

AC-DC Adapter
PD 65 W / ADP-65TW A

ADP-65TW A

Highlights & Features

- Meet efficiency DoE Level VI & CoC Tier 2
- No load power consumption < 0.15 W
- AC wall mount / Type-C output connector
- Fully enclosed plastic case
- Protection: short circuit / over voltage / over current / over temperature

Safety Standards



CB Certified for worldwide use

Model Number: ADP-65TW AC
Unit Weight: 210g ± 2.5%
Dimensions (L×W×H): 30.4 x 30.4 x 60 mm
Remark: The DC cable is detachable.

General Description

The ADP Series of AC-DC wall mount adapter in compact size. ADP-65TW AC meet the DoE Level VI and CoC Tier 2 energy efficiency requirements 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 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
ADP-65TW AC	90-264 Vac	Level VI & CoC Tier2	5V/3A ; 9V/3A ; 15V/3A ; 20V/3.25A

Model Numbering

ADP -	65	T	W	A	C
Adapter or Charger	Wattage	Series Code	Wall Mount	AC Plug Type	



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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) @ 100 Vac	1.5 A
Average Efficiency (min)	5V $\geq$ 81.39% ; 9V $\geq$ 86.62% ; 15V $\geq$ 87.73% ; 20V $\geq$ 88% @ 115 Vac & 230 Vac
No Load Power Consumption (max)	0.15 W @ 115 Vac & 230 Vac
Inrush Current @ Cold start	Fuse I^2t < 22%
Leakage Current (max) @ 240 Vac/50 Hz	50 μ A

Output Ratings / Characteristics

Nominal Output Voltage	5V/9V/15V/20V
Output Current	3A @ 5V/9V/15V ; 3.25A @ 20V
Output Power	65 W
Line Regulation	$\pm$ 5%
Load Regulation	$\pm$ 5%
PARD* (20 MHz) @ 25°C	< 180 mV pk-pk (5V) / < 200 mV pk-pk (9V) < 300 mV pk-pk (15V) / < 380 mV pk-pk (20V)
Turn on delay Time	< 3 S @ 100~240 Vac, 5V only
Rise Time	< 40 ms @ 100~240 Vac, 100% load, 5V only
Hold-up Time	> 5 ms @ 100 Vac, 100% load, 20V only
Peak Load @ 25°C	> 13V @ 200% Load, 2ms, 100~240 Vac (15V only)
	> 13V @ 225% Load, 0.25ms, 100~240 Vac
	> 17.8V @ 200% Load, 0.5ms, 100~240 Vac (20V only) > 17.8V @ 225% Load, 0.25ms, 100~240 Vac

*PARD is measured with an AC coupling mode, and in parallel with 0.1 μ F ceramic capacitor & 10 μ F electrolytic capacitor.

Mechanical

Case		PC
Dimensions (L × W × H)		30.4 x 30.4 x 60 mm
Unit Weight		210g ± 2.5%
Indicator		N/A
Cooling System		Convection
Output Specification	Connector	Type-C
Input Socket		Wall mount

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Environment

Surrounding Temperature	Operating	0°C to +35°C
	Storage	-30°C to +80°C
Power De-Rating		N/A
Operating Humidity		5%-90% RH (non-condensing)
Operating Altitude		5,000 meters (16,400 feet)
Ball Impact Test		Test height 300 cm, 1 sample 1 time, Steel Ball 500 g, Concrete Floor
Drop Test		Test height 76 cm(operating) / 110 cm (Non-operating), 6 face for each sample, concrete floor Function test pass after drop test
Shock Test (Non-Operating)		50 G, 11 ms, 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)	<7.5V @ 5V ; <13.5V @ 9V ; <20.25V @ 15V ; <27V @ 20V, Latch mode
Overload / Overcurrent (max)	3.05~3.6A @ 5V ; 3.05~3.6A @ 9V ; 3.9~5A @ 15V ; 3.9~5A @ 20V, Latch mode
Over Temperature	Latch mode
Short Circuit	Latch mode
Pollution Degree	2
Protection Against Shock	Class I

Reliability Data

MTBF	> 150,000 hrs. at Input: 100/240 Vac, Output: 100% load, Ta: 25°C
Expected Cap Life Time @ 25°C	13140hours (100% load, 100Vac & 240Vac)?
Case Temperature Rise	< 45°C @ 100Vac, Output: 95% load, Ta: 25°C

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Safety Standards / Directives

