High Voltage Power Supplies
Serie GPS / HPS / KPS / LPS

OVERVIEW

FEATURES
- AC mains supplied, modular HV PS in the range of 300 W to 3000 W
- High voltages from 1 kV up to 80 kV
- Extraordinary control characteristics for output voltage and current.
- C-charger (KPS and LPS series) with high repetition accuracy at high charging frequencies
- Patented resonance mode technique
- Very high efficiency, up to 95%
- 300 W up to 800 W units with mains input wide range and PFC
- 1,5 kW / 3 kW units optional mains input wide range with PFC

HPS / LPS SERIES
- Manual front panel operation
- Voltage and current display (4-digit, LED resp. LCD)
- Remote monitoring and control with interface CAN and RS232, opt. IEEE 488.2 interface, Ethernet interface and/or analogue I/O.

CONSTRUCTION
- Standard 19", 1 to 4 HU and 10" compact box
- Customer specified

GPS / KPS SERIES
- Analogue I/O control

Compact HV PS
KPS and LPS series

1U and 4U 19" Laboratory HV PS
HPS and LPS series
### Case 19" 1HU 19" 3HU 19" 4HU

<table>
<thead>
<tr>
<th>Power W</th>
<th>300 W</th>
<th>800 W</th>
<th>1500 W</th>
<th>3.000 W</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vo / kV</td>
<td>Io / mA</td>
<td>Io / mA</td>
<td>Io / mA</td>
<td>Io / mA</td>
</tr>
<tr>
<td>1</td>
<td>300</td>
<td>800</td>
<td>1.500</td>
<td>3.000</td>
</tr>
<tr>
<td>2</td>
<td>150</td>
<td>400</td>
<td>750</td>
<td>1.500</td>
</tr>
<tr>
<td>3</td>
<td>100</td>
<td>250</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>4</td>
<td>75</td>
<td>200</td>
<td>350</td>
<td>750</td>
</tr>
<tr>
<td>6</td>
<td>50</td>
<td>130</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>8</td>
<td>35</td>
<td>100</td>
<td>180</td>
<td>350</td>
</tr>
<tr>
<td>12</td>
<td>25</td>
<td>65</td>
<td>120</td>
<td>250</td>
</tr>
<tr>
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<td>100</td>
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<td>20</td>
<td>15</td>
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<tr>
<td>30</td>
<td>10</td>
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</tr>
</tbody>
</table>

### TECHNICAL DATAS GPS / HPS / KPS / LPS

**Supply voltage**
- 300 W / 800 W series: 85 to 264 V-AC with PFC
- 1.5 kW / 3 kW series: 110 V-AC or 230 V-AC, opt. 85 to 264 V-AC, PFC

**Efficiency**
- up to 95%

**Stability voltage**
- 0.01% (0 ≤ Io / Io max and ΔVin)

**Stability current**
- 0.2 % (Rload / Rin < no-load and ΔVin)

**Ripple and noise**
- < 1 * 10^-4 * Vomax

**Temp. coeff.**
- < 2 * 10^-4/K

**Remote control**
- GPS / KPS

**Control and monitor voltage**
- 0 to 5 V for VO and IO (direct coupled analogue I/O)
- Manual front panel operation
- CAN and RS232 interface, opt. IEEE interface and indirect coupled analogue I/O

**Polarity**
- positive or negative (factory fixed, please specify)

**Protection**
- over voltage, short circuit, temperature, over load

**Built-in case**
- 300 W
- 800 W
- 1500 W
- 3000 W

### OPTIONS

- IEE - IEEE 488.2 interface
- AIO - Analogue Interface
- AIE - Analogue and IEEE 488.2 interface
- EPU - Polarity electronically switchable

### REMARKS

- Other voltages / currents on request!
- HV connectors:
  - up to 8 kV with SHV connector
  - up to 15 kV with Lemo socket ERA1Y660.0750-1
  - up to 30 kV with Lemo socket ERA3Y660.0750-1

### ORDER CODE

<table>
<thead>
<tr>
<th>L =&gt; Type</th>
<th>G - DC output / analogue I/O</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>DC output / display + digital interface</td>
</tr>
<tr>
<td>K</td>
<td>C-charger / analogue I/O</td>
</tr>
<tr>
<td>L</td>
<td>C-charger / display + digital interface</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>P =&gt; Polarity</th>
<th>p - positive</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>negative</td>
</tr>
<tr>
<td>r</td>
<td>reversible</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>40 =&gt; Voltage vv</th>
<th>vv * 100V</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 =&gt; Current ii</td>
<td>ii - Mantissa</td>
</tr>
<tr>
<td>7 =&gt; Current e</td>
<td>e - Exponent 10^n * nA</td>
</tr>
</tbody>
</table>

| IEE => Option LPP | C-charger; 19"-1U; 4kV / 200mA; manual front panel operation + display; IEEE 488.2 |
**TECHNICAL DATAS GPS / HPS / KPS / LPS**

Supply voltage  
Efficiency up to 85%  
Stability voltage 0.02% (0 ≤ \(I_{\text{Out}}\) ≤ \(I_{\text{Outmax}}\) and \(\Delta V_{\text{o}}\))  
Stability current 0.2% (\(R_{\text{Load}}\) \(\leq R_{\text{Load min}}\) < no-load and \(\Delta V_{\text{i}}\))  
Ripple and noise < 0.2% \(\times V_{\text{Omax}}\)  
Temp. coeff. < 2 \(\times 10^{-4}\)/K  
Remote control GPS / KPS  
GPS / LPS Manual front panel operation  
HPS / KPS CAN and RS232 interface, opt. Ethernet interface  
Polarity positive or negative (factory fixed, please specify)  
Protection over voltage, short circuit, temperature, over load  
Built-in case OEM  
Compact case D/W/H) 254 / 254 / 81  

**REMARKS**

- Other voltages / currents on request!  
- HV connectors: Shielded high voltage cable, Special connector (included with HV cable 3m)  

**OPTION**

- ETH-Ethernet interface