







## **Your Trusted Power Partner**



# The choice of test engineers for deep expertise in AC and DC power supplies, and simulation systems

Manufacturing the world's broadest selection of AC and DC power supplies for more than forty years, AMETEK has produced precision programmable power and power bus simulators for test and measurement needs, ATE systems, R&D, process control, and power conditioning across diverse industries. Its products and services are recognized around the world for robust performance, high quality, reliability, and economic value.

#### ELGAR

AMETEK's Elgar brand Programmable Power Solutions are custom or quasi-custom configurable systems, which combine products from the broad AMETEK power portfolio with other system components and sophisticated software to solve unique testing requirements including:

- Power sub-systems
- Power conditioning and distribution units
- Turnkey power systems: Satellite Solar Array Simulation

#### Sorensen<sup>®</sup>

Benchtop and rack mounted Programmable DC power supplies available in over 30 product lines featuring a broad range of output power, voltage and current ratings, as well as input voltage and control options.

Extensive selection of benchtop and rack mounted power supplies featuring high slew rate MOSFET designs, with CC, CV, CP and CR operating modes. High power models offered in both air- and water-cooled versions.

#### California Instruments

AC sources featuring programmable amplitudes and frequency, ranging from 250VA single  $\Phi$  benchtop units to  $3\Phi$  systems >1 MVA with optional high frequency and energy saving regenerative operation for grid simulation and renewable energy test applications. Sophisticated controls and software support generation and application of complex waveforms for avionics testing, including high frequency and DC power.



#### **Asterion AC and DC Power**

**High Performance AC Source** 

California Instruments

## California Instruments™ Asterion® Programmable AC, DC & AC + DC Power (500VA - 36000VA, 200 / 400Vac, 250 / 500Vdc)

Performance. Reliance. Brilliance.

The California Instruments Asterion line of AC power sources by AMETEK Programmable Power combines intelligence and flexibility to create an



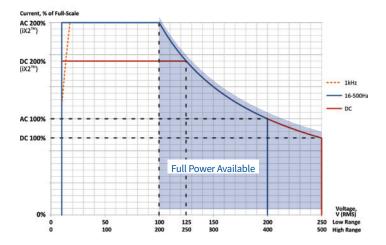
advanced platform of AĆ solutions. This easy-to-configure design features sophisticated technology for delivering high performance, programmable AC and DC power. Its sleek design packs maximum power density into a low-profile form factor with an intuitive touch screen interface placing that power at your fingertips. Centralized control and unparalleled modularity make Asterion the most adaptable platform on the market.

#### **Advanced Features**

- High power density in 1U / 2U / 4U / 14U chassis up to 18kVA
- Intuitive touch panel control
- Multi-language display for global operation
- Auto paralleling for higher power
- Single phase 1U models and 1 or 3 phase selectable 2U / 4U / 14U models
- Complete IEC standards and avionic test suites (optional)
- ATE version available in 1U, 2U and 4U models
- Standard LXI LAN, USB and RS232, optional GPIB
- Full remote control via Virtual Panels™

#### iX2<sup>™</sup> current doubling technology

See data sheet for ratings > 1.2kHz



The  $iX2^{TM}$  current doubling technology enables output current to increase linearly up to two times the full current as the voltage decreases from range maximum to one-half of range voltage. iX2 technology results in a source that delivers full power over the widest voltage ranges. This eliminates the need to buy overpowered sources just to reach low line current requirements.

Fixed & Autoranging DC Power Supply

Sorensen

#### Sorensen<sup>™</sup> Asterion<sup>®</sup> DC Fixed Range & Autoranging Programmable Power Supply with Touch Screen Display

(1.7/3.4/5.0/10kW, 40-400V, 4.3-250A)

The Sorensen Asterion DC Series is the newest addition to the Asterion platform of power testing solutions. The new DC



series features two types of product lines: fixed range and autoranging. The fixed range supplies are economical, traditional rectangular IV profile output power supplies with all the enhanced advantages that comes standard with the Asterion platform. The autoranging supplies feature expanded current and voltage range at the full output power level, enabling the ability to satisfy a wider testing need without requiring the purchase of additional models.

The Asterion DC Series, just like the Asterion AC Series, has several operating advantages such as easy auto-paralleling, complete remote programming and control via Virtual Panels GUI, and intuitive front panel touch screen operation.

