

# ADVANCED ELECTRONIC TEST SYSTEMS FOR THE CONNECTOR & CABLE INDUSTRIES



## Successful Multi-Billion Dollar Programs Demand Reliable Electrical Connections



Utilize The Most Efficient Test Equipment Available

The Model 4087B is a revolutionary, automated test system for the electrical connector industry which substantially speeds up production testing and increases production throughput!



The Model 4087B is a benchtop test system engineered *specifically* to test filtered, hermetic, and other types of electrical connectors. Its speed, efficiency and versatility are unrivaled in the industry!

If you manufacture electrical connectors, or use connectors in your OEM product, or purchase components that connect to your product AND:

**Your industry is:**

Automotive  
 Medical  
 Aerospace  
 Communications  
 Defense  
 System Controls  
 Oil & Gas Exploration

**AND your product is:**

Mission Critical  
 EMI/RFI Sensitive  
 Life Critical

**AND your job is:**

Quality Assurance  
 Manufacture  
 Design / Specify  
 Incoming Inspection  
 Install

...you are in a position to supercharge your company's production throughput, and profitability with the 4087B.

**What types of devices does the system test?**

- Planar Capacitor Arrays, Discoidals, Feedthroughs
- Filter Subassemblies
- Ceramic Capacitors
- Hermetics & Feedthrough Assemblies
- Non-Filtered Connectors, All Types
- Medical Connectors, Pacemaker, Defibrillator
- Geophysical, Oil, Gas & Nuclear
- Zener Diodes (Bipolar) / Transient Voltage Suppressor
- Metal Oxide Varistors (MOV)



## How can your quality assurance program benefit from this system?

- Produces significantly faster test results: 7x faster than other commercial ATE products, and 30x faster than manual testing
- Reduce / eliminate production bottlenecks & backlogs
- Generates accurate and reliable test data with serialized, traceable documentation
- Eliminates tedious, error-prone, expensive manual testing
- Detects failures much earlier in the assembly & testing process
- Dramatically shortens delivery schedules and customer backlogs
- Generates much greater product throughput, resulting in greater company profitability
- Saves money by paying for itself within 3-6 months of use
- Replaces up to 5 manual test operators per shift

## What types of connectors does the 4087B system test?

All types of electrical connectors, including, but not limited to:

- Circular
- Geophysical / Oil
- ARINC / Rack & Panel
- Hermetics & Feedthroughs
- D-Subminiature
- Medical
- Micro 'D' & Nano
- Automotive
- Filtered
- Nuclear

## How do the connectors under test interface to the system?

- The 4087B system accepts custom interface test modules for all popular shell & pin pattern configurations. Simply plug module into front of tester with quarter-turn fasteners, install device and begin testing
- Provides a clean, simple, cable-less interface to your product
- Tester accepts plug-in test adapters to test: a) finished product, b) sub-assemblies and c) capacitors & planar arrays
- Device Under Test (DUT) installs and is tested in seconds
- Eliminates wires, cables and bulky testing fixtures

## What types of tests does the system conduct?

- Capacitance to 1 uF (2uF Optional)
- Capacitance from 0-750 VDC Bias
- Dissipation Factor 0-100%
- DC/AC Dielectric Withstanding Voltage (DWV / Hi-Pot) 0-2mA
- Ground-Ring Test
- Inductance
- Zener Diode & TVS; Unipolar & Bipolar
- Capacitance Spread; Percentage or Absolute
- IR to 100GΩ (200GΩ Optional)
- Shorted Pin Test
- Cluster Tests
- Test Voltages to 1500 VDC / 1800 VAC
- Optional Test Voltages to 2500 VDC / 2300 VAC

## How many pins / ways can be tested?

- Expandable from 32 to 320 points / ways with modular plug-in multiplexer circuitboards. Custom applications also available

## What is so revolutionary about the ConnectorTest International system 4087B?

- The PC controlled 4087B system utilizes a patented, *highly efficient test sequence* whereby ALL programmed tests are conducted on the pin under test. This technology *substantially reduces* testing time by 7x - 30x depending if manual testing methods are used, or, if some form of semi-automated testing is utilized in production. This efficient testing sequence *detects failures much earlier in the assembly & testing process*. Additionally, this test sequence ensures that each pin is tested against all other pins tied to the connector shell automatically, ensuring detection of pin-to-pin leakage and short-circuits. The result is a substantially higher device-throughput-rate in your production department and less time and expense testing parts than ever before.
- All test data is serialized by test, and can be sorted by date, part number, Job/Lot, and printed for the customer. All test data is stored in the system's software for future retrieval. The end result is a quality connector with serialized documentation to back it up.

**Is the system easy to program?** The system's software uses easy-to-follow data entry screens for entering mapping information and test values in memory; no programming languages needed!

- Stores Pin Mapping Information
- Stores Program Test Values
- Prints and Stores Serialized Test Results
- Archives Test Results
- Password Protection
- Connector Device Library

## What is the system's accuracy?

- 2% Max for all tests

**Where are all of the wires and cables?** Instead of typical bulky fixtures and long wire looms, a modular electrical fixture 'Module' is used. The device under test interfaces to a custom-made plug-in module which plugs into the 4087B system - clean and simple. The module is internally hardwired to a specific mapping pattern consistent with the device under test, allowing the computer to address and



test each pin in a predetermined program within the system's software. The test module replaces long wires and outdated apparatus associated with typical laboratory testing setups - eliminating stray capacitance problems, and setup time. See the company website for photos of the plug-in test modules.

### What options can be ordered with the system?

- Barcode reader can interface with system, saving keyboard strokes when dealing with large part numbers, order numbers, etc.
- Temperature Humidity sensor provides data which is transferred onto the Test Summary as a record after a test
- 17" touch screen monitor is available; saving time with operating the system and navigating menu screens
- Ferroresonant uninterruptible power supply (UPS System); 500 VA recommended

**What about reliability and servicing?** The 4087B system is completely modular for ease of servicing, which allows a qualified supervisor to remove the circuitboards inside the 4087B tester in the event of service. Service and replacements are typically an overnight delivery away. The system's relays are tested 10 million cycles prior to field duty. The 4087B tester is warranted for one year. Other components of the 4087B system carry the respective warranty of the manufacturer, e.g. printer, computer, monitor, LCR meter, etc.

**Who uses the 4087B system?** This system is used by interconnect manufacturers worldwide to test electrical connectors used in applications from automotive engine management systems to implantable pacemakers; spacecraft, commercial & military aircraft / hardware & sub-systems, geophysical connectors, deep-sea oil & gas well connectors, communications systems, submarine, nuclear applications, and much more. As today's advanced electronic systems are managed by faster, more sophisticated computers and systems, the requirement for specialized connector devices increases - as does the requirement for testing these complex interconnect devices. The system 4087B more than satisfies today's testing requirements.



### About ConnectorTest International

Although this might be your first encounter with ConnectorTest International or the 4087B system, be assured that the technology base is founded upon more than 60 years of experience in advanced aerospace and commercial electronics. After 32 years of field duty, evolution and improvements in response to user input and requirements, the Model 4087B has become the industry testing standard for electrical connector manufacturers, and the end-users of these products.



**Watch Your Company's Production Output Soar with ConnectorTest International's 4087B Test System!**

**ConnectorTest**  
INTERNATIONAL