

# ADP Series Power Adapters

## 19V 40W/65W/90W

# ADP 19V

### Highlights & Features

- Energy Star Compliance (Level VI)
- IT safety approvals
- 100k Hours MTBF
- Over-Voltage/Load/Temperature & Short Circuit protections
- Low Leakage Current

### Safety Standards



CB Certified for worldwide use



### Model Information

#### ADP Series Power Adapters

| Model Number  | Input Voltage Range | Output Voltage | Output Current |
|---------------|---------------------|----------------|----------------|
| ADP-40KD BBBM | 90-264Vac           | 19Vdc          | 2.1A           |
| ADP-65JH HBAN | 90-264Vac           | 19Vdc          | 3.42A          |
| ADP-90MD HDM  | 90-264Vac           | 19Vdc          | 4.74A          |

### Specifications

#### Input Ratings / Characteristics

|                                     | ADP-40KD BBBM                                | ADP-65JH HBAN                    | ADP-90MD HDM         |
|-------------------------------------|--|----------------------------------|----------------------|
| Nominal Input Voltage               |  | 100-240Vac                       |                      |
| Input Voltage Range                 |  | 90-264Vac                        |                      |
| Nominal Input Frequency             |  | 50-60Hz                          |                      |
| Input Frequency Rang                |  | 47-63Hz                          |                      |
| Input Current                       | 1.2A Max at 100Vac input voltage             | 1.5A Max at 100Vac input voltage |                      |
| Inrush Current Limit (cold start)   | No Damage                                    |                                  |                      |
| Efficiency at nominal input voltage | 85%  | 84%                              |                      |
| Active Mode Efficiency @ 115Vac     | >88%   |                                  |                      |
| Active Mode Efficiency @ 230Vac     | >85.30%                                      | >87%                             | >88%                 |
| No Load Power Consumption           | <0.1W @ 115Vac/60Hz ,<br><0.3W @ 230Vac/50Hz | <0.21W @ 115Vac/60Hz             |                      |
| Leakage Current                     | <100uA at 240Vac/50Hz                        | <50uA at 240Vac/50Hz             | <75uA at 240Vac/50Hz |

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### Output Ratings / Characteristics

|                         | ADP-40KD BBBM  | ADP-65JH HBAN   | ADP-90MD HDM   |
|-------------------------|--|---|--|
| Rated Voltage           | 19V  |   |  |
| Voltage Range           | 18.05 ~ 19.95V   |   |  |
| Current                 | 2.1A   | 3.42A   | 4.74A  |
| Output Ripple and Noise | 350 mV pk-pk   | 300mV pk-pk   | 380mV pk-pk  |
| Turn On delay time      | 5 seconds @ 100-240Vac   | 2 seconds @ 100-240Vac  |  |
| Hold-up Time            | The output voltage shall be sustained 5mS within regulation requirement after loss 100Vac and maximum load.    |   |  |
| Rise Time               | DC output rise time from 10% to 90% of output voltage shall be less than 30mS at nominal line and maximum load | DC output rise time from 10% to 90% of output voltage shall be less than 100ms at nominal line and maximum load |  |
| Transient Load Response | 0.1A to 100% load at 2.5A/us slew rate and frequency is 10Hz to 10KHz  |   | 0% to 50% and 50% to 100% 1.0A/us slew rate and frequency is 100Hz |

