



FineTest

www.finetest.com

Functional ATE Systems



Functional ATE & Power Supply Testers



Military and Aerospace Test Systems

Functional ATE Systems

Power Supply Test Systems

Hi-Pot Test Systems

ESS / Burn-In / Vibration Monitoring Systems

Manual Test Systems

Test Fixtures and ITAs

Box Builds and Sub-Assemblies

Switching and I/O Cards

Custom Cabinets and Accessories



FineTest 1 Industry Drive, Palm Coast, FL 32137 Tel: (386) 569-6189 Fax: (386) 446-0463 email: sales@finetest.com

*FineTest Commercial Test Systems
are used by many diverse manufacturers
and end users including the following:*

TDK/Lambda

S.A.F.T.

Jabil Circuits

Medtronics

ABB CEAG

Resonant Power

EOS Corporation

Nortel Networks

On-Line Power

Racal Datacom

P-Com

Alpha Technologies

Cherokee International

GE Medical Systems

American Radionics

Silicon Graphics

IBM

Avex

Magnetek

Tellabs

Xerox

Xantrex

Marconi

Alacrity

Compaq

CSS Power

GoldStar

Rockwell Automation

Sun Microsystems

Ascom Energy Systems

US Technologies

Emerson Network Power

AT&T Power Systems

Functional ATE Systems

*FineTest Functional ATE Systems
are used for many diverse applications
including the following:*

Automation Controllers and Modules

Inverters and Battery Chargers

Medical Patient Monitors

Medical CT Scanners

Telecom Control Modules

Capacitor Test

Design Verification Test

Vibration Test and Monitoring

Sub-Assembly and Board Test

Thermocouple Test

Ballast and Interference Test

Functional ATEs for Automation Controllers

FUNCTIONAL ATE SYSTEMS



Front view of System #4

Application: Large System Programmable Controllers
High Volume Production Testing

Features: FineTest Cabinet with 12" Side Extension
Integrated Automation Controllers
MicroSoft C# Programming

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FUNCTIONAL ATE SYSTEMS



Systems 2 and 3

Duplicate System #6 with SelfTest Adapter installed



Functional ATEs for Automation Controllers continued...