Electrical Safety	IEC/EN 62368-1, 60950	
	BSMI CNS 13438, 14336-1, 15663	
	PSE J62368-1, J55032, J3000	
	UL 62368-1, CSA 62368-1	
	PSB IEC 62368-1:2014, 60950-1:2005+A1:2009+A2:2013	
CE/UKCA	Comply with EMC Directive 2014/30/EU, the Low Voltage Directive 2014/35/EU, RoHS Directive 2011/65/EU+ (EU) 2020/659 and Commission Regulation (EU) 2019/1782, ErP Directive	
Galvanic Isolation	I/P to O/P	3000 Vac

EMC

EMC / Emissions	EN 55032	Criteria Class B
Harmonic Current Emissions	IEC 61000-3-2	The power consumption of EUT is less than 75W and no limits apply
Voltage Flicker	IEC 61000-3-3	
Electrostatic Discharge	IEC 61000-4-2	Air Discharge performance criterion B: ± 12 kV/ ± 15 kV, Contact Discharge performance criterion A: ± 8 kV
Radio Frequency Electromagnetic Field	IEC 61000-4-3	Criteria A 80 MHz – 1 GHz, 3 V/m, 80% AM (1 KHz)
Electrical Fast Transient	IEC 61000-4-4	Level 3 Criteria A
Surge	IEC 61000-4-5	Level 3 Criteria A Common Mode: ± 2 kV Differential Mode: ± 1 kV
Radio Frequency Common Mode	IEC 61000-4-6	Criteria A 150 kHz – 10 MHz, 3 V, 80% AM (1 KHz) 10 MHz – 30 MHz, 3V-1V, 80% AM (1 KHz) 30 MHz – 80 MHz, 1V, 80% AM (1 KHz)
Power Frequency Magnetic Fields	IEC 61000-4-8	Criteria A 1 A/m, 50Hz
Voltage Dips	IEC 61000-4-11	Voltage dips 70% residual voltage, 25 periods (Criterion C) < 5% residual voltage, 0.5 periods (Criterion B) Voltage short interruptions < 5% residual voltage, 250 periods (Criterion C)

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)

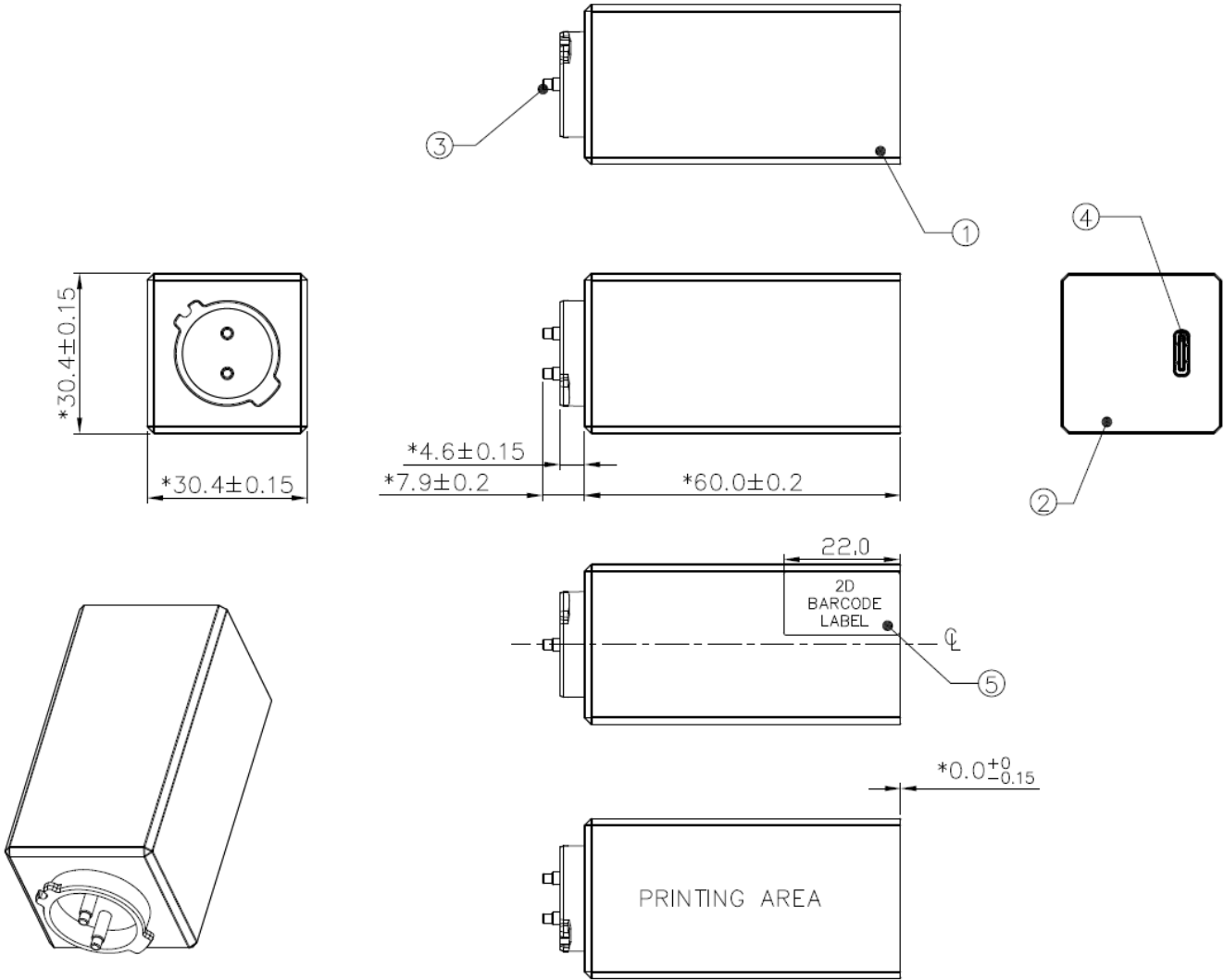
5) Symmetrical: Differential mode (Line to line)