#### **Advantages:**

- High power density in a 1U/2U chassis up to 5 kW/10 kW
- Intuitive touch panel control
- Multi-language display for global operation
- Auto paralleling for higher power
- Full remote control via Virtual Panels

#### **Advanced Intelligent Control**

The Asterion DC Series is operated from the intuitive, easy-to-use front panel touch screen display. Quickly access output programming parameters, measurements, configuration and system settings from the touch screen interface. Functions and parameters can be directly selected from the touch screen or by using the encoder selector button. The control resolution is adjusted by a dynamic rate change algorithm that combines the benefits of precise control over small parameter changes with quick sweeps through the entire range.

Additionally, the instrument can be controlled via standard LXI Ethernet and RS232 control interfaces, as well as through the optional GPIB and EtherCAT control interface. The unit can also be controlled remotely via the Virtual Panels GUI.

#### Sorensen DC Power

Touch Screen Economical High Power DC Power Supply

Sorensen<sup>®</sup>

#### Sorensen SGX Programmable Precision High Power DC Power Supply with Touch Screen Display

(4-150kW, 10-1000V, 5-6000A)

The Sorensen SGX Series represents the next generation of high power programmable DC power supplies. The SGX Series is designed for



exceptional load transient response, low noise and the highest power density in the industry. With a full 15kW available down to 20V output in a 3U package, the SGX leads the industry in power density. The power density is enhanced by a stylish front air intake allowing supplies to be stacked without any required clearance between units.

#### **Advantages:**

- Quickly and expertly control supply with intuitive touch screen.
- High Power Density: up to 15kW in 3U chassis; 30kW in 6U chassis
- Wide Voltage Range: 0-10V up to 0-1000V, from 4kW to 30kW
- Fast Load Transient Response: Protection from undesired voltage excursions
- Low Ripple and Noise
- Parallelable up to 150kW
- Form, fit and function compatibility with previous SG power supplies

At the heart of the SGX is a 4/5KW power module depending on the output voltage. One to six modules can be configured in a single chassis to deliver 4kW to 30kW of power. Combinations of these chassis can then be easily paralleled to achieve power levels up to 150kW. Paralleled units operate like one single supply providing the total system current.

#### **Advanced Intelligent Control**

The SGX Series is operated from the intuitive, easy-to-use front panel touch screen display. Quickly access output programming parameters, measurements, sequencing, configuration and system settings from the touch screen interface. Functions and parameters can be directly selected from the touch screen or by using the encoder selector button. The control resolution is adjusted by a dynamic rate change algorithm that combines the benefits of precise control over small parameter changes with quick sweeps through the entire range. Additionally, the instrument can be controlled via LXI Ethernet and RS232 standard control interfaces, as well as through the optional GPIB control interface.

#### High Power Extensible Programmable DC System

#### Sorensen

#### **HPX DC Supply System**

## Configurable High Power Solution

The Sorensen HPX High Power Extensible, Programmable DC Series from 36kW ~ 240kW, delivers unsurpassed quality & reliable low-noise performance, fast and precise programmability with premium features at an affordable price, all in a convenient rack-mount cabinet with casters.

#### **Advanced Features**

- High Power Density: Up to 150KW in a single bay rack-mount cabinet
- Up to 240KW in a dual bay rack
- Fast Load Transient Response: Protection from undesired voltage excursions
- Fast Slew Rate with exceptional rise/fall times for speedcritical applications
- Low Ripple: Suitable for the most sensitive applications
- Low Audible Noise: Temperature controlled variable speed fans
- High accuracy: Voltage/current measurements without external DMMs
- Ethernet is standard
- Options for a single system circuit breaker and emergency power off (EPO) switch

## The Flexibility You Want with the Capability You Need in One System

The HPX Series features two modes in one: Automatic constant voltage and constant current mode crossover with protection against hazardous faults. Remote Shutdown (S/D) Interlock provides various external output shutdown capability in case hazardous faults occur. Other features such as External Analog Programming provide increased control and convenience for external programming applications achieved through various external voltage control methods. The HPX also includes Remote Sense for correcting errors from line voltage drops. Sophisticated power conversion technology, with State-of-the-art FET-based high frequency switching technology provides accuracy, exceptional load transient response & low noise in a smaller footprint as compared to other technologies.





