96W DC Class 2 Power Supply
DS96W Aluminum Case Series 100-277V

**FEATURES**

- UL8750, EN61347, UL1310, UL48, cUL, CE, TUV, KAMA, CQC compliant
- FCC Part 15/18 Class B and EN55015 compliant
- Meet the RoHS directive;IP66 compliant,
- Suitable for high-temperature, high-dust location
- Suitable for indoor or outdoor applications
- Suitable in standard electrical junction boxes
- Compact, lightweight
- Single output, ranged from 4VDC up to 114VDC
- Active PFC reduces power consumption
- Isolation between primary and secondary
- Exceeds California Title 24 Requirements

**Electrical Specifications**

- **Power Factor**: >95%
- **Efficiency**: higher than 85%
- **Case TC**: 85°C Max
- **Protection**: Input / Output
- **Isolation between primary and secondary**: 0.08 A
- **Storage**: -40°C / +85°C
- **Humidity**: 95% RH max
- **IP Rating**: IP 60
- **Class**: Class 2 power supply
- **Dimming**: 0-10 Dimming
- **Optional Dimming**: Phase Dimming

**Environmental Specifications**

1. Operating temperature: -30 to +60°C
2. Storage temperature range: -40 to +85°C
3. Humidity: 5% - 95%RH
4. Cooling: Free air cooling Convection
5. Vibration Frequency: 5-55Hz/2g, 30 minutes
6. Impact resistance: 1g/s
7. MTBF: 462,000 hours at full load and 40°C ambient conditions
8. LIFE: 90,000 hours at full load and 40°C ambient conditions
9. Warranty: 30,000 hours at full load and 40°C ambient conditions
10. EMC:
    Compliant to CISPR 22 CLASS B, CISPR 14-1 CLASS B, GB4343. 1-2003, GB17625.1-2003
    - Harmonic currents test conforming to GB4343-2003+A1, CISPR 14-1:EN 61000-3-2:1995
    - RF Electromagnetic Field Immunity test conforming to GB/T13926.3, IEC61000-4-3, PrEN55014-2 Section 6.5
    - Electrical fast transient/burst immunity test conforming to GB/T13926.4, IEC61000-4-4, PrEN55014-2 section 6.2
    - Voltage dips and short interrupts immunity test conforming to IEC61000-4-11
    - Voltage variations immunity test conforming to IEC61000-4-11
    - Electrostatic discharge immunity test conforming to IEC61000-4-11

* Under confirmed thermal condition
### Electrical Specifications

- **Input range:** 90 to 305VAC
- **Frequency:** 47-63HZ
- **Power Factor:** > 95% at full load.
- **Inrush current:** < 40A at 25C, 230V, cold start.
- **Input current:** 1.2A at 120V
- **Efficiency:** Up to 92% typical at 230Vac Full Load.
- **Maximum power:** 96W
- **Load regulation accuracy:** ±4%, Current accuracy: ±3%
- **Start-up delay:** 1000 ms at Worst case.
- **Turn-on overshoot in the output current:** < 10%.
- **Ripple & Noise:** < 20% Peak-peak 20MHz Bandwidth.
- **Optional DC Dimming control:** 0-10Vdc, 2mA, 2-wire.
- **Optional RD Dimming control:** 3-wire 50KΩ Resistance Dimming.
- **Leakage current:** 400μA (typical).
- **Hold up time:** half cycle.
- **Output over-voltage protection function:** Less than 1.3 times the maximum output voltage.
- **Output over-current protection:** Less than 1.1 times the maximum output current.
- **Output short circuit protection:** Unlimited short-circuit, or long-term short-circuit, self-recovery after withdrawal.
- **Energy Star:** No-load power consumption less than the fixed type constant current 0.5W (at 120V input).

