

# AC-DC Adapter

## PD 65 W / ADP-65JW Z

# ADP-65JW Z

### 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-65JW ZEA  
**Unit Weight:** 223g ±2.5%  
**Dimensions (L×W×H):** 63 x 63 x 28.5 mm

### General Description

The ADP Series of AC-DC wall mount adapter in compact size. ADP-65JW ZEA 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-65JW ZEA | 90-264 Vac          | Level VI & CoC Tier2 | 5V/3A ; 9V/3A ; 15V/3A ; 20V/3.25A |

### Model Numbering

| ADP -              | 65      | J           | W          | Z                      | EA |
|--------------------|---------|-------------|------------|------------------------|----|
| Adapter or Charger | Wattage | Series Code | Wall Mount | AC Plug Type<br>Z : EU |    |

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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         | 1.5A  |
| Average Efficiency (min)              | 5V $\geq$ 81.84% ; 9V $\geq$ 87.30% ; 15V $\geq$ 88.85% ;<br>20V $\geq$ 89% @ 115 Vac & 230 Vac |
| No Load Power Consumption (max)       | 0.15 W @ 115 Vac & 230 Vac, 5V only   |
| Inrush Current @ Cold start           | Fuse $I^2t < 22\%$  |
| Leakage Current (max) @ 240 Vac/50 Hz | 20 uA   |

#### 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        | 4.85~5.5V @ 5V ; $\pm 5\%$ @ 9V/15V/20V          |
| Load Regulation        | 4.85~5.5V @ 5V ; $\pm 5\%$ @ 9V/15V/20V          |
| PARD* (20 MHz) @ 25°C  | < 180 mV pk-pk (5V)                              |
|                        | < 200 mV pk-pk (9V)                              |
|                        | < 300 mV pk-pk (15V/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, 80% load, 20V only             |
| Peak Load @ 25°C       | > 17.8V @ 200%Load, 2ms, 100~240 Vac, 20V only   |
|                        | > 17.8V @ 225%Load, 250us, 100~240 Vac, 20V only |
|                        | > 13V @ 200%Load, 2ms, 100~240 Vac, 15V only     |
|                        | > 13V @ 225%Load, 250us, 100~240 Vac, 15V only   |

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

### Mechanical

|                            |                   |                 |
|----------------------------|-------------------|-----------------|
| Case                       | PC                |                 |
| Dimensions (L x W x H)     | 63 x 63 x 28.5 mm |                 |
| Unit Weight                | 223g $\pm 2.5\%$  |                 |
| Indicator                  | N/A               |                 |
| Cooling System             | Convection        |                 |
| Output Cable Specification | Connector         | Type-C          |
|                            | Length            | 2000 $\pm$ 50mm |
| Input Socket               | Wall mount        |                 |

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### Environment

|                            |  |                |
|----------------------------|--|----------------|
| Surrounding Temperature    | Operating  | 0°C to +40°C   |
|                            | Storage  | -30°C to +80°C |
| Operating Humidity         | 5%-90% RH (non-condensing)   |                |
| Operating Altitude         | 5,000 meters (16,400 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<br>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) | <3.6A @ 5V ; <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.<br>at Input: 100Vac & 240Vac, Output: 100% load, Ta: 25°C |
| Expected Cap Life Time @ 25°C | 13140hours (100% load, 100Vac & 240Vac)                                  |
| Case Temperature Rise         | < 40°C @ 100Vac & 240Vac, Output: 95% load, Ta: 40°C                     |

