Aerospace Testing Solutions

Military Wiring

EMC Compliance

Digital Avionics

Customer Applications

BCF Designs Ltd specialises in the design and supply of Ground Support Equipment for use at operational level. Innovative solutions for testing Aerospace Military Wiring, Fuel Systems, EMC Compliance and Digital Avionics are currently available as commercial off the shelf test equipment.

Fuel Systems

Automatic Fuel System Test Set

The testing and vaildation of an aircraft's fuel system is one essential part of the regular maintenance schedule. The BCF Designs Automatic Fuel System Test Set has been designed to be compatible with all aircraft types, and provides a fast, accurate and repeatable solution for the cost effective testing of aircraft fuel systems.

The DE8490 Test Set is accessed and controlled via simple menu driven software specific to each aircraft type. This ensures that the testing protocol used is always consistent, which in turn allows the user to accurately diagnose any faults in the aircraft fuel system. The DE8490 automatically stores all the test data, which can subsequently be downloaded for review, fault and repair tracking.

The equipment will test both AC and DC capacitance fuel systems. Depending upon aircraft test requirements the DE8490 can measure or simulate fuel quantity and consequently gauge accuracy. Connection to the aircraft is achieved via existing lead sets and a multipole connector, or by using the supplied co-axial cables. An adaptor interface cable can also be supplied if required to match any other existing connector and harness construction. The Test Set is self-calibrating using highly accurate and stable in-built capacitors. It can be powered from any mains AC supply, aircraft DC supply or by using the rechargeable internal battery.

Specifically designed as ruggedised, portable ground support equipment for use at operational level, the Fuel System Test Set provides the user with a simple, efficient and reliable maintenance tool.

Benefits:

- One test set for all aircraft types
- Automatic operation
- Aircraft specific menu driven software
- Fuel quantity and electrical resistance measurements
- Simulation of gauge and tank systems
- All data recorded for fault and repair tracking
- Multi-powered including battery management
- Simplicity of use
- Self calibrating
- Ruggedised & portable

Technical data

DE8490 AC/DC Fuel System Test Set

Software:

- Factory installed as per customer specification. Additional aircraft software upgrades by request

Capacitance measurement Range:

- Measurement of both AC and DC capacitance values of tank unit probes
- 0 to 10,000 pf
  Automatic or Manual Mode

Accuracy:

- AC
  +/- 0.1 pf up to 100 pf
  +/- 0.1% of reading above 100 pf
- DC
  +/- 0.2 pf up to 100 pf
  +/- 0.2% of reading above 100 pf

Capacitance Simulation Range:

- Simulation of capacitance values of the fuel system for calibration, validation and fault finding
- Tank unit simulation
  0 to 10,000 pf (accurate to +/- 2%)
- Compensator simulation
  0 to 1,000 pf (accurate to +/- 2%)
- Auxiliary capacitor simulation
  0 to 1,000 pf (accurate to +/- 2%)

Insulation Resistance Measurement:

- 5k ohms to 30M ohms
  (accurate to +/- 10% to 20M ohms, +/- 20% above 20 M ohms)

Bonding Resistance Measurement:

- 10 milliohms to 20 ohms
  (accurate to +/- 10%)

Options:

- Other fluids
  LOX, water

Calibration:

- Daily self calibration using very accurate internal capacitors
- 3 year return period for full factory calibration

Connections:

- Measurement and simulation inputs and outputs internally multiplexed to a multipole connector (MIL-C-26482 Series 1) contact or their respective dedicated connector
- 4 mm sockets for insulation and bonding resistance connectors
- Standard BNC for tank, compensator or auxiliary connectors

Dimensions: 410 x 295 x 265 mm
(16 x 12 x 11 inches)

Weight: 10 Kg (22 lbs)

Temperature Range: -20C to + 50C
(-4F to +122F)

Power Supply:

- 85 to 265volts, 45 to 445 Hz AC
- 18 to 32 volts DC
- Internal rechargeable battery pack

Accessories supplied:

- Power leads
- RS232 interface lead
- Co-axial leads (1 set)
- Operator's manual

Nato Stock Number:
4920-99-471-2178

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