## **Products for Renewable Energy**

#### **Regenerative High Power AC Sources**

#### California Instruments

#### **MX Series With SNK (Sink) Option**

MX Series Programmable Power Source with Sink Option facilitates utility interconnection performance and anti-islanding compliance in solar inverter testing.

The MX15 delivers up to 15 kVA of single phase output. The MX22.5, MX30 and MX45 deliver up to 22.5 kVA, 30 kVA and 45 kVA, respectively. These operate using single or three phase output in AC or AC+DC mode. In DC mode, 50% of the AC power level is available.



#### Regenerative Mode Operation.

In the Regenerative Mode, the MX Series can accept and sink (SNK) power returning from any connected equipment to the utility grid. This power return can be a short-term event or a semi-permanent condition. To handle these occurrences effectively under a wide range of supply voltages, the MX source with the SNK option has a programmable current limit, that is different in the SNK mode from the current limit when sourcing current.

- Solar Energy/Power Grid Simulation
- Power Grid Modeling (Unique External Drive (EXTD) option allows the MX or RS to be controlled as hardware In the Loop (HIL) via external waveform inputs from a Real Time Simulator or other source)
- Avionics Test Ready (Available avionic test suites include MIL-STD 704, RTCA/DO-160, Boeing & Airbus test suites)
- MIL-STD 1399-300B shipboard power test software
- IEC 61000 Compliance Test Ready (Available IEC 61000 test suites include 3-2, 3-3, 3-11, 3-12, 4-11, 4-13, 4-14, 4-17, 4-27, 4-28, & 4-29)

For higher power requirements, the MX90 and MX135 models are available. Multi cabinet MX45 systems always operate in three phase output mode. Available reconfigurable MX90 and MX135 models provide multiple controllers which allow separation of the high power system into two or three individual MX45 units for use in separate applications.

#### RS Series AC/DC Power Source/Sink

The RS Series has double the power density of the MX Series, providing a compact system for up to 1MVA+ of output. The RS system consists of multiple high power AC and DC power supplies that provide controlled outputs not only for inverter testing, but also many other applications.



- Generate and save harmonic and arbitrary waveforms
- Capture and display output voltage and current waveforms
- Log and display harmonic voltage and current
- Display data bus traffic to and from the AC Source
- Optional Class C Ethernet Interface

#### **Regenerative, Bidirectional Power Solution**

Automatic crossover between Source and Sink power mode offers regenerative capabilities in AC, AC+DC and DC modes. Regenerate up to 100% of the rated output power back to the utility grid during sink mode operation.

#### **High Crest Factor**

With a crest factor of up to 3.6, the RS Series AC source can drive difficult nonlinear loads with ease. The RS90 can deliver up to 720 Amps of repetitive peak current (150V AC range) per phase to handle high crest factor three phase loads.

#### **Configurations**

The RS90 delivers up to 90kVA of AC or AC + DC power. In DC mode, 50% of the AC power level is available for higher power requirements. The RS180, RS270, RS360, RS450 and RS540 models are available. The available MB option provides multiple controllers which allow separation of the high power system into individual RS90 units for use in separate applications. This ability to reconfigure the system provides an even greater level of flexibility not commonly found in power systems.

#### **Solar Energy Test Systems**



#### **ETS - Embedded TerraSAS PV Simulator**

(60V, 80V, 150V, 600V, 1000V)

For microgrids, energy storage, and inverter test applications, the TerraSAS<sup>TM</sup> series photovoltaic (PV) simulators are specifically designed to emulate the dynamic electrical behavior of a terrestrial PV solar array. They offer low output capacitance and high closed loop bandwidth to keep up with the advanced Maximum Power Point Tracking (MPPT) algorithms used in today's grid-tied inverters. The Embedded TerraSAS (ETS) is a high performance solution in a small form factor that combines an agile power supply with an innovative I-V curve generator in a single standalone unit.

- ETS 600 / 1000: For isolated and non-isolated string inverters up to 1000Vdc Voc.
- ETS 60 / 80 / 150: For use with micro-inverters or DC optimizers up to 150Vdc Voc.

