Loop resistance tester

BAE SYSTEMS

Loop resistance tester

Electrical, fuel, communication and other mission critical systems are shielded and grounded to protect against the harmful effects of lightning, high intensity radiated fields (HIRF) and other electromagnetic interference (EMI).

SPECIFICATIONS

Certified to ANSI / UL913 Intrinsic Safety Rqmts	Class I, Division 1, Group D hazardous locations
Measurement range in loop mode	1 to 4,000 milliohms
Measurement range in joint mode	0.01 to 4,000 milliohms
Accuracy	+/- 5% or +/- 0.2 mΩ (whichever is greater)
Operating frequency	200 Hz
Temperature range	-20 ° to +60 ° C during operation
Maximum cable diameter	1.75 in (44.5 mm)
Size	14 x 14 x 11 in (355.6 mm x 355.6 mm x 279.4 mm)
Weight	27 lbs (12.2 kg)

Designers pay a significant penalty in cost and weight to ensure that safety and mission success are maintained to the highest possible level. Continued functionality to design specifications must be ensured throughout the life of the system.

Intense FAA and industry focus on wiring and fuel systems safety has demonstrated that these critical systems should be tested at regular intervals and visual inspection alone is not adequate. The FAA found that traditional intrusive bonding measurement techniques can cause other problems. The FAA also recommended redundant grounding paths and non-intrusive testing methods.

Bond meters require breaking connections, which can temporarily heal and mask corrosion problems. Breaking connections also require some sort of system functional test, which can be costly and drive lengthy maintenance flow times. Bond meters do not ensure a good reconnection and cannot handle grounding and shielding systems that have redundant grounding paths.

The BAE Systems Loop Resistance Tester (LRT) is a unique, patented and completely non-intrusive instrument that verifies the integrity of these critical systems without disruption to the installation. The LRT can provide tremendous labor savings and greatly reduced maintenance flow times. It can also find latent defects like corrosion and loose connections, which can avoid costly downtime and loss of revenue service.

FEATURES AND BENEFITS

- With 10 years of proven, reliable experience in production and field use, it is the most widely used instrument for critical HIRF/lightning testing
- This is the only instrument of its type certified as intrinsically safe for use in hazardous zones
- Ruggedized, durable, reliable, self-checking features help prevent erroneous operation
- Operation is simplified with automatic measurement range control
- RS-232 port supports remote data collection
- Completely, self-contained, portable, battery-powered operation for approximately 8 hours
- Lighted joint probes can quickly isolate the source of high resistance if loop reading is above the specified limits
- Used in commercial transport aircraft in production and in the field, airframe manufacturers, engine manufacturers and MRO facilities. Also used on several DoD applications to verify critical EMP hardness requirements are met
- Can be used in any application where verification of the integrity of shielding/grounding systems is critical – any arrangement in which current can be induced into a closed loop
- Detects latent defects, avoiding potential downtime and loss of revenue service and helps to ensure flight safety
- Optional certifications standard kit available

FOR MORE INFORMATION, CONTACT: