6KW HiPIMS-Power Supply hiP-V

Technical Data

Output Data

Output-Power: 6KW
Output Voltage: 0V to -1000V, optional 1200V  
(Voltage for nominal pulse and DC-mode)
Output Current: 500A (pulse peak) 
max. 12A DC, for <400V in DC-mode
Pulse frequency: 1kHz at 1200V, 500A;  
with lower energy pulses the frequency can be increased
Pulse width: 5µs to 1000µs
Duty cycle: <50% or DC 100%
Arc detection / handling: < 3µs
Arc current level: Adjustable 50A ÷ 1000A
Voltage stability: ±2.5%
Voltage ripple: <5%rms

Note: Up to 3 units can be paralleled to achieve up to 3 times output current ratings. 
Up to 2 units can be series connected to achieve up to 2 times output voltage ratings.

Projected Applications

- HiPIMS, Uni-Polar / Bi-Polar (optional) / with Superimposed HiPIMS capability
- DC magnetron sputtering
- DC-pulse magnetron sputtering
- DC Bias
- DC-pulse Bias
- HiPIMS Bias- DC
- HiPIMS Bias DC-pulse Bi-Polar (optional) / Uni-Polar
- hiPlus (Positive Voltage Reversal, optional)
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**Input Line**

Nominal voltage: 400Vac 3phase + neutral +/- 15%
Input nominal current: <13 Amps
Dielectric strength: 2500V – 50Hz – 1min.

**Environmental Conditions**

Ambient temperature: 0ºC to 40ºC
Temperature inside the box: 0ºC to 70ºC
Humidity: up to 90% (the equipment is designed with creepage distances as per EN-61010-1)
Maximum Height: 1200m

**Acoustic noise**

The equipment will produce an acoustic noise lower than 60dBA measured at a distance of 1 m.

**Case**

The unit is contained in a 19" rack module, 635mm deep and 9U high (405mm approx.)
The weight is 50kg.
The protection is IP20. It is not protected for water ingress; it is protected against ingress of parts bigger than 12mm. It is intended for indoor use in a laboratory.
The case is forced ventilated; the air ingress is done by the front side and the exhaust by the rear side.

distributed by

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Reference Standards

The 6kW pulsed power supply described in this document is fully compliant, but not only, with the following railway standards:

EN 61000-3-12-2006 Electromagnetic compatibility (EMC) part 3-12: limits for harmonic currents produced by equipment connected to public low-voltage systems with input current greater than 16 a and equal to or less than 75 a per phase

EN 61010-1:2002 Safety requirements for electrical equipment for measurement, control, and laboratory use -- Part 1: General requirements

MIL STD 217 Reliability Prediction of Electronic Equipment

EN 61204-3-2002 Low voltage power supplies, d.c. output -- Part 3: Electromagnetic compatibility (EMC).

EN 61000-6-3-2006 Electromagnetic compatibility (EMC). Generic standards. Emission standard for residential, commercial and light- industrial environments

EN 61000-6-2-2006 Electromagnetic compatibility (EMC) -- Part 6-2: Generic standards - Immunity for industrial environments