

Ultra-Safe Resistance Measurement

AMPTEC 620A-4 Igniter Circuit Tester - USAF Munitions Approved



USAF MUNITION SAFETY BOARD APPROVED - MIL STD 810 Method 511 Explosive and Volatile Atmospheres

transit case also holds all accessories (OP100), and a N.I.S.T. traceability calibration certificate under the NSN 6625-01-460-1499NM . In addition a single pointed handheld Kelvin Lead probe set (OP401) for testing wiring continuity on items such as recessed sockets/pins on connectors is also available.

RS232 Interface - Automated squib testing with a ultra-safe optically isolated RS232C Interface



Option "232" an optically isolated RS232C remote control interface, safely change ranges and safely provides remote reading of the AMPTEC 620A-4 Igniter Tester's resistance over to a PC fitted with an serial RS232C Interface (i.e. COM1 port). The optically & magnetically isolated RS232C interface allows a PC connection to safely taken squib resistance readings, make range changes and re-measure etc. with full remote control of the AMPTEC 620A4. Gold plated rear terminals (Vhigh, Ihigh, Vlow, Ilow) are included to facilitate use in an automated system For automated systems applications, many AMPTEC 620ES users that have the isolated RS232C interface also get the option "247" continuous isolated power option (runs without batteries see next page) and the rack mount adapter option.

AMPTEC 620A-4 IGNITER CIRCUIT TESTER

The AMPTEC RESEARCH 620A-4 Igniter Circuit Tester is a portable digital ohmmeter specifically designed for ultra-safe resistance testing on explosive devices (i.e. squibs, igniters, flares, warheads, detonators). The U.S.A.F Non-Nuclear Munition Safety Board approved the AMPTEC 620A-4 ICT for use on all U.S.A.F Non-nuclear munitions.

Designed with Life Protecting Safety in Mind

The AMPTEC 620A Igniter Tester offers fail-safe current limiting resistor network circuitry to insure that the instrument test currents cannot exceed 8 mA. In the unlikely event of a worst case component failure, the output current limiting network is still in effect.

Easier to Use and Much Safer than any DMM

With many ordnance tests you may want to keep any squib measurements simple and safe. The AMPTEC 620A Igniter Tester only measures resistance, it is not a complex multifunction DMM. It's much less subject to operator error than a DMM. If the AMPTEC 620A-4 had an electrical fault it offers the life saving advantage of failing safe (8 mA max).

Safety Line Isolation Switch When Re-Charging

The AMPTEC 620A-4 rechargeable NI-CAD batteries are good for up to 1000 recharges. Internal safety line isolation switch automatically disables the battery charging circuit when in the operate mode. Alternately, all power is removed from the output circuitry when in the off/charging mode (when measuring it won't allow re-charging and when re-charging you can't measure.)

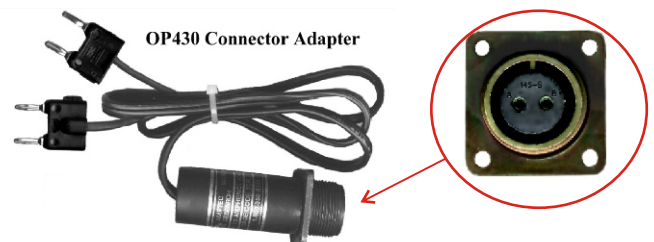
NSN 6625-01-460-1499NM Igniter Tester Package

The AMPTEC 620A-4 Circuit Igniter Tester NSN package includes: a 48" Dual Banana to Alligator Lead set(OP290), Battery Charger (OPDC), Operator Maintenance Manual (OPMAN), Dual Banana to 2 pin Circular Plug Adapter (AIM 7 Adapter - OP430) , the foam lined

Kelvin Leads, Probes Accessories and Options



Option "401" Test Probe Lead Set



Option "430" shown above is a J9 AMPHENOL CONNECTOR ADAPTER that mimics the ALINCO 101 Igniter Tester jack



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Ultra-Safe Resistance Measurement 620A-4 Explosive Safety Igniter Tester

Kelvin Leads, Probes Accessories and Options



FED EX SWIFT delivery program



All AMPTEC 620 series test lead and probe sets are a minimum 48" length, dual banana termination at the ohmmeter end (call the Sales Department at AMPTEC RESEARCH for any custom requirement).

Option "110" Test Lead Pouch (Mounted on the 620A4 top lid) with enough storage room to hold a variety of test leads and accessories (see photo above).

