

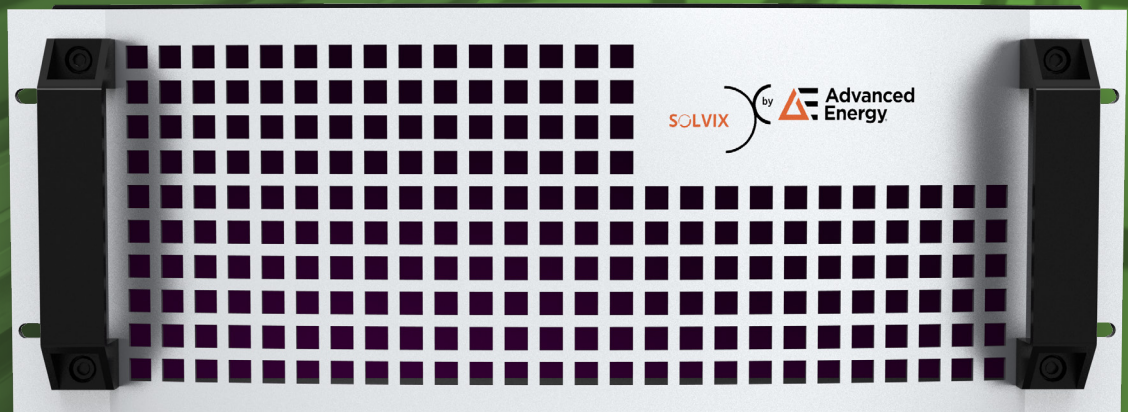
# Solvix<sup>®</sup>

3 TO 30 KW DC AND PULSED-DC POWER SUPPLIES  
FOR METALLIC AND REACTIVE SPUTTERING APPLICATIONS





# Proven Reliability, Accuracy, and Repeatability



**Solvix®**

## **DC and Pulsed-DC Power Supplies**

Advanced Energy®, the world leader in power conversion technology, presents Solvix DC and pulsed-DC power supplies for metallic and reactive sputtering. This series provides precise control and proven reliability—backed by AE’s worldwide support network.

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Offering a wide range of power and frequency levels, pulsing, and multiple communications options, Solvix by AE power supplies provide a rugged and cost-effective solution for your unique process.

### **BENEFITS**

- Proven reliability, accuracy, and repeatability
- Worldwide support network
- Reduced substrate damage and process contamination
- Adaptability to a wide range of process requirements
- High throughput
- Efficient installation and service

### **FEATURES**

- Best-in-class arc handling
- DC and pulsed-DC units
- Current, power, and voltage regulation modes
- Flexible architecture
- Air cooling
- Multiple units configurable for high-power requirements
- High peak-to-peak voltages (high-frequency models)
- Patented tapless wide output load impedance range (medium-frequency models)

### **APPLICATIONS**

- Solar, FPD, glass, and industrial sputtering of functional, decorative, and hard coatings
- Sputtering of reactive, metallic, and ceramic films



### Proven Reliability, Accuracy, and Repeatability

The Solvix series features highly developed DC and pulsed-DC technology, as well as a streamlined design that eliminates potential points of failure. Constructed at a world-class manufacturing facility that has received the highest scores from the most discerning OEM auditors, these rugged power supplies deliver reliable, consistent, and precise performance:

- Highly reliable design with > 10 years field experience
- High accuracy: < 1%
- High repeatability: < 0.5%

### Worldwide Product and Application Support

AE field service engineers support your on-site needs, including installation, commissioning, set up, inspection, and more.

AE field applications engineers conduct on-site reviews and consultations to solve challenges and enhance process efficiency and productivity.

AE service centers are located around the world and provide the highest quality repairs to maximize uptime and reduce total cost of ownership.

## Reduced Substrate Damage and Process Contamination

The Solvix series reduces arc-caused contamination and damage with a fast reaction time ( $< 1 \mu\text{s}$ ) and selectable detection modes. Pulsed-DC units reduce arc formation and minimize arc energy by periodically reversing electrode voltage to clear charge buildup. The result is high-quality films, even from highly arc-prone processes.

## Adaptability to a Range of Process Requirements

With a flexible architecture, the Solvix series offers wide range of power levels from 3 to 30 kW. In addition, multiple communication options are available to meet the needs of your unique manufacturing process.

