

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 (Pending)



Description

The PLEC-150SxxxST Series operate from a 90 ~ 305 Vac input range. These units will provide up to a 5.95A of output current and a maximum output voltage of 214 V for 150 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	
700 mA	90 ~ 305 Vac	214 Vdc	150 W	92%	0.99	0.96	PLEC-150S070ST
1050 mA	90 ~ 305 Vac	142 Vdc	150 W	92%	0.99	0.96	PLEC-150S105ST
1400 mA	90 ~ 305 Vac	107 Vdc	150 W	91%	0.99	0.96	PLEC-150S140ST
1750 mA	90 ~ 305 Vac	85 Vdc	150 W	91%	0.99	0.96	PLEC-150S175ST
2100 mA	90 ~ 305 Vac	71 Vdc	150 W	91%	0.99	0.96	PLEC-150S210ST
2450 mA	90 ~ 305 Vac	61 Vdc	150 W	91%	0.99	0.96	PLEC-150S245ST
2800 mA	90 ~ 305 Vac	53 Vdc	150 W	91%	0.99	0.96	PLEC-150S280ST
3150 mA	90 ~ 305 Vac	47 Vdc	150 W	91%	0.99	0.96	PLEC-150S315ST
3500 mA	90 ~ 305 Vac	42 Vdc	150 W	91%	0.99	0.96	PLEC-150S350ST
4200 mA	90 ~ 305 Vac	35 Vdc	150 W	90%	0.99	0.96	PLEC-150S420ST
4900 mA	90 ~ 305 Vac	30 Vdc	150 W	90%	0.99	0.96	PLEC-150S490ST
5950 mA	90 ~ 305 Vac	25 Vdc	150 W	90%	0.99	0.96	PLEC-150S595ST

- 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.

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	
Input AC Current	-	-	1.8 A	Measured at full load and 100 Vac input.
	-	-	0.9 A	Measured at full load and 220 Vac input.
Inrush Current	-	-	35 A	At 230Vac input 25°C Cold Start

Output Specifications

Parameter	Min.	Typ.	Max.	Notes
Output Current Range				
$I_o = 700$ mA	665 mA	700 mA	735 mA	
$I_o = 1050$ mA	997 mA	1050 mA	1103 mA	
$I_o = 1400$ mA	1330 mA	1400 mA	1470 mA	
$I_o = 1750$ mA	1662 mA	1750 mA	1838 mA	
$I_o = 2100$ mA	1995 mA	2100 mA	2205 mA	
$I_o = 2450$ mA	2327 mA	2450 mA	2573 mA	
$I_o = 2800$ mA	2660 mA	2800 mA	2940 mA	
$I_o = 3150$ mA	2992 mA	3150 mA	3308 mA	
$I_o = 3500$ mA	3325 mA	3500 mA	3675 mA	
$I_o = 4200$ mA	3990 mA	4200 mA	4410 mA	
$I_o = 4900$ mA	4655 mA	4900 mA	5145 mA	
$I_o = 5950$ mA	5652 mA	5950 mA	6248 mA	
Output Voltage Range				
$I_o = 700$ mA	128 V	-	214 V	
$I_o = 1050$ mA	85 V	-	142 V	
$I_o = 1400$ mA	64 V	-	107 V	
$I_o = 1750$ mA	51 V	-	85 V	
$I_o = 2100$ mA	42 V	-	71 V	
$I_o = 2450$ mA	36 V	-	61 V	
$I_o = 2800$ mA	31 V	-	53 V	
$I_o = 3150$ mA	28 V	-	47 V	
$I_o = 3500$ mA	25 V	-	42 V	
$I_o = 4200$ mA	21 V	-	35 V	
$I_o = 4900$ mA	18 V	-	30 V	
$I_o = 5950$ mA	15 V	-	25 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	-	-	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.

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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.
I _o = 700 mA	257 V	289 V	321 V	
I _o = 1050 mA	170 V	192 V	213 V	
I _o = 1400 mA	128 V	144 V	161 V	
I _o = 1750 mA	102 V	115 V	128 V	
I _o = 2100 mA	85 V	96 V	107 V	
I _o = 2450 mA	73 V	82 V	92 V	
I _o = 2800 mA	64 V	72 V	80 V	
I _o = 3150 mA	56 V	63 V	71 V	
I _o = 3500 mA	50 V	57 V	63 V	
I _o = 4200 mA	42 V	47 V	53 V	
I _o = 4900 mA	36 V	41 V	45 V	
I _o = 5950 mA	30 V	34 V	38 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 and 110 Vac input.
I _o = 700 mA	89%	90%	-	
I _o = 1050 mA	89%	90%	-	
I _o = 1400 mA	88%	89%	-	
I _o = 1750 mA	88%	89%	-	
I _o = 2100 mA	88%	89%	-	
I _o = 2450 mA	88%	89%	-	
I _o = 2800 mA	88%	89%	-	
I _o = 3150 mA	88%	89%	-	
I _o = 3500 mA	88%	89%	-	
I _o = 4200 mA	87%	88%	-	
I _o = 4900 mA	87%	88%	-	
I _o = 5950 mA	87%	88%	-	
Efficiency				Measured at full load and 220 Vac input.
I _o = 700 mA	91%	92%	-	
I _o = 1050 mA	91%	92%	-	
I _o = 1400 mA	90%	91%	-	
I _o = 1750 mA	90%	91%	-	
I _o = 2100 mA	90%	91%	-	
I _o = 2450 mA	90%	91%	-	
I _o = 2800 mA	90%	91%	-	
I _o = 3150 mA	90%	91%	-	
I _o = 3500 mA	90%	91%	-	
I _o = 4200 mA	89%	90%	-	
I _o = 4900 mA	89%	90%	-	
I _o = 5950 mA	89%	90%	-	
MTBF	450,000 hours			At 110 Vac input, full load and 25°C ambient temperature (MIL-HDBK-217F)
Life Time	100,000 hours			At 25°C ambient temperature.
Dimensions				
Inches (L x W x H)	9.37 x 3.13 x 1.81			
Millimeters (L x W x H)	238 x 79.5 x 46			
Net Weight	-	1500 g	-	

