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Procyon DC/AC Test Systems

POWERFUL, EASY-TO-USE AUTOMATED TEST SYSTEMS

INTEPRO
SYSTEMS

THE POWER TEST EXPERTS

KEYFEATURES

- R&D and production ATE's
- Power from 1W to over 1MW
- Single and multi-channel testing
- Scalable solutions
- Regenerative load technology
- Auto-ranging sources
- Custom Solutions at COTs pricing
- Open-architecture hardware supporting USB, LXI, IEEE, VXI, PXI and AXI
- High speed data acquisition
- Powerful programming without coding test executive software
- Hardware Independent Software Platform

Overview

Intepro Systems is the choice of power conversion users and manufacturers around the world to meet their design, manufacturing and quality control needs. Our knowledge and expertise in power supplies, distributed power systems, regenerative power, and power components make our systems unparalleled for production and accelerated life testing, environmental stress screening, depot repair and characterization.

Applications include functional testing of AC/DC power supplies, converters, and chargers from USB to electric vehicles. Intepro Systems are also used in the repair and design

characterization of these units as well as in a wide range of associated power electronics.

At the heart of Intepro's Test Systems is our PowerStar software. This powerful programming without coding test executive permits complete flexibility to configure and integrate any third-party instrumentation with a wide range of Intepro and customer hardware. This flexibility provides built-in obsolescence management allowing hardware to be swapped without the need to make any changes to existing software and test programs, thus preserving your investment.

System Architecture

Intepro's Procyon test systems are built around industry-standard open architecture hardware platforms that enable integration of commercial off-the-shelf (COTS) instrumentation. This design approach reduces lead times, increases reliability which results in cost reduction compared with custom engineering designs.

Utilizing the latest technologies from many preselected COTS supplies sets us apart from most automated test equipment (ATE) suppliers. These COTS instruments are carefully selected and approved by Intepro to work in test systems. This reduces the interaction with customers UUT's easing the test development time to assist customers in achieving their sustainable factories.

The Procyon 2100-70 series offers modular and regenerative load technology as well as traditional loads. Regenerative technologies assist in obtaining sustainability goals as well as driving cost savings compared to traditional electronic loads that dissipate loaded energy in the form of heat.

The Procyon 2100-70 is a configurable turnkey test solution, delivering comprehensive test coverage and high productivity to some of the world's largest-volume manufacturers as well as the affordability needed by niche market producers. The table below lists a selection of the standard tests available for selection within the software.

STANDARD LIBRARY TESTS INCLUDE:

OUTPUT PERFORMANCE

- Output Voltage
- Ripple and Noise
- Efficiency
- Overshoot Voltage
- Voltage Dropouts
- Dynamic Regulation

INPUT CHARACTERISTICS

- Frequency Range
- Power Analysis
- High Line/Low Line
- Line disturbance
- Safety
- Energy Compliance

REGULATION TEST

- Cross Regulation
- Load Regulation
- Line Regulation

RESPONSE AND TIMING

- Transient Response Time
- Spikes and Drops
- Line Transient

PROTECTION TEST

- Short Circuit
- OC, OV and OP Protection
- Remote Shutdown Protection

SPECIAL TEST

- Communications
- Status Signals
- PSU Setup

Typical Procyon 2100-70 Test System



Mass Hardware Interface

Procyon test systems can be fitted with industry-standard Virginia Panel, Mac Panel or Hypertronics receivers and interface test adapters (ITAs). Custom interfaces are also available to maintain compatibility with your existing test fixtures.

The mass interface fixture (MIF) acts as the connector interface between test instruments and units under test. The fixtures are flexible, reconfigurable and modular.

Test points are routed via the MIF to high speed multiplexers allowing connection to a range of measurement instruments for fast and precise measurements.

AC SOURCES

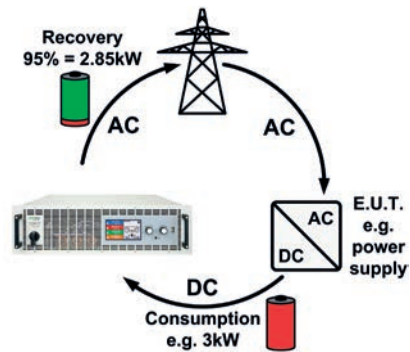
Intepro's programmable AC products provide high output current and high frequency ranges. These AC sources are ideal for high inrush current as they can deliver up to 4.5 times of peak current. Some of our sources also feature a DC Output so you can extend your system for DC type testing. Intepro also utilizes a grid simulator for all your green energy testing needs.



