

Lightweight, Portable Tester Designed for Maintenance Applications

Honeywell takes automated wire testing where it's never gone before

DIT-MCO's new Model 2135 tester weighs less than 30 pounds. Small in size, it provides powerful features and functionality to meet the demands of maintenance operations that focus on troubleshooting electrical faults related to wear and tear. Crews can take the tester right into the cockpit, cabin or even a locomotive cab to test wiring.

According to Francois Gau, Product Line Director-Nova Wire Integrity Programs, Honeywell, wire testing in a maintenance venue is vastly different from electrical testing in a factory environment.

“Once the aircraft is put into service, technicians aren't concerned with huge amounts of switching or complex analytical tests,” he says. In addition to visual inspections to spot deterioration from wear and tear, “technicians need to test specific systems on the airplane, and they may need to test several systems on different aircraft in any one day. It's the same whether you're talking commercial airlines or defense facilities.”

In addition to the basic challenge of detecting and locating faults, speed in diagnosing faults is another issue. Currently, a thorough, preventive check of an aircraft's systems requires at least two people several hours manually testing one pin at a time. “They could even spend days trying to find a fault,” says Gau.

Hal King, Manager-Wiring Analyzers, and other DIT-MCO engineers developing the 2135 worked closely with Honeywell for its Nova programs, for which the 2135 is a central component. In fact, any field or maintenance application would benefit from the system's size and mobility. Designed for the specific needs and conditions of maintenance activities, the new tester features:

- **Switching for up to 300 test points** – DIT-MCO automatic analyzers used during manufacturing typically support up to 100,000 points with the largest systems. “Our customers, commercial airlines and military users, told us 300 points would cover their needs to test specific systems in their aircraft,” said Gau. Examples of systems include the fuel quantity indicator, autopilot system, fire-and-overheat systems, flight control system, and weaponry.
- **Portable, compact design** – The Model 2135 is powered by AC input power or battery. It operates between four to eight hours on a fully-charged battery. A strong, lightweight carbon fiber molded case encloses the hardware. The case is highly resistant to impact, moisture, and corrosion.
- **Basic functions** – Once an aircraft begins its operational life, electric continuity is foremost. However, the 2135 is programmable to deliver up to a full 1000VDC and 3 amps, and can measure voltage, insulation resistance, continuity resistance, hipot, and capacitance while comparing these measured values to programmable limits.
- **Fault location** – The 2135 can be used with DIT-MCO's Fault Locator feature to physically pinpoint a fault location. After repair, the 2135 can recheck the assembly to confirm that the short or open circuit was repaired.

- **Flexibility and compatibility** – The 2135 can be paired with an industry standard personal computer or laptop computer with Microsoft® Windows 2000 or later. It runs under DIT-MCO’s TestExecutive® analyzer control software.

With its rugged portability, flexibility, and tailor-made functionality, DIT-MCO’s Model 2135 is a valuable tool to help maintenance crews combat the potential dangers of aging electrical systems.

What is NOVA?

Honeywell launched its new Nova Wire Integrity Program™ to help airlines and military organizations manage the integrity of electrical systems for the entire useful life of the aircraft in their fleets.

Nova considers the functionality of each wire in each aircraft in combination with the wire’s “criticality” in terms of safety. The program schedules wire tests, specifies test equipment requirements, captures and retains test data, and generates trend reports to facilitate long-term monitoring of the electrical systems.

The Nova suite of test equipment – including DIT-MCO’s new Model 2135 – is adapted to various maintenance activities and settings. Testing focuses on detecting problems in wiring itself as well as deteriorating wiring and insulation, whose causes might include contamination, physical abuse, vibration, corrosion, and aging.

For more information about the Nova program, visit www.wipnova.com.