

150W Medical AC Adapter CXLA Series



Single Output 150W AC-DC Data Sheet

General description

This AC to DC switching power supply is a single-output adapter, available in both Class-I and Class-II types. It delivers 150 watts of continuous power at an operating temperature range of -30°C~70°C(refer to the derating curve). It complies with global safety and EMC regulations (refer to details below). This is ECO Green medical AC adapter series.

Features

- * Wide AC input voltage range
- * Comprehensive protections: Short-circuit, Over-voltage, Over-current, Over-temperature
- * Compliant with IEC60601-1 Ed.3.2
- * Suitable for Type BF medical equipment
- * High efficiency and high reliability
- * 2 x MOPP isolation
- * Meet DOE Level VI efficiency standards (and comply with the latest DOE Level VII requirements)
- * No load power consumption $\leq 0.15W$



CXLA150F-12-A2

Applications

- * Patient Monitoring Systems
- * Diagnostic & Imaging Equipment
- * Home Healthcare
- * Laboratory & Clinical Devices

Model Encoding

CXLA	XXX	F	–	XX	–	X	X
Medical AC Adapter Series	Output Power 100W => 100 150W => 150	Universal input		Output Voltage 12V => 12 19V => 19 24V => 24		AC Inlet Type A : C14 (Class-I) C : C6 (Class-I) B : C8 (Class-II)	DC plug Type 1: 5.5×2.5 Barrel Straight 2: Min. DIN 4P with Lock

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Electrical Specification

SAFETY MODEL NO.			CXLA150F-12	CXLA150F-19	CXLA150F-24
OUTPUT	DC Voltage		12V	19V	24V
	Rated Current		12.5A	7.89A	6.25A
	Rated Popwer (Max.)		150W	150W	150W
	LINE Regulation		±1%	±1%	±1%
	LOAD Regulation		±5%	±5%	±5%
	Startup Time; Rise Time		≤3.0sec; <50ms		
	Hold-up Time (115Vac at full load on 25°C)		20ms		
	Ripple&Noise(Max.)	+0°C - +70°C	120mVp-p	190mVp-p	240mVp-p
-30°C - +0°C		360mVp-p	570mVp-p	720mVp-p	
INPUT	Normal Voltage Range		100-240Vac		
	Input Voltage Range		90~264Vac (Universal)		
	Input Frequency		47~63Hz		
	Input Current (Typ.)		2A/100Vac, 0.8A/240Vac		
	Inrush Current (Typ., Cold start)		No Component Damage (<Fuse/Bridge diode I²t)		
	Power Factor		>0.9		
	Average Efficiency		>89%		
	Full Load Efficiency(Typ., 230Vac/50Hz)		90.0%	91.5%	92.5%
	Leakage Current (264Vac/60Hz)		Earth Current <115uA(class-I and Class-II), Touch Current <100uA(Class-I)		
	Standby Power		≤0.15W		
PROTECTION	Over Voltage Protection		140% of Rated Voltage, Latch Mode		
	Over Current Protection		105%~150% of Rated Current, Latch Mode		
	Short Current Protection		No Damage, Latch Mode		
	Over Temperature Protection		No Damage, Auto-recovery Mode (until temperature returns to normal level)		
ENVIRONMENT	Working Temperature (note#2)		-30 ~ +70°C (Refer to "Derating Curve")		
	Working Humidity		10% ~ 90% RH non-condensing		
	Storage Temperature/ Humidity		-40 ~ +85°C, 5 ~ 95% RH non-condensing		
	Vibration		10-500Hz, 2G, 10minute non-operating		
	Operating Altitude (Max.)		5000 meters		
	Shock		<20G		
EMC & SAFETY	IEC 60601-1-2 Ed. 4.1 Requirements				
	EMI	Conducted Emission	EN/BS EN 55032 (CISPR32), FCC : Class B		
		Radiated Emission	EN/BS EN 55032 (CISPR32), FCC : Class B		
		Harmonic Current	IEC61000-3-2, Class A		
		Voltage Flicker	IEC61000-3-3		
	EMS	ESD	IEC61000-4-2, Level 4, ESD: ±8KV Contact / ±15KV Air, Criteria A		
		Radiated Immunity	IEC61000-4-3, Level 3, 10V/m (80MHz ~ 2.7GHz)		