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

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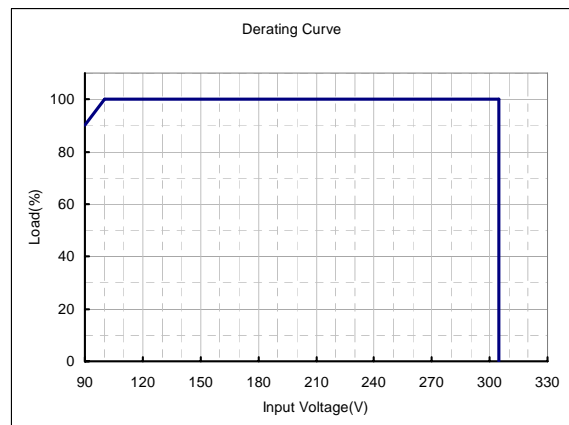
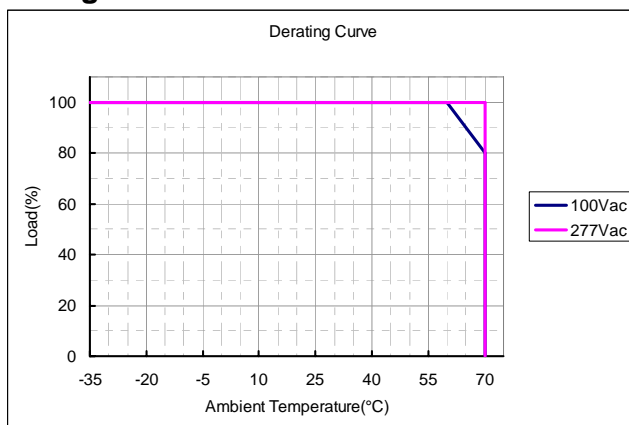
Environmental Specifications

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

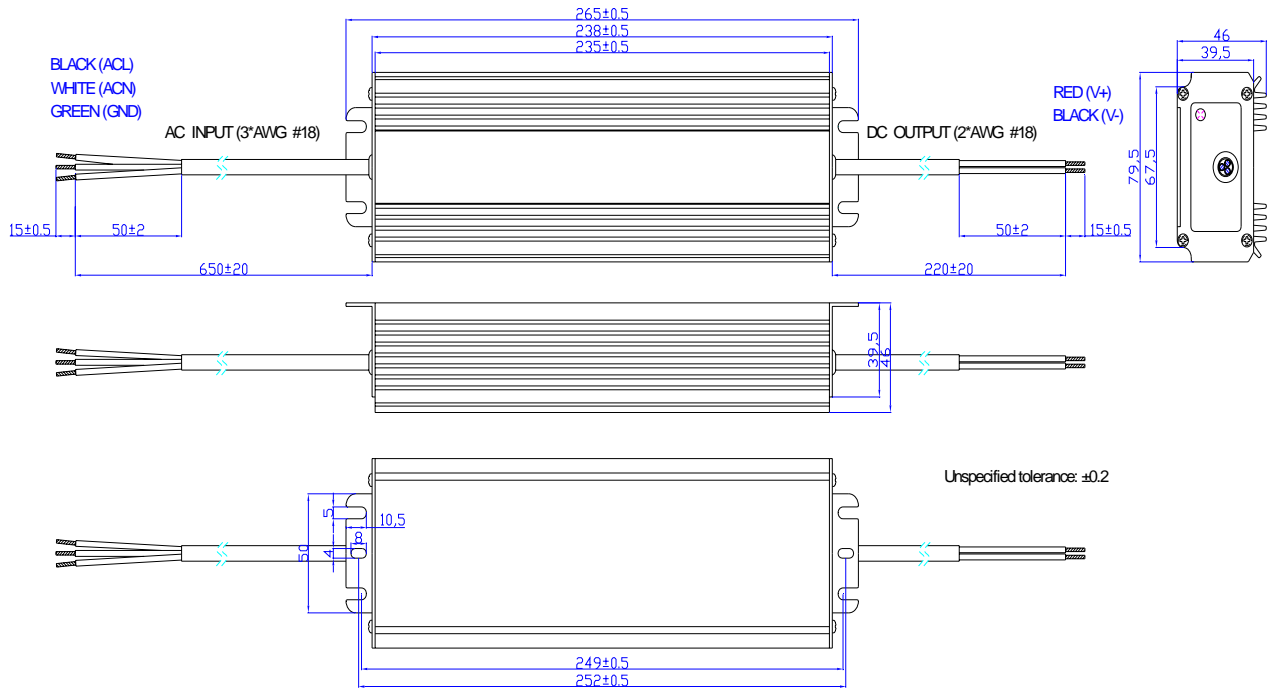
Safety Category	Country	Standard
CUL	USA & Canada	UL8750 Compliance to UL1310 Class2 UL1012 UL935, CAN/CSA-C22.2 No. 0, CSA-C22.2 No. 107.1, CSA-C22.2 No. 250.0
CE	Europe	EN 61347-1, EN61347-2-13
EMI Standards		Notes
EN 55015		Conducted emission Test & Radiated emission Test with 6 dB margin
EMS Standards		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 61000-4-5		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.

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