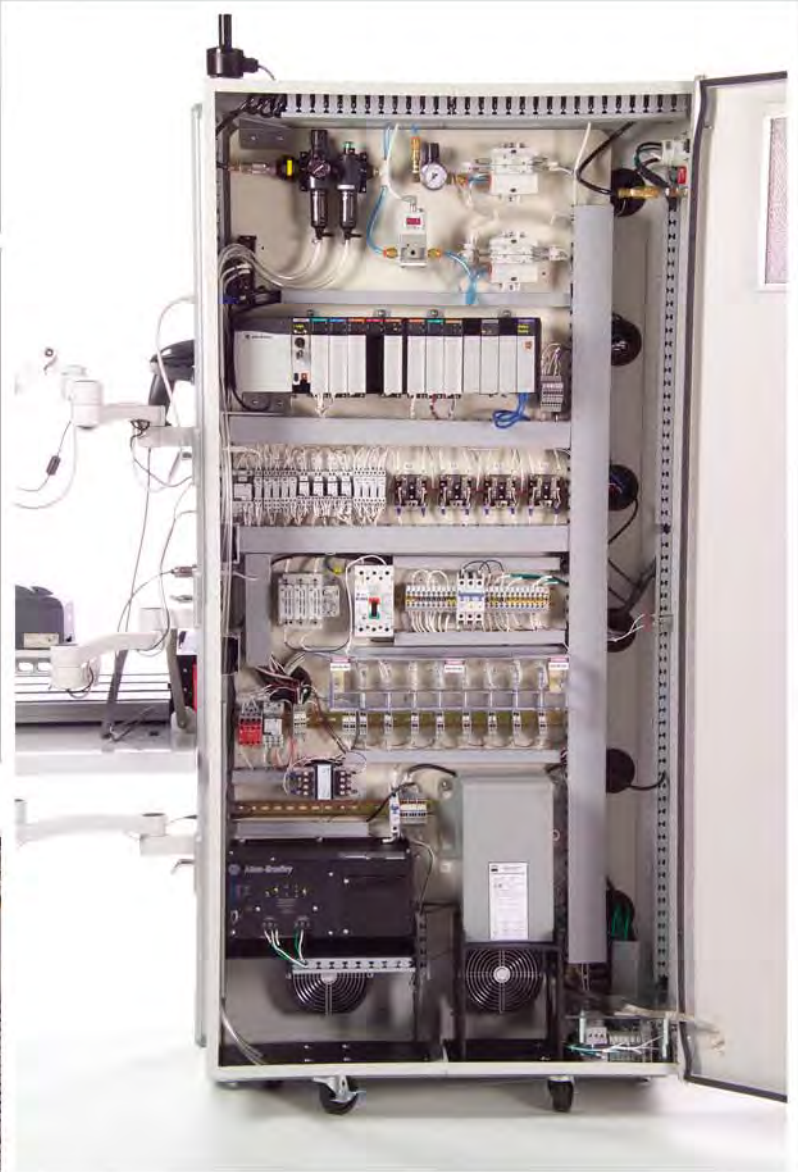
FUNCTIONAL ATE SYSTEMS



Close-Up of Programmable Automation Controller used to control the System



Close-Up of relay section showing every wire labeled



Side view of system with Cabinet Extension Side Door Open showing all of the components mounted and easy to access including the Programmable Automation Cotroller that is used to control the system



Monitor Arm with Touch-Screen LCD and Keyboard Arm allows easy control of the system while working nside the extension

Functional ATE for Inverters and Chargers

FUNCTIONAL ATE SYSTEMS



Front view of System

Application: High Power Inverters and Battery Chargers
High Volume Production Testing

Features: Electronic AC and DC Loads, Resistive Loads
Control Board Mux to UUTs to all Board Rev Levels
Communications to UUT to verify Alarms and Control
FineSoft on NI LabWindows/CVI Platform
Integration with company wide SAP software
Test Fixture with Ball Transfer Table to integrate
directly into Production Line



FUNCTIONAL ATE SYSTEMS

Inverter/Charger Tester on the Production Floor



Battery Charger Test Fixture with a UUT

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Functional ATE for Inverters and Chargers continued...

FUNCTIONAL ATE SYSTEMS



Front view of System with Inverter Test Fixture and a UUT



*Side Angle View
of Inverter Test Fixture
showing safety cover doors
and Ball Transfer Table
for direct integration into the
Production Line*



Adapter Palte to connect to UUT



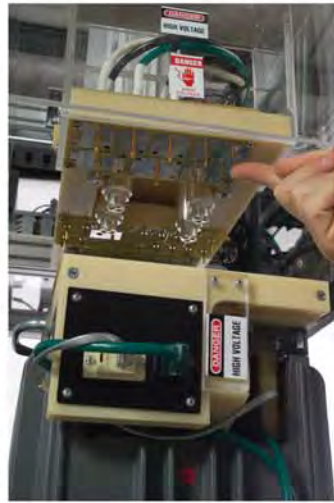
*using Pogo-Pins,
LED sensors & Bus Bars*



*Bus Bars and large PCB Pads
for Test Fixture Pogo-Pins*



Fixture in the UP Position



Fixture Top Pogo-Pins



Close-Up 250Amp Pogo-Pins



*Fixture in the DOWN Position
connected to a UUT*



Close-Up of High Current Pogo-Pins

*making contact with
the Adapter Plate and UUT*



FUNCTIONAL ATE SYSTEMS

Functional ATE for Battery Chargers

FUNCTIONAL ATE SYSTEMS



Front view of System

Application: Battery Charger Tester
High Volume Production Testing

Features: Automated Communication to UUT
Tests Units at 60A or 80A
FineSoft on NI LabWindows/CVI Platform



