

AC-DC Adapter

24V 150W / ADT-150C24AC K-A

ADT-150C



Highlights & Features

- Meet efficiency DoE Level VI & CoC Tier 2
- No load power consumption < 0.15 W
- Universal AC input / Full range
- Fully enclosed plastic case
- Protection: short circuit / over voltage / overload/ over temperature

Safety Standards



CB Certified for worldwide use

Model Number: ADT-150C24AC K-A
Unit Weight: 0.47 kg (1.04 lb)
Dimensions (L×W×H): 165.1 x 76.1 x 31.5 mm
 (6.5 x 3.0 x 1.24 inch)

General Description

The ADT Series of AC-DC desktop adapter in compact size. ADT-150C24AC K-A meet the DoE Level VI and CoC Tier 2 energy efficiency requirements with levels up to 91% and the extremely low no-load power consumption below 0.15W. The series conform to major international safety standards according to IEC/EN/UL 62368-1 and IEC/EN 60950-1 approval for ITE. In addition, they also meet the EMI approvals to EN 55032 class B.

Model Information

Model Number	Input Voltage Range	Efficiency Level	Rated Output Voltage	Rated Output Current
ADT-150C24AC K-A	90-264Vac	DOE Level VI & CoC Tier 2	24V	6.25A

Model Numbering

ADT -	150	C	24	A	C	K -	A
Delta AC-DC Adapter	Max wattage	Family Code	Output Voltage 24 for 24V	A : Desktop	Input Connector C : C14	Output Connector K : 4pin din	Standard

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Specifications

Input Ratings / Characteristics

Nominal Input Voltage	100-240Vac	
Input Voltage Range	90-264Vac	
Nominal Input Frequency	50-60Hz	
Input Frequency Range	47-63Hz	
Input Current (max)	115Vac	1.85 A
	230Vac	1.0 A
Efficiency at 100% Load	115Vac	90% typ.
	230Vac	91% typ.
Average Efficiency (min)	89% @ 115Vac & 230Vac	
Efficiency @ 10% load	79% @ 115Vac & 230Vac	
No Load Power Consumption (max)	0.15W @ 115Vac & 230Vac	
Power Factor @ 100% load (min)	0.9 @ 230Vac	
Inrush Current	No damage	
Leakage Current (max)	0.25 mA @ 240Vac/50Hz	

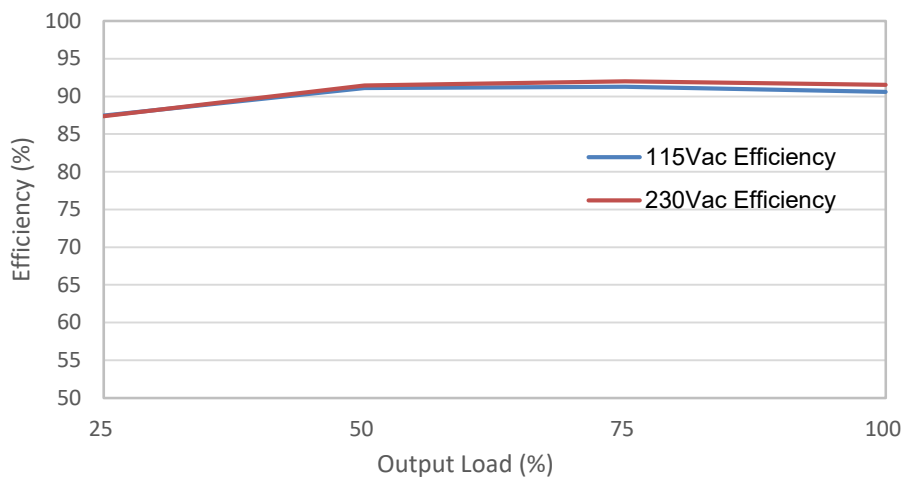


Fig 1. ADT-150C24AC K-A Efficiency versus Output Load

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Output Ratings / Characteristics

Nominal Output Voltage	24V	
Output Current	6.25A	
Output Power	150W	
Line Regulation	± 0.5%	
Load Regulation	± 3.0%	
PARD* (20MHz)	0 to 40°C	240 mV pk-pk
	-10 to 0°C	480 mV pk-pk
Start-up Time	1000 ms typ. @ 115Vac 500 ms typ. @ 230Vac	
Rise Time (max)	40ms @ nominal input, full load	
Hold-up Time (typ.)	16ms @ nominal input, full load	
Transient Responses	± 10% @ 0.1A -100% load change, Slew rate 2.5A/us ,100 to 10KHz, 50% Duty Cycle	
Capacitive load (max)	470uF	

*PARD is measured with an AC coupling mode, and in parallel with 0.1uF ceramic capacitor & 470uF electrolytic capacitor.

