S2476N Databus Network Analyser

Detect and isolate wiring faults on a MIL-STD-1553 harness system with in-built bus footprinting techniques

Ultra Precision Control Systems is an Ultra Electronics business specialising in electronic sub-systems designed for use within the Aerospace and Defence industry. Ultra's experience in designing ruggedised and deployable test equipment goes back to the mid-1980s and our product portfolio includes test equipment that is in service on all major UK MoD and many US DoD platforms. Areas of expertise include fuel system, 1553 databus, RF filter and Electrical Wiring Interconnect System (EWIS) integrity testing. Ultra also provides special-to-type test solutions to help our customers tackle the most demanding test requirements worldwide.

The S2476N databus network tester isolates all common wiring faults on any platform with a 1553 databus harness system: short circuits, shorts to shield, open circuits and cross-overs etc. It measures insertion loss between any two stubs in dBs. It is simple to operate, with no need to disconnect the main bus and comes with an integral battery charger; ideal for one-man operation.

The kit comprises aircraft specific interconnect leads to connect the tester to the aircraft of choice, consumable spares for the tester, a databus repair kit, full technical publications and a transit case. Additional options include a calibration kit and an ARINC 429 protocol tester (DE3400).

The S2476N can footprint a 1553 databus, allowing users to monitor system integrity and schedule preventative maintenance, in accordance with JAP(D) 100A-01.

Key features

- Preventative maintenance using bus footprinting
- Reduces 'black box' No-Fault Found (NFF) rates
- Isolates common wiring faults
- No need to disconnect main bus
- Can be used on any MIL-STD-1553 platform
- Removable transmitter for remote testing
- Lightweight and portable
- Not restricted by ITAR
- Full training and support available

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Technical data

Capability

- S2476N can detect:
  - Short circuits between twisted pairs of bus or stub
  - Open circuits on bus or stub
  - Cross-overs of twisted pairs, on bus or stub
  - Short circuits between either of the wires of the bus or stub twisted pair to shield/screen system
  - Insertion loss between any two stubs in decibels in the range 0dB to -36dBs (+/- 0.1dB)

Specification

Transmitter

- Provides 200KHz signal for insertion loss measurement
- Provides 25KHz signal for wiring fault detection
- Battery powered: up to 8 hours continuous use
- Self contained, sealed unit

Receiver

- PASS/FAIL indication of wiring fault
- Measures insertion loss between any two stubs in the range 0dB to -36dBs
- Battery powered: up to 8 hours continuous use
- Self contained, sealed unit
- Provides storage compartment for the transmitter unit.

Display

- GREEN/RED LED pass/fail indication for open circuits, short circuits, cross-overs and short circuits to the shield/screen system
- LCD gives insertion loss in dBs between any two stubs

Dimensions

- 220 x 220 x 375mm (9 x 9 x 15 inches)

Weight

- 8.5kgs (19lbs)

Temperature range

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

Accessories

Supplied

- Calibration pad S2476C
- Power charge lead

Optional

- Calibration kit DE2463/A
- Module for direct coupled buses S2476G

Calibration

- Prior to daily use, via supplied 12.0dB calibration pad
- Annually, via optional calibration kit DE2463/A, or return to OEM calibration Service

Charging

- Battery charger operates from 85V to 265V, 40Hz to 400Hz

Qualification

- MIL-STD-810 Environmental
- MIL-STD-461 EMC

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