



**ASCENT[®] AMS DC POWER SUPPLIES
30, 40, AND 60 KW**

STABLE POWER DELIVERY THROUGH EXTREME ARC
CONDITIONS FOR HIGHLY REPEATABLE FILMS





Ascent[®] AMS
power supplies
deliver stable,
repeatable power,
regardless of
process material
or cathode design.

As manufacturing techniques advance, new materials and cathode designs pose greater challenges to process stability and film repeatability. Ascent® AMS power supplies deliver stable, repeatable power, regardless of process material or cathode design.

- High film quality and throughput
- Reduced film, substrate, and equipment damage
- Stable throughput and power delivery under extreme arcing conditions
- Easy integration and control



FEATURES

- ARC MANAGEMENT SYSTEM™ (AMS) TECHNOLOGY—CUSTOMER PRE-SETS FOR METAL AND CERAMIC TARGETS
- SET POINT COMPENSATION™ TECHNOLOGY
- ARC SYNC® TECHNOLOGY—MASTER/SLAVE UP TO 12 UNITS
- ETHERNET, DEVICENET™, PROFIBUS®, RS-232/485, AND ANALOG COMMUNICATIONS
- VIRTUAL FRONT PANEL (VFP) SOFTWARE, REMOTE CONTROL PANEL, AND PASSIVE-DISPLAY FRONT PANEL INTERFACES
- ROHS, CE, NRTL, SEMI S2, AND SEMI F47 COMPLIANCE

APPLICATIONS

SPUTTERING FOR SOLAR, FPD, SEMI, INDUSTRIAL, AND WEB COATING PROCESSES



INDUSTRY-LEADING ARC MANAGEMENT

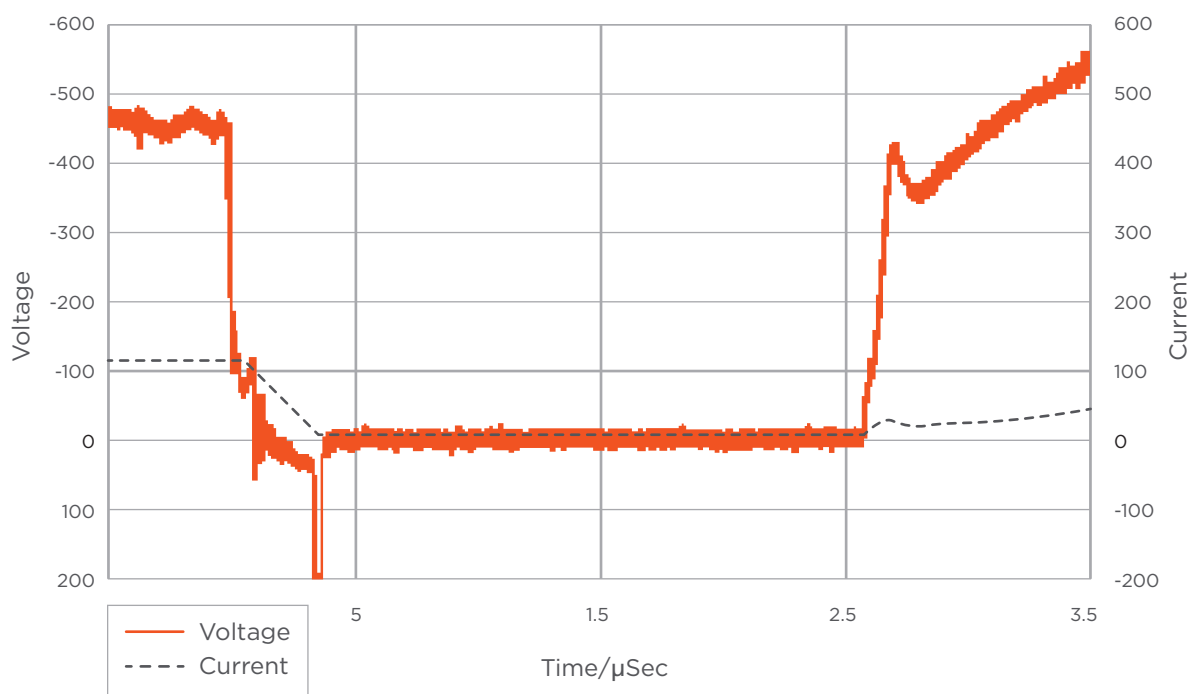
Many insulative target materials used in magnetron PVD processes produce up to thousands of arcs per second—a level that requires more than the rudimentary detection and handling that conventional arc management provides.