Option "300" Gold Plated Four Terminal Kelvin Clip Test Lead Set open to 1/2" for connection to wires, lugs, etc.

Option "401" Single Pointed Handheld Probe Set - ideal for probing into recessed squib wire sockets, and onto larger metal surfaces (flat or round) such as flares, rounds and shells, that do not easily accept test lead clip attachment.

Option "403" 4 Terminal Kelvin Mini-probes - (photo shown above) Each probe has two spring loaded, gold plated, steel tips with 0.18" separation. (one red and one black handheld probe). Excellent general purpose Mini-Probe, and along with the Option "300" Kelvin Clip Leads easily fit inside the AMPTEC 620ES Test Lead Pouch (OP110).

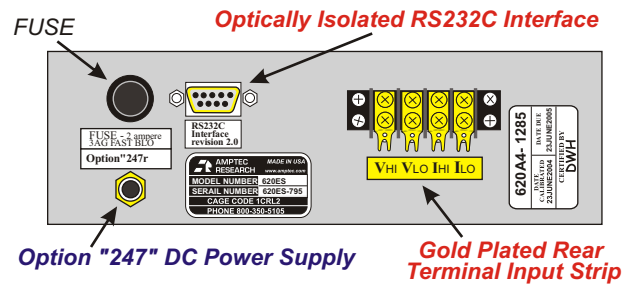
Option "620-ISO" Isolated Analog Output provides an isolated DC Voltage output directly proportional to the measured resistance (1.2345 VDC =1.2345 ohms). A datalogger or system DVM can safely measure the isolated voltage as being representative of the actual resistance of the device under test.



Option "247" for continuous isolated operation 24Hr/7day. Dual stage isolation provides safe power for 620 series Igniter Tester *to safely run continuous 24 Hrs/day* without batteries. It's proven "Medical Safety 3 KV Isolation" technology is used in monitoring human patients wired to electrical instrumentation. This field tested option is presently running in over 75 AMPTEC 620 series igniter testers in U.S. Anti-

Ballistic Missile systems (24Hrs/7).

AMPTEC 620A-4 REAR PANEL DIAGRAM fitted with Options "232" and "247"



RESISTANCE RANGE/ RESOLUTION				Notes
NOMINAL CURRENT/ FAILSAFE CURRENT LEVELS				
20Ω 1mΩ	200Ω 10mΩ	2 KΩ 100mΩ	20KΩ 1Ω	Approved for use on all Non-Nuclear U.S.A.F Munitions detonators and explosive devices. (NSN 6625 -01-460-1499NM)
5mA 8mA	0.5mA 1.5mA	50μA 150μA	5μA 20μA	

Specifications

Accuracy: (180 days 25°C ± 10°C) ± 0.02% of reading and ± 0.02% of range for 20 ohm through 20 Kohm ranges.

Failsafe Current : < 8 mA - 20 Ohm range, < 1.5 mA - for 200 ohm range, <15μA for the 200 Kohm range.

Display: 4½ digit (19999) L.E.D. - 20,000 counts , ultra brite readable in sunlight

Terminal Configuration: 4 Wire Kelvin, 5 Way Gold Plated Binding Posts - accepts wires, spade lugs, banana jacks etc.

Overload Indication: Display flashes

Maximum Input: 250 VDC

Operating Temperature Range: 0°C to 50°C

Display Update Rate: Approximately 3 per second

Power: Rechargeable Ni-Cad batteries (5.0 Ahr) & Charger (115 VAC 50-60 Hz)

Max. Internal Voltage: 4.8 VDC - 4 ea. 1.2 V Ni-CADS

Size: 235mm/9" D x 254mm/10" W x 76mm/3" H

Weight: 1.6 KG/3.5lbs NET 3 KG/6.5 lbs shipping

Ordering Information

AMPTEC 620A4 Explosive Safety Igniter Tester

--- Optional and Replaceable Items ---

"OP620-BAT"	Replacement set of 4 ea. NiCad Batteries
P/N "OP100"	Hardshell Meter/Accessory Carrying Case
"OP620-DC"	Battery Charger
P/N "OP232"	Optically Isolated RS232C serial interface
P/N "OP247"	24Hr/7 day Isolated Continuous Operating Power
P/N "OP300"	Kelvin Clip Lead Set (with gold clips)
P/N "OP401"	Single Point Handheld Mini-probes
P/N "OP403"	Handheld Kelvin Mini-probes (4 pointed)
P/N "OP519"	Rack Mount Adapter with support tray
P/N "620ISO"	Isolated Analog Output Interface