DC LOADS

Traditional air and water cooled loads are available but Intepro also offers energy saving regenerative loads. Intepro's line of regenerative products offers all of the necessary features of today's electronic loads plus the added benefit of energy recovery to mains.

Regenerative technology converts the supplied energy into a synchronous sine current and feeds it back into the local or public grid. This eliminates the usual load heat dissipation and reduces utility costs at the same time.



When used for burn-in and life characterization applications, Intepro's ELR Series "Green Loads" recycle more than 93% of the power drawn from the AC mains or DC input. These energy recycling loads can be a key part of your smart factories.



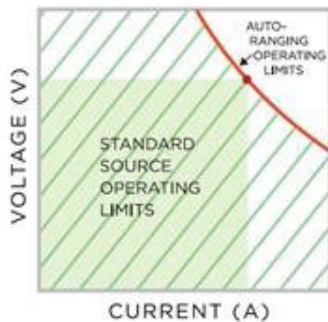
ELR-5000



ELR-9000

DC SOURCES

Intepro's Auto-Ranging programmable DC products provide higher output current at reduced voltages. This feature offers a wider power curve than traditional rectangular output characteristic power supplies because they expand the output power curve into a more usable power envelope. This gives the user more voltage and current combinations in one.



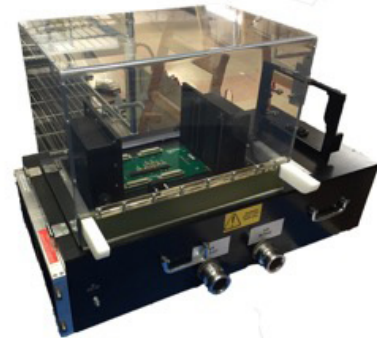
PS and PS Series 1-15kW

PowerStar Test Executive

With a true open architecture structure, PowerStar facilitates the engineers' job of quickly developing comprehensive test programs. PowerStar's unique "Programming without Coding"TM capability allows engineers to create sophisticated test programs that are as complex as C-coding by simply selecting from hundreds of standard test routines, limit checks, data logging or data exporting functions. For those who want to write C-code, they can write their own test libraries or instrument drivers with the optional VBA (Visual Basic for Applications) or Visual Studio integrated packages.

Test Fixtures

For those customers who need a complete turnkey test platform, Intepro Systems can provide fully integrated test fixtures and programs with your test systems. These fixtures can be integrated with your automation systems and designed to be safely operated by your operators.



Self-Test Fixtures

A self-test facility is available to carry out an automatic functional check on the test system hardware. The system leverages internal hardware to test functional operation of the system.

Calibration Fixture

Intepro provides breakout fixtures to simplify the calibration of the test station.



Safety

The systems contain interlocks and optional real-time safety shutdown modules that cut off power to the unit under test when critical programmable thresholds are exceeded.

All power inputs have safety breakers on the rear of the cabinet as well as an EPO mushroom button on the front of the station that will power down the entire station within a few milliseconds.

In addition to the power on/off, all instruments are routed through a common interface panel. These connections are also safety interlocked. No source power is available on the front panel pins whenever the fixture harness has been removed.

Project Management

Intepro Systems follow a structured approach in specifying and implementing test systems for its customers. Projects are coordinated by a dedicated project engineer who liaises directly with you during all phases of the project.

CUSTOMER REQUIREMENTS

- Our knowledgeable team works with you to determine requirements.