#### **TerraSAS Solar Array Simulator**

The Elgar Terrestrial Solar Array Simulator was designed to meet the testing needs of OEMs making inverters and DC charge controllers for large scale solar energy farms, which have their outputs connected to the national power grid. TerraSAS capabilities include:

- Programmable I-V curves for solar array inverter and DC charge controller testing
- Tests for inverter Maximum Power Point Tracking
- Simulation of PV cell types (silicon, CIGS, etc.)
- Simulation of dynamic irradiance & temperature
- SAM database with over 100 preloaded PV Panels
- Series, parallel and multi-channel capabilities—1000W-1MW



### **Sources and Supplies for Challenging Test Applications**

AC/DC Programmable Sources

California Instruments

#### **CSW Series**

The CSW Series eliminates the need for multiple instruments in applications, such as testing load susceptibility to power bus anomalies, accomplished by combining a precision readback AC/DC power source with a high performance power analyzer and arbitrary



waveform generator. This makes a CSW capable of complex testing that traditionally required digital multimeters, power harmonics analyzers, current shunts, etc. Since many components in the CSW are shared between the AC/DC source and the power analyzer, the total cost of this integrated system is less than the typical cost of a multiple instrument system. The CSW Series features:

- Constant Power Mode (up to 33.3kVA output)
- 2-8,000Hz Output Frequencies
- Scope Capture Capability
- Power Programming Software
- Plug & Play Paralleling
- Full remote control via Virtual Panels™
- Optional LXI Class C Ethernet Interface

Auto Parallel Mode, External Drive Input, USB, RS232, GPIB and LAN are just some examples of advanced features making the CSW one of the most versatle AC sources available. This makes the CSW Series ideal for testing today's complex avionics, telecommunications and other electronics where a sleek, low profile, light weight power supply better fits the application. These applications include:

- Testing under real-world power conditions using different waveforms on all 3 phases
- Load susceptibility tests with sequence/event programming and multiple harmonics
- MIL-STD-704, DO-160, B787 and ABD100 avionics testing
- Power supply testing for AC-DC, DC-DC converters and UPS's
- Transient tests on 12 and 24 VDC for automotive application

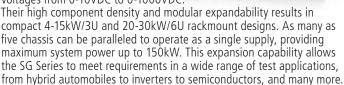
Please visit www.powerandtest.com for complete data sheets and more detailed specifications.

**DC Programmable Sources** 

Sorensen

SG Series – High Power, High Current and Fast Response

The popular Sorensen SG Series of programmable power supplies has been expanded to include output voltages from 0-10VDC to 0-1000VDC



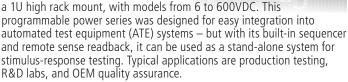
The SG Series is designed for exceptionally fast load transient response, low noise, and ease-of-use — making it suitable for the most demanding applications. Two basic designs are available: the Model SGA with local analog control, and the Model SGI that combines onboard intelligence for automated sequences with looping, custom waveform outputs, and save/recall of settings for repetitive tests. The SGI also features an impressive vacuum fluorescent graphical display in eight languages, context sensitive "soft" keys, and simplified programming with a front panel keyboard. Both versions are available with optional LXI Class C Ethernet or IEEE-488.2 (GPIB) interfaces.

#### **DC Programmable Sources**

Sorensen

## XG Series for Easy Integration and Control

The XG Series is now available in 850W, 1500W and 1700W versions in



The new XG1700 Series features constant voltage and constant current modes with automatic cross-over, and an Auto Restart mode for recovery from a PC failure or reboot. Auto Restart returns the power output to its previous state after the loss of any remote digital control, which remains active to avoid disruption to any test process. A Foldback Mode is available to disable the output whenever the supply transitions between constant voltage and constant current operation, which protects sensitive loads.

Many other features are available to facilitate integration into larger test systems, such as standard USB and RS232/485 remote control interfaces, or optional low-cost LXI Ethernet and isolated analog interfaces. Moreover, multiple supplies can be configured as a multi-channel system with one acting as the leader and the others as follower units. This allows easy test programming over a simple cable connection with a single GPIB or IP address.



