

# AC-DC Adapter

## 24 V 150 W / 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 0.15 W. 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	90-264 Vac	DOE Level VI & CoC Tier 2	24 V	6.25 A

### Model Numbering

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

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### Specifications

#### Input Ratings / Characteristics

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

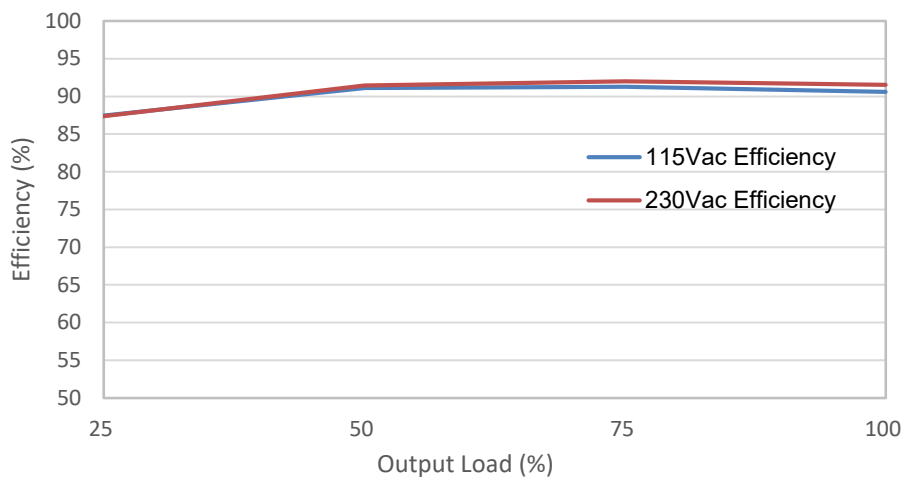


Fig 1. ADT-150C24AC K-A Efficiency versus Output Load

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### Output Ratings / Characteristics

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

\*PARD is measured with an AC coupling mode, and in parallel with 0.1 uF ceramic capacitor & 470 uF 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 130 cm, 1 sample 1 time, Steel Ball 500 g, Concrete floor	
Drop Test	Test height 100 cm, 6 face for each sample, concrete floor Function test pass after drop test	
Shock Test (Non-Operating)	50 G, 11ms, 1 shock for each direction	
Vibration (Non-Operating)	5-500 Hz, 2.09 Grms, 20 mins, one cycle for each three axis	

### Protections

Overvoltage (max)	33 V, 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/EN 60950-1 ; IEC/UL/EN 62368-1
		BSMI CNS 14336-1
		CCC GB 4943.1
		PSE J 62368-1
		KC K 60950-1
CE		Comply with EMC Directive 2014/30/EU and the Low Voltage Directive 2014/35/EU
UKCA		In conformance with Electromagnetic Compatibility Regulations 2016 and Electrical Equipment (Safety) Regulations 2016
Galvanic Isolation	I/P to O/P	3000 Vac

### EMC

EMC / Emissions		CISPR/EN/BS EN 55032 Class B BSMI CNS 13438 FCC Part 15 GB/T 9254 KN 32
Harmonic Current Emissions	IEC 61000-3-2	Class D ; GB 17625.1
Immunity to		EN/BS EN 55024; KN 35
Radiated and conducted Emissions		Conducted Emissions: EN/BS EN 55032 Class B Radiated Emissions: EN/BS EN 55032 Class B
Voltage Flicker	IEC 61000-3-3	
Electrostatic Discharge	IEC 61000-4-2	Level 4 Criteria A <sup>1)</sup> Air Discharge: 15 kV Contact Discharge: 8 kV
Radiated Field	IEC 61000-4-3	Level 2 Criteria A <sup>1)</sup> 80 MHz – 1 GHz, 3 V/m , 80% AM(1 KHz)
Electrical Fast Transient / Burst	IEC 61000-4-4	Level 2 Criteria A <sup>1)</sup> : 2 kV
Surge	IEC 61000-4-5	Level 3 Criteria A <sup>1)</sup> Common Mode <sup>4)</sup> : 2 kV Differential Mode <sup>5)</sup> : 1 kV
Conducted	IEC 61000-4-6	Level 2 Criteria A <sup>1)</sup> 150 kHz – 80 MHz, 3 Vrms, Sine Wave, 80%, AM modulation
Power Frequency Magnetic Fields	IEC 61000-4-8	Level 1 Criteria A <sup>1)</sup> Magnetic field strength 1 A/m
Voltage Dips	IEC 61000-4-11	Voltage dips 95% reduction/0.5 periods (Criterion A <sup>1)</sup> ) 30% reduction/5 periods (Criterion B <sup>2)</sup> ) Voltage short interruptions 95% reduction/250 periods (Criterion B <sup>2)</sup> )

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)

