Model SL30P&N300X3955 is a remotely controlled reversible polarity power supply. Inside this single chassis, two independent high voltage output sections shall be connected to a high voltage relay circuit. This relay circuit shall then be connected to the single rear panel mounted high voltage output connector. A customer provided polarity control signal shall determine the output polarity of the power supply. The salient features of this custom unit are as follows:

1. **Input Voltage:**
   208 Vac, single phase ±10%, 50/60 Hertz.

2. **Output Voltage:**
   0 to +30kV or 0 to -10kV; polarity dependant upon status of polarity control signal.

3. **Output Current:**
   Internally set to 10mA. Sink or source capability, dependant upon selected polarity. A 3 megohm, 33 watt preload resistor rated at 10kV will be connected from the negative output to chassis ground. This preload current will appear on the current monitor.

4. **Output Voltage Regulation:**
   Load: 0.05% of maximum voltage for a full load change.
   Line: ±0.05% of maximum voltage for a ±10% input line voltage change.

5. **Output Current Regulation:**
   Load: 0.05% of maximum current ±100uA for a full voltage change.
   Line: ±0.05% of maximum current for a ±10% input line voltage change.

6. **Stability:**
   100 ppm/hour after a one half hour warm-up, voltage or current regulated.

7. **Ripple:**
   0.1% peak to peak of maximum output, voltage or current regulated.

8. **Efficiency:**
   85% typical.

9. **Temperature/Humidity:**
   Operating: 0°C to 50°C.
   Storage: -40°C to 85°C.
   Humidity: 10% to 90%, non-condensing.
10. Temperature Coefficient:
   100 ppm/°C.

11. Slow Start:
The NSS option shall be included where the rise time shall be less than 200mS.

12. Arc/Short Circuit Protection and Intervention:
The power supply shall be immune to transient and continuous arcing by virtue of internal resistive arc current limiters up to a 1 Herztz continuous rate. Arc inhibit, arc quench, reramp, and arc count/strip features will not be provided. The power supply shall be immune to transient and continuous short-circuiting by virtue of a fast acting automatic regulating current loop.

13. High Voltage Enable:
The I0 Option (Instant On) shall be provided.

14. Front Panel Features:
Clear labeled front panel shall be provided.
A circuit breaker, power ON indicator and handles shall be provided.

15. Rear Panel Features:
Line Cord:
High Voltage Connector:
A captive 7.5 foot long, three-conductor line cord shall be provided.
A single Spellman designed delrin high voltage output connector shall be provided. A detachable 10 foot shielded coaxial high voltage output cable shall be provided.

16. Ground Connector:
A ¼-20 threaded ground stud complete with locking hardware, that it electrically bonded to the rear panel sheet metal panel enclosure shall be provided for load return and system ground connections.
17. Remote Interface Connector:
A single AMP CPC type (SHV#105808-257) 16 position connector shall be provided to allow the customer to interface with the power supply. The pin out of this connector is as follows:

<table>
<thead>
<tr>
<th>PIN</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No connection</td>
</tr>
<tr>
<td>2</td>
<td>External Interlock (0V or ground = disable, 10V = enable)</td>
</tr>
<tr>
<td>3</td>
<td>Current Monitor (0 to 10V = 0 to 10mA, relay switched to show + or - output)</td>
</tr>
<tr>
<td>4</td>
<td>Voltage Monitor (0 to 10V = 0 to full scale, relay switched to show + or - output)</td>
</tr>
<tr>
<td>5</td>
<td>Voltage Program (0 to 5V = 0 to full scale. -10kV or 30kV respectively)</td>
</tr>
<tr>
<td>6</td>
<td>+15 Vdc @ 100mA, maximum</td>
</tr>
<tr>
<td>7</td>
<td>Polarity Control (Opt coupler driven, transistor &quot;off&quot; = Positive, &quot;on&quot; = Negative</td>
</tr>
<tr>
<td>8</td>
<td>Polarity Status (TTL low=positive)</td>
</tr>
<tr>
<td>9</td>
<td>Signal Ground</td>
</tr>
<tr>
<td>10</td>
<td>Signal Ground</td>
</tr>
<tr>
<td>11</td>
<td>No connection</td>
</tr>
<tr>
<td>12</td>
<td>Chassis Ground (for cable shield connection)</td>
</tr>
<tr>
<td>13</td>
<td>No connection</td>
</tr>
<tr>
<td>14</td>
<td>No connection</td>
</tr>
<tr>
<td>15</td>
<td>No connection</td>
</tr>
<tr>
<td>16</td>
<td>No connection</td>
</tr>
</tbody>
</table>

18. Mechanicals:
Size: 19.0" wide by 21.0" deep by 5.25" high
Weight: Approximately 33 pounds
Cooling: Forced air, intake on forward side panel, exhaust out rear panel.
Mounting: 6 holes with no. 10-32 PEM's provided for slide mounts. 4.25x9.50x15.25x1.75 from bottom.

19. Regulatory:
The unit shall be CE marked, and is designed to meet UL1010.