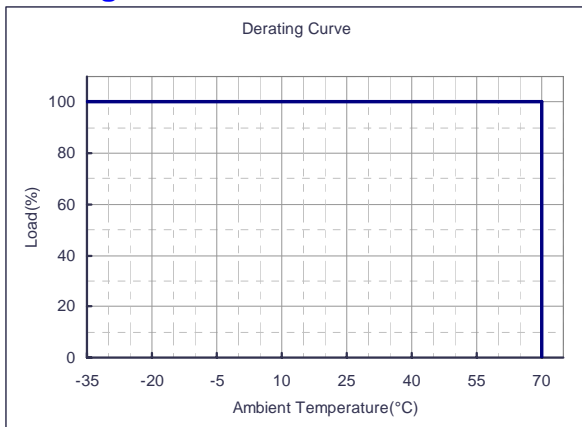
Safety Category	Standard
CUL	UL8750, UL935, UL1012, UL1310 Class 2, CSA-C22.2 No. 107.1, CSA C22.2 NO. 223-M91 Class 2
CE	EN61347-1, EN61347-2-13

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Safety & EMC Compliance (Continued)

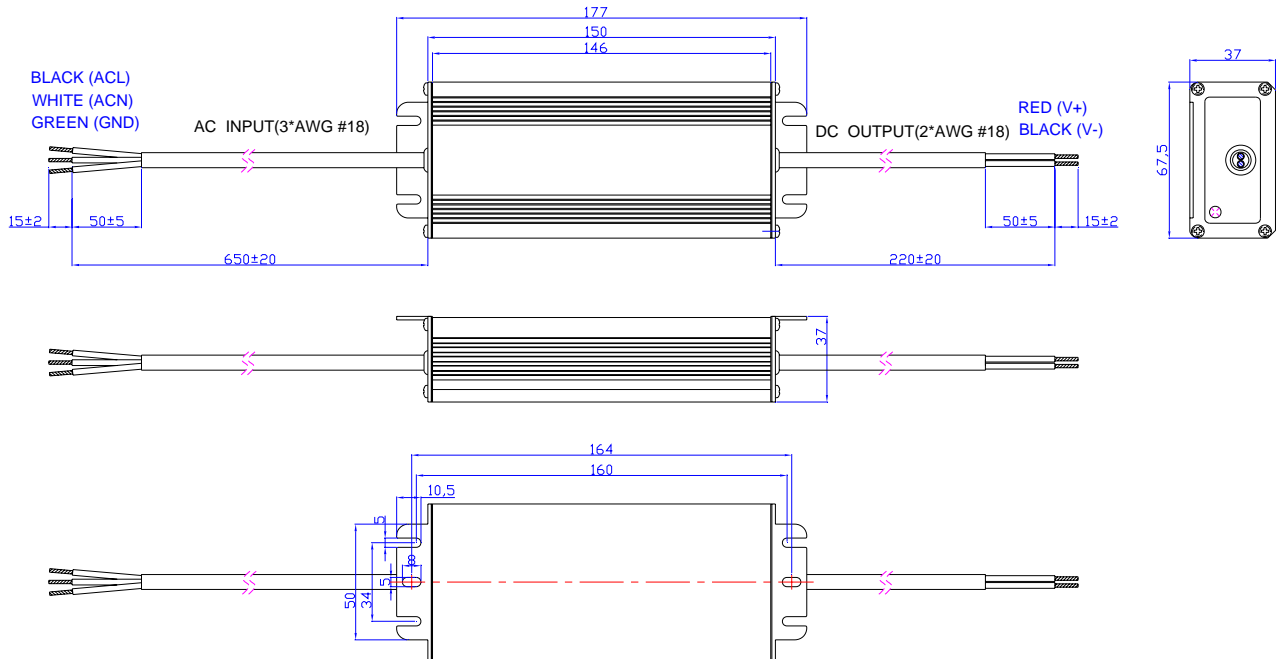
EMI Standards	Notes
EN 55015	Conducted emission Test & Radiated emission Test with 6 dB margin
EMS Standards	Notes
EN 61000-3-2	Harmonic current emissions
EN 61000-3-3	Voltage fluctuations & flicker
EN 61000-4-2	Electrostatic Discharge (ESD): 8 kV air discharge, 4 kV contact discharge
EN 61000-4-3	Radio-Frequency 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	V3.1	Change MTBF and Life Time		
2009-09-11	V3.2	Change Turn-on Delay Time		
2009-10-15	A	1. Add notes of UL1310 Class 2 for all models. 2. Change the OVP Value; 3. Change the main value of efficiency; 4. Change the stripper length of all wires to 50mm.		
2009-11-10	B	Change notes of efficiency.		
2009-12-03	C	Add notes: the output current is adjustable at factory from 50% to 100%		
2010-03-03	D	Change Model Note:		
			EUC-060S230ST (4)	(5)
			EUC-060S330ST (4)	(5)
		Add Leakage Current in Input Specifications	/	/
		Add Derating Curve	/	/
		Modify the tin-plated wire length tolerance in Mechanical Outline	±0.5	±2
2010-05-31	E	Add star rank for recommended models	/	☆: Popular model.
		Standardize the tolerance in Mechanical Outline	/	/
2010-08-10	F	Delete Output Overshoot / Undershoot	Max. 10%	/
		Change Turn-on Delay Time 110Vac input	Typ. 0.5S Max. 0.8S	Typ. 0.8S Max. 1.2S
2011-01-14	G	Change popular models		
2011-12-09	H	EUC-060S140ST, EUC-060S170ST	Non Class 2	Class 2

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