## High Throughput

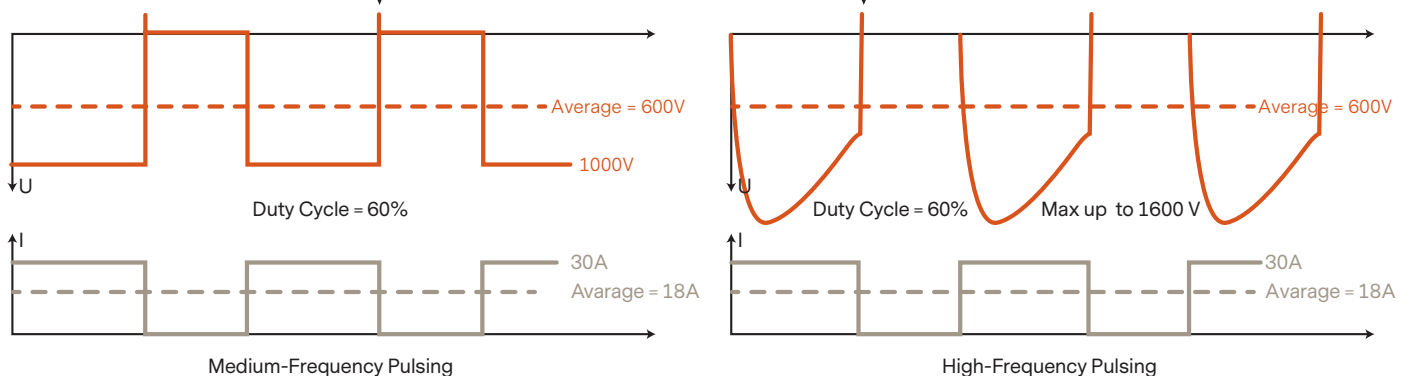
Pulsed-DC units can be combined and synchronized for higher-power operation.

## Efficient Installation and Service

Modular in design, Solvix units are easy to install and make preventive maintenance easy to perform in the field, reducing maintenance costs.

## Solvix DC Pulsing

Voltage reversal during each pulse clears potentially damaging charge buildup, reducing the incidence of arcs



## Solvix® DC and Pulsed-DC Power Supplies

ELECTRICAL	Solvix by AE DC Power Supplies	Solvix by AE Medium-Frequency Pulsed-DC Power Supplies	Solvix by AE High-Frequency Pulsed-DC Power Supplies	
<b>Output Power</b>				
Output Power	6, 10 <sup>1</sup> , 15 <sup>1</sup> , 20, and 30 kW	10, 15, and 30 kW	3, 5, 10, 20 kW	30 kW
Frequency Range	-	1 to 30 kHz	5 to 350 kHz	5 to 100 kHz
Voltage Range	20 to 700 VDC	20 to 1000 VDC	20 to 700 VDC	
Regulation Modes	Current, power, and voltage			
Power Accuracy	< 1%	< 1%	< 1%	
Repeatability	< 0.5%	< 0.5%	< 0.5%	
Pulse Duty Cycle	-	1 to 99%	50 to 100%	
<b>Input Power</b>				
Voltage	400 VAC, 480 VAC, 3Φ, 50/60Hz			
Arc Management	Passive	Serial Switch + aux parallel switch	Parallel switch	

<sup>1</sup> Single or dual unit

PHYSICAL	3 kW <sup>2</sup>	6 kW	10 kW	Dual 10 kW	15 kW	20 kW	20 kW <sup>3</sup>	Dual 15 kW	30 kW
Dimensions	17.8 cm (H) x 48.4 cm (W) x 68.0 cm (D) 7" (H) x 19.1" (W) x 26.8" (D)						26.5 cm (H) x 48.4 cm (W) x 68.3 cm (D) 10.5" (H) x 19.1" (W) x 26.9" (D)		
Weight	29 to 40 kg (64 to 88 lb)						40 to 76 kg (88 to 168 lb)		
Cooling	Air								

<sup>2</sup> Depth is 62.2 cm (24.5")

<sup>3</sup> Pulsed DC

I/O CONTROL	3 kW	6 kW	10 kW	Dual 10 kW	15 kW	20 kW	Dual 15 kW	30 kW
Analog	Software customized: 4 digital input, 4 digital output; 3 analog input, 2 analog output							
Digital	Standard: Analog, RS-232							
	Available: RS-485, Profibus, Ethernet							



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## ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than four decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

AE's power solutions enable customer innovation in complex semiconductor and industrial thin film plasma manufacturing processes, demanding high and low voltage applications, and temperature-critical thermal processes.

With deep applications know-how and responsive service and support across the globe, AE builds collaborative partnerships to meet rapid technological developments, propel growth for its customers and power the future of technology.

PRECISION | POWER | PERFORMANCE | TRUST

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