Programmable laboratory power supplies direct from the manufacturer

ETSYSTEM® is the perfect partner for standard solutions, system integrations and customer specific requirements

**DC Sources**
750 W – 1 MW, voltages up to 1,500 V / currents up to 50,000 A

DC Sources with Integrated Load for 2-Quadrant Operation
1.2 kW – 10 kW, voltages up to 600 V / currents up to 500 A

**Bidirectional DC Source/Sink with Grid Power Recycling**
30 kW – 2 MW (master/slave)

**AC Sources**
250 VA – 2 MVA and 7000 VAC/1,000 VDC, 2,000 A per phase, 1 or 3-phase

**Bidirectional AC Source/Sink with Grid Power Recycling**
30 kVA – 180 kVA (master/slave)

**Electronic Loads**
150 W – 200,000 W
DC SOURCES

- From 750 W to 195 kW
- Output voltages up to 1,500 V
- Output currents up to 9,750 A
- Quiet operation, ensuring that it is pleasant to work within the vicinity of the unit
- Constant current and voltage
- Standard integrated ATI 5/10 galvanically isolated analogue interface: 0 – 5 V or 0 – 10 V (user selectable) and RS232
- Digital interfaces IEEE488, RS485, USB and LAN (optional)
- “High speed” feature (optional)
  The secondary rise and fall time for the DC output voltage is shortened by a factor of 10 in comparison to the standard times, on average.
- Autorange function optional down to 33%
- Special versions available on request
LAB/SMP/E

750 W – 2.4 kW
Voltages up to 1,200 V
Currents up to 160 A
From 19” x 1 U x 440 mm

LAB/SMS/E

3 kW – 10 kW
Voltages up to 1,500 V
Currents up to 500 A
From 19” x 2 U x 440 - 600 mm

LAB/HP/E

5 kW – 195 kW
Voltages up to 1,500 V
Currents up to 9,750 A
From 19” x 3 U x 620 mm
DC SOURCES

- From 750 W to 1 MW
- Output voltages up to 1,500 V
- Output currents up to 50,000 A
- Quiet operation, ensuring that it is pleasant to work within the vicinity of the unit
- Very easy to control via front panel
- Information via graphic display
- Constant voltage, current, resistance, power operation and simulation of PV arrays
- Create any type of voltage or current curve via memory card or digital interface (sequential operation)
- Script operation, in conjunction with the Datalog function, enables an independent stand-alone test field to be set up
- Standard integrated ATI 5/10 galvanically isolated analogue interface: 0 – 5 V or 0 – 10 V (user selectable) and RS232, master/slave (LAB/HP and LAB/SMS), soft interlock
- Master/slave interface to parallel and series circuits (LAB/HP and LAB/SMS)
- Filter functions which can be adjusted for analogue interface
- Digital interfaces IEEE488, RS485, USB and LAN (optional)
- SD card slot (optional)
- Datalog function: Current operating values are saved to the memory card at adjustable time intervals, SD card (optional)
- Voltage rise time and current rise time (U and I slopes) are adjustable
- $U_{\text{max}}$ and $I_{\text{max}}$ can be set by the user in order to limit output voltage or output current
A switch-off time can be set for the unit once the start button has been pressed

Create U/I output characteristics which can be saved (e.g. for PV-Sim, shading)

“High speed” optional secondary rise and fall time for the DC output voltage is reduced by a factor of 10 compared to standard times, on average

Autorange optional down to 33%

OVP, OTP, UVP and OCP protective functions

Special versions available on request

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**LAB/SMP**

750 W – 2.4 kW  
Voltages up to 1,200 V  
Currents up to 160 A  
From 19” x 1 U x 440 mm

**LAB/SMS**

3 kW – 80 kW (master-slave)  
Voltages up to 1,500 V  
Currents up to 4,000 A  
From 19” x 2 U x 440 - 600 mm

**LAB/HP**

5 kW – 1 MW (master-slave)  
Voltages up to 1,500 V  
Currents up to 50,000 A  
From 19” x 3 U x 620 mm
DC SOURCES WITH INTEGRATED LOAD