### Environment

|                                       | ADP-40KD BBBM  | ADP-65JH HBAN   | ADP-90MD HDM   |
|---------------------------------------|--|---|--|
| Operating Temperature                 | 0 °C to +40 °C   |   |  |
| Shipping/Storage Temperature          | -30 °C to +80 °C   |   | -20 °C to +85 °C.  |
| Operating Humidity                    | 8% to 90% RH (Non-Condensing)  |   |  |
| Shipping/Storage Humidity             | 5% to 95% RH (Non-Condensing)  |   |  |
| Lightning Surge Immunity              | IEC-1000-4-5 Level 3 Requirements<br>L-N 1KV/1.2 * 50uS 5 times No damage  | IEC-61000-4-5 Level 3 requirements<br>L-N 1KV/1.2 * 50uS 5 times No function error<br>L-FG 2KV/1.2 * 50uS 5 times No damage.  |  |
| Electric Fast Transients (EFT)        | IEC-1000-4-4/1995<br>EN 61000-4-4  |   |  |
| Electrostatic Discharge (ESD)         | ±15KV air discharge<br>±8KV contact discharge  |   |  |
| Dielectric Withstand Voltage (HI-POT) | Between AC input and secondary AC 3KV test time 1 minute; 100% of line products of this Adapter shall be applied 3000Vac for 2 seconds between AC input terminals and output terminals. Cut off current 3mA. | Between AC input and secondary AC 3KV test time 1 minute; 100% of line products of this Adapter shall be applied 3000Vac for 2 seconds between AC input terminals and output terminals. Cut off current 10mA. | 100% of line products of this Adapter shall be applied 3000Vac for 1 seconds between AC input terminals and output terminals. Cut off current is 10mA. |
| Insulation Resistance                 | The insulation resistance shall be not less than 30M ohms after application of 500Vdc/10mA for 1 minute.   |   | The insulation resistance shall be not less than 20M ohms after application of 500Vdc/10mA for 1 minute  |
| Electromagnetic Interference (EMI)    | (a) FCC Class B<br>(b) CISPR 22 Class B<br>(c) VCCI Class B  | (a) FCC Class B<br>(b) CISPR 22 Class B<br>(c) VCCI Class B   | (a) FCC Class B<br>(b) CISPR 22 Class B<br>(c) VCCI Class B  |
| MTBF                                  | 150,000 hours  | 100,000 hours   |  |
| Altitude                              | 5,000m (16,400 ft)   |   |  |

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### Protections

|                        | ADP-40KD BBBM   | ADP-65JH HBAN  | ADP-90MD HDM  |
|------------------------|---|--|---|
| Over Voltage           | The output shall be protected to latch off at over-voltage condition, maximum value can't be over 29V.                              | The output shall be protected to latch off at over-voltage condition, maximum value can't be over 27V. | The output shall be protected to latch off at over-voltage condition, maximum value shall be more than 22V and be less than 27V.  |
| Overload / Overcurrent | The maximum constant current shall be more than 2.1A and be less than 5.0A at 90Vac and 264Vac. The adaptor shall be auto-recovery. | The maximum constant current shall be more than 4.1A. The adapter shall be Auto-recovery               | The minimum constant current shall be more than 5.214A.<br>The maximum constant current shall be less than 6.636A.<br>The output shall be protected to latch off at over-current condition. |
| Over Temperature       | Latch Mode  |  |   |
| Short Circuit          | Auto-Recovery   |  |   |