#### **Programmable Power that Saves You Money**

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**BPS Bulk Power Series** 

California Instruments

## High Power AC Source for Frequency Conversion and Test

The BPS Series consists of multiple high power AC power systems that provide controlled AC output for ATE and product test applications. This high power AC test system covers a wide spectrum of AC power applications at an affordable cost. Using state-of-the-art PWM switching techniques, the BPS Series combines compactness, robustness and functionality in a compact floor-standing chassis, no larger than a typical office copying machine. This higher power density has been accomplished without the need to resort to elaborate cooling schemes or additi



■ High Power AC Source

Programmable AC power for frequency conversion and product test applications

Expandable Power Levels

Available output power of 30, 45, 75 and 90 kVA per unit and multi-unit configurations for power requirements up to 180 kVA and above

■ Remote Control

Standard RS232, USB and IEEE-488 (GPIB) and optional LAN interfaces are available for automated test applications

Please visit www.powerandtest.com for complete data sheets and more detailed specifications.

**DLM600W Programmable DC Sources** 

Sorensen<sup>®</sup>

#### Performance Rivaling Expensive Linear Supplies

Through the use of Zero Voltage Switching (ZVS) technology, the DLM600W Series achieves exceptionally low, near-linear ripple and



noise in a compact 1U (1.75 inches) high, half-rack (8.5 inch) wide chassis. These 600W high density packages are perfect for either rack or bench mounted applications requiring output voltages from 0-5VDC to 0-300VDC and currents from 0-2A to 0-75A. Ripple can be as low as 2.5mV rms, and noise as low as 15mV p-p. Easy leader/follower paralleling with active current sharing is possible with as many as four units, or supplies can be connected in series for higher voltage output. Cooling air intake at the front and sides with exhaust at the rear and sides allows units to be stacked vertically without space between, yielding maximum rackmount density and operating temperatures up to 50°C.

Remote control with 16 bit programming is available through LM-compliant Ethernet/RS-232C interfaces, or 12-bit programming through IEEE-488.2/RS-232C interfaces. Software includes an IVI-com driver, LabWindows™ CVI driver, LabVIEW driver, and Virtual PanelsTM, depending on options selected.. Analog programming is also available from the front panel with individual 10-turn potentiometer knobs. Other features include overvoltage protection, and voltage/current preview buttons that allow viewing set points on a 3½-digit display at any time with or without the output enabled.

DCS Series Programmable Power Supplies

Sorensen

#### **Many Choices and Capabilities**

The DCS Series with its 5-year warranty is one of AMETEK's most popular DC power supply families.

The high reliability of this platform is demonstrated by a huge installed base

that has satisfied diverse



applications over many years. More than 30 different models provide outputs up to 600V or 350A in 1kW, 1.2kW and 3kW low-profile rackmount packages, supplying continuous full output power in any volt/amp combination within rated limits.

Easy-to-use 10-turn potentiometers on the front panel are used to adjust voltage and current settings, which are displayed simultaneously. LEDs indicate the status of overvoltage protection (OVP), overtemperature, remote programming, constant-voltage/constant-current mode, and shutdown. The 3kW models also have push button control of the output standby mode, OVP reset, remote/local programming, and preview status of voltage, current and OVP set points. Remote and analog control features are the same as in the DLM Series described above.

## **Distinctive Products for Diverse Applications**

ReFlex Power™ AC/DC Sources & Loads

**ELGAR** 

## Reconfigurable Modular Designs for Maximum Flexibility

The RFP™ Series is a modular, high-density, programmable power system that can be configured using AC and DC output modules, along with electronic loads, a controller and chassis (see table). This flexible platform is 100% digital, making it ideal

for ATE and production test environments where it can provide programmable stimulus, bias power, and loading for devices under test (DUTs).

The EIA 4U-high mainframe chassis can hold up to 12 single-slot modules, or combinations of single-, dual- and triple-slot wide modules, supporting up to 6kW of output power, and any worldwide AC or DC

res under

input. Up

to eight mainframes (potentially 95 modules) require only a single controller, which communicates with individual modules via a high-speed proprietary bus protocol. It can communicate with a host controller via an **LXI** Ethernet LAN connection, ensuring interoperability and ease of integration.

By using the powerful ReFlex Power software, modules can be combined via the controller in series or parallel groups or series/parallel arrays to form new assets, or "virtual outputs." This can be accomplished "on the fly" within a test program — there's no need to shut down when reconfiguring modules. The result is a reduction in the overall asset count for many of these systems, while increasing the range of voltage and currents available for the DUTs.