System & Test Fixture

Close-Up of Fixture with a UUT

Functional ATEs for Automation Controller/Modules

FUNCTIONAL ATE SYSTEMS



Front view of System #1

Application: Large System Programmable Controllers/Modules
High Volume Production Testing

Features: FineTest Precision 96x9 Matrix (<1uV EMF)
8 1/2 Digit DMM, Kron-Hite Precision Source-Measure Unit
Integrated Automation Controllers
MicroSoft C# Programming



Close-Up Showing 8 1/2 Digit DMM, Kron-Hite Source Measurement Unit



FineTest 96x9 Precision Matrix with cover removed



Functional ATEs for Automation Controllers continued...

FUNCTIONAL ATE SYSTEMS



Power Matrix Unit (Dual 32x4 15A Matrices)



AC Resistive Load Unit



Close-Up 5k Min Load Resistor Load Board



5k Min Load Unit with multiple Resistor Boards



Programmable AC/DC Control Unit



Programmable Power Distribution Unit



Duplicate Systems 5 and 6

Functional ATE for Medical Device Patient Monitor

FUNCTIONAL ATE SYSTEMS



Front view of System with UUT installed

Application: Medical Device Production Testing

Features: Fluke Biotek Medical Device Tests
Full Remote Control of UUT Windows and Mouse
Integrated AC and DC Hipot
FineSoft on NI LabVIEW Platform

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FUNCTIONAL ATE SYSTEMS



Rolling Cart to install a UUT in the Test Fixture

Close-Up of a
UUT during Test
showing
External Mini-Screen,
Sound Pressure Sensor

Functional/Power ATEs for Medical Device Patient Monitor

FUNCTIONAL ATE SYSTEMS



Multiple duplicate Testers on the production floor

Application: Medical Device Patient Monitor
Medical AC/DC Power Supplies
High Volume Production

Features: FineSoft on Agilent VEE platform
Integrated HIPOT Tester
Flashing Safety Lamp
Side-Mount Computer and Arm
Kikusui AC Source



Front view of Tester



Integrated HIPOT Tester and Flashing Safety Lamp



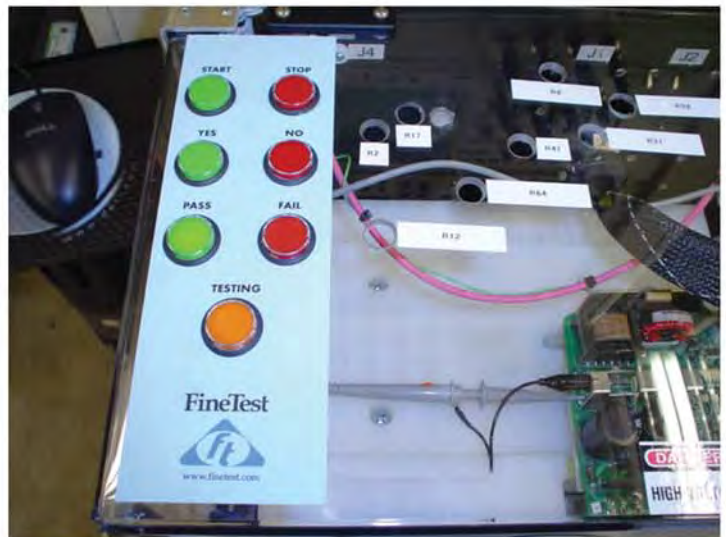
Duplicate Test Fixtures on the production floor



Side-Mount Computer and Monitor Arm



Close-Up Test Fixture with UUT



Close-Up of Test Fixture showing Push Buttons and Indicator Lights for easy Operator Interface

Functional/Power ATE for Medical Device CT Scanner

FUNCTIONAL ATE SYSTEMS



Front view of Tester



Close-Up of Safety Lamp that Flashes when HIPOT is in use



Close-Up of Integrated HIPOT Tester

Application: Medical Device CT Scanner
Medical High Power AC/DC Power Supplies
High Volume Production

