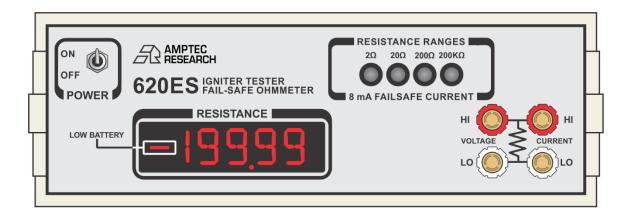
# The 620ES Igniter Circuit Tester & Fail-Safe Ohmmeter



# The gold standard in ultra-safe resistance testing.

The 620ES Igniter Tester is a portable digital ohmmeter specifically designed for ultra-safe resistance testing on explosive devices. Approved by the USAF Non-nuclear Munitions Safety Board and compatible with our RS232C Interface (OP-232), this product is the safest and easiest to use in its field. Now thanks to our ISO 9001:2015 certification, you can also be confident that you're receiving the highest quality instrumentation available.

The AMPTEC 620ES offers fail-safe current limiting resistor network circuitry to ensure that instrument test currents cannot exceed 8 mA. In the unlikely event of a component failure, the output current limiting network would still be in effect. If the 620ES had an electrical fault, it offers the life-saving advantage of failing safely.

The 620ES is part of a lineage of intrinsically safe igniter circuit testers in the 620 Series product line, enabling you to take high-accuracy resistance measurements across virtually any range from 2  $\Omega$  to 20 M $\Omega$ .

Every AMPTEC product is proudly made from start to finish in the USA and comes with a one-year warranty, plus an N.I.S.T calibration certificate with data at no extra cost.



#### AMPTEC RESEARCH CORP.



(512) 858-4045 // www.amptec.com 13231 Rooster Springs Rd., Austin, TX 78737

# AMPTEC 620ES Igniter Circuit Tester Datasheet

The below specifications apply to units that are purchased as a part of our 620ES Commercial Package with no additional options. For information on the specifications of units with additional options, please refer to the following page.

### AMPTEC 620ES Range, Resolution, Accuracy, & Current Levels

Range	2 Ω	20 Ω	200 Ω	200 ΚΩ
Nominal Current	5 mA	5 mA	0.5 mA	0.5 uA
Failsafe Current	8 mA	8 mA	8 mA	8 mA
Resolution	100 u <b>Ω</b>	1 mΩ	10 m $\Omega$	10 Ω
Accuracy	± .02% of reading & ± .05% of range	± .02% of reading & range	± .02% of reading & range	± .02% of reading & range

#### **AMPTEC 620ES General Specifications**

Display 4 ½ digit LED di	splay	Dimensions	9.75" x 10" x 3.25"
Input Voltage 250 VDC maxim	mum l	Internal Voltage	4.8 VDC maximum
Low Battery Display read	s"—" (	Open Circuit	1.6 VDC
Overload/Overrange Display flas	shes -	<b>Terminal</b> Ban	ana jack binding posts
Temperature Coefficient ± 0.002% per	1° C	Temperature Limit (Opera	ating) 0° to 50° C
Temperature Limit (Storage)20° to 7	70° C	Update Rate	3 readings per second
Weight (Standard Version)	5 lbs.		

#### **AMPTEC 620ES Power Specifications**

Batteries 4ea 5000 mAh NICAD batteries	Battery Charge Time ~8 hrs. til full charge
Battery Charger AMPTEC 620-DC	Battery Charger Charging Current 2A max
Battery Charger Input 90 – 264 VAC	Battery Life 1000 cycles or 3 years
Battery Charger Output 5.9V	

#### **OP-247 Optically Isolated Power Specifications**

This option enables your unit to be ran via AC power, allowing for uninterrupted use. Unless otherwise noted in the table below, all other specifications match those listed in the general specifications section.

AC/DC adaptor	AMPTEC 247-DC	Adaptor input	. 120VAC
Adaptor output	24 VDC	Unit Weight	2.3 lbs

#### **OP-232 RS232C Interface Specifications**

This option enables your unit to connect to a computer and receive commands via RS232C.

Connection	DE-9 connector	Rear terminal block	4 Gold-Plated terminals

#### **OP-519 Rack Mount Specifications**

This option, OP-519S (for single units) and OP-519D (for dual units), allows your unit to be rack mounted. Unless otherwise noted in the table below, all other specifications match those listed in the general specifications section.

