AC-DC Adapter
PD 100 W / ADP-100XB B

ADP-100XB B

Highlights & Features

- Meet efficiency DoE Level VI & CoC Tier 2
- No load power consumption < 0.15 W
- AC-DC adapter
- Fully enclosed plastic case
- Protection: short circuit / over voltage / over current / over temperature

Safety Standards

CB Certified for worldwide use

Model Number:	ADP-100XB BD
Unit Weight:	260g ± 5%
Dimensions (L×W×H):	108 x 56 x 26.5 mm
Remark:	The AC cable is detachable.

General Description

The ADP Series of AC-DC adapter in compact size. ADP-100XB BD 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-100XB BD	90-264 Vac	Level VI & CoC Tier 2	5V/3A ; 9V/3A ; 12V/3A ; 15V/3A ; 20V/5A

Model Numbering

ADP -	100	X	B	B	D
Adapter or Charger	Wattage	Series Code	Adapter	AC Plug Type	

All parameters are specified at 25°C ambient unless otherwise indicated.
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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	2 A
Average Efficiency (min)	5V ≧ 82.39% ; 9V ≧ 87.62% ; 12V ≧ 88.4% 15V ≧ 88.85% ; 20V ≧ 89% @ 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 uA

Output Ratings / Characteristics

Nominal Output Voltage	5V/9V/12V/15V/20V
Output Current	3A @ 5V/9V/12V/15V ; 5A @ 20V
Output Power	100 W
Line Regulation	± 5%
Load Regulation	± 5%
PARD* (20 MHz) @ 25°C	< 180 mV pk-pk (5V) / < 210 mV pk-pk (9V)
	< 250 mV pk-pk (12V) / < 300 mV pk-pk (15V)
	< 350 mV pk-pk (20V)
Turn on delay Time	< 3 S @ 115 Vac, 5V only
Rise Time	< 275ms @ 90~264Vac, 100% load
Hold-up Time	> 5 ms @ 115 Vac, 100% load, 20V only
Peak Load @ 25°C	> 13V @ 180% Load, 2ms, 100~240 Vac (15V only)
	> 17V @ 180% Load, 2ms, 100~240 Vac (20V only)

*PARD is measured with an AC coupling mode, and in parallel with 0.47uF ceramic capacitor & 47uF electrolytic capacitor.

Mechanical

Case		PC
Dimensions (L × W × H)		108 x 56 x 26.5 mm
Unit Weight		260g ± 5%
Indicator		N/A
Cooling System		Convection
Output Cable Specification	Connector	Type-C
	Length	1500±30mm
Input Socket		C6

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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		5000 meters (16400 feet)
Ball Impact Test		Test height 130 cm, 1 sample 1 time, Steel Ball 540 g, Concrete Floor
Drop Test		Test height 130 cm, 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 ; <11.7V @ 9V ; <15.6V @ 12V ; <19.5V @ 15V ; <26V @ 20V, Latch mode
Overload / Overcurrent (max)	3.3~3.9A @ 5V ; 3.3~3.9A @ 9V ; 3.3~3.9A @ 12V ; 3.3~3.9A @ 15V ; 5.3~6.5A @ 20V, Latch mode
Over Temperature	Latch mode
Short Circuit	Latch mode
Pollution Degree	2
Protection Against Shock	Class I