### Mechanical

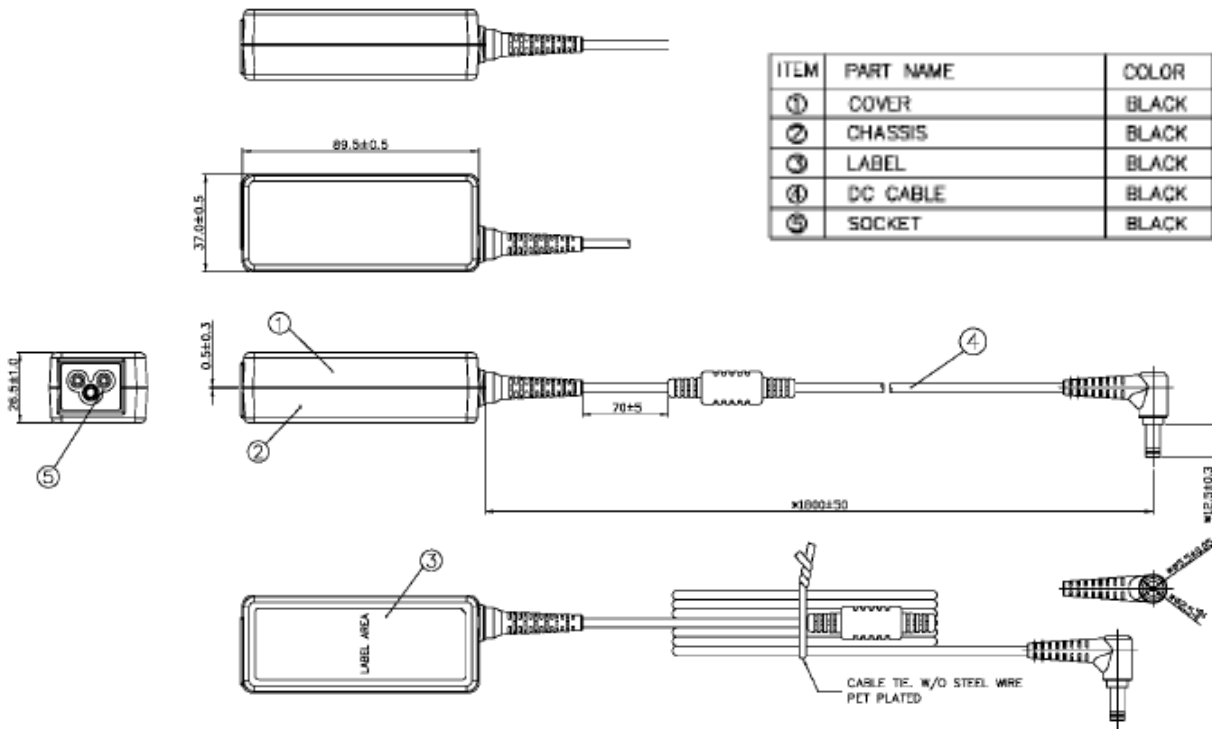
|                                | ADP-40KD BBBM                                  | ADP-65JH HBAN                                   | ADP-90MD HDM                                 |
|--------------------------------|--|---|--|
| Color                          | Black  |   |  |
| Outline Dimensions (L x W x D) | 89.5 * 37.0 * 26.5 mm<br>3.52 * 1.45 * 1.04 in | 108.0 * 46.0 * 29.5 mm<br>4.25 * 1.81 * 1.16 in | 127.0 * 51.0 * 30.5 mm<br>5.0 * 2.0 * 1.2 in |
| AC Inlet Type                  | Socket C6 type                                 |   |  |
| DC Cable Type                  | UL 1571 22AWG                                  | UL1571 #AWG18                                   | #AWG18                                       |
| DC Cable Length                | 1800 mm  |   |  |
| DC Connector - OD              | 5.5 mm   | 5.5 mm  | 5.5 mm                                       |
| DC Connector - ID              | 2.5 mm   | 2.5 mm  | 1.7 mm                                       |
| DC Connector - Length          | 12.5 mm  | 11 mm   | 11 mm  |

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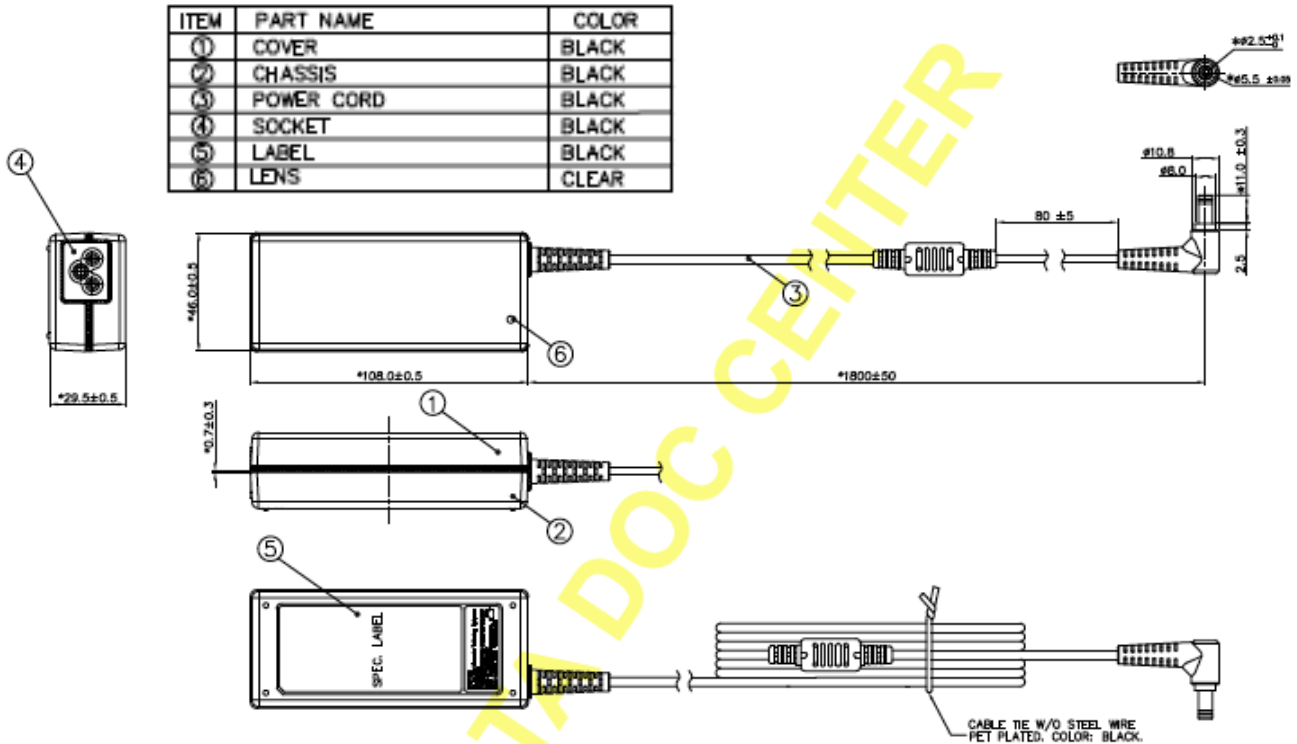
## 19V 40W/65W/90W