With three key innovations—Arc Management System™ technology, Set Point Compensation™ technology, and Arc-Sync™ technology—Ascent AMS power supplies enable the use of new target materials, with reduced film and equipment damage, stable throughput, and the ability to synchronize the arc responses of connected units.

ARC MANAGEMENT SYSTEM™ (AMS) TECHNOLOGY

AE's proprietary AMS technology preserves film quality and repeatability, even under extreme arcing conditions. These enhanced arc handling capabilities enable success with newer materials, such as AZO and IGZO.

Arc Response at 30 kW

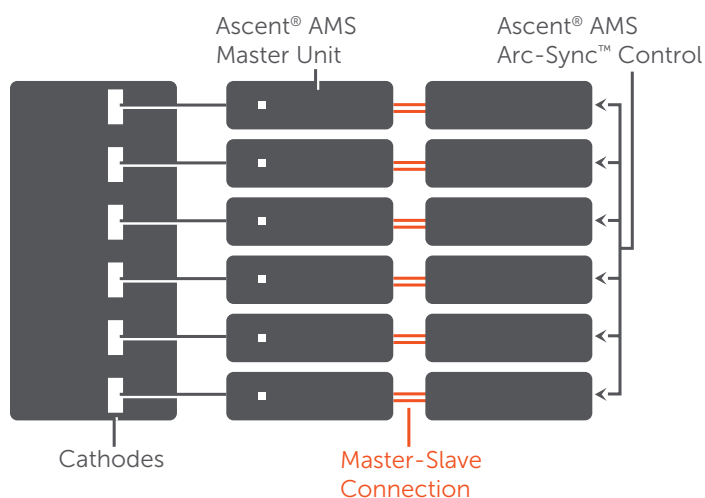


Fast Detection, Shutdown, and Recovery from Arc Events

- › Automatic arc handling eliminates need to adjust arc management parameters.
- › Primary arc response quickly removes power from arcs.
- › Secondary arc response cools surface and quenches secondary arcs.
- › Controlled power recovery minimizes over-shoot and secondary arcs.
- › Low stored energy—less than 0.4 mJ per kW—reduces arc impact on the process.

