



SM 1250

POWER SUPPLY FOR 3 kW MAGNETRON @ 2.45 GHz

The SM 1250 magnetron power supply is a compact, air-cooled, switch-mode power supply designed to drive most nominal 3 kW @ 2.45 GHz magnetron models.

For power control versatility, depending on the model, the output power of the SM 1250 can be variably adjusted from 10 to 100% using an external 1 to 10 VDC analog signal, or by remote control through a fieldbus interface or by front panel commands.

Available in either 208 or 400 VAC line voltage configurations, the SM1250 is designed to power and control MKS, Alter® TM031, T1031 or TX030 microwave magnetron heads; however it will also power other manufacturer's electrically compatible heads. The compact and innovative design of the SM 1250 power supply make it a highly competitive alternative to traditional, transformer based, power supplies.

The SM 1250 autonomously manages the working status of the magnetron, providing signals to drive the correct pre-heating of the filament and to adjust the filament voltage according to the specific back down curve. In addition, the power supply automatically shuts off the output power in the event of an alarm condition, such as over current or over voltage of the magnetron.

The SM 1250 is packaged in a 19-inch wide, 3U high rack mount enclosure and is built with a rugged steel base and easily removable cover. Industry standard electrical connectors, dedicated to specific electrical functions, provide simple and easy set up. The power supply high voltage (HV) output, carrying the anodic current, is delivered through an HV connector with an insertion detection switch.

Features & Benefits

- High efficiency power supply design requiring only air cooling simplifies installation and reduces cost
- Low output ripple makes it suitable for most applications
- Advanced filament control results in low maintenance and long magnetron life
- Efficient power stage design results in very low harmonics and inrush current
- "Plug & Play" design for fast and easy installation
- Four different control options available to suit most application requirements (see Version Overview Table)

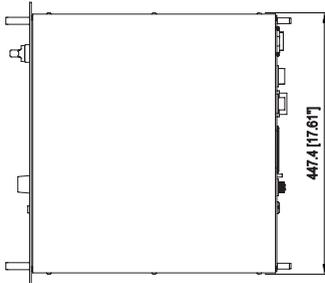
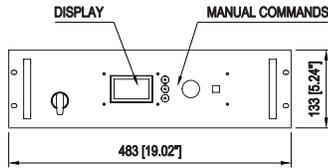
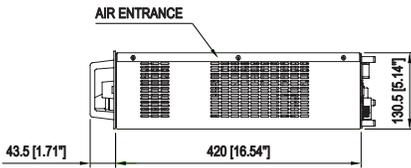
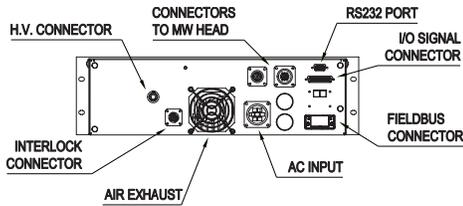
Plasma &

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Specifications



Dimensional Drawing —

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

Output Power	4500 W max
Line Input	3 x 208V, 3 x 400V
Line Frequency	50/60 Hz
Efficiency	92%
Output Current	1000 mA max
Alarm Management	In the event of an alarm condition, the alarm contact opens, the output power is switched off and the alarm contact is latched. A reset procedure is required to turn the unit back on.

Dimensions

Width, Rack	447.4 mm (17.61")
Width, Front Panel	483 mm (19.02")
Height, Rack	130.5 mm (5.14")
Length, Rack	420 mm (16.54")

Weight

21 kg/46 lbs

Cooling Type

Forced air, approx 120 m³/h

Working Ambient Temp. (max)

40°C/104°F

Compliance

CE

Preferred Microwave Head

TM031 (Closed head, waveguide size WR340), or TI031 Integral Head with Iso launcher, waveguide size WR340 (others if electrically compatible)

SM 1250 Version Overview

Version Abbreviation	BASIC/ LEGACY	BUS	DISPLAY	TWIN LOCK
Version Number	7 (ex 0)	1	2	50
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	✓	NA	✓	✓
Microswitch on HV Connection	✓	✓	✓	✓
Stand-off (rear)	✓	✓	✓	✓
Interlock Compatibility with SM 1150	✓	✓	✓	✓
Hardware Interlock of Power Stage	NA	✓	✓	✓



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