

MedTEST

A Complete Electrical Safety Testing System that Satisfies the Most Demanding Medical Compliance Requirements



Our MedTEST system can be designed to provide a complete test solution for medical device manufacturers in need of conforming to IEC 60601-1 3rd Edition Standard. Customize your MedTEST system to satisfy your individual testing requirements including Hipot, Ground Bond, Insulation Resistance, Functional Run and leakage current testing for all B, BF and CF type applied parts including Mains on Applied Parts (MOAP) tests. Up to 40 A of continuous DUT current combined with our Active Link® technology reduces overall test time and integration with our SC6540 modular multiplexer allows for multi-point sequential testing without the need to change test leads. Get the most from your test system by utilizing our WithStand® software for maximum productivity-enhancing benefits.



Rack cabinet shown in image is for illustration only. Ikonix does not sell or distribute the rack cabinet.



AC Hipot



DC Hipot



Ground Bond



Ground Continuity



Insulation Resistance



Leakage Current



Functional Run



Power Source Recommended

AVAILABLE INTERFACES



USB



RS-232



Ethernet
(Optional)



GPIB
(Optional)

SAFETY & PRODUCTIVITY FEATURES



SmartGFI®
Automatic operator shock protection



Remote Safety Interlock
Easily disable HV output



Prompt & Hold
Provides alerts & instructions between tests



Multiple Languages
Multi-Language user interface



Active Link®
Continuous power during test steps



My Menu
Customize your own shortcut menu



DualCHEK®
Simultaneous Hipot and Ground Bond



Internal Multiplexer
Available with optional HV multiplexer



Modular Multiplexer
Compatible with SC6540 multiplexers



FailCHEK™
Confirms failure detection



Cal-Alert®
Tracks and alerts for calibration



Ramp-HI®
Reduce ramp time during DC Hipot



Charge-LO®
Confirms proper DUT connection



Accredited Cal
Accredited calibration options available



WithStand®
Automation Software

POPULAR MEDTEST CONFIGURATIONS



OMNIA® II 8207 AND SC6540

- All-in-one testing system (Hipot, Ground Bond, Insulation Resistance, and Leakage Current)
- Built in 500 VA AC power source
- Efficient use of rack space
- SC6540 provides automated multi-point testing
Most common applications incorporate 8 or 16 port multiplexers



OMNIA® II 8206, SC6540 AND POWERED BY AN **EEC** AC POWER SOURCE

- All-in-one testing system (Hipot, Ground Bond, Insulation Resistance, and Leakage Current)
- Compatible EEC power source provides power to DUT*
- SC6540 provides automated multi-point testing.
Most common applications incorporate 8 or 16 port multiplexers

*Choose from EEC 8500 Series.



OMNIA® II 8204, 620L, SC6540 AND POWERED BY AN **EEC** AC POWER SOURCE

- All-in-one testing system (Hipot, Ground Bond, Insulation Resistance, and Leakage Current)
- Compatible EEC power source provides power to DUT*
- SC6540 provides automated multi-point testing
Most common applications incorporate 8 or 16 port multiplexers
- Up to 40 A continuous current capability for applications that draw greater than 16 A of current

*Choose from EEC 8500 Series.

LINE CONDITIONS		
Reverse Power Switch	Switch for power polarity reversal	
Neutral Switch	Neutral switch on/off selection for single fault	
Ground Switch	Ground switch on/off selection for class I single fault	
PROBE SETTINGS		
Surface to Surface	(PH – PL)	
Surface to Line	(PH – L)	
Ground to Line	(G – L)	
LEAKAGE LIMIT SETTINGS		
Touch Current High/Low Limit (rms)	Range: Resolution: 0.1 μA / 1 μA / 0.01 mA	0.0 μA – 999.9 μA / 1,000 μA – 9,999 μA / 10.00 mA – 20.00 mA
Touch Current High/Low Limit (Peak)	Range: Resolution: 0.1 μA / 1 μA / 0.01 mA	0.0 μA -999.9 μA / 1,000 uA – 9,999 μA / 10.00 mA – 30.00 mA
MEASURING DEVICE MODULE		
MD1	UL544NP, UL484 , UL923, UL471, UL867, UL697	
MD2	UL544P	
MD3	IEC 60601-1	
MD4	UL1563	
MD5	IEC60990 Fig4 U2, IEC62368, IEC60335-1, IEC60598-1,IEC60065, IEC61010	
MD6	IEC60990 Fig5 U3, IEC60598-1	
MD7	IEC62368, IEC61010-1 FigA.2 (2 kohm) for Run function	
External MD	Basic measuring element 1 kohm	
MD Voltage Limit	70 VDC	
DUT POWER		
AC Voltage	0.0 – 277.0 V	
AC Current	40 A max continuous	
AC Voltage High/Low Limit	Range: Resolution: 0.1 V/step	0.0 – 277.0 V
AC Voltage Display	Range: Resolution: Accuracy: ± (1.5% of reading + 2 counts), 30.0 – 277.0 V	0.0 – 277.0 V
Delay Time Setting	Range: Resolution: 0.1 sec	0.5 – 999.9 sec
Dwell Time Setting	Range: Resolution: Accuracy: ± (0.1% of reading + 0.05 seconds)	0, 0.5 – 999.9 sec (0=Continuous)
Failure Protection	On Start-Up – Neutral Voltage Check (Neutral – V) Over current and ground current check (Line – OC)	

DIELECTRIC WITHSTAND TEST MODE			
Output Rating*	5 kV @ 50 mAAC 6 kV @ 20 mADC		
Voltage Setting	Range: Resolution: Accuracy:	0 – 5,000 VAC, 0 – 6,000 VDC 1 V ± (1.5% of setting + 5 V)	
HI and LO-Limit	AC Total	Range: Resolution: Accuracy:	0.000-9.999 mA 0.001 mA ± (2% of setting + 2 counts)
		Range: Resolution: Accuracy:	10.00 – 50.00 mA 0.01 mA ± (2% of Setting + 2 counts)
	AC Real	Range: Resolution: Accuracy:	0.000 – 9.999 mA 0.001 mA ± (3% of setting + 50 μA)
		Range: Resolution: Accuracy:	10.00 – 50.00 mA 0.01 mA ± (3% of setting + 50 μA)
	DC	Range: Resolution: Accuracy:	0.00 – 999.9 μA 0.1 μA ± (2% of setting + 2 counts)
		Range: Resolution: Accuracy:	1,000 – 20,000 μA 1 μA ± (2% of setting + 2 counts)
Ramp HI	> 20 mA peak maximum, ON/OFF selectable		
Charge LO	Range:	0.000 – 350.0 μA or Auto Set	
DC Output Ripple	≤ 4% Ripple rms at 5 kVDC @ 20 mA, Resistive Load		
Discharge Timer	< 50 msec for