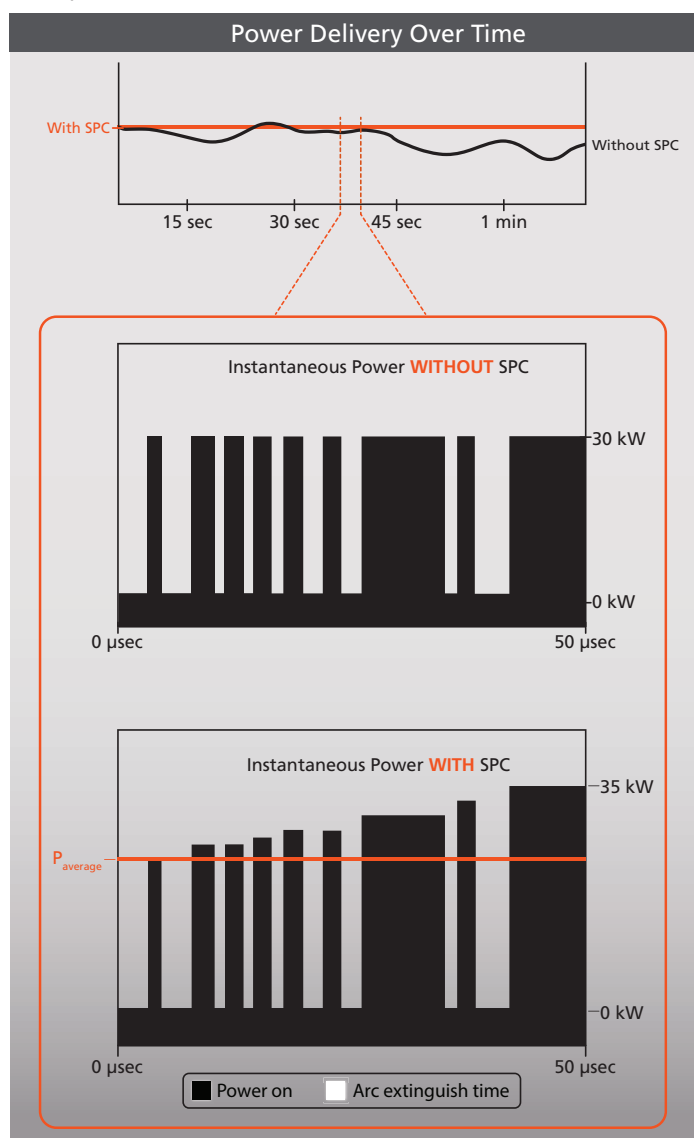
ARC-SYNC™ TECHNOLOGY

For use with multiple-cathode systems, Arc-Sync™ technology coordinates the arc responses of up to 12 connected Ascent AMS units (up to 720 kW).



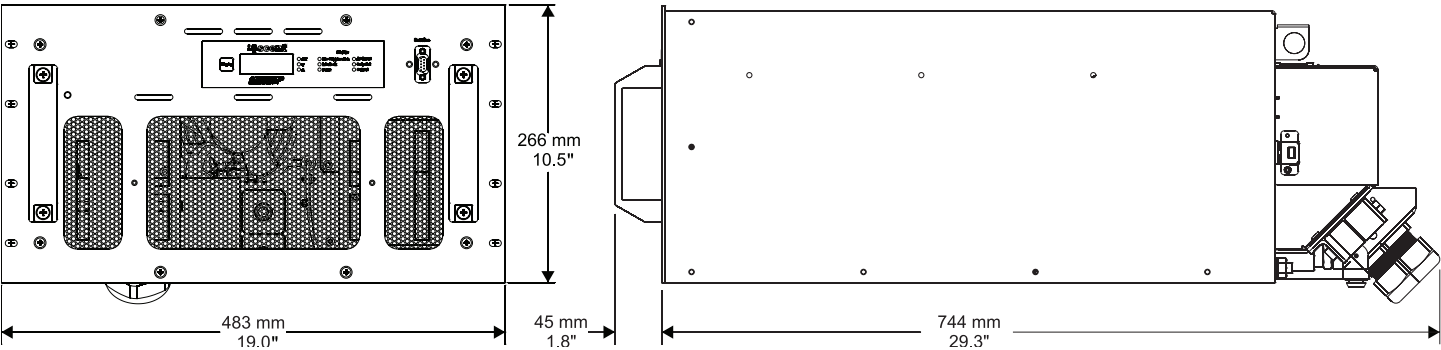
SET POINT COMPENSATION™ (SPC) TECHNOLOGY

Ascent AMS power supplies feature a patented algorithm that improves power-delivery repeatability and maintains sputter rate by automatically adjusting power output to compensate for arc shutdowns.



