

Fusion

USES:

- High & Low Voltage Testing of Up to 72 Points in Less Than 1 Second
- Production Testing of Medical Device Cables, Leads, Feedthroughs and Other Components
- Testing of Assemblies Comprised of Resistors, Capacitors, Switches & Connectors

FEATURES:

- 36 or 72 Channel Scanner
- HV Test to 3500VAC, 3000VDC
- Total & Real Leakage Current Measurements to 25mA AC
- Insulation Resistance to 100GΩ
- 2- & 4-Wire Resistance Measurements
- LV Test Stimulus: 10μA - 100mA
- Capacitance Test: 100pF-1000μF
- Custom Component Tests: Flying Leads, Twisted Pair, Harness
- Group Continuity Testing
- Net Testing & Programming
- Pass/Fail Testing
- Automatic Arc Detection
- Touch Screen Programming
- Auto-Learn Component Recognition



Integrated Multi-Point Analyzer

Hipot, Megohmmeter, Milliohmmeter & Capacitance Measurement Functions Up to 72 Channels

Introduction

The Fusion Multi-Point Analyzer is a fully integrated system for testing products with multiple leads or test points. Functions include Hipot, Megohmmeter, Milliohmmeter and Capacitance Measurements through a multi-channel scanner up to 72 points. To fit your product test application, choose from eight models, with pin count of 36 or 72, AC hipot voltage to 3500V and DC hipot voltage to 3000V. Its PC-based intuitive graphical touch-screen makes for easy setup and operation. The highly automated system allows for custom test programming without the need for scripting. Through component recognition, multi-point devices can be learned and test programs generated, all automatically. In high speed production applications, high and low voltage testing can be accomplished in less than 1 second.

Description

Low Voltage Tests: For low resistance measurements, a 2-wire and 4-wire configuration is possible with resolution down to 1mΩ in the 4-wire mode. Make 2-wire measurements from 1mΩ to 50MΩ and 4-wire measurements from 1mΩ to 400kΩ. The unit is also capable of high resistance measurements to 50MΩ.

High Voltage Tests: For AC hipot testing, output voltages to 3500V are possible and for DC hipot output voltages to 3000V. Insulation resistance measurements can be made to 100GΩ at test voltages to 3000V DC.

Component Testing: The Fusion is able to test cable assemblies comprised of multiple components such as resistors, capacitors, diodes and switches. The Net List for components is learned automatically using "Auto Mode" and can also be edited manually. Capacitor measurements from 100pF to 1000uF are possible with basic accuracy of 2%

Interfaces: Standard interfaces on the Fusion include RS-232, Printer, Monitor, Keyboard, 3 1/2" Floppy Drive and Ethernet (Network).

Reports Generated: Fusion will automatically generate reports for each product tested which can then be displayed, printed out or saved to a file. Reports allow products to be serialized and can be formatted by the user.

System Applications: The Fusion can be used as a stand-alone system or easily integrated into a larger automated system using its digital inputs and digital outputs.

Password Protection: Enabling Password Protection restricts access to specific features preventing unauthorized users from modifying test programs and system parameters.



For more detailed specifications,
visit

www.quadtech.com

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purchase, rent & lease options,
call

1-800-253-1230

Fax 1-978-461-4295

Intl. 1-978-461-2100

Fusion

Model Numbers:

Fusion Model	# Points	V AC	V DC
QF1 -036	36	2500	--
-072	72	2500	--
QF2 -036	36	--	2500
-072	72	--	2500
QF3 -036	36	2500	2500
-072	72	2500	2500
QF4 -036	36	3500	3000
-072	72	3500	3000

AC Voltage:

Parameter	Range	Accuracy	Resolution
QF4 Voltage	50 – 3500V AC	±(1% + 5V)	1V
QF1, QF3 Voltage	50 – 2500V AC	±(1% + 5V)	1V
Total & Real Current	1µA – 25mA	±3%	1µA
Dwell Time	500ms – 600s	±(1% + 50ms)	10ms
Ramp Time	0s – 100s	±25%	10ms
Fall Time	0s – 100s	±25%	10ms
Discharge Time	0s – 1200s	±(1% + 50ms)	100ms

DC Voltage:

Parameter	Range	Accuracy	Resolution
QF4 Voltage	50 – 3000V DC	±(1% + 5V)	1V
QF2, QF3 Voltage	50 – 2500V DC	±(1% + 5V)	1V
Current	1nA – 3mA	±3%	1nA
Dwell Time	100ms – 600s	±(1% + 50ms)	10ms
Ramp Time	0s – 100s	±(1% + 50ms)	10ms
Fall Time	0s – 100s	±(1% + 50ms)	10ms
Discharge Time	0s – 1200s	±(1% + 50ms)	100ms
Insulation	1M – 49MΩ	±3%	1MΩ
Resistance	50M – 499MΩ	±5%	1MΩ
	500M – 1.999GΩ	±10%	1MΩ
	2G – 100GΩ	±20%	1MΩ