Features: FineSoft on Agilent VEE platform
Integrated HIPOT Tester
Flashing Safety Lamp
Fixed multi-tap transformer for input voltage

Functional/Power ATE for Medical Power OEM



FUNCTIONAL ATE SYSTEMS

Front View of System

Application: Patient Contact Approved Medical Power Supplies
High Volume Production

Features: WaveTek Arbitrary Waveform Generator
FineSoft on Agilent VEE Platform

Table-Top Functional ATE for Controller Modules *Canada/China*

FUNCTIONAL ATE SYSTEMS



Front view of System #4

Application: Power Cabinet Controller Module
High Volume Production Testing

Features: Simulation/Testing of Thermocouples, Shunts,
Voltage and Current Monitors, and Digital IO Signals
through CAN Bus and Ethernet
FineSoft on NI LabVIEW Platform
Table-Top System for use on Production Bench



Controller Tester and Computer with a Test Fixture



*Duplicate Systems
Acceptance and Training*



Fixture with a UUT

Functional ATE for Capacitor Production Test

FUNCTIONAL ATE SYSTEMS



Front view of System with Label Printer, Computer, LCR Meter and vertical Air Cylinder to connect to UUT

Application: Capacitor High Volume Production Testing

Features:

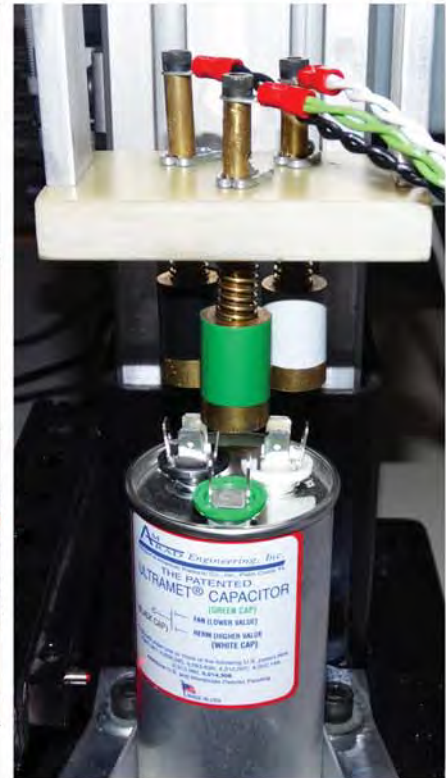
- Tests Capacitors with Single or Dual Capacitance Values
- Light Sensor to detect UUT and automatically activate Vertical Air Cylinder to connect UUT to Tester
- User selectable Manual or Automatic Mode
- Stanford Research LCR Meter
- Zebra Label Printer that prints test values on the label
- FineSoft on NI LabVIEW Platform



*FineSoft Single or Dual Capacitance Test Software for Capcitors with more than one Cap value in a unit
Also shown is light sensor to detect UUT installed and automatically activate the Air Cylinder to connect UUT*