SYSTEM DEFINITION/PROPOSAL

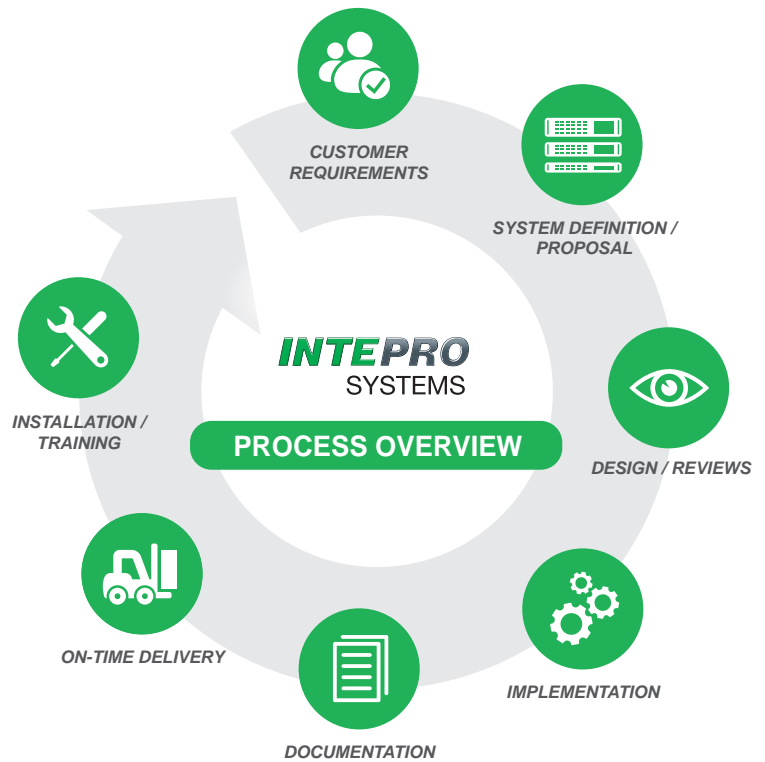
- Once a concept has been defined Intepro proposes a detailed solution.

DESIGN/REVIEWS

- The solution is designed and regular customer reviews are held to ensure alignment with customer requirements.

IMPLEMENTATION

- Our team of experts assemble the systems to meet the design agreed with our customers during the design stage



DOCUMENTATION

- Complete documentation package that includes user and service manuals, schematics, wire tap table and parts list cost savings.

ON-TIME DELIVERY

- Meeting commitments is an important milestone in any project. We deliver on time and on budget.

INSTALLATION/TRAINING

- Worldwide on-site installation, system verification and user training accelerates initial start up.

POST-COMPLETION

- On-site service
- Procyon calibration fixtures and Calstar calibration software allows for on-site calibration reducing down time of the ATE
- Prompt response to customer support
- Remote diagnostics
- Post-design engineering services
- Extended maintenance contracts available to minimize long term cost of ownership

TRAINING

- Introductory training covering system hardware, software setup and maintenance to full comprehensive training including how to create and modify test programs.

CONTINUOUS PATH TO UPGRADES MEANS A LONG ATE LIFE

- Hardware Independence, swap in new equipment without changing your test programs.
- Hardware independence means you are in control of your hardware and software
- End-User Can change instrument model or brands to keep the system current
- Hardware independence streamlines the replacement of obsolete hardware

The Intepro Advantage

Intepro has partnerships with many test and measurement manufacturers allow us to tailor the systems to your needs. Our knowledgeable team recommends which brand fits best with your requirements. We also include those specific brands you prefer.

We also have our in-house Power supplies, Electronic loads and AC sources that offer excellent performance at significant cost savings. These instruments utilize the latest technologies. Our DC power supplies are auto-ranging to provide compact efficient power to potentially reduce the number of power supplies needed for your testing. Our regenerative loads not only minimize heat dissipation from the system, but also recycle more than 90% of the load energy.

ON TIME, ON BUDGET

It is on the top of the list for any company, but Intepro doesn't stop after there. We factor in through-put, quality control, down time, servicing and expandability. This is why our systems are class leaders reducing cost of ownership while performing at a high level for many years of operation. Let your resources focus on what they do best, let us solve the problem of design and building your ATE tester on time and on budget.

OUR SYSTEMS

Our configurable test platforms include:

- **PST2100-10**
DC/DC Power Supply Test Systems
- **PST2100-20**
Battery Test Systems
- **PTS2100-30**
Electric Vehicle Test Systems
- **PTS2100-40**
Energy Conversion Test Systems
- **PTS2100-50**
Life Cycle Test Stations / Burn In
- **PTS2100-70**
DC/AC Power Supply Test System
- **PTS2100-80**
AC/DC Power Supply Test System

Global Support

Support offices on three continents for reaching around the world for worldwide onsite support. Our teams transition projects and manufacturing using our ATEs from one continent to another. We provide support from training to onsite maintenance and full services.

Notes

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