2-Wire Resistance:

Range	Accuracy	Resolution	Max Current
0.000 – 9.999Ω	±(1% + 50mΩ)	1mΩ	100mA
10.00 – 39.99Ω	±(1% + 50mΩ)	10mΩ	100mA
40.00 – 99.99Ω	±1%	10mΩ	1mA
100.0 – 399.9Ω	±1%	100mΩ	1mA
400.0 – 999.9Ω	±1%	100mΩ	1mA
1.000k – 3.999kΩ	±1%	1Ω	1mA
4.000k – 9.999kΩ	±1%	1Ω	100µA
10.00k – 39.99kΩ	±1%	10Ω	100µA
40.00k – 99.99kΩ	±1%	10Ω	10µA
100.0k – 399.9kΩ	±1%	100Ω	10µA
400.0k – 999.9kΩ	±3%	100Ω	Auto
1.000M – 9.999MΩ	±5%	1kΩ	Auto
10.00M – 50.00MΩ	±10%	10kΩ	Auto

4-Wire Resistance:

Range	Accuracy	Resolution	Max Current
0.000 – 9.999Ω	±(1% + 5mΩ)	1mΩ	100mA
10.00 – 39.99Ω	±(1% + 5mΩ)	10mΩ	100mA
40.00 – 99.99Ω	±1%	10mΩ	1mA
100.0 – 399.9Ω	±1%	100mΩ	1mA
400.0 – 999.9Ω	±1%	100mΩ	1mA
1.000k – 3.999kΩ	±1%	1Ω	1mA
4.000k – 9.999kΩ	±1%	1Ω	100µA
10.00k – 39.99kΩ	±1%	10Ω	100µA
40.00k – 99.99kΩ	±1%	10Ω	10µA
100.0k – 399.9kΩ	±1%	100Ω	10µA

Capacitance:

Range	Accuracy	Resolution
100.0pF – 999.9pF	±(2% + 10pF)	0.1pF
1.000nF – 9.999nF	±2%	1pF
10.00nF – 99.99nF	±2%	10pF
100.0nF – 999.9nF	±2%	100pF
1.000µF – 9.999µF	±2%	1nF
10.00µF – 99.99µF	±2%	10nF
100.0µF – 999.9µF	±2%	100nF

Interfaces:

RS-232, Printer, Monitor, Keyboard, 3 1/2" Floppy Drive, Ethernet

Miscellaneous:

Learn Mode
Offset/Tare Function
Password Lockout
Fault Location
Pause Mode

Dimensions:

Main Unit: 17 x 21.5 x 9.0 inches
Expansion Unit: 17 x 21.5 x 9.0 inches
Shipping Container: 27.5 x 28.5 x 31.25 in.

Weight:

QF1, QF3, QF4: 90 lbs net
QF1, QF3, QF4: 150 lbs ship
QF2: 80 lbs net
QF2: 140 lbs ship

Environmental:

Operating: 0°C to +55°C
Humidity: 8% < 80%
Gradient: 30°C/Hr max, w/o condensation
Vibration: Operating: 2.45m/s² (0.25G)
Vibration: Non-Operating: 11.76m/s² (1.2G)
Shock: Operating: 29.4m/s² (3G)
Shock: Non-Operating: 490m/s² (50G)

Power:

- 105 - 130V AC
- 60 Hz
- 5A max

Ordering Information

Fusion QF1-036, -072: 2500V AC	Optional Accessories:	800190	Spares Kit: QF1, QF2 & QF3
Fusion QF2-036, -072: 2500V DC	No P/N Calibration B&A Data	800191	Spares Kit: QF4
Fusion QF3-036, -072: 2500V AC / 2500V DC	320329 Kit Conn MPT Crimp 13p	800192	Calibration Verification Tool
Fusion QF4-036, -072: 3500V AC / 3000V DC	350090 Tare Plug		
	520153 EPO Switch		
Includes:	520154 EPO Switch with 1 Palm Switch		
4200-0300 AC Power Cable(s)	520155 Single Palm Switch		
150795 Instruction Manual	520156 Battery for Horizon-Pentium		
630161 Ground Probe	Motherboard		
320330 Adapter: DIN-5 to PS/2	630160 MPT Cal Cable I/F MUX-036		
Calibration Certificate traceable to NIST			

For more detailed specifications, visit www.quadtech.com
For more information about special purchase, rent & lease options, call
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