Mechanical

Case	PC	
Dimensions (L × W × H)	165.1 x 76.1 x 31.5 mm (6.5 x 3.0 x 1.24 inch)	
Unit Weight	0.47 kg (1.04 lb)	
Indicator	N/A	
Cooling System	Convection	
Terminal	Input	C14
	Output	4Pin Din
	Length	UL1571 #17AWG , 1800 mm

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Environment

Surrounding Temperature	Operating	-10°C to +60°C
	Storage	-40°C to +85°C
Power De-Rating		>40°C de-rated by 2.5%/°C
Operating Humidity		5%-95% RH (non-condensing)
Operating Altitude		5,000 meters (16400 feet)
Ball Impact Test		Test height 130cm, 1 sample 1 time, Steel Ball 500g, Concrete floor
Drop Test		Test height 100cm, 6 face for each sample, concrete floor Function test pass after drop test
Shock Test (Non-Operating)		50G, 11ms, 1 shock for each direction
Vibration (Non-Operating)		5-500Hz, 2.09Grms, 20mins, one cycle for each three axis

Protections

Overvoltage (max)	33V, Latch Mode
Overload / Overcurrent (max)	120-180% , Latch Mode
Over Temperature	Latch Mode
Short Circuit	Latch Mode
Pollution Degree	2
Protection Against Shock	Class I

Reliability Data

MTBF	> 300,000 hrs. per Telcordia SR-332 at Input: 115Vac, Output: 100% load, Ta: 25°C
Expected Cap Life Time	5 years (50% load @ 25°C)

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Safety Standards / Directives

Electrical Safety		IEC/UL 60950-1 ; IEC/UL/EN 62368-1
		BSMI CNS14336-1
		CCC GB4943.1
		PSE J62368-1
		KC K60950-1
CE		Comply with EMC Directive 2014/30/EU and the Low Voltage Directive 2014/35/EU
Galvanic Isolation	I/P to O/P	3000Vac

EMC

EMC / Emissions		CISPR /EN 55032 Class B BSMI CNS13438 FCC Part 15 GB/T9254 KN32
Harmonic Current Emissions	IEC61000-3-2	Class D ; GB17625.1
Immunity to		EN 55024; KN35
Radiated and conducted Emissions		Conducted Emissions: EN55032 Class B Radiated Emissions: EN55032 Class B
Voltage Flicker	IEC61000-3-3	
Electrostatic Discharge	IEC61000-4-2	Level 4 Criteria A ¹⁾ Air Discharge: 15kV Contact Discharge:8kV
Radiated Field	IEC61000-4-3	Level 2 Criteria A ¹⁾ 80MHz-1GHz, 3V/m , 80% AM(1KHz)
Electrical Fast Transient / Burst	IEC61000-4-4	Level 2 Criteria A ¹⁾ : 2kV
Surge	IEC61000-4-5	Level 3 Criteria A ¹⁾ Common Mode ⁴⁾ : 2kV Differential Mode ⁵⁾ : 1kV
Conducted	IEC61000-4-6	Level 2 Criteria A ¹⁾ 150kHz-80MHz, 3Vrms, Sine Wave, 80%, AM modulation
Power Frequency Magnetic Fields	IEC61000-4-8	Level 1 Criteria A ¹⁾ Magnetic field strength 1A/m
Voltage Dips	IEC61000-4-11	Voltage dips 95% reduction/0.5 periods (Criterion A ¹⁾) 30% reduction/5 periods (Criterion B ²⁾) Voltage short interruptions 95% reduction/250 periods (Criterion B ²⁾)

1) Criteria A: Normal performance within the specification limits

2) Criteria B: Output out of regulation, or shuts down during test. Automatically restore to normal operation after test.

3) Criteria C: PSU shuts down during test, but need operator to reset.

4) Asymmetrical: Common mode (Line to earth)