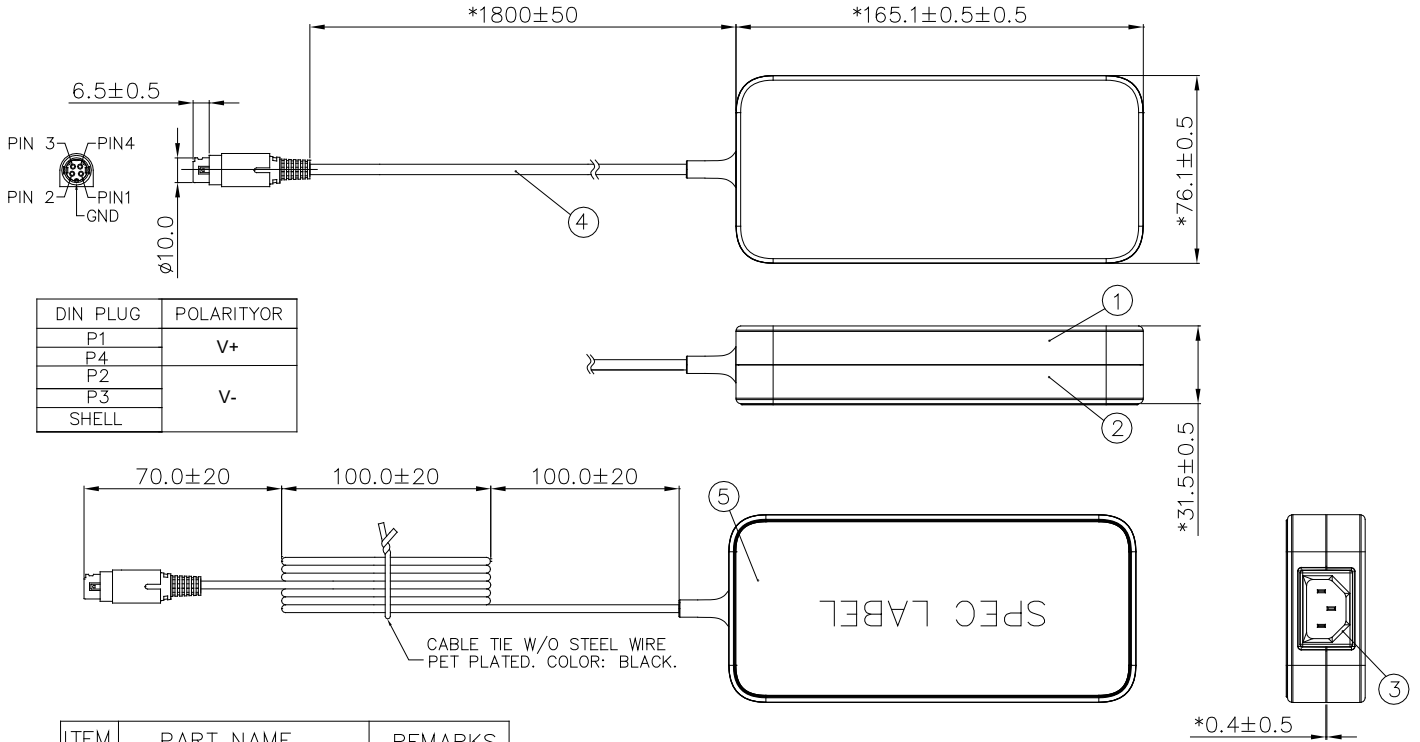
5) Symmetrical: Differential mode (Line to line)

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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

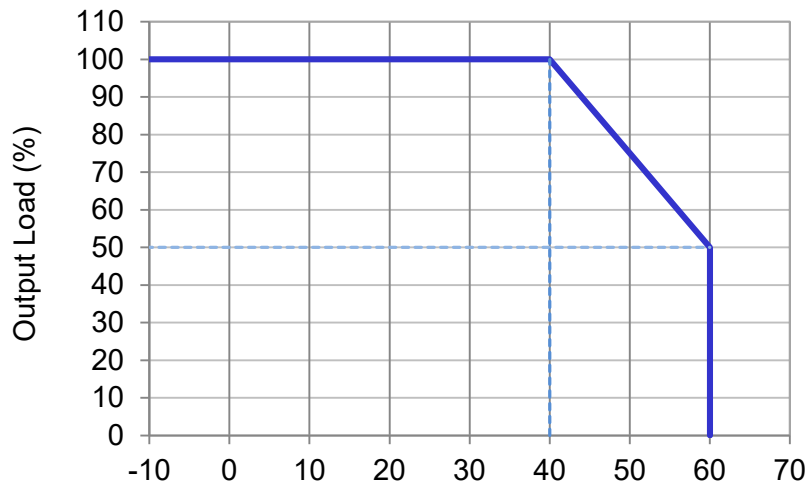


Fig. 1 De-rating for All Mounting Orientation  
 > 40°C de-rate power by 2.5% / °C

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### Attention

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Delta reserves the right to make changes to the information described in the datasheets without notice.

### Manufacturer and Authorized Representatives Information

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