OP-519S (Single Unit)	OP-519D (Dual Units)	
Dimensions 19" x 3.5" x 10"	Dimensions 19" x 3.5" x 10"	
Materials ABS plastic face, aluminum	Materials ABS plastic face, aluminum	
Weight 2.3 lbs (plus unit weight)	Weight 2.1 lbs (plus unit weights)	



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# AMPTEC 620ES Igniter Circuit Tester Ordering Information

The below is a comprehensive list of every available AMPTEC brand accessory and modification that is compatible with the 620ES Igniter Tester. Please contact us for pricing or questions about a custom accessory/modification.

# General 620ES Ordering Information

SKU   Description   Power cord for meters with OP-247   Compatible only with units that have OP-247   Compatible only with units that have OP-247   Power cord for meters with OP-247   Compatible only with units that have OP-247   Pre-installed in unit upon purchase   Pre-installed in unit upon purchase   One is provided with unit upon purchase   OP-100   Hard shell transit case for unit   OP-110   Test lead storage pouch   OP-290   4' Alligator clip test lead set   OP-291   4' Dual banana jack to single banana jack lead set   OP-291   4' Dual banana jack to single banana jack lead set   OP-300   4' Gold plated 4-Wire Kelvin clip leads   One is provided with unit upon purchase   OP-302   5-way Banana jack backed Kelvin clips (no cable incl.)   OP-304   4' Banana jack calibration lead set   OP-304   A' Banana jack calibration lead set   OP-304   OP-304   OP-304   OP-304   OP-304   OP-304   OP-305   OP-306   OP-306   OP-306   OP-307   OP-307   OP-307   OP-307   OP-308   OP-308   OP-309   OP-400   OP-400	SKU	Description	
SKU Description Notes  247-DC Power cord for meters with OP-247 Compatible only with units that have OP-247  620-BAT Replacement set of 4 NiCd D cell batteries Pre-installed in unit upon purchase  620-DC Battery charger replacement One is provided with unit upon purchase  OP-100 Hard shell transit case for unit  OP-110 Test lead storage pouch  OP-290 4' Alligator clip test lead set  OP-291 4' Dual banana jack to single banana jack lead set  OP-300 4' Gold plated 4-Wire Kelvin clip leads  OP-300 5-way Banana jack backed Kelvin clips (no cable incl.)  OP-304 4' Banana jack calibration lead set  OP-305 5-way Banana jack backed Kelvin clips (no cable incl.)  OP-306 4' Kelvin with large jaw/clamp lead set  OP-307 4' Gold plated set with alligator clips instead of banana jacks  OP-308 4' Kelvin with large jaw/clamp lead set  OP-401 4' Gold plated single tip Kelvin probes  OP-401 4' Surface mount sized Kelvin micro probe set  OP-402 4' Surface mount sized Kelvin micro probe set  OP-403 4' Kelvin mini spear probe set  OP-404 Amphenol connector adapter  620ES Compatible Modifications  SKU Description  OP-CC Conformal coating of all internal PCB  OP-RFI Installation of internal conductive and conformal coating to reduce RFI  OP-RPI Installation of Optically Isolated RS232C interface  OP-232 Installation of Optically Isolated Power (AC power operated)  OP-500 Installation of Isolated Analog Output  Modifies unit to fit rack mount, includes hardware and face plate(s), OP-519S	620ES UNIT	Igniter tester, OP-300 leads, 620-DC battery charger, N	J.I.S.T. calibration certificate
Power cord for meters with OP-247  Replacement set of 4 NiCd D cell batteries  Replacement set of 4 NiCd D cell batteries  Pre-installed in unit upon purchase  One is provided with unit upon purchase  OP-100  Hard shell transit case for unit  OP-110  Test lead storage pouch OP-290  4' Alligator clip test lead set OP-291  4' Dual banana jack to single banana jack lead set OP-300  4' Gold plated 4-Wire Kelvin clip leads OP-300  OP-301  Feway Banana jack backed Kelvin clips (no cable incl.) OP-302  S-way Banana jack backed Kelvin clips (no cable incl.) OP-304  4' Banana jack calibration lead set OP-305  OP-306  OP-307  4' Kelvin with large jaw/clamp lead set OP-401  4' Gold plated single tip Kelvin probes OP-401  Pistol grip version of OP-401 probe set OP-402  4' Surface mount sized Kelvin micro probe set OP-403  Amphenol connector adapter  620ES Compatible Modifications  SKU  Description OP-CC  Conformal coating of all internal PCB OP-RPI Installation of internal conductive and conformal coating to reduce RFI OP-RPI Installation of Optically Isolated RS232C interface OP-247 Installation of Isolated Analog Output Modifies unit to fit rack mount, includes hardware and face plate(s), OP-519S		620ES Compatible Accessories	