Reliability Data

MTBF	> 100,000 hrs. at Input: 115 Vac, Output: 100% load, Ta: 25°C
Expected Cap Life Time @ 25°C	8760hours (100% load, 115Vac)
Case Temperature Rise	< 50°C @ 100/240Vac, Output: 100% 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 A: ±15 kV, no damage Contact Discharge performance criterion A: ±8 kV, no damage
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 C
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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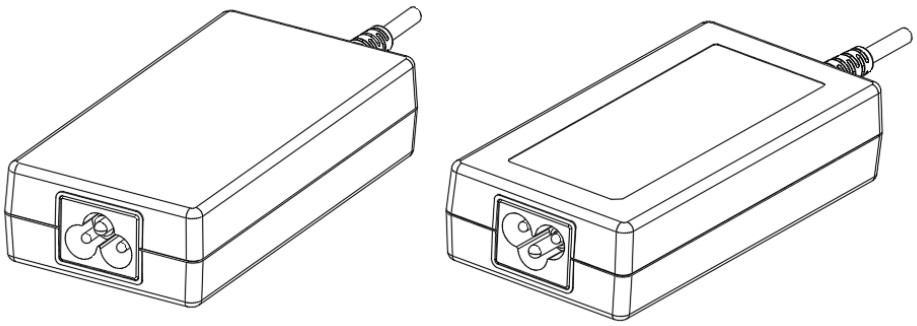
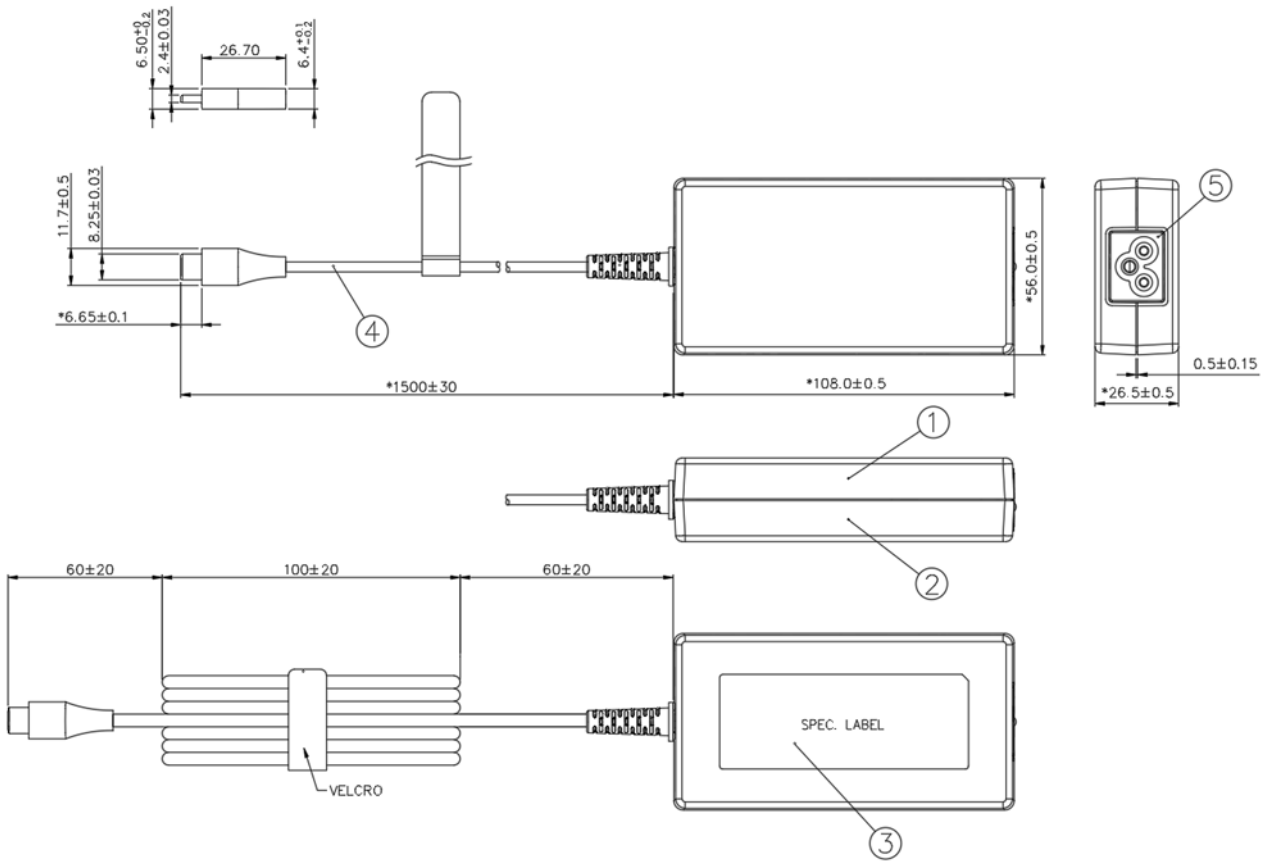
Dimensions (ADP-100XB BD)

L x W x H: 108 x 56 x 26.5 mm





ITEM	PART NAME	COLOR
①	COVER	BLACK
②	CHASSIS	BLACK
③	LABEL	BLACK
④	DC CABLE	BLACK
⑤	SOCKET	BLACK

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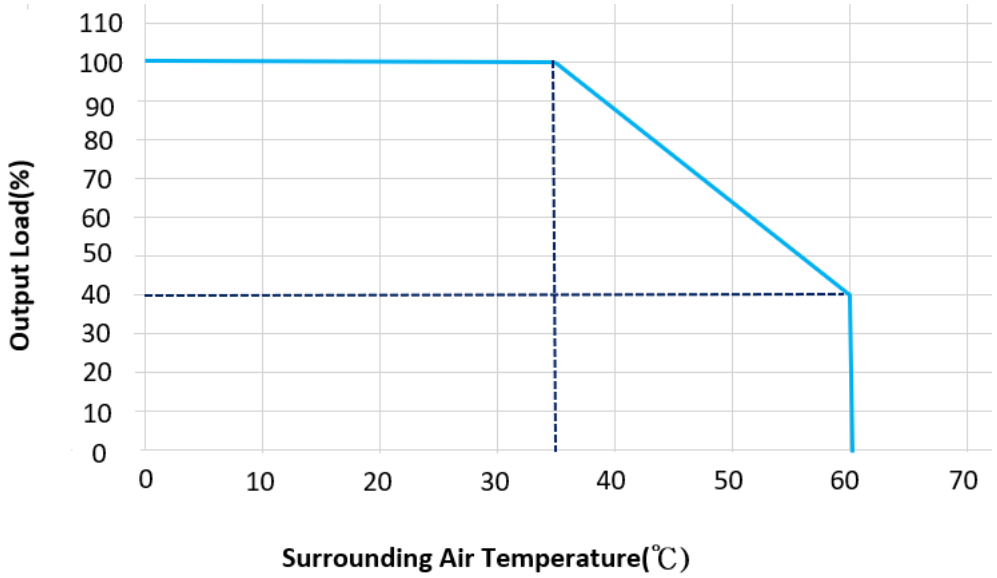
Engineering Data

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



Others

Attention

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Manufacturer and Authorized Representatives Information

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