ADVANCED ENERGY®

SOLVIX BY AE

3 to 40 kW DC and Pulsed-DC Power Supplies
for Metallic and Reactive Sputtering Applications

SOLVIX BY AE
DC AND PULSED-DC POWER SUPPLIES

Advanced Energy®, the world leader in power conversion technology, presents Solvix by AE 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. 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 and water 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)
- ICE enhanced arc management for TCO materials

Applications

- Solar, FPD, glass, and industrial sputtering of functional, decorative, and hard coatings
- Sputtering of reactive, metallic, and ceramic TCO films (AZO, ZNO, ITO, and more)

Proven Reliability, Accuracy, and Repeatability

The Solvix by AE 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: < 0.5%
- High repeatability: < 0.2%

Worldwide Support Network

More than 200 professionals are available around the clock—in dozens of locations around the world—to provide highly responsive sales, service, and technical support. Our comprehensive network of AE offices and regional partners provides insight into your product, process, and application, from a location near you.

Reduced Substrate Damage and Process Contamination

The Solvix by AE series reduces arc-caused contamination and damage with a fast reaction time (< 1 µs) 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.

ICE Technology: Enhanced Arc Handling for TCO Films

Superior arc handling comes standard on Solvix by AE products.

For particularly arc-prone materials such as AZO, ZNO, and ITO, AE offers an even higher level of arc protection. ICE technology, optional with 20/40 kW units, minimizes arcing, stabilizes process conditions, and reduces film defects, for high-quality TCO films.

Adaptability to a Range of Process Requirements

With a flexible architecture, the Solvix by AE series offers wide range of power levels from 3 to 40 kW. In addition, multiple communication options are available to meet the needs of your unique manufacturing process.

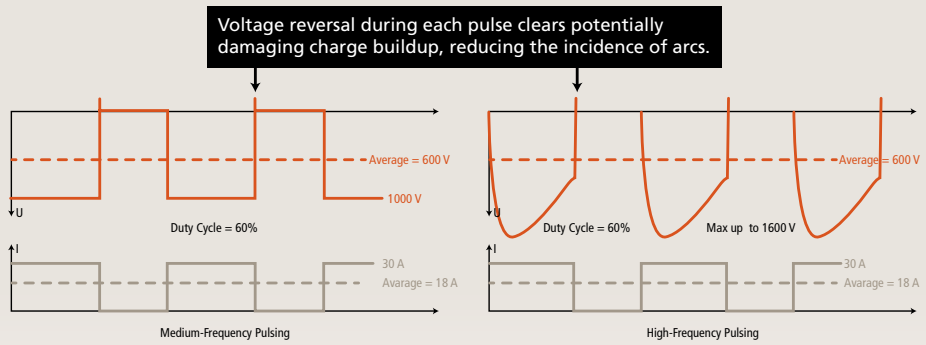
High Throughput

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

Efficient Installation and Service

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

Solvix by AE DC Pulsing



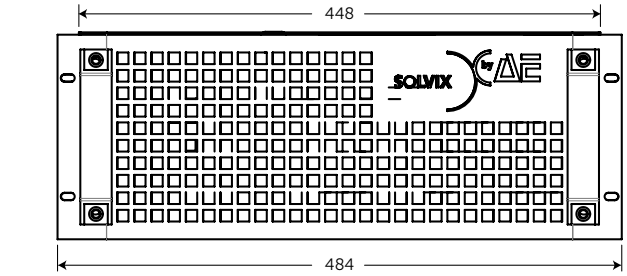
Electrical	Solvix by AE DC Power Supplies		Solvix by AE Medium-Frequency Pulsed-DC Power Supplies	Solvix by AE High-Frequency Pulsed-DC Power Supplies
Output Power				
Output Power	3, 6, 10[1], 15[1], 20, and 30 kW	40 kW	10, 15, and 30 kW	3, 5, 10, and 20 kW
Frequency Range	–		1 to 30 kHz	5 to 350 kHz
Voltage Range	20 to 700 VDC	20 to 800 VDC	20 to 1000 VDC	20 to 700 VDC
Regulation Modes	Current, power, and voltage			
Power Accuracy	< 0.5%			
Repeatability	< 0.2%			
Pulse Duty Cycle	–		1 to 99%	50 to 100%
Input Power				
Voltage	400 VAC, 3 Φ, 50/60Hz			
Arc Management	Passive	ICE	Voltage reversal serial + parallel switch	Voltage reversal parallel switch

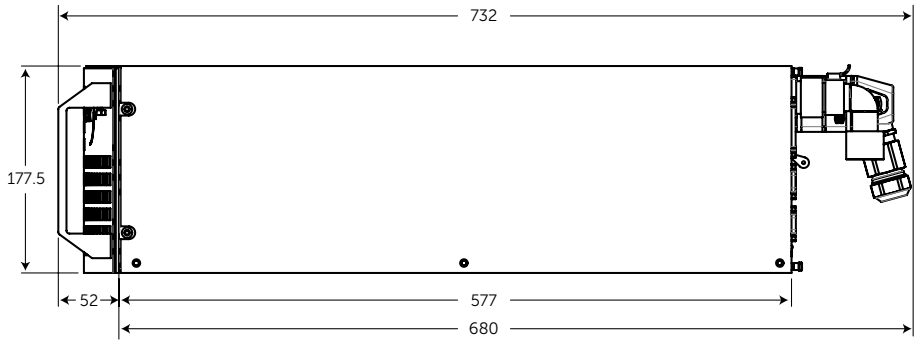
[1] Single or dual unit

Physical	3 kW[2]	6 kW	10 kW	15 kW	20 kW	20 kW[3]	Dual 10 kW	Dual 15 kW	30 kW	20/40 kW[4]
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									Water

[2] Depth is 62.2 cm (24.5")
[3] Pulsed DC
[4] ICE depth is 70.0 cm (27.6")

I/O Control	3 kW	6 kW	10 kW	15 kW	20 kW	Dual 10 kW	Dual 15 kW	30 kW	20/40 kW
Analog	Software customized: 4 digital input, 4 digital output; 2 analog input, 2 analog output								
Digital	Standard: Analog, RS-232								
	Available: RS-485, Profibus , Ethernet								





Measurements are shown in millimeters.

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For more information on Solvix by AE power supplies for reactive and metallic sputtering, visit
www.advanced-energy.com/en/SolvixbyAESputtering.html

For more information on AE's complete product portfolio, visit
www.advanced-energy.com/en/Products.html

Specifications are subject to change without notice.

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