620-BAT Replacement set of 4 NiCd D cell batteries Pre-installation of purchase 620-DC Battery charger replacement One is provided with unit upon purchase 620-DC Battery charger replacement One is provided with unit upon purchase 620-DC Hard shell transit case for unit  OP-100 Hard shell transit case for unit  OP-290 4' Alligator clip test lead set  OP-291 4' Dual banana jack to single banana jack lead set  OP-300 4' Gold plated 4-Wire Kelvin clip leads OP-300 5-way Banana jack backed Kelvin clips (no cable incl.) OP-304 4' Banana jack calibration lead set  OP-305 4' Kelvin with large jaw/clamp lead set  OP-306 4' Kelvin with large jaw/clamp lead set  OP-407 4' Gold plated single tip Kelvin probes PG-401 Pistol grip version of OP-401 probe set  OP-402 4' Surface mount sized Kelvin micro probe set  OP-403 4' Kelvin mini spear probe set  OP-4040 Amphenol connector adapter  620ES Compatible Modifications  SKU Description  OP-CC Conformal coating of all internal PCB OP-RFI Installation of internal conductive and conformal coating to reduce RFI OP-RPI Installation of Optically Isolated RS232C interface OP-247 Installation of Optically Isolated Power (AC power operated) OP-500 Installation of Isolated Analog Output Modifies unit to fit rack mount, includes hardware and face plate(s), OP-519S	SKU	Description	Notes
620-DC Battery charger replacement One is provided with unit upon purchase  OP-100 Hard shell transit case for unit  OP-110 Test lead storage pouch  OP-290 4' Alligator clip test lead set  OP-291 4' Dual banana jack to single banana jack lead set  OP-300 4' Gold plated 4-Wire Kelvin clip leads One is provided with unit upon purchase  OP-301 4' Banana jack backed Kelvin clips (no cable incl.)  OP-302 5-way Banana jack backed Kelvin clips (no cable incl.)  OP-304 4' Banana jack calibration lead set  OP-305 4' Kelvin with large jaw/clamp lead set  OP-306 4' Kelvin with large jaw/clamp lead set  OP-401 4' Gold plated single tip Kelvin probes  PG-401 Pistol grip version of OP-401 probe set  OP-402 4' Surface mount sized Kelvin micro probe set  OP-403 4' Kelvin mini spear probe set  OP-404 Amphenol connector adapter  620ES Compatible Modifications  SKU Description  OP-CC Conformal coating of all internal PCB  OP-RFI Installation of internal conductive and conformal coating to reduce RFI  OP-RPI Installation of Optically Isolated RS232C interface  OP-247 Installation of Optically Isolated Power (AC power operated)  OP-500 Installation of Isolated Analog Output  Modifies unit to fit rack mount, includes hardware and face plate(s), OP-519S	247-DC	Power cord for meters with OP-247	
OP-100 Hard shell transit case for unit OP-110 Test lead storage pouch OP-290 4' Alligator clip test lead set OP-291 4' Dual banana jack to single banana jack lead set OP-291 4' Gold plated 4-Wire Kelvin clip leads OP-300 4' Gold plated 4-Wire Kelvin clips (no cable incl.) OP-302 5-way Banana jack backed Kelvin clips (no cable incl.) OP-304 4' Banana jack calibration lead set OP-305 4' Kelvin with large jaw/clamp lead set OP-306 4' Kelvin with large jaw/clamp lead set OP-307 4' Gold plated single tip Kelvin probes OP-308 4' Kelvin with large jaw/clamp lead set OP-309 4' Surface mount sized Kelvin micro probe set OP-401 4' Gold plated single tip Kelvin probes OP-402 4' Surface mount sized Kelvin micro probe set OP-403 4' Kelvin mini spear probe set OP-430 Amphenol connector adapter  620ES Compatible Modifications SKU Description OP-CC Conformal coating of all internal PCB OP-RFI Installation of internal conductive and conformal coating to reduce RFI OP-RPI Installation of Optically Isolated RS232C interface OP-247 Installation of Optically Isolated Power (AC power operated) OP-500 Installation of Isolated Analog Output Modifies unit to fit rack mount, includes hardware and face plate(s), OP-519S	620-BAT	Replacement set of 4 NiCd D cell batteries	purchase
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