

# Reflex 950



## Connector and filter connector test system - expandable to 160 pins

REFLEX 950 is a new generation HIGH PIN-COUNT – Connector & Filter Capacitor Connector Test System providing all essential production and engineering connector tests in a single HIGH-VOLTAGE system. Tests include: Insulation Resistance, Milli-Ohm Contact Resistance, Dielectric Withstand Voltage (DWV), Capacitance, Capacitance with Bias and Zener/Transzorb tests-PRF-6106K and MIL-R-39016E.



### Key Features

- **Modular High Pin Count Architecture**
- **Interchangeable Test Fixtures**
- **Expandable in 10 pin increments to 160 pins**
- **High Voltage DC Source 0 – 2,100 V DC**
- **High Voltage AC Source 0 – 1,500 V AC rms**
- **AC Source frequencies 50, 60, 190, 400 Hz**
- **Menu software for test & programming**
- **Data logging & Report Generation Tools**
- **Comprehensive Self-Test & Calibration**

### Tests

- **Insulation Resistance**
- **Milli-Ohm Contact Resistance**
- **Dielectric Withstand Voltage programmable to 2,100 V DC or 1,500 V AC rms**
- **Capacitance**
- **Capacitance with DC Bias to 2,100 V DC**
- **Zener & Transzorb parametric test**



### Modular HIGH Pin Count Architecture

REFLEX 950 is a modular PRODUCTION Connector Test System which can be configured for a wide variety of high throughput Production and Quality Engineering Connector Test applications.

Systems can be configured for up to 160 four wire (Kelvin) contacts and for high voltage AC, DC and biased DC Capacitance testing. The system incorporates a parametric test capability for complex connectors incorporating zener diodes and transzorbs



**System description:** REFLEX 950 is comprised of three main units:

#### **Instrument Mainframe**

This unit houses the system power supplies, high-speed Pentium PC controller, LCR Bridge and system instrumentation.

#### **System pin Multiplexer**

Switching of system resources to specified device connector pins is achieved via a modular high voltage. The multiplexer can be configured with up to 160 four wire (Kelvin) connections. Switching is fully controlled by the test program and enables the following test modes:

- Pin to ground, all other pins grounded
- Pin to ground, no other pins grounded
- Any pin to any other pin

The multiplexer is designed to ensure no system damage occurs in the event of short circuit or high voltage discharge as might occur with a defective connector.

#### **Fixturing**

The REFLEX 950 test interface is designed to accept a variety of 4-wire and 2-wire test fixtures. Four wire fixturing allows the very latest techniques in REFLEX 950 to be used to be used fully for accurate and repeatable measurements. However the fixturing also allows 2-wire connections to be made if required.

**Safety Enclosure :** To fully protect the operator against accidental exposure to potentially high voltages during testing, the test fixture is full enclosed in a safety enclosure which is electrically interlocked to disable all high voltage supplies and system operation until the covers are fully closed.

#### **Technical Specifications:**

Device channels	10 - 160 Kelvin pins .
Maximum working voltage	1500V rms AC / +2100V peak DC
Power supply current	0 to 100mA (software programmable)
Test frequencies	50, 60, 190, 400Hz
Tests	Insulation resistance (IR), resistance, dielectric withstand Voltage (DWV), capacitance, zener & transorb voltage.
LCR meter	Agilent HP4263B-001 (or equivalent)
Operator safety	Mechanically and electrically interlocked safety enclosure
Dimensions (mm)	793(w) x 673(d) x 935(h) (excluding optional computer stand)

#### **For further details contact:**

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**Interchangeable Test Inserts:** An interchangeable 4-wire "Connector Carrier Module" is used to provide the ultimate in flexibility and allow a wide range of connector styles to be easily accommodated on the system. The system uses a zero insertion force "bed-of-nails" interface to the carrier, allowing Carriers to be easily removed and replaced in seconds. Multiple connectors can be fitted to the carriers to increase test throughput and minimise fixturing costs.

For compatibility with older connector test systems and to enable existing fixtures to be used, ART can offer to supply Connector Carriers which will accept inserts from 2-wire Connector Test System manufacturers.

**Operator Interface & Menu Software:** REFLEX 950 uses the latest "ARTWORKS" software environment to create an easy-to-use Operator Interface and a flexible and intuitive test programming environment.

For efficient Production testing, test programs can be selected quickly and correctly by manufacturer's part number and operator feedback presented for confirmation. Test programs can be quickly and simply generated using a guided series of steps requiring the entry of key data sheet parameters for the Connector to be tested.

**Results Data Logging & Report Generation :** Data can be viewed, printed or exported to print or data-log files, this data can then be inserted into a wide range of spreadsheet and database packages. Using the integrated report generation package "Reporter" the generation of professional looking reports is only a button press away.

**On-Line Help Documentation :** All hardware and software documentation is supplied in an 'on-line' form. One key-press calls up test and operational information in a context-sensitive display.

**Comprehensive Self-Test & Calibration:** For a high degree of user confidence in the system, a comprehensive self-test facility is provided which allows the full system operation to be checked under software control in a matter of minutes. This allows confidence tests to be run and data logged when required, for example: at the beginning and end of a batch, shift, day, week etc as required by company quality procedures. All system resources are checked, together with all ranges of the system instruments. The results of the self-test can be logged to screen, system hard drive, printer or network. The system includes a software prompted calibration procedure.