

Intrinsically Safe

Safety Ohm Meter

Type 1681A – Armaments Version



Features

- o MOD approval for EED testing
- o Intrinsically safe
- o Robust & reliable



Intrinsically Safe Safety Ohm Meter Type I681A – Armaments Version

The I681A is a fail safe design to test and measure the resistance of EEDS (Electro-Explosive Detonators, Squibs, etc). In addition the instrument is CE marked and compliant with the EU Atex Directive 94/9/EC for Potentially Explosive Atmospheres Zones 1 & 2.



SPECIFICATION	NSN 6625-99-399-1120
Model Ref:	I681A
Tester Body:	Precision sand-cast aluminium alloy case with integral battery compartment.
Tester Weight:	2kg Excluding carrying case.
Tester Casing:	Precision sand-cast aluminium case with integral battery compartment. Magnesium content less than 1%.
Tester Dimensions:	190 x 70mm (Front Panel).
Depth:	200mm excluding controls. 220mm including range switch.
Finish:	Golden Yellow Semi Gloss Enamel BS381C Tint 356 stoved to DEF 1059.
Display:	3.5 digit LCD incorporating a battery condition annunciator. Character height; 12.7mm High Rel grade display with wide temperature range fluid.
Ranges:	000.0 to 199.9m (resolution = 0.1m)* 0.000 to 1.999 (resolution = 0.001) 00.00 to 19.99 (resolution = 0.01) 000.0 to 199.9 (resolution = 0.1) 0.000 to 1.999k (resolution = 1.0) 00.00 to 19.99k (resolution = 10)
Measurement Accuracy:	0 to 200 ±1% of reading; ±1 digit 0 to 2k ±1.5% of reading; ±1 digit 0 to 20k ±2% of reading; ±3 digit
Zero Adjustment:	Range covered 0 to 50m
Response Time:	3 seconds
Warm-up Time:	Instantaneous
Measurement Frequency:	10Hz
Voltage Across Sample:	1mV at FSD
Max Test Voltage:	1V peak with Test Leads open circuit
Applied Test Currents:	3.5mA rms on 000.0 to 199.9m range. 350µA rms on 0.000 to 1.999 range. 35µA rms on 00.00 to 19.99 range. 3.5µA rms on 000.0 to 199.9 range. 0.35µA rms on 0.000 to 1.999k range. 0.035µA rms on 00.00 to 19.99k range.
DPM Back-Lighting:	L.E.D. (4 off), Red Operated by momentary action switch.
Power Requirement:	Four AA size batteries Manganese Alkaline Duracell MN1500
Battery Life:	1 Year; non operational. 56 hours continuous at 20°C.
*The I681A is a two wire measuring instrument. At the 200mΩ range the meter reading will only be indicative. For more details please contact AGI.	
Battery Protection:	Series diode protects equipment against inadvertent attempts to fit the batteries incorrectly.
Battery State Check:	Low battery condition annunciator incorporated in the LCD display indicates when approximately 90% of battery life is consumed.
Reliability:	MTBF > 4000 hours (calculated) Source ref; MIL HDBK 217E Ground Mobile, Part stress analysis.
Test Leads	Standard 1 metre cable (optional).
Calibration Period:	12 Months.
Operating Temp Range:	-20°C to +40°C for intrinsic safety.
Storage Temp Range:	-40°C to +60°C.
Desiccant:	Sachet type with indicator. NSN 6850-99-341-5048. Replaced at calibration intervals.
Contaminants:	Resistant to accidental damage from accidental contact with the following: Trichloroethane (Inhibisol) Avcat NATO F-43 Dieso NATO F-54 Avcat NATO F-44 General Purpose UK K(MT) Dieso Circgas NATO F-50 Oils: OPE215 Displacing fluid PX-24 NATO C-634 OM15 De-icing fluid AL5 NATO S-735 NATO H515 Isopropanol AL11 NATO S-737 NATO U-123NATO U-149 Methanol AL14 NATO S-747 OMD 160 OX 38 Methylene ketone (MEK)
EMC:	Outline Specification Def Stan 59-41, See final EMC Report, the overview is as follows: a) Def Stan 07-85 Part 1. Issue 01 Section 8-07 Para 2.11 also guidance Test Requirements detailed in Def Stan 07-85 Part 2/1. b) Def Stan 59-41 Class A (Air) DRE01 c) Def Stan 59-41 Class B (Land) DRS01 and DRS02.
Safety Classification:	Ex II 2G Ex ib IICT4 Gb (-20°C ≤ Ta ≤ +40°C). Baseefa 03ATEX 0284 CE I 108.
Line Discharge:	Designed to provide resistive discharge paths to meet DEF STAN 07-85 Issue 1 Part 1 Chapter 8-07 paragraph 2.5 and Part 2 Chapter 8-07 Paragraph 2.5. Note: Discharge time not specified. Also note that terminal connection A is connected to chassis.
Maximum Output Parameters:	Single fault conditions, worst case output condition voltage 1.5V Dc, current 10mA. Compliant with DEF STAN 07-85, part 1/1, chapter 8-07, para 2.8.2.

This publication is not intended to form the basis of a contract.



About AGI

AGI is backed by over 30 years of experience in the design, development, manufacture and installation of defence systems and provides full integrated logistic support services, training, installation and documentation.

AGI is accredited to International Quality Standards ISO 9001/BS5750 Part 1 and Tick-IT software procedures.

Aeronautical & General Instruments Limited

Fleets Point, Willis Way, Poole, Dorset, BH15 3SS, UK

Tel: +44(0)1202 685661, Fax: +44(0)1202 685670, E-mail: sales@agiltld.co.uk, Website: www.agiltld.co.uk