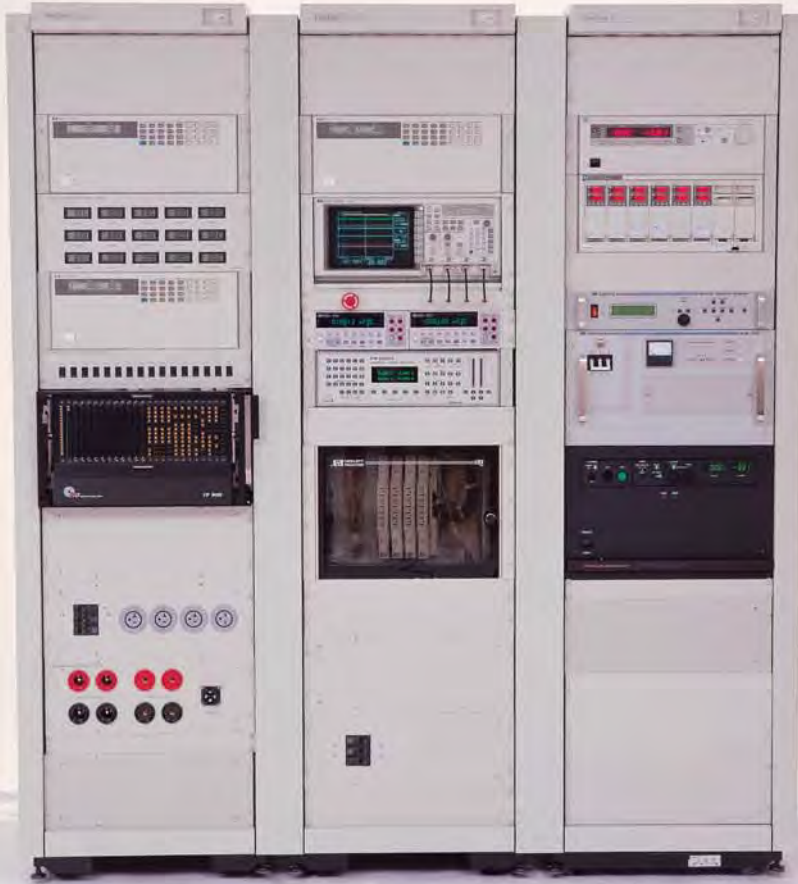
Stanford Research LCR Meter



Close-Up UUT Connection

Functional/Power ATE for Mainframe Computer DVT Lab

FUNCTIONAL ATE SYSTEMS



Front view of DVT Tester

Application: AC/DC and DC/DC Power Supplies
Design Verification Test (DVT)
Engineering Characterization
Vendor Qualification

Features: Thermocouple Interface Panel
Integrated Thermal Chamber
PM3000A 3 Phase Power Meter
External input for Lab AC and DC Sources
FineSoft on LabWindows CVI platform