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Dimensions (ADP-65TW AC)

L x W x H: 30.4 x 30.4 x 60 mm



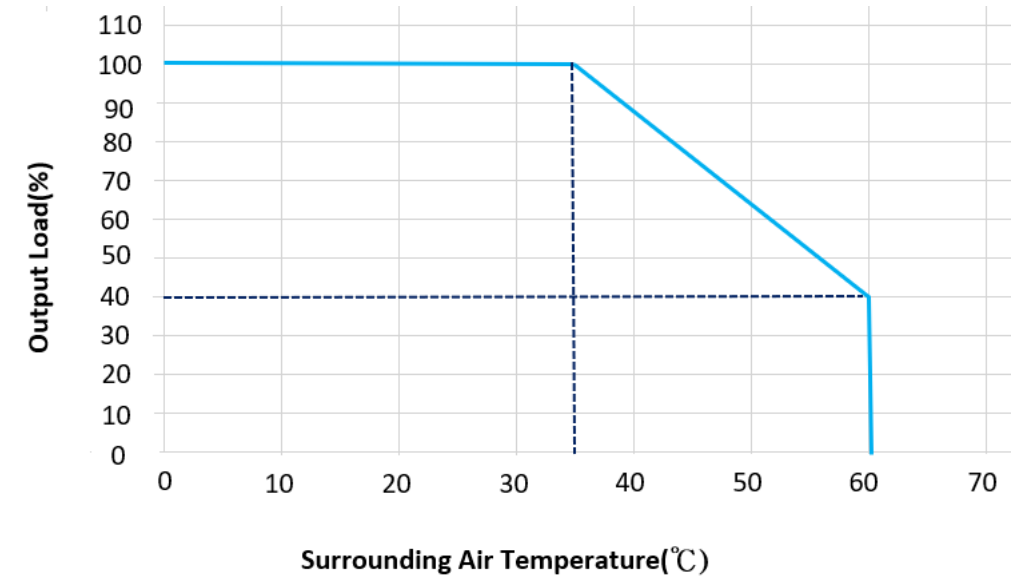
ITEM	PART NAME	COLOR
①	COVER	BLACK
②	CHASSIS	BLACK
③	AC PIN	--
④	USB TYPE C	--
⑤	2D BARCDOE (STICK ON OPP FILM)	WHITE

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Engineering Data

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



Others

Attention

Delta provides all information in the datasheets on an “AS IS” basis and does not offer any kind of warranty through the information for using the product. In the event of any discrepancy between the information in the catalog and datasheets, the datasheets shall prevail (please refer to **PSU.deltaww.com** for the latest datasheets information). Delta shall have no liability of indemnification for any claim or action arising from any error for the provided information in the datasheets. Customer shall take its responsibility for evaluation of using the product before placing an order with Delta.

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

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