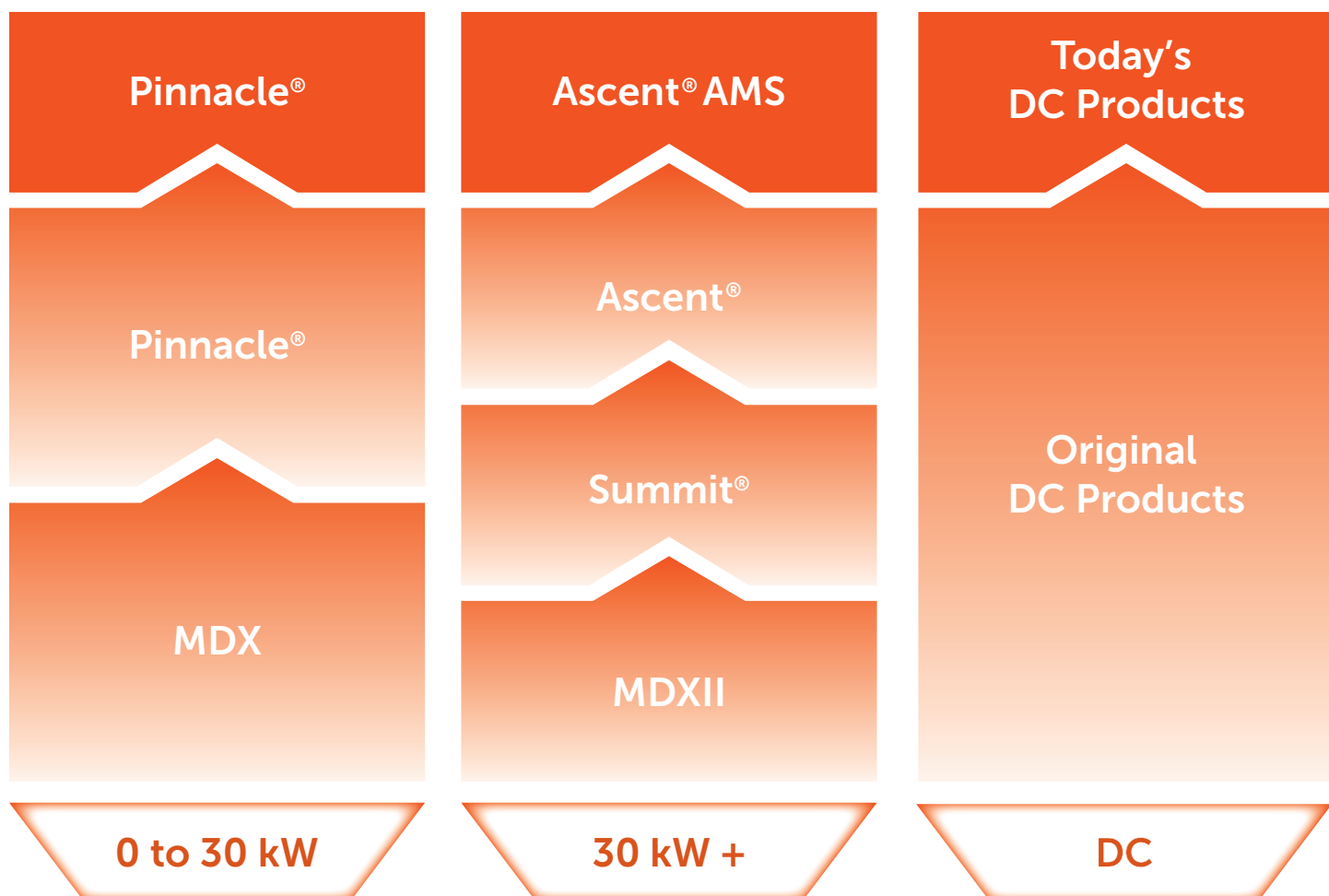


DIMENSIONAL DRAWING



GENERAL SPECIFICATIONS	ASCENT® AMS 30 KW	ASCENT® AMS 40 KW	ASCENT® AMS 60 KW
Input Power	400, 440, or 480 VAC (±10%), 50/60 Hz		
Output Voltage	Up to 1000 V		
Output Current	Up to 120 A		
Min Output Current	1 A at 400 W		2 A at 600 W
I/O Communication	Ethernet, DeviceNet™, Profibus®, RS-232/485, analog, Virtual Front Panel (VFP) software, remote control panel, and passive-display front panel		
Weight	~61.5 kg (136 lb)		
Mounting	48.26 cm (19"), rack mountable, 6U height		
Cooling Air Temperature	40°C (104°F) max		
Cooling Water Temperature	35°C (95°F) max		
Compliance	EU RoHS, CE, NRTL, SEMI S2, SEMI F47		

Evolution of Advanced Energy® DC Innovation





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