Aircooled Low Ripple Switch Mode Power Supply

FM - PS3kW Magnetron / 2.45 GHz - VG

General Information

FM - Aircooled Low Ripple Switch Mode Power Supply for 3kW Magnetrons @ 2.45 GHz is a series of power switch supplies. These power supplies contain all the necessary circuitry to drive a remote magnetron with regulated power, ranging from 10% to 100% of the rated power output. They contain circuitry for a fixed delay for magnetron warm up and continuous filament cut back operation. The control circuitry also provides status indicators, remote power regulation and the necessary connectors for wiring an external interlock circuit to meet microwave specific security demands.

The PS3KW power supply is able to power of all market usual magnetron types with a nominal power of 3kW @ 2.45 GHz.

Key Features / Technical Details

- 19“ rack mounted
- Air Cooled with connectors on the back side
- The air cooling is extremely quiet and efficient
- Low Ripple Current ≤ 2% , ideally for plasma applications and other most applications
- Stable filament control prolong the magnetron life
- Microcontroller based monitoring and controlling of all important Magnetron Operating Parameters like High Voltage and Current
- Sophisticated Design allows the generator always working at the ideal operating point (high efficency and longer magnetron lifespan)
- Low electromagnetic interference, improved fail-safe design against electromagnetic interference‘s
- Protective features to guard the magnetron and itself against failures
- Improved protective design to guard the person who accidentally touched the High Voltage
- Advanced alarm handling, all alarms can be displayed in a plain text Fieldbus-Interface
- Two different control options to suit most application requirements (e.g. PLC control or fieldbus control capabilities)

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Specififation

Electrical and Technical Data

Input	
Line Input	3 x 400 V_{AC}
Line Frequency	50 Hz
Input Power	4.57 kVA @ 400 V_{AC}
Maximum intake current	7.4A @ 360 V_{AC}
Output	
Max Output Power	4620 W
Rated Output Current	840 mA
Filament	Adjustable for all type of Magnetrons
Control / Monitoring	
Power Adjustment Signal Range	0-10 V_{DC}
Interface	Profinet or analog PLC

Cooling

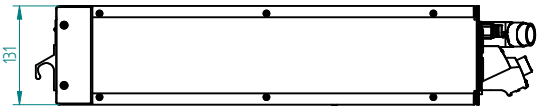
Air Cooling	
Intake Airflow (without filter)	Appx. 55 m^3/h

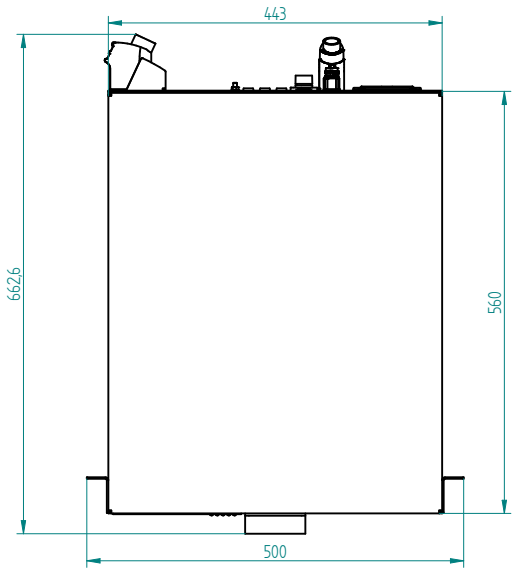
Mechanical Data

Front Panel Dimensions	19“ x 3HE (482.6 x 131 mm)
Rack Total Width	443 mm
Rack Total Height	131 mm
Depth with Connectors applied	662.6 mm
Total Weight	Appx. 18 kg

Ambient Conditions

Use	Indoor use only
Operation mode	Continous operation
Ambient Temperature	+5°C to +40°C operating
Relative Humidity	80% @ 30°C to 50% @ 40°C
Efficiency	>96%





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