Plasma & Reactive Gas Solutions

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SM 845

POWER SUPPLY FOR 2 kW MAGNETRON @ 2.45 GHz SWITCHING TECHNOLOGY WITH NETWORK CONNECTIVITY

The SM 845 is an air-cooled power supply for a 2 kW magnetron. The SM 845 is able to power and control most types of magnetrons available on the market with nominal power of 2 kW @ 2.45 GHz.

Depending on the model, the output power can be adjusted continuously, from 10% up to 100%, using an external analog signal from 1 to 10VDC, or by remote control through fieldbus interface or by front panel commands.

The SM 845 is a resonant switch-mode power supply and includes a power factor correction stage (PFC) that improves the efficiency of the entire system. It accepts input line voltage ranging from 180 VAC to 250 VAC. The SM 845 is designed to be used with the TMx20 or TI020 microwave heads, however it may be used to power microwave head developed by other manufacturers, if electrically compatible.

The SM 845 manages autonomously the working status of the magnetron, driving the correct pre-heating of the filament, adjusting filament voltage according to the specific back down curve, and shutting off the output in any alarm event condition, such as over-current or over-voltage of the magnetron.

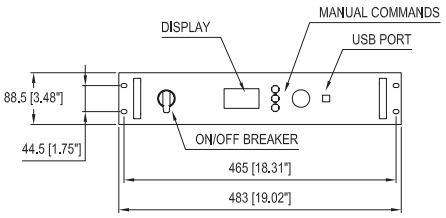
The electrical wiring utilizes industrial connectors, including the high voltage output, carrying the anodic current, that has a specific connector. Any electrical function has a separate connector leading to a simple and easy set up.

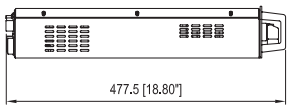
The SM 845 has a front panel 19” wide and 2U in height, is built with a rugged steel base and an easily removable aluminum cover. The air cooling flow enters from the sides and exits from the rear.

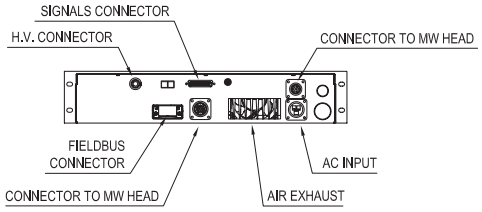
Features & Benefits

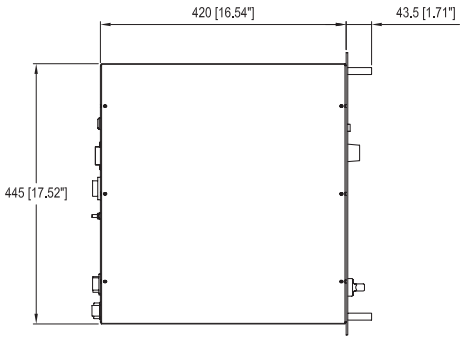
- Proven, state-of-the-art design with resonant topology that improves efficiency
- Single phase input requirement, at nominal 230 VAC, includes Power Factor Correction (PFC) stage which widens the input voltage range and allows the unit to power in most countries
- Low output ripple, suitable for most applications, and stable filament control result in long magnetron life
- Very low harmonics and inrush current from efficient power stage design
- Generator is designed with a “Plug & Play” concept: when installed with our cable set the user has to supply only two signals
- Four different versions are available to suit most application requirements, for example PLC control only, manual commands, or simple networking control capabilities (see Version Overview Table on back)

Specifications









Dimensional Drawing —

Note: Unless otherwise specified, dimensions are nominal values in millimeters (inches referenced).

Output Power	3000 W max
Line Input	230 VAC +10%/ -15%
Line Frequency	50/60 Hz
Efficiency	92%
Output Current	800 mA max
Alarm Management	Opening alarm contact, emission of a 4 bit alarm code, the alarm is latched and requires a reset procedure
Dimensions	
Width, Rack	445 mm (17.52")
Width, Front Panel	483 mm (19.02")
Height, Rack	88.5 mm (3.48")
Length, Rack	420 mm (16.54")
Weight	14 kg/ 31 lbs
Cooling Type	Forced air, approx 100 m^3/h
Working Ambient Temp. (max)	40°C/ 104°F
Compliance	CE
Preferred Microwave Head	TM020 or TMA20 or TI020

SM 845 Version Overview

Version Abbreviation	BASIC	BUS	DISPLAY	ex-745 LEGACY
Version Number	**0**	**1**	**2**	**7**
External Control (PLC)	✓	possible	✓	✓
LED Panel Indicators	✓	✓	NA	✓
Local Commands (Manual)	NA	NA	✓	NA
Graphic Interface	NA	NA	✓	NA
Network Control	NA	✓	NA	NA
RS 232 Control (USB Port)	NA	NA	✓	NA
Firmware Upgrade	NA	✓	✓	NA

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