Plasma & Reactive Gas Solutions

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CR 840

POWER SUPPLY FOR 2 kW MAGNETRON @ 2.45 GHz

The CR 840 magnetron power supply is a compact, air-cooled, switch-mode power supply designed to drive most nominal 2 kW @ 2.45 GHz magnetron models.

For power control versatility, the CR 840 is available in three different configurations. Depending on the model, the output power of the CR 840 can be variably adjusted from 10 to 100% using an external analog signal, a digital PWM signal, or it may be driven from a zero power state to 100% full power with a simple digital ON-OFF signal.

The CR 840 is designed to power and control MKS, Alter® TMx20 or TI020 microwave magnetron heads; however it will also power other manufacturer's electrically compatible heads. The compact and innovative design of the CR 840 power supply makes it a highly competitive alternative to traditional, transformer based, power supplies.

The CR 840 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.

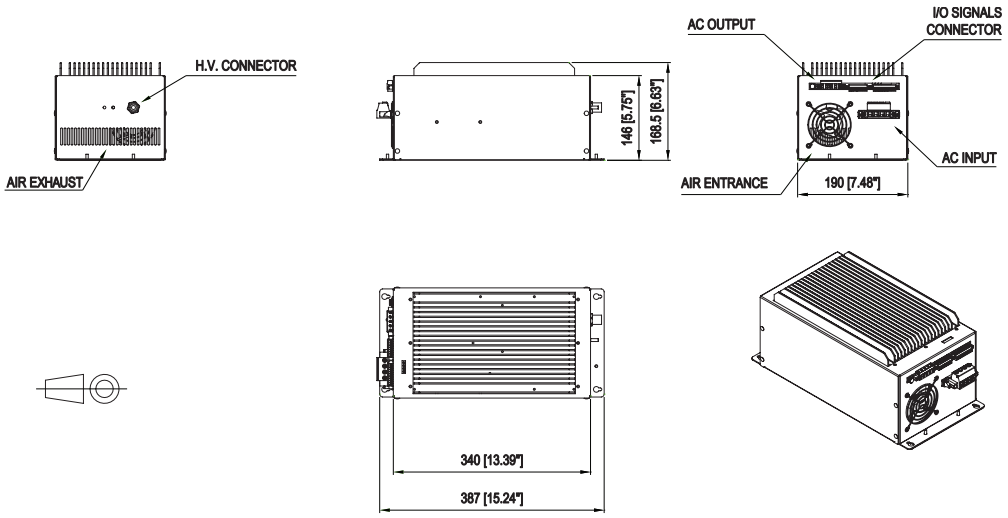
The CR 840 is enclosed in a lightweight and compact housing designed to be easily mounted inside an electrical enclosure. Industry standard electrical terminal blocks with separate terminals for all electrical functions provide simple and easy set up. The power supply high voltage (HV) output, carrying the anodic current, is delivered through an HV connector.

Features & Benefits

- Compact and lightweight form factor makes it ideal for installations where the space saving is critical
- The ON/OFF version of the CR 840 is a highly competitive alternative to large and heavy, traditional L-C power supplies
- High efficiency power supply design requires only air cooling for simple and low cost installation
- Standard output ripple makes the CR 840 suitable for industrial heating applications
- Stable filament control results in long magnetron life
- Efficient power stage design results in very low harmonics and inrush current
- System designed for easy assembly inside an electrical enclosure, with access to the terminal block on the bottom of the unit and output on the top

Specifications and Ordering Information

Output Power	3000 W max
Line Input	3 x 400V + N
Line Frequency	50/60 Hz
Efficiency	92%
Output Current (max)	750 mA
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	190 mm (7.48 in.)
Height, total (mm)	168.5 mm (6.63 in.)
Length, total (mm)	387 mm (15.24 in.)
Weight	10 kg/ 22 lbs.
Cooling Type	Forced air, 80 m^3/h
Working Ambient Temperature (max)	40° C/ 104° F
Compliance	CE
Preferred Microwave Magnetron Head	TMA20 (Closed head, air cooled, waveguide size WR340), TM020 (Closed head, water cooled, waveguide size WR 340), TI020 (Integral head, waveguide size WR340, includes isolator), Other manufacturer's electrically compatible heads



Dimensional Drawing —

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

Model and Version

CR 840T Version 0	Adjustable output from 10 to 100% with 0-10V analog signal (range 1-10V)
CR 840T Version 1	Adjustable output from 10 to 100% with PWM 24 V digital signal (period length: 100 msec)
FR 840T	Fixed output power 0-100% with ON/OFF 24V digital signal

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