- From 1.2 kW to 10 kW
- Output voltages up to 600 V
- Output currents up to 500 A
- Compact design
- Quiet operation, ensuring that it is pleasant to work within the vicinity of the unit
- Very easy to control via front panel
- Information via graphic display
- Constant voltage, current, resistance, power operation and simulation of PV arrays
- With integrated load; 300 – 2,000 W voltage-controlled for 2-quadrant operation
- Create any type of voltage or current curve via memory card or digital interface (sequential operation)
- Script operation, in conjunction with the Datalog function, enables an independent stand-alone test field to be set up
- Standard integrated ATI 5/10 galvanically isolated analogue interface: 0 – 5 V or 0 – 10 V (user selectable) and RS232, soft interlock
- Digital interfaces IEEE488, RS485, USB and LAN (optional)
- SD card slot (optional)
- Filter functions which can be adjusted for analogue interface
- Voltage rise time and current rise time (U and I slopes) are adjustable
- $U_{\text{max}}$ and $I_{\text{max}}$ can be set by the user in order to limit output voltage or output current
- A switch-off time can be set for the unit once the start button has been pressed
- Create U/I output characteristics which can be saved (e.g. for PV-Sim, shading)
- Datalog function: Current operating values are saved to the memory card at adjustable time intervals
- Protective functions for OVP, OTP, UVP, OCP
- Special versions available on request

**LAB/SMSL**

1.2 kW – 5 kW  
Voltages up to 600 V  
Currents up to 200 A  
From 19” x 2 U x 440 mm

**LAB/HPL**

5 kW – 10 kW  
Voltages up to 600 V  
Currents up to 500 A  
From 19” x 3 U x 620 mm
BIDIRECTIONAL DC SOURCES WITH GRID POWER RECYCLING

- From 30 kW to 2 MW
- Voltages of 5-300 V / 5-600 V / 5-1,200V
- Maximum currents in a single system ± 1,500 A
- Available as multi-channel output (e.g. 2-channel DC output)
- Continuous transition from charging to discharging
- Modular system, systems can be connected in parallel
- Galvanically isolated from the grid
- TFT touch display with simple menu navigation
- Emergency off in the front door
- Indicator lights for operating status
- Fan-cooling
- Fast response time < 1.5 ms (optional < 3 ms)
- Low grid feedback effect
- Sens Connection for compensating voltage drops on the DC line
- Programmable sequences that can be stored and reloaded
- 3 operating modes: constant voltage (CV), constant current (CC+ & CC-), constant power (CP+ & CP-) for charging and discharging
- The systems’ “hardware limits” can be set specifically for the application
- Standard interfaces: LAN and RS485 (CAN optional)
- Special versions available on request
Test of the performance of the motor and motor’s energy recovery system. DC source/sink for simulating storage batteries or energy storage systems.

LAB/SLV1
From 30 kW – 2 MW
Voltages of 5-300 V / 5-600 V / 5-1,200V
Maximum currents of ± 1,500 A in single system
Regulation time < 8 ms

LAB/SLV1-BSS
From 30 kW – 2 MW
Voltages of 5-300 V / 5-600 V / 5-1,200V
Maximum currents of ± 1,500 A in single system
Regulation time < 1.5 ms

The device can be used as a charging or discharging device for batteries, in order to test their performance. It features an output contactor for disconnection under load.
AC SOURCES

- Power range from 250 VA to 36,000 VA
- 0 – 700 V AC / 1,000 V DC output voltages per phase
- Maximum currents up to 2,000 A per phase
- Variable frequencies ranging from 1 – 2,000 Hz (sine, square, triangle)
- Simulation of single- and three-phase networks (worldwide)
- AC and DC operation
- Information via graphic display
- Measurement of: voltage, effective current, average and peak current, effective power, idle power, apparent power, power factor, crest factor
- Constant voltage and constant current operating modes
- 10 memory spaces to store current configurations
- External oscillator input ±10 V with adjustable time delay of up to 70 mS
- Free memory spaces for user-programmable curves (WAV files), enabled via an external memory card or interface
- Script control: process programming and booting from memory card
- Creation of user-defined curve shapes and programming via external memory card or digital interface
- Three non-volatile curve shapes (programming via memory card)
- Datalog function: current operation values can be saved to a memory card at adjustable time intervals
- Script operation, in combination with the Datalog function, enables an independent stand-alone test field to be set up
- Digital interfaces IEEE, RS232, RS485, USB, LAN (optional)
- Galvanically isolated 0 – 5 V or 0 – 10 V analogue interface (optional)
- SD card slot (optional)
- The drivers for the Lab View user interface can also be used in conjunction with a digital interface
- Sync input synchronizes the device with external sources (optional)
- Sync output triggers external measurement instruments or similar (optional)
- Disengageable output voltage via memory card or digital interface for a determined amount of half periods (optional)
- Connectable output voltage via memory card or digital interface for a determined amount of time (optional)
- Special versions available on request

