

Ultra-Safe Automated Resistance Measurements 620RK Explosive Safety Igniter Tester



RS232C

24 Hour/7 Day Operation

Safe Automated Squib Resistance Measurements



The AMPTEC 620 series Explosive Safety Igniter Circuit Testers have now introduced the latest remote controllable and automated measuring (optically and magnetically isolated RS-232C interface) failsafe ohmmeter model. The AMPTEC 620RK is a failsafe ohmmeter specifically designed for ultra-safe resistance testing on explosive devices (i.e. squibs, igniters, flares, detonators). The AMPTEC 620RK Explosive Safety Igniter Tester can be safely operated 24 Hrs/7Day without batteries. It's proven "Medical Safety 3 KV Isolated Supply" technology is the same used in monitoring human patients wired to electrical instrumentation. The AMPTEC 620RK automated Igniter Circuit Tester is presently running in dozens of U.S. Anti-Ballistic Missile systems (24Hrs/7). The AMPTEC 620RK can be remote controlled (i.e. PLC or PC) to change to a given resistance range, safely take squib readings and then send them over the unit's optically isolated RS232C serial interface to a PLC or PC. The AMPTEC 620RK resistance measurement circuitry uses the same failsafe current source as the USAF Munition Safety Board approved AMPTEC 620A-4 Igniter Tester (the only Digital Igniter Tester the USAF uses on its high explosive ordnance). The AMPTEC 620RK current source is the same circuitry used by the US NAVY Ordnance Safety Board Approved AMPTEC 630BN ICT on NAVY "Submarine Launched Cruise Missile warhead and rocket motor squibs".

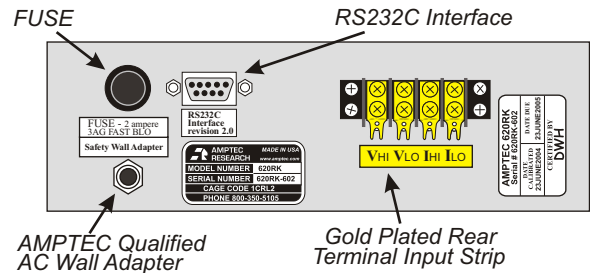
620RK Resistance Range/Resolution

20 Ω	200 Ω	200 KΩ
1 mΩ	10 mΩ	10 Ω

620RK Nominal Test Current/Failsafe Current Levels

20 Ω	200 Ω	200 KΩ
8mA	1.5mA	1.5 μA
5mA	0.5mA	0.5 μA

AMPTEC 620RK REAR PANEL



Gold plated 4 terminal Kelvin rear terminal Inputs are wired in parallel with the unit's front terminals come standard with AMPTEC 620RK. If a "2 wire ohms" connection is made then the V high and I high terminals should be shorted together, and the V low and I low terminals should be shorted.

For safety reasons, the unit's rear panel DC power supply input (raw DCV) is then internally electrically isolated/conditioned to a 3.0 KV . The unit's Safety Board Approved failsafe ohmmeter current source is still running independent of the meter's 3.0 KV DC or AC supply isolation circuitry when used with AMPTEC supplied wall adapter.

Specifications

- Accuracy:** (1 YEAR 25°C ± 10°C) ± 0.02% of reading ± 0.02% of range for the 20 ohm and 200 ohm ranges, ± 0.05% of reading ± 0.05% for the 200K ohm range.
- Failsafe Current :** (5 mA operational) < 8 milliamperes for the 20 Ohm ranges, < 1.5 milliamperes for the unit's 200 ohm range, < 15 micro-ohms or the 200 Kohm range.
- Display:** 4½ digit (19999) L.E.D. - 20,000 counts
- Terminal Configuration:** Four-wire Kelvin, or the inputs can be shorted to a 2 wire resistance meter.
- Measurement Update Rate . . .** Approximately 300 ms
- Overload Indication:** Display flashes, also O/L status available over the isolated RS232C interface
- Operating Temperature Range:** 0°C to 50°C
- Open Circuit Current Source Compliance Voltage . .** Diode clamped at ~1.6 volts VDC
- Temperature Coefficient:** 20 ohm and &200 ohm ranges ± 0.002% per °C (from 0°C-15°C and 35°C-50°C), 200Kohm range ±0.01% per °C (from 0°C-15°C and 35°C-50°C)
- Display Update Rate:** Approximately 3 per second also available over the RS232C Interface
- Power:** Continuous 24Hr/ 7 Days via DC/DC convertor
- 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

AMPTEC RESEARCH Corporation is an American Owned and Operated small business



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