

**Aumictech**

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Data Sheet

August 15, 2026

ADVANCED ENERGY

Advanced Energy MDX-10K DC Magnetron 10 kW Power Supply

The Advanced Energy MDX-10K is a 10kW DC magnetron power supply designed for thin film deposition and other sputtering applications. It provides stable and precise power delivery for consistent process results. Featuring advanced arc management and a solid design, the MDX-10K ensures reliable operation and extended service life.



MODEL

**Advanced Energy
MDX-10K**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

MDX-10K

LISTING

<https://aumictechlabs.com/products/mdx-10k-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Advanced Energy MDX-10K is a 10 kW DC magnetron power supply for thin-film deposition and sputtering applications. It delivers stable, precise power with 0.25% regulation accuracy across Power, Current, and Voltage modes. The supply features ARC-OUT™ arc suppression and exceptionally low stored energy through high-frequency conversion techniques, enabling 5 μ s response to plasma load changes. Three voltage tap configurations (Standard Z, Low Z, High Z) accommodate various magnetron impedances, while automatic limiting protects against load mismatch conditions. Programmable ramp and run timers, combined with multiple control interfaces, support flexible process integration. Technical Specifications Output Power: 10 kW Regulation Modes: Power, Current, Voltage Regulation Accuracy: 0.25% in all modes Ripple: 1%

RMS at 100 kHz Ignition Voltage: 1550 V Response Time: 5 μ s to plasma load changes Ramp
Timer: 0 to 99.0 minutes, programmable Run Timer: Continuous or 0 to 99.0 minutes,
programmable Voltage Configuration Standard Z Taps: 500–600 V, 600–800 V, 800–1000 V Low Z
Taps: 400–500 V, 500–640 V, 640–800 V High Z Taps: 600–775 V, 775–1000 V, 1000–1250 V Key
Features ARC-OUT™ circuit reduces arc-induced splatter and thermal shock ARC-CHECK™
optional feature for impedance restoration Extremely low stored energy design Automatic limiting
under overcurrent, overvoltage, or overpower conditions Forced-air cooling 71 lb weight; 25"
height Electrical & Control Input Voltage: 208 V $\pm$ 10%, 380 V $\pm$ 10%, 415 V $\pm$ 10% (3-phase, 50/60
Hz) Input Current: 34 A Control Interfaces: Front panel, user port (RS-232 ASCII), analog remote
control Analog Signals: 0–5 V for voltage, current, and power control Logic I/O: Interlock, output,
and setpoint status outputs Interlock Inputs: Vacuum, water, system interlocks
supported Operating Environment Temperature: 0 to 45°C ambient Humidity: 92% relative
humidity, non-condensing Clearance Required: 3" rear, 1" side minimum

MDX10K Characteristics / Specifications

PARAMETER	VALUE
Model	MDX-10K
Instrument Type	DC magnetron power supply
Rated Output Power	10 kW
Regulation Accuracy	0.25 percent in power current and voltage modes
Ripple Above 5 kW Units	1 percent rms at 100 kHz
Ignition Voltage	1550 V
Ramp Timer	0 to 99.0 minutes programmable
Run Timer	continuous or 0 to 99.0 programmable
Input Voltage Options	208 V 380 V 415 V plus or minus 10 percent 3 phase 50/60 Hz
Output Connector	UHF type
Cooling	forced air
Maximum Ambient	45 C
Maximum Relative Humidity	92 percent noncondensing
Control Interfaces	front panel RS-232 analog
Series Family	Advanced Energy MDX
Related Models	MDX-5K MDX-L12M
Power Increment Family	5 kW increments from 5 kW to 80 kW
Load Mismatch Behavior	continuous operation with automatic limiting
Tap Voltage Span Family	about 400 V to 1250 V depending onZconfig
Strike Voltage All Ranges	up to 1550 V
Conversion Method	high frequency switchmode
Manufacturer	Advanced Energy Industries
Humidity	92 percent noncondensing

MDX10K Specifications

PARAMETER	VALUE
Applications	Higher-power DC magnetron sputtering and bias applications requiring 10 kW continuous delivery.
Key Features	10 kW continuous magnetron drive
Technical Specifications	Model: MDX-10K

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes	
Numeric rows from Advanced Energy MDX Series documentation applied to the 10 kW model column. Unit-specific tap currents are configuration dependent.	

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.