Front panel interface with Engineering Breakout Fixture

Functional ATE/Monitoring for Power Module Vibration Test



FUNCTIONAL ATE SYSTEMS

Front view of Vibration Monitoring System

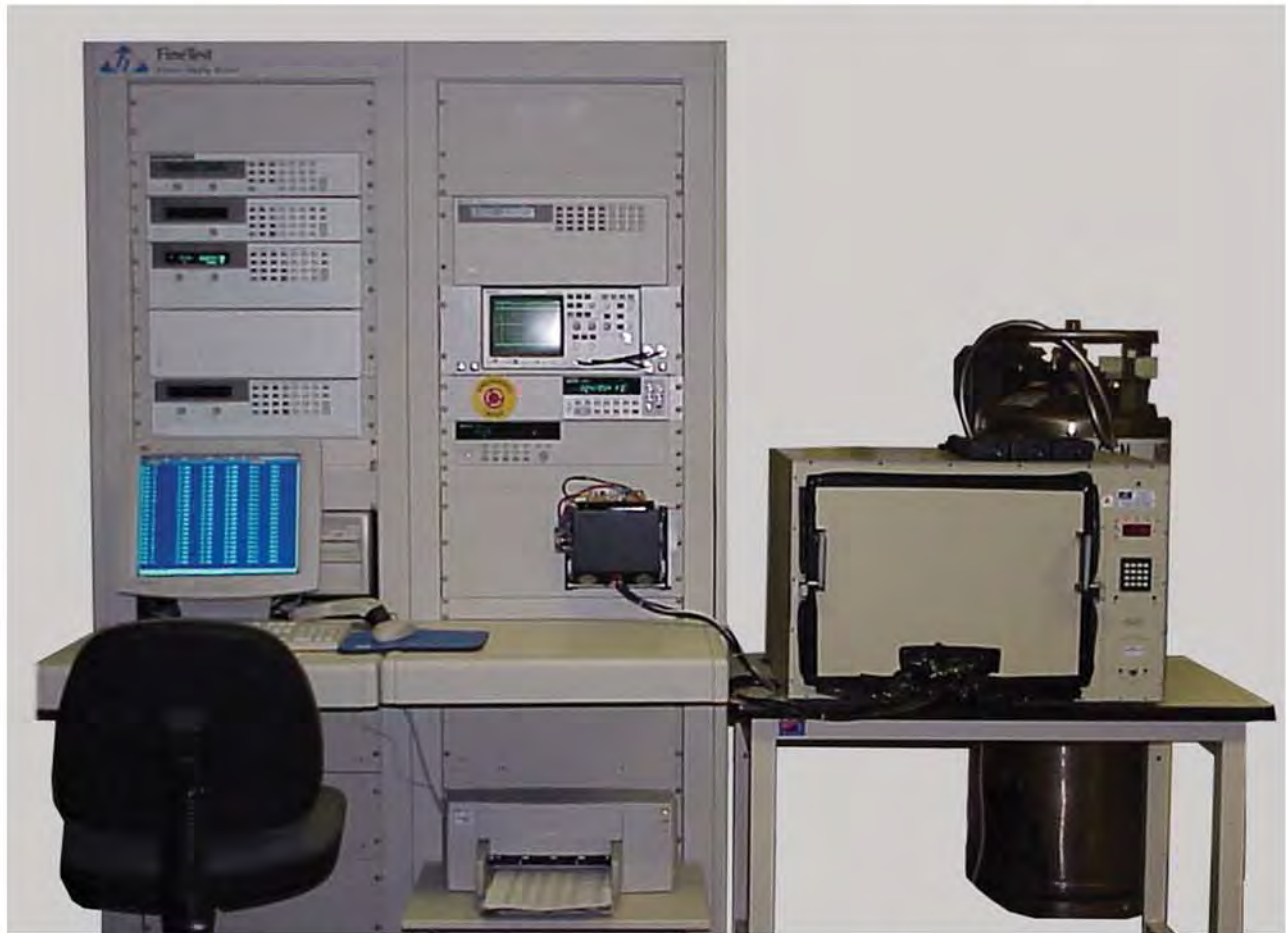
Application: Power Monitor Modules
High Volume Production

Features: Monitors UUTs during Vibration for Power Glitches
RS485 Communication to UUTs during Vibration
to monitor UUT Status Registers
FineSoft on LabWindows CVI

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Functional/Power ATE for Design Verification Test (DVT)

FUNCTIONAL ATE SYSTEMS



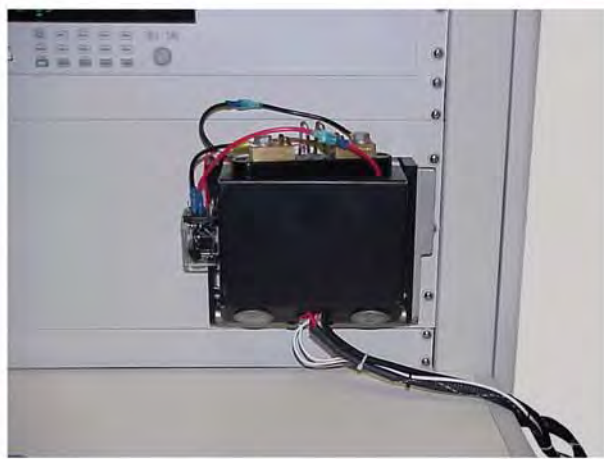
Front view of DVT Tester with Thermal Chamber

Application: AC/DC and DC/DC Power Supplies and Sub-Assemblies
Design Verification Test (DVT)
Engineering Prototype Characterization and Vendor Qualification

Features: Functional test through ramp of input voltage, frequency, output load conditions, and across the operating temperature range.
Integrated Thermal Chamber with Liquid Nitrogen
Data collected at every point, and imported to Excel
Graphs UUT response versus Input V, Freq, Load, temp etc.
UUT connected to Tester with Test Cable