### Constant Current

<table>
<thead>
<tr>
<th>Model #</th>
<th>Output Voltage Range</th>
<th>Output Constant Current</th>
<th>Current Accuracy</th>
<th>Power Factor</th>
<th>Output Power</th>
<th>Typical Efficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>DS96W0350C</td>
<td>95~286V DC</td>
<td>350mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>92%</td>
</tr>
<tr>
<td>DS96W0450C</td>
<td>74~222V DC</td>
<td>450mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>92%</td>
</tr>
<tr>
<td>DS96W0700C</td>
<td>47~143V DC</td>
<td>700mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>92%</td>
</tr>
<tr>
<td>DS96W1050C</td>
<td>32~95V DC</td>
<td>1050mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>92%</td>
</tr>
<tr>
<td>DS96W1400C</td>
<td>24~71V DC</td>
<td>1400mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>91%</td>
</tr>
<tr>
<td>DS96W1750C</td>
<td>19~57V DC</td>
<td>1750mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>91%</td>
</tr>
<tr>
<td>DS96W2100C</td>
<td>16~48V DC</td>
<td>2100mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>91%</td>
</tr>
<tr>
<td>DS96W2450C</td>
<td>14~41V DC</td>
<td>2450mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>91%</td>
</tr>
<tr>
<td>DS96W2800C</td>
<td>12~36V DC</td>
<td>2800mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>90%</td>
</tr>
<tr>
<td>DS96W3150C</td>
<td>10~32V DC</td>
<td>3150mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>90%</td>
</tr>
<tr>
<td>DS96W3570C</td>
<td>9~28V DC</td>
<td>3570mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>90%</td>
</tr>
<tr>
<td>DS96W4200C</td>
<td>8~24V DC</td>
<td>4200mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>90%</td>
</tr>
<tr>
<td>DS96W5000C</td>
<td>7~20V DC</td>
<td>5000mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>89%</td>
</tr>
<tr>
<td>DS96W5550C</td>
<td>6~18V DC</td>
<td>5550mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
<td>89%</td>
</tr>
<tr>
<td>Model #</td>
<td>Output Voltage Current</td>
<td>Maximum Output Current</td>
<td>Minimum Output Current</td>
<td>Current Accuracy</td>
<td>Power Factor</td>
<td>Output Power</td>
</tr>
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<tr>
<td>DS96W48V</td>
<td>48V DC</td>
<td>2000mA</td>
<td>120mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
</tr>
<tr>
<td>DS96W41V</td>
<td>41V DC</td>
<td>2340mA</td>
<td>140mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
</tr>
<tr>
<td>DS96W36V</td>
<td>36V DC</td>
<td>2660mA</td>
<td>150mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
</tr>
<tr>
<td>DS96W32V</td>
<td>32V DC</td>
<td>3000mA</td>
<td>180mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
</tr>
<tr>
<td>DS96W28V</td>
<td>28V DC</td>
<td>3420mA</td>
<td>200mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
</tr>
<tr>
<td>DS96W24V</td>
<td>24V DC</td>
<td>4000mA</td>
<td>230mA</td>
<td>±3%</td>
<td>95%</td>
<td>100W</td>
</tr>
</tbody>
</table>

Note: Typical power factor measured at 220VAC input, full load. Maximum efficiency measured at 220VAC input, full load.

**DIMMING OPTIONS**

1. Optional DC Dimming control:
   a. 0-10V DC Dimming Mode.
   b. Input Voltage Range 0-10Vdc, Output constant current Adjustable range: 10%-MAX. When input >10V, Constant current output for maximum value. When input ≤ 0V (Include input open circuit), Constant current output for 10%.
   c. Input impedance 5KΩ, dimming response time: 20ms.
   d. Input Current: MAX. 2mA.
**Technical Specs.**

**Efficiency vs. Vout at 80°C case**

- Efficiency % vs. Vout (V)
- 120V, 230V, 277V

**PF vs. Pout at 80°C case**

- Power Factor % vs. Pout (W)
- 120V, 230V, 277V

**THD vs. Pout**

- THD % vs. Pout (W)
- 120V, 230V, 277V

**Life Time vs. Ambient Temp**

- Life Time (KHRS) vs. Ambient Temp (°C)
- PO=50%, PO=80%, PO=100%

**Life Time vs. Tcase Temp**

- Life Time (KHRS) vs. Tcase Temp (°C)
- PO=50%, PO=80%, PO=100%
**INSTALLATION SPECIFICATIONS**

- Aluminum metal enclosure, Used with thermal conductivity and flame retardant glue potting.
- AC input for connection the three core ANSI/UL1015/AWG18 temperature 105 °C core copper wire connection, Cable Length: 150mm, Stripping on the tin: 10mm.
- DC output for connection the two core ANSI/UL1569/AWG14 temperature 105 °C core copper wire, Cable Length: 150mm, Stripping on the tin: 10mm.
- The dimmer control input is the two copper wires, ANSI/UL1569/AWG24 & temperature 105 °C, Cable Length: 150mm, Stripping on the tin: 10mm.
- Where: 0-10V input — Purple wire, GND — Grey wire.
- This product has two Φ3.6mm mounting holes.

**MECHANICAL SPECS.**

<table>
<thead>
<tr>
<th>Available Form Factors</th>
<th>Dimensions</th>
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</thead>
<tbody>
<tr>
<td>“L17”</td>
<td>150X61X38mm</td>
</tr>
</tbody>
</table>

Remote Enclosure

| “G2”          | 233.1X85.5X48.9mm |
| “G3”          | 280X103X56mm      |

**L17**

**G2: -RE MODELS**

**G3: -REO MODELS**