

Intrinsically Safe

Safety Ohm Meter

Type 1681A – Armaments Version



Features

- o Compact, light and robust
- o Low maintenance
- o Easy to operate
- o Digital display
- o Highly reliable
- o Long battery life



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The 1681A 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:	1681A	
Tester Body:	Precision sand-cast aluminium alloy case with integral battery compartment.	Battery Protection: Series diode protects equipment against inadvertent attempts to fit the batteries incorrectly.
Tester Weight:	2kg Excluding carrying case.	Battery State Check: Low battery condition annunciator incorporated in the LCD display indicates when approximately 90% of battery life is consumed.
Tester Casing:	Precision sand-cast aluminium case with integral battery compartment. Magnesium content less than 1%.	Reliability: MTBF > 4000 hours (calculated) Source ref; MIL HDBK 217E Ground Mobile, Part stress analysis.
Tester Dimensions:	190 x 70mm (Front Panel).	Test Leads Standard 1 metre cable (optional).
Depth:	200mm excluding controls. 220mm including range switch.	Calibration Period: 12 Months.
Finish:	Golden Yellow Semi Gloss Enamel BS381C Tint 356 stoved to DEF 1059.	Operating Temp Range: -20°C to +40°C for intrinsic safety.
Display:	3.5 digit LCD incorporating a battery condition annunciator. Character height; 12.7mm High Rel grade display with wide temperature range fluid.	Storage Temp Range: -40°C to +60°C.
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)	Desiccant: Sachet type with indicator. NSN 6850-99-341-5048. Replaced at calibration intervals.
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	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 Cargas NATO F-50 Oils: OPE215 Displacing fluid PX-24 NATO C-634 OMI 5 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 Methyl ethyl ketone (MEK)
Zero Adjustment:	Range covered 0 to 50m	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.
Response Time:	3 seconds	Safety Classification: Ex II 2G Ex ib IIC T4 GB (-20°C ≤ Ta ≤ +40°C). Baseefa 03ATEX 0284 CE I 108.
Warm-up Time:	Instantaneous	Line Discharge: Designed to provide resistive discharge paths to meet DEF STAN 07-85 Issue1 Part 1 Chapter 8-07 paragraph 2.5 and Part2 Chapter 8-07 Paragraph 2.5. Note: Discharge time not specified. Also note that terminal connection A is connected to chassis.
Measurement Frequency:	10Hz	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.
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 MINI500	
Battery Life:	1 Year; non operational. 56 hours continuous at 20°C.	
* The 1681A is a two wire measuring instrument. At the 200mΩ range the meter reading will only be indicative. For more details please contact AGI.		

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

Sales leaflet SOM Type 1681A Issue B

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.



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