Close-Up of Thermal Chamber and Liquid Nitrogen tank



Close-Up of Test Cable connected to Tester



Cable from Tester into Thermal Chamber



Close-Up of UUT inside Thermal Chamber

Functional ATEs for Telecom Sub-Assemblies

FUNCTIONAL ATE SYSTEMS



Tester #1 and #2 on the production floor



Close-Up of Tester #1



Close-Up of Tester #2



Test Program Development on Tester #1

Application: Telecom Power Sub-Assembly and Board Test
High Volume Production

Features: Interchangeable Test Fixtures
FineSoft on LabWindows CVI

Functional ATEs for Telecom Sub-Assemblies



FUNCTIONAL ATE SYSTEMS

Front view of duplicate Testers testing Sub-Assemblies on the production floor



Close-Up of Tester #2 with Test Fixture

Application: Telecom Power Sub-Assembly
and Board Test
High Volume Production

Features: Interchangeable Test Fixtures
FineSoft on LabWindows CVI

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Functional ATE for Telecom Power Cabinet & Modules

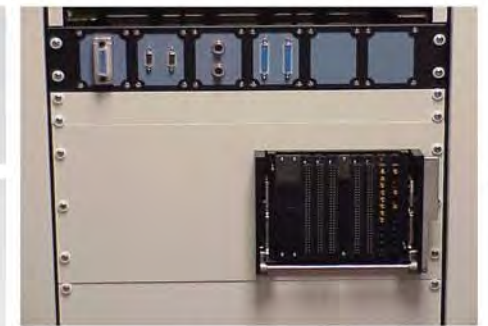
FUNCTIONAL ATE SYSTEMS



Front view of Tester



Duplicate system in production with a Test Fixture and UUT



Close-Up of front panel interface for monitor, keyboard and mouse

Application: Telecom DC Power Cabinets
Telecom DC Cabinet Modules
High volume production environment

Features: Virginia Panel front panel interface
All equipment in single cabinet
Front panel interface for monitor, keyboard and mouse
FineSoft on LabWindows CVI platform

Functional ATE for Thermocouple Test



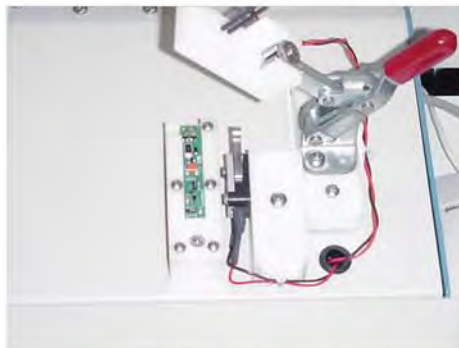
Thermocouple Output Pulse on Scope



FUNCTIONAL ATE SYSTEMS



Encapsulated Thermocouple installed in Test Fixture



Open-Board Thermocouple installed in Test Fixture

Thermocouple Tester with Test Fixture

Application: Encapsulated Thermocouples
Open-Board Thermocouple Modules
High Volume Production

Features: Pogo-Pin Test Fixture for SMT Boards
FineSoft on LabWindows CVI

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Functional ATE for Sub-Assembly and Board Test

FUNCTIONAL ATE SYSTEMS



Front view of Tester

Application: Functional Test of Sub-Assemblies and Boards

Features: 25 Module VP front panel interface
C size VXI mainframe for switching
8 ½ Digit Multimeter
Source Measurement Unit (SMU)



Full view showing C Size VXI mainframe and 8 ½ Digit Multimeter

Functional ATEs for Ballast and Interference Test



FUNCTIONAL ATE SYSTEMS



Ballast Functional and Interference Tester

Close-Up of Functional Tester

Application: True Input Power
Ballast Testing
Lightning Interference Test

Features: Dual cabinet for Functional Test
Separate Interference Tester
FineSoft on LabWindows DOS

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FineTest Production Floor



FineTest Building at 1 Industry Drive



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