CONTINUITY TESTER

- ADVANCED MICROPROCESSOR TECHNOLOGY.
- GO/NO GO CONTINUITY CHECK.
- DIGITAL RESISTANCE DISPLAY.
- DYNAMIC CHECKING OF BONDING REELS.
- SIMPLE TO OPERATE, AUTO SWITCH ON/OFF.
- SELF TESTS AND CALIBRATES BEFORE EVERY TEST.
- ROBUST AND IMPACT RESISTANT.
- COMPACT, LIGHTWEIGHT, HIGHLY PORTABLE.
- ATEX CERTIFICATION PENDING.

Introduction.

Systems which transfer flammable liquids or powders must be bonded, or electrically connected in order to safely dissipate static electrical charges. However, it is important that these systems are tested regularly, because deterioration could result in a hazardous situation developing.

Traditionally, a resistance or multi function meter is used. These instruments are normally cumbersome, delicate, and should be used by skilled technicians. They do not detect the small changes in resistance which affect a bonding system and they are also not responsive enough to detect a worn bonding reel bearing or slip ring. Consequently it is unlikely that bonding systems will be checked frequently or in the correct manner. A number of specialised bonding system testers have been developed but they all have a variety of other shortcomings.

The Aljac Continuity Tester (ACT) has been specifically designed for this task ONLY, so it does not sacrifice performance in the interests of being a multi purpose instrument and it is based on the very latest microprocessor technology.

Description.

The ACT is a foolproof Go/No Go device which can be used by non skilled personnel, and it is controlled by a microprocessor which offers significant operational advantages.

Simply touching the clips together switches the ACT on. It self checks calibration and available battery power and only then allows the test to proceed. The ACT uses a single dual colour light emitting diode (LED) to indicate the condition of the bonding system under test, which makes the results very simple to interpret. If the system resistance is less than the set point, the LED will flash Green (Pass). If the system resistance is more than the set point, the LED will flash Red (Fail). The default set point is 25 Ohms which is in accordance with the JIG Guidelines for aviation fuel systems, but alternative set points can be specified at the time of order placement. In addition, throughout the test, a two figure digital display tells the operator the actual system resistance (in Ohms).

The ACT housing is ergonomically designed to be comfortably held in the hand and is moulded from impact resistant Polyamide, so it is lightweight, robust, and is highly portable.

The ACT incorporates a sealed, non rechargeable, high capacity battery which gives it an extended operational life, but the battery life is further enhanced by a number of power saving features. The ACT does not have a constant power useage, it checks the resistance 200 times per second. Also, the microprocessor automatically switches off the ACT after a time out period at any stage of the operation, even if the clips are left connected or touching at the end of the test.

The ACT can be supplied with a calibration certificate if required, but in any event it self checks calibration before every test.

The ACT incorporates a current limitation feature and is safe for use in hazardous areas, unlike many other devices which are currently in use.

We can provide a Stowage Bracket which can be used to neatly stow the ACT when not in use, or can hold the ACT securely during testing.

Operation.

1. Self Check/Start Up.

a) Touch and hold the clips together. The ACT checks calibration and battery power.
b) If display shows ER the ACT is either out of calibration or the battery is discharged.
c) If the calibration is correct and the battery has sufficient power, the LED flashes Green and the display shows 88 (segment check). Separate the clips within 10 seconds.
d) The LED flashes Red and the display shows HI (open circuit). The ACT is now ready to check the bonding system.

2. Bonding System Test.

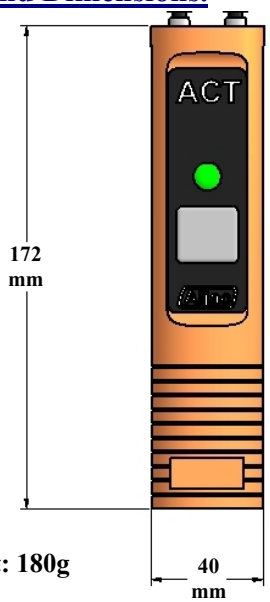
a) Within 10 seconds connect one clip to a clean unpainted metal point on the system framework or vehicle chassis and connect the other clip to the system bonding clip.
b) If the LED flashes Green the system resistance is less than the set point. The bonding system is serviceable.
c) If the LED flashes Red the system resistance is greater than the set point. The bonding system is unserviceable and the problem MUST be rectified before further use.
d) The actual system resistance in Ohms is displayed throughout the test and this may be recorded.
e) The condition of the bonding reel slip ring or bearing can be checked by reeling the cable in or out with the ACT still connected. A defective reel bearing or slip ring will cause the LED to change colour from Red to Green and back again.
f) At the end of the test remove the clips. The LED flashes Red and the display shows HI (open circuit). The ACT will now time out in 15 seconds and switch off.

Always wait for the ACT to switch off at the end of every test before starting a new test.

How To Order.

Continuity Tester:- Part No. 0100400180.
Stowage Bracket:- Part No. 0100400181.

Weights and Dimensions.



Nett Weight: 180g

Specification.

Type: Go-No Go Continuity Tester.
Set Point: 25 Ohms (default). Option 1 to 40 Ohms.
Test Frequency: 200 tests per second.
Display Update: Every 100 tests (0.5 seconds).
LED: Dual colour high intensity (Red/Green).
Display: Two digit 7 segment LCD, 12mm character height. Selectable on or off.
Housing: High visibility orange impact resistant PA6 Polyamide.
Battery: Lithium Thionyl Chloride 3.6V.
Microprocessor: Atmel AVR EXMEGA 16A 4U.
Flying Leads: 2 x 0.5 metres long, with plugs/clips.

Ancilliary Items.

Contact our Sales Department for bonding reels (hand or spring rewind), bonding cable, bonding clips, bonding lugs, NATO bonding plugs, bonding clip break away joints, drum bonding clamps.

We are also happy to advise you on the selection and operation of static bonding equipment and systems.