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### Safety Standards / Directives

|                    |            |  |
|--------------------|------------|--|
| Electrical Safety  |            | IEC/EN 62368-1, 60950  |
|                    |            | PSB IEC 62368-1:2014, 60950-1:2005+A1:2009+A2:2013   |
| CE                 |            | 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: 15 kV, Criteria B<br>Contact Discharge: 8 kV, Criteria A   |
| Radio Frequency Electromagnetic Field | IEC 61000-4-3  | Criteria A<br>80 MHz – 1 GHz, 3 V/m, 80% AM (1 KHz)   |
| Electrical Fast Transient             | IEC 61000-4-4  | Level 3 Criteria B  |
| Surge                                 | IEC 61000-4-5  | Level 3 Criteria no function error<br>Common Mode: 2 kV<br>Differential Mode: 1 kV  |
| Radio Frequency Common Mode           | IEC 61000-4-6  | Criteria A<br>150 kHz – 10 MHz, 3 V, 80% AM (1 KHz)<br>10 MHz – 30 MHz, 3V-1V, 80% AM (1 KHz)<br>30 MHz – 80 MHz, 1V, 80% AM (1 KHz)  |
| Power Frequency Magnetic Fields       | IEC 61000-4-8  | Criteria A<br>1 A/m, 50Hz   |
| Voltage Dips                          | IEC 61000-4-11 | Voltage dips<br>70% residual voltage, 25 periods (Criterion C)<br>< 5% residual voltage, 0.5 periods (Criterion B)<br><br>Voltage short interruptions<br>< 5% residual voltage, 250 periods (Criterion C) |

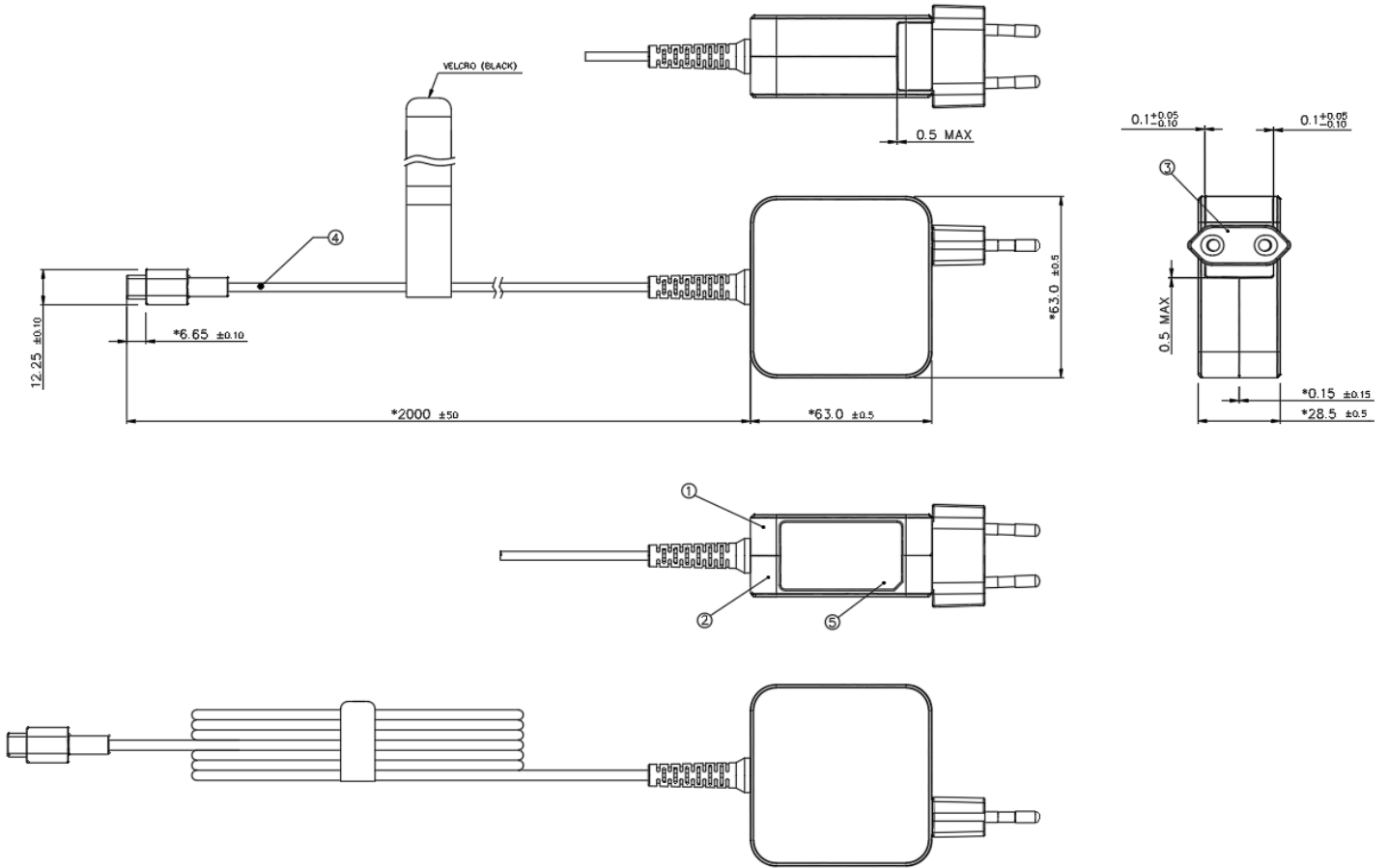
- 1) Criteria A: Normal performance within the specification limits
- 2) Criteria B: Output out of regulation, or shuts down during test. Automatically restore to normal operation after test.
- 3) Criteria C: PSU shuts down during test, but need operator to reset.
- 4) Asymmetrical: Common mode (Line to earth)
- 5) Symmetrical: Differential mode (Line to line)

