# 150W Single Output Switching Power Supply

## Features:
- AC input range selectable by switch
- Protections: Short circuit / Over load / Over voltage
- Cooling by free air convection
- 100% full load burn-in test
- Fixed switching frequency at 77KHz

## Specification

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>NL-150-5</td>
<td>5V</td>
<td>30A</td>
<td>0 - 30A</td>
<td>150W</td>
<td>150mVp-p</td>
<td>4.5 - 5.5V</td>
<td>±2.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
<td>100ms, 50ms, 20ms at full load</td>
</tr>
<tr>
<td>NL-150-7.5</td>
<td>7.5V</td>
<td>20A</td>
<td>0 - 20A</td>
<td>150W</td>
<td>150mVp-p</td>
<td>6 - 10V</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
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<tr>
<td>NL-150-9</td>
<td>9V</td>
<td>16.7A</td>
<td>0 - 16.7A</td>
<td>150W</td>
<td>150mVp-p</td>
<td>8.5 - 10V</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
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<tr>
<td>NL-150-12</td>
<td>12V</td>
<td>12.5A</td>
<td>0 - 12.5A</td>
<td>150W</td>
<td>150mVp-p</td>
<td>10.6 - 13.2V</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
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<tr>
<td>NL-150-15</td>
<td>13.5V</td>
<td>11.2A</td>
<td>0 - 11.2A</td>
<td>150W</td>
<td>150mVp-p</td>
<td>12 - 15V</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
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<tr>
<td>NL-150-24</td>
<td>15V</td>
<td>10A</td>
<td>0 - 10A</td>
<td>150W</td>
<td>150mVp-p</td>
<td>13.5 - 16.5V</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
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<tr>
<td>NL-150-27</td>
<td>24V</td>
<td>6.5A</td>
<td>0 - 6.5A</td>
<td>150W</td>
<td>150mVp-p</td>
<td>21 - 28V</td>
<td>±1.0%</td>
<td>±0.5%</td>
<td>±0.5%</td>
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<tr>
<td>NL-150-48</td>
<td>27V</td>
<td>5.6A</td>
<td>0 - 5.6A</td>
<td>150W</td>
<td>150mVp-p</td>
<td>24 - 30V</td>
<td>±1.0%</td>
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<tr>
<td>NL-150-48</td>
<td>48V</td>
<td>3.2A</td>
<td>0 - 3.2A</td>
<td>150W</td>
<td>150mVp-p</td>
<td>43 - 53V</td>
<td>±1.0%</td>
<td>±0.5%</td>
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## Input
- Voltage Range: 88 - 132VAC/176 - 264VAC selected by switch
- Frequency Range: 47-63Hz
- Efficiency (Typ.): 78%
- AC Current: 3.2A/115VAC, 1.8A/230VAC
- Inrush Current (max.): Cold Start 35A
- Leakage Current: <3.5mA / 240VAC

## Protection
- Over Load: 105 - 150% rated output power
- Over Voltage: 5.75 - 6.75V, 8.63 - 10.13V, 10.35 - 12.2V, 13.8 - 16.2V, 15.53 - 18.2V, 17.25 - 20.3V, 20 - 34.8V, 31.1 - 36.45V, 55.2 - 64.8V

## Environment
- Working Temperature: -10°C to +60°C (Refer to output load derating curve)
- Working Humidity: 20 ~ 90% RH non-condensing
- Storage Temp. Humidity: -20 ~ +85°C, 10 ~ 85% RH
- Temp. Coefficient: ±0.3%/°C, ±0.03%/°C (0 ~ 50°C)
- Vibration: 5 - 50Hz, 2g, 10m/min, each along X, Y, Z axes

## Safety & EMC (Note 4)
- Safety Standards: UL1012, IEC60950-1, TUV EN60950-1 Approved
- Withstand Voltage: IP-0/IP, IP-3KVAC, IP-FG-1.5KVAC, IP-FG-0.5KVAC
- Isolation Resistance: IP-0/IP, IP-FG, IP-FG-100M Ohms/500VDC
- EMI Conduction & Radiation: Compliance to CISPR22 Class B
- Harmonic Current: Compliance to IEC 61000-3-2, -3
- EMS Immunity: Compliance to EN61000-4-2, 4, 3, 4, 5, 6, 8, 11, EN550204, EN55024, Light industry level, criteria A

## Others
- MTBF: 286.7K hrs min. MIL-HDBK-217F (25°C)
- Dimension: 200 x 8 x 30mm (L x W x H)
- Packing: 0.39kg / 40sps (1/27kg / 95% UFT)

**Note:**
1. All parameters are measured at 230VAC input, rated load, and 25°C ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance includes set up tolerance, line regulation and load regulation.
4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it meets EMC directives.