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Data Sheet

August 15, 2026

ADVANCED ENERGY

Advanced Energy MDX-L12M DC Magnetron 12kW Power Supply

The Advanced Energy MDX-L12M is a 12kW DC magnetron power supply designed for demanding thin film applications. It delivers precise and stable power with advanced arc management and a solid design for continuous operation.



MODEL

**Advanced Energy
MDX-L12M**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

MDX-L12M

LISTING

<https://aumictechlabs.com/products/mdx-l12m-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Advanced Energy MDX-L12M is a 12 kW DC magnetron power supply engineered for demanding thin-film deposition and sputtering applications. It delivers precise, stable power with advanced arc management and operates continuously in both laboratory and industrial environments. The unit functions as a configurable power, current, or voltage source, supporting semiconductor manufacturing, thin-film processing, and precision material deposition workflows.

Technical Specifications
Power Output: 12 kW nominal
Input Voltage: 90–260 VAC
Efficiency: Up to 92% from line to load
Output Regulation Modes: Power, current, or voltage source selection
Striking Voltage: Soft-start options at 1500 V or 800 V available

Key Features
Advanced Arc Management: VARC (Vacuum Arc/Discharge Control) suppresses and quenches arc events with adjustable suppression timing. Impedance sensing immediately terminates power

delivery to prevent energy dumping into hotspots, reducing target burn-in and material loss. Dual Digital Meters: Front-panel displays show power, current, voltage, ramp time, and setpoints in real time. Intuitive Control Interface: Front-panel voltage, current, and output power adjustment with LED status indicators for arc detection, setpoint reached, ramp progression, plasma presence, output status, and interlock conditions (water, vacuum, auxiliary). Industrial Communication: RS-232, Ethernet/IP, PROFINET, and Modbus RTU/TCP protocols enable remote operation and integration into multi-component systems. Remote Operation & Data Logging: Rear-panel switches control remote functionality; 25-pin sub-miniature D connector facilitates control signaling and data logging. Typical Applications Semiconductor thin-film deposition, magnetron sputtering, laboratory instrumentation, machine and robotic control systems. Compatibility & Integration Supports multiple communication standards for networked operation. Configurable output modes accommodate diverse load impedances and process requirements.

MDXL12M Characteristics / Specifications

PARAMETER	VALUE
Model	MDX-L12M
Instrument Type	DC magnetron power supply
Rated Output Power	12 kW
Regulation Accuracy	0.25 percent in power current and voltage modes
Ripple Class Above 5 kW	1 percent rms at 100 kHz class OEM table
Ignition Voltage	1550 V
Ramp Timer	0 to 99.0 minutes programmable
Input Voltage Options	208 V 380 V 415 V plus or minus 10 percent 3 phase 50/60 Hz
Cooling	forced air
Maximum Ambient	45 C
Maximum Relative Humidity	92 percent noncondensing
Output Connector Class	UHF type class MDX family
Control Interfaces	front panel RS-232 analog
Series Family	Advanced Energy MDX
Related Models	MDX-5K MDX-10K
Load Mismatch Behavior	continuous operation with automatic limiting
Strike Voltage	up to 1550 V
Conversion Method	high frequency switchmode
Power Family Span	2.5 kW to 80 kW MDX drives
Tap Transformer	three tap impedance matching
Run Timer	continuous or 0 to 99.0 programmable
Manufacturer	Advanced Energy Industries
Humidity	92 percent noncondensing

MDXL12M Specifications

PARAMETER	VALUE
Applications	Large-area magnetron sputtering and high-power PVD bias requiring about 12 kW DC delivery.
Key Features	12 kW magnetron output class
Technical Specifications	Model: MDX-L12M

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 DC Magnetron Drives literature for 12 kW class MDX-L12M. Confirm faceplate line and tap configuration on the installed unit.	

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.