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### Dimensions (ADP-65JW ZEA)

L x W x H: 63 x 63 x 28.5 mm



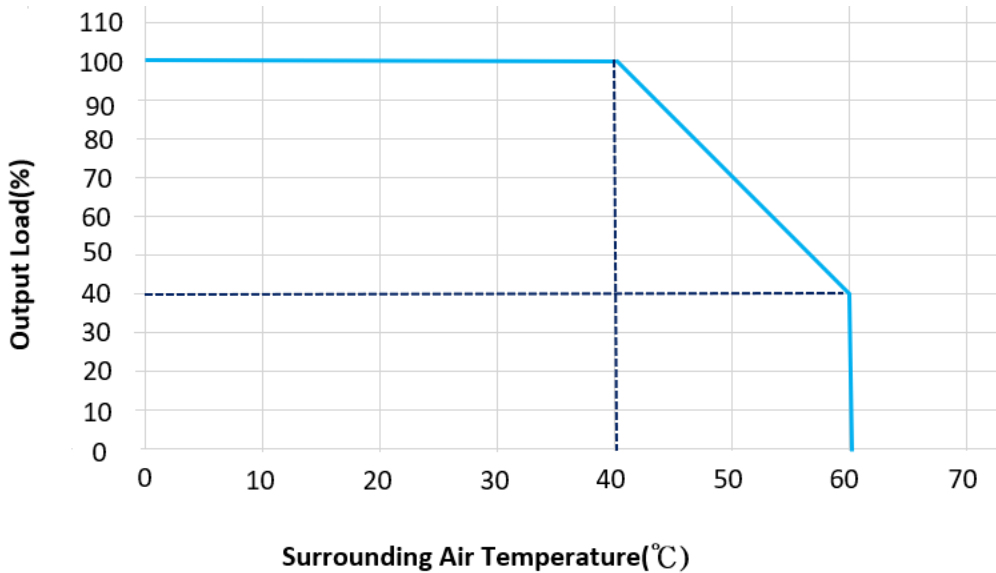
| ITEM | PART NAME  | COLOR   |
|------|------------|---------|
| ①    | COVER      | BLACK   |
| ②    | CHASSIS    | BLACK   |
| ③    | AC PLUG    | NATURAL |
| ④    | DC CABLE   | BLACK   |
| ⑤    | LASER ETCH | N/A     |

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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](http://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.

### Manufacturer and Authorized Representatives Information

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