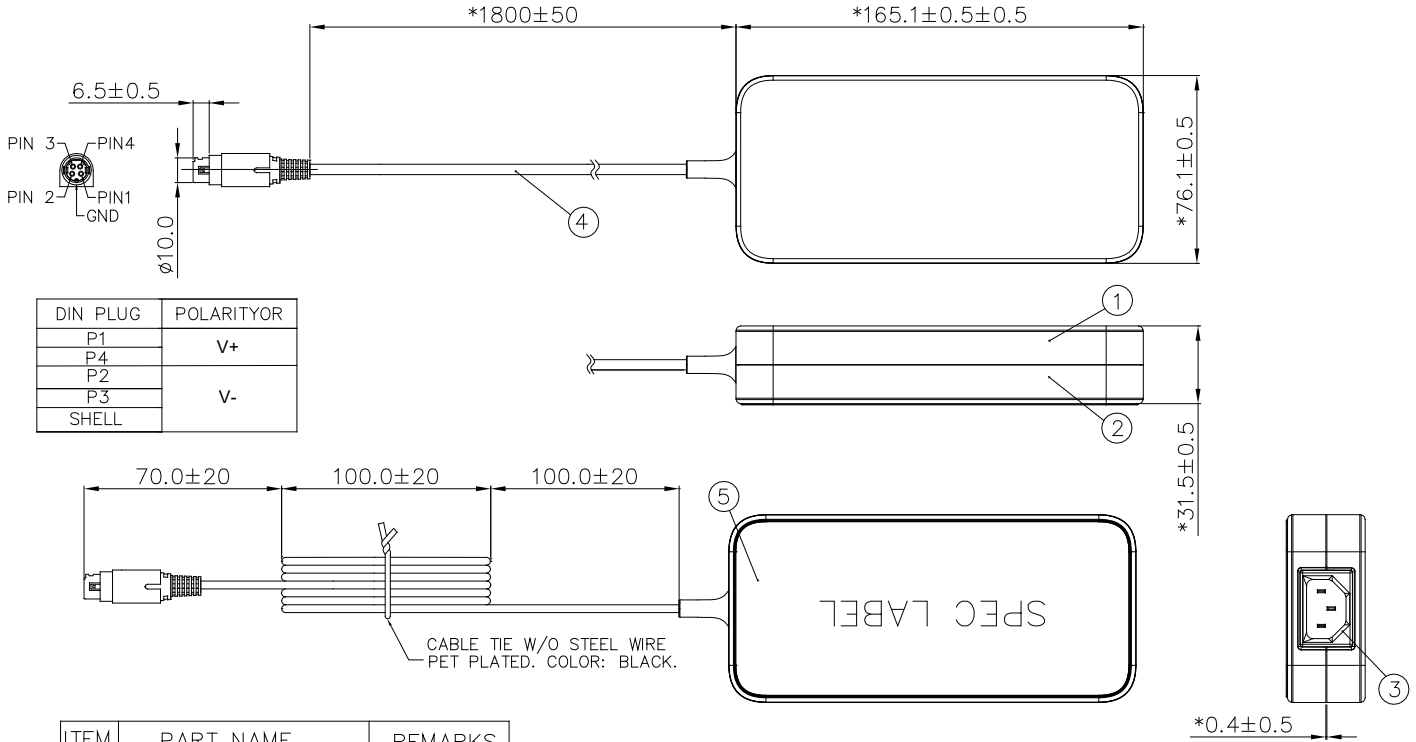
5) Symmetrical: Differential mode (Line to line)

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Dimensions

L x W x H: 165.1 x 76.1 x 31.5 mm (6.5 x 3.0 x 1.24 inch)



ITEM	PART NAME	REMARKS
①	COVER	BLACK
②	CHASSIS	BLACK
③	SOCKET ASS'Y	BLACK
④	POWER CORD	BLACK
⑤	SPEC LABEL	----

Engineering Data

Output Load De-rating V.S. Surrounding Air Temperature

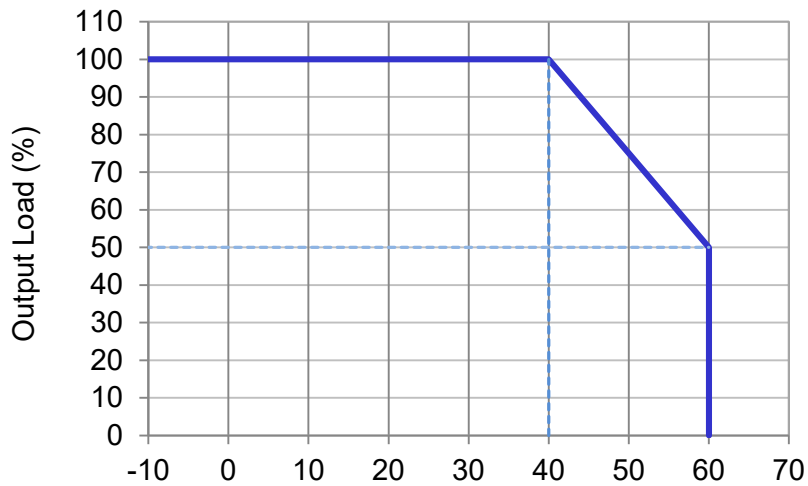


Fig. 1 De-rating for All Mounting Orientation
 > 40°C de-rate power by 2.5% / °C

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