**EAC/SP 1 PHASE**

250 VA – 12,000 VA  
Voltages up to 0 – 700 VAC / 1,000 V DC  
Currents up to 2,000 A  
From 19” x 3 U x 620 mm

**EAC/SP 3 PHASE**

750 VA – 36,000 VA  
Voltage up to 0 – 700 VAC / 1,000 V DC  
Currents up to 2,000 A per phase  
From 3 x 19” x 3 U x 620 mm
BIDIRECTIONAL AC SOURCE/SINK WITH GRID POWER RECYCLING

- From 30 kVA to 180 kVA
- Output voltages up to 750 V (L-N)
- Output currents up to 192 A per phase
- High power AC source, with output power from 30 KVA to 180 KVA for source and sink with grid power recycling
- Galvanically isolated from the grid
- TFT touch display with simple menu navigation
- Emergency off in the front door
- Indicator lights for operating status
- Fan-cooling
- Bidirectional current flow
- Output voltage and phase angles can be adjusted per phase
- Sequence programming for output voltage, phase angle, harmonics and output frequency
- Optional AC output independent output phases 3 x L-N
- Optional LVRT (Low Voltage Ride Through) supports LVRT testing of photovoltaic inverters (test carried out by seeing whether unit can stay connected during voltage drops)
- Optional test procedure for measures to prevent islanding for utility-interconnected photovoltaic inverters in accordance with EN 62116:2011 (IEC 62116:2008)
- Overload capability 120% for 1 minute
- Standard interfaces: LAN and RS485 (CAN is an option)
- Special versions available on request
EAC-4Q-GS SERIES

30 kVA – 180 kVA
Output voltages up to 750 V (L-N)
Output currents up to 192 A per phase in a single system

Editing the individual parameters in the sequences.

Recording the individual parameters, such as voltage and current of the individual phases.

Bidirectional AC Sources with Grid Power Recycling | ET SYSTEM
**ELECTRONIC DC LOADS**

- From 150 W to 200 kW
- Input voltages up to 1,500 V
- Currents up to 1,500 A
- 6 different operating modes: CC, CR, CV, CP, CC+Cv, CR+Cv
- System integration
- Integrated battery tester
- Adjustable CC soft startup
- Quick response time: 2.5 A/µs
- Dynamic loads and test sequences
- Current, voltage, resistance and power operation
- Programmable sequences, 8 memory spaces with 200 steps that can be edited individually
- Digital interfaces RS232, RS485 and USB (optional)
- Special versions available on request

**M9403 Multi-Electronic Load Test System**

A practical test software which we developed in-house, which is incredibly easy to use. It enables up to 8 identical electronic loads to be tested in parallel.

Here, the electronic loads can be applied as one total load or can also be set independently of each other. They are controlled via a digital interface: RS232, RS485 or USB (optional).
**ELP/DCM**

150 W – 200 kW
Voltages up to 1,500 V
Currents up to 1,500 A
19” x 2 U x 520.5 mm – 19” x 20 U x 700 mm

**Selectable Load Operating Modes**

- **Constant Current Mode**
  In CC mode, the load attempts to maintain the set current, regardless of the input voltage.

- **Constant Voltage Mode**
  In CV mode, the load attempts to keep the set voltage constant, regardless of the current.

- **Constant Resistant Mode**
  In CR mode, a resistance is applied. A current flows which is linearly proportional to the voltage.

- **Constant Power Mode**
  In CP mode, a constant power is set. Thus, if the voltage drops, the current rises and vice versa.

- **Switching from CC Mode to CV Mode**
  When switching from CC mode to CV mode, power supplies, for example, can be tested without destroying the specimen due to over-current or excess voltage.

- **Switching from CR Mode to CV Mode**
  When switching from CR mode to CV mode, power supplies, for example, can be tested without destroying the specimen due to over-current or excess voltage.
SYSTEM INTEGRATION

ET SYSTEM® Your partner for tailor-made solutions

ET SYSTEM® offers comprehensive solutions for system integration, in which the devices are individually retrofitted with additional components and supplied ready for use.

The sources and electronic loads, which we create in-house, can be wired according to the customer’s requirements, installed in 19” cabinets and endowed with additional functions in accordance with your specifications.

The output power can also be adapted to any altered requirements at a later point in time by adding further devices using the master/slave function.

With more than 20 years of experience and our company’s certification according to ISO 9001:2015, we can guarantee safety, endurance and reliability, and thus safeguard the cornerstones of your success.

Our Services at a Glance

- Customer-specific device construction
- Subsequent upgrading of output power
- Personal contact partner with a range of services, from qualified consultation to direct support by the developers
- And much, much more…

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