Modular AC	/ DC Pro	ducts	ReFlex Power		
Model	Model Voltage Current		Power	Overview	
RFP DC High Power	33-450V	2.3-30A	1000W	DC Output ReFlex Power Module	
RFP DC Low Power	16-65V	5.1-20.6A	330W	DC Output ReFlex Power Module	
RFP AC Power	140-280V	3.5-7A	875VA	AC Output ReFlex Power Module	
RFP DC Load	500V	15-30A	375- 750W	DC Load ReFlex Power Module	
RFP Controller	_	_	_	Ethernet Enabled Controller ReFlex Power Module	
RFP Chassis	115-400V Input	_	_	12 Slot, Universal AC/DC Input, ReFlex Power Module Chassis	

Please visit www.powerandtest.com for complete data sheets and more detailed specifications.

Precision Water-cooled Modular DC Power Supply

Sorensen<sup>®</sup>

#### **ASD FLX**

The ASD FLX gets its name from its modular design with front loading modules for easy access and flexible voltage options. The chassis with removable, lightweight modules allows for easy one



person installation. Furthermore, this product has a wide range of voltage input, 324 VAC to 528 VAC, giving it the flexibility to be utilized globally in a single configuration.

The ASD FLX with its 3U, 30kW water-cooled packaging provides one of the highest power densities available with outstanding output ripple and noise. The water-cooling allows for use in environments that normally exclude air-cooled power supplies.

Advanced digital controls included in the ASD FLX have the ability to allow you to program slew rates, such as current and voltage, as well as program transient response times to emulate specific recovery times. The ASD FLX optional advanced features also allow you to program different "fault levels", enabling detection of output cabling, connections or load problems before they cause critical system problems. The factory flight data recorder feature has the ability to record parameters such as voltage, current, power, load impedance, faults and input voltages, allowing the factory to easily determine "why" you had an unexpected outcome.

#### Advanced features include:

- Precise programming of voltage and current slew rate for sensitive loads
- Industrial field bus interface (Modbus-TCP, Modbus-RTU, Ethernet) enable real-time digital control
- Built in power quality monitoring detects and saves input voltage anomalies which can be saved for later diagnostic analysis
- Programmable analog interface scaling facilitates integrating the ASD FLX with existing systems easily
- Built-in energy meter calculates the delivered energy throughout a process or period of time
- Optional real time clock enables accurate timestamping of events

The ASD FLX has the unique ability to allow modules within a given chassis to be followers for different leaders, thus limiting the number of chassis required should an application need more than 30kW. See diagram below.

ASD FLX Chassis 1	10kW	10kW	10kW	_	40kW Load
ASD FLX Chassis 2	10kW Follower to 3	10kW Follower to 3	10kW Follower to 1		
ASD FLX Chassis 3	10kW	10kW	10kW	_	50kW Load



## **Sorensen DC Product Listing**

Overview of Rack Mounted Programmable DC Power Sources						
Series	Voltage	Current	Power	Overview		
Asterion DC Series	40V - 400V	4.3A - 250A	1.7 - 10kW	High Performance Programmable, Touchscreen DC Supplies		
DLM600	5V – 300V	2A – 75A	375 – 600W	1/2 Rack DC Power Supplies		
XG 850	6V – 600V	1.4A – 110A	670 – 850W	1/2 Rack DC Power Supplies		
XG 1500	6V – 600V	2.6A – 187.5A	1500 – 1560W	1500W, 1U DC Power Supplies		
XG 1700	6V – 600V	2.8A – 220A	1330 – 1710W	1700W, 1U DC Power Supplies		
DCS Series	8V – 600V	1.7A – 350A	1 – 3kW	DC Switching Supplies		
DLM Series	5V – 600V	5A – 450A	3 – 4kW	DC Power Supplies		
SGX Series	10V - 1000V	5A - 6000A	4 - 150kW	High Power Modular, Touchscreen DC Power Supplies		
SG Series	10V – 1000V	5A – 6000A	4 – 150kW	High Power Modular DC Power Supplies		
SFA Series	40V – 250V	20A – 2250A	5 – 150kW	High Slew Rate Current Source		
ASD FLX Series	40V – 160V	167A – 8000A	10kW – 320kW	Modular Water-Cooled High Power DC Power		
HPX Series	10V – 1000V	45A – 6000A	36kW – 240kW	High Power Extensible Programmable DC Series		

Overview of Bench Mounted Programmable DC Power Sources						
Series	Voltage	Current	Power	Overview		
XPL Series	18V – 56V	1A – 3.3A	30 – 125W	Economical, compact linear power supplies		
XEL Series	6V – 250V	370mA – 6A	48 – 180W	User-friendly linear supplies		
XDL Series	35V – 56V	0.5A – 5A	105 – 242W	Digitally controlled power supplies		
XPF Series	60V	10A – 20A	175 – 840W	Single or dual isolated outputs with PowerFlex		
XPH Series	18V – 75V	2A – 20A	175 – 420W	Compact, high performance power supplies		

Note: Please contact us for other output voltage / current combinations.