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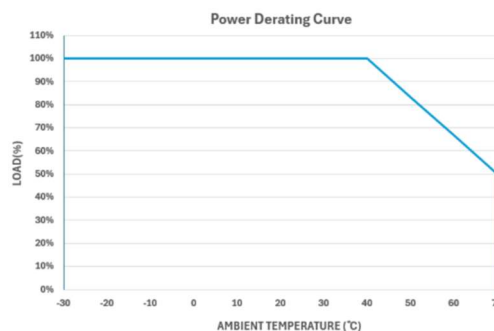
EMC & SAFETY	IEC 60601-1-2 Ed.4.1 Requirements		
	EMS	EFT/Burst	IEC61000-4-4, Level 3, 2kV, Criteria A
		Surge	IEC61000-4-5, Level 4, 2kV/L-N, 4kV L-FG&N-FG, Criteria A
		Conducted Immunity	IEC61000-4-6, Level 3, Criteria A
		Magnetic Field Immunity	IEC61000-4-8, Level 4, 30A/m, Criteria A
		Voltage Dips, interruption	IEC61000-4-11, (1) 100% dip for 10ms, 0°, 45°, 90°, 135°, 180°, 225°, 270° and 315°, Criteria A (2) 100% dip for 20ms, 0°, Criteria A (3) 30% dip for 500ms, 0°, Criteria A (4) 100% dip for 5 seconds (short interruption), Criteria B
	Safety Standard		
	ANSI/AAMI ES60601-1, UL62368-1; C-UL (equivalent to CAN/CSA-C22.2 No.60601-1), C-UL (equivalent to CAN/CSA-C22.2 No.62368-1); EN60601-1, EN62368-1; CB/ IEC60601-1, IEC62368-1; CCC GB4943.1; PSE J62368-1; BSMI CNS15598-1; KC62368-1; RCM AS/NZS62368-1		
	Isolation Level		Primary-Secondary: 2xMOPP ; Primary-FG 1xMOPP, Secondary-FG 1xMOPP
	Isolation Resistance (Min.)		Primary-Secondary: 4000VAC, Primary-FG: 1500VAC, Secondary-FG: 1500VAC
	Withstand Voltage		Primary-Secondary: 100Mohm @ 500VDC, 25°C, 70%RH
Other	Warranty		3 years
	Dimension		155.3mm*75.3mm*28.5mm
	Weight (Typ.)		500 grams (1.102 lbs)
	Input Terminal		C6 and C8 and C14 Socket
	Output Cable Length		1.0 m

Notes

#1: All specification are defined at 230Vac/50Hz, rated power, and 25°C ambient temperature unless otherwise specified.

#2: De-rating curve for ambient temperature:

Output Power VS Ambient Temperature



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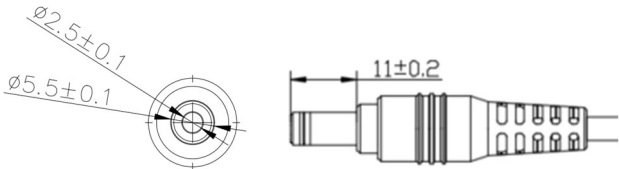
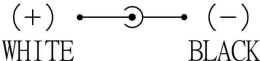
OUTPUT CABLE

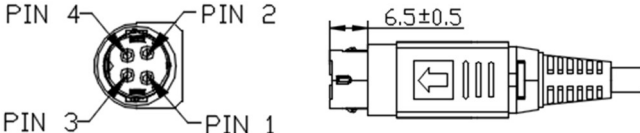
Output Cable			
Output Voltage	12V	19V	24V
Cable Length	1.0M (3.28ft)	1.0M (3.28ft)	1.0M (3.28ft)
Wire Gauge	16AWG	18AWG	20AWG

AC INPUT OPTION

Input Inlet		
A	C	B
Input C14; Class-I Safety Approvals	Input C6; Class-I Safety Approvals	Input C8; Class-II Safety Approvals

DC OUTPUT OPTION (PLUG & PIN CONNECTION)

1		
5.5×2.5 Barrel Straight	PIN Definition	
		

2		
Min. DIN 4P with Lock	PIN Definition	
	PIN1	+Vo
	PIN2	+Vo
	PIN3	-Vo
	PIN4	-Vo

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MECHANICAL AND CONNECTOR INFORMATION

