

Intrinsically Safe

Safety Ohm Meter

Type 1681



DESCRIPTION	SAFETY OHM METER 1681A	PART NO.	81081/0300.00	REV	1
CARRYING CASE		PART NO.	81081/0300.01		
HANDBOOK					
OPERATOR CARMAMENT					
ALLEN KEY					
NSN	6625 99 9875630				
	6625 99 5014741				
		TM3119			
		13733-A4			



Intrinsically Safe Safety Ohm Meter Type 1681

The 1681 Safety Ohm Meter is a rugged highly portable intrinsically safe instrument for use in Potentially Explosive Atmospheres. The instrument is CE marked and is approved under the Atex Directive 94/9/EC (Ex) II 2G Ex ib IIC T4 Gb (-20°C ≤ Ta ≤ +40°C) Baseefa 03ATEX0284.

In addition to the measurement of the quality of electrical bonds the tester is ideally suited to continuity testing in equipment with semiconductor devices having low breakdown voltage.



SPECIFICATION	NSN 6625-99-950-2497	
Model Ref:	1681	
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 199.9mΩ (resolution = 0.1mΩ) 0.000 to 1.999Ω (resolution = 0.001Ω) 00.00 to 19.99Ω (resolution = 0.01Ω) 000.0 to 199.9Ω (resolution = 0.1Ω) 0.000 to 1.999kΩ (resolution = 1.0Ω) 00.00 to 19.99kΩ (resolution = 10Ω)	
Measurement Accuracy:	0 to 200Ω ±1% of reading; ±1 digit 0 to 2kΩ ±1.5% of reading; ±1 digit 0 to 20kΩ ±2% of reading; ±3 digit	
Zero Adjustment:	Screwdriver slot adjustment on the front panel.	
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 199.9mΩ range. 350µA rms on 0.000 to 1.999Ω range. 35µA rms on 00.00 to 19.99Ω range. 3.5µA rms on 000.0 to 199.9Ω range. 0.35µA rms on 0.000 to 1.999kΩ range 0.035µA rms on 00.00 to 19.99kΩ 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.	
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.	
Tester Weight:	3Kg approx including carrying case and test leads	
Reliability:	MTBF > 4000 hours (calculated) Source ref; MIL HDBK 217E Ground Mobile, Part stress analysis.	
Test Leads	Standard set of test leads supplied	
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
	Cirgas 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	Methylethylketone (MEK)
EMC:	Designed to be immune to interference from other service equipment and to emit minimal electromagnetic interference. Designed to DEF STAN 59-41 (Part 1). Class A requirement.	
Safety Classification:	Ex II 2G Ex ib IIC T4 Gb (-20°C ≤ Ta ≤ +40°C) Baseefa 03ATEX 0284 CE 1108.	
Carrying Case:	Black padded, flame retardant, antistatic nylon carrying case with shoulder strap for Tester, Test leads and Operators Handbook. Internal dividers separate the Test Leads, Handbook and Tester from each other.	

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

Sales leaflet SOM Type 1681 Issue E

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 Ltd**

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

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