Please visit www.powerandtest.com for complete data sheets and more detailed specifications.

## **AC Product Listing**

Overview of Programmable AC Power Sources						
Model	Voltage*	Current	Power	Overview		
Asterion AC/DC Series	200 - 400V	1.25A - 180A	500 - 36kVA	High Performance AC Power Sources		
iX and i Series II	150 - 300V	0A - 120A	5 - 15kVA	AC/DC source with high performance power analyzer		
Ls/Lx Series	156 - 400V	0A - 132A	5 - 18kVA	Three phase and single phase source		
CSW Series	156 - 312V	8A - 288A	5.5 - 33.3 kVA	High performance AC/DC source		
MX Series	150 - 400V	0A - 375A	15 - 135kVA	High power AC/DC source in a compact floor standing cabinet		
BPS Series	150 – 400V	0 - 400A	30 - 180kVA	High power programmable AC source for frequency conversion and product test		
RS Series	150 - 400V	0 - 1500A	90 - 1MVA+	High power AC/DC source and analyzer		

<sup>\*</sup> Voltage is Line to Neutral (L-N) for multi-phase sources. For Line to Line (L-L), the conversion is (VI-n\*Sqrt 3). (For example, an output setting of 277V Line to Neutral = 480V Line to Line (277 \* sqrt 3)

Note: Please contact us for other output voltage/current combinations.

Please visit www.powerandtest.com for complete data sheets and more detailed specifications.



#### **AMETEK Programmable Power Support**

#### **Support**

AMETEK Support begins with your first contact and continues throughout the life of our products. We'll help you pick the right product for your application, use it properly, and provide service and parts when needed.

To view all of our support categories, visit our support portal home at <a href="https://www.powerandtest.com/service-and-support/support-home">www.powerandtest.com/service-and-support/support-home</a>

**Technical Support:** Need help choosing a product or working with a product you just purchased? Contact our knowledgeable Customer Care team and one of our specialists will help you.

www.powerandtest.com/service-and-support/technical-support

#### AMECare® Reliability Assurance™ Life Cycle Support:

AMETEK offers support for every phase of your product's life. This support includes items from the day you purchase a new product, install it, and maintain it throughout its life. You decide what type of white glove service fits your application, budget, and timeline requirements while following the path that ensures your product remains in factory "like new" condition for its entire life!

www.powerandtest.com/service-and-support/ra

**Downloads:** All product manuals, data sheets and support software are available online under the Downloads tab on each specific product page.

#### **Spare Parts**

To order spare parts or determine the correct replacement part for your AMREL, California Instruments, Elgar, Sorensen, Power Ten or Xantrex supply, contact the AMETEK Programmable Power Customer Service Department by emailing us at: <a href="mailto:parts.ppd@ametek.com">parts.ppd@ametek.com</a>

#### Repair

Outside the USA, contact your local representative or nearest Authorized Service Center. Contact information for all Service Centers can be found at: <a href="https://www.powerandtest.com/service-and-support/service-centers">www.powerandtest.com/service-and-support/service-centers</a>

#### **Programmable Power Solutions**

For customers that require a custom or quasi-custom configurable system please contact your local representative, distributor or Regional Sales Manager with details. AMETEK"s Engineered Solutions group will work with you to design the best solution for your requirements.

#### **Purchase Orders**

If emailing in a purchase order, please use the following email address for all (domestic and international) origins.

Purchase Orders for New Products: Send POs to: <u>orders.ppd@ametek.com</u>

> Please visit www.powerandtest.com for further support, and order help as well as warranty information

AMETEK Programmable Power has an extensive network of worldwide Reps and Distributors.

To find local sales support, please visit us online at www.powerandtest.com/sales-rep/sales.





#### **Global Headquarters**

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