

# Aircraft Bonding Meter I681B



## Features

- o ATEX approved to Zone I
- o Intrinsically safe
- o Portable robust housing
- o Battery powered
- o Selection of bonding test leads



## Description

The I681B Safety Ohm meter has been specifically configured to make Aircraft bonding measurements quickly and easily. The meter has a backlight LCD display that enables the user to work easily and quickly in shadow areas.

The recommended probe set comprises two 2m long pointed probe sets and two 2m long short pointed probes. These enable the user to quickly establish a connection on an aircraft area where a bonding measurement is required.

A carbon impregnated conductive foam case with a strap is supplied with the unit and measurements can be taken with the unit within and without of the case. Taking measurement with the I681B in the case, the entire unit can be grounded, by connecting the external ground lug on the case to the I681B chassis ground. This ensures that the I681B cannot generate an ESD "spark".



In areas where there is flammable gas present the I681B does not present a hazard since it is certified for use in an ATEX zone I environment. The rugged aluminium case has very low magnesium content and is proof against a number of liquid contaminants such as Aviation fuel, De icing fluid and Methanol.

Reliability and ruggedness of the I681B are well proven, since the I681 family of safety ohm meters are used by tri service military personnel. Similar units have been in service for over 20 years.

| Electrical Specification | Details                              | Resolution                 |
|--------------------------|--------------------------------------|----------------------------|
| Range                    | 000.0 to 199.9mΩ                     | 0.1mΩ                      |
|                          | 0.000 to 1.999Ω                      | 0.001Ω                     |
|                          | 00.00 to 19.99Ω                      | 0.01Ω                      |
|                          | 000.0 to 199.9mΩ                     | 0.1Ω                       |
|                          | 0.000 to 1.999kΩ                     | 1.0Ω                       |
|                          | 00.00 to 19.99kΩ                     | 10Ω                        |
| Measurement Accuracy     | 0 to 200Ω                            | ±1% of reading ±1 digit    |
|                          | 0 to 2kΩ                             | ±1.5% of reading ±1 digit  |
|                          | 0 to 20kΩ                            | ±2.0% of reading ±3 digits |
| Applied Test Currents    | 0.000 to 199.9mΩ                     | 3.5mA rms                  |
|                          | 0.000 to 1.999Ω                      | 350μA rms                  |
|                          | 00.00 to 19.99Ω                      | 35μA rms                   |
|                          | 000.0 to 199.9Ω                      | 3.5μA rms                  |
|                          | 0.000 to 1.999kΩ                     | 0.35μA rms                 |
|                          | 00.00 to 19.99kΩ                     | 0.035μA rms                |
| Measurement Frequency    | 10Hz                                 |                            |
| Maximum Test Voltage     | 1V peak with test leads open circuit |                            |

| Physical Specification | Details                                                                                                                                                                |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Physical Dimensions    | 190mm x 70mm x 200mm                                                                                                                                                   |
| Weight                 | 2Kg (excluding case and leads)                                                                                                                                         |
| Power                  | 4 x AA batteries (Duracell MIN 1500)                                                                                                                                   |
| Battery protection     | Series diode to prevent incorrect battery polarity fit                                                                                                                 |
| Environmental          |                                                                                                                                                                        |
| Operating temperature  | -20°C to +40°C                                                                                                                                                         |
| Storage temperature    | -40°C to +60°C                                                                                                                                                         |
| Contaminants           | Resistant to the following fluids<br>Trichloroethane<br>Avcat<br>Circas<br>Displacing fluid<br>De icing fluid<br>Isopropanol AL<br>Methanol AL 14<br>Methylethylketone |
| EMC                    | DEF STAN 59-41 Part I Class A                                                                                                                                          |
| Safety                 | Ⓔ II 2G Ex ib IIC T4 Gb<br>(-20°C ≤ Ta ≤ +40°C)                                                                                                                        |
| Zero adjustment        | Screwdriver slot in front panel                                                                                                                                        |



### About AGI

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AGI is accredited to International Quality Standards ISO 9001/BS5750 Part I and Tick-IT software procedures.

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