### Mechanical

#### ADP-40KD BBM



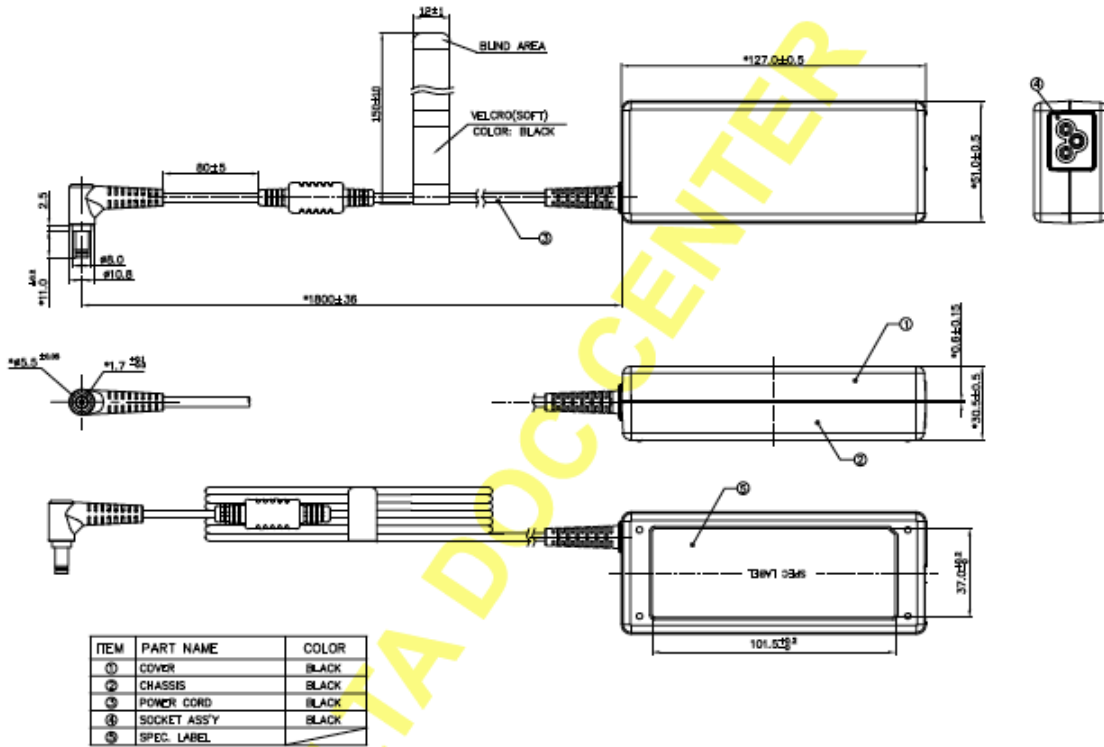
#### ADP-65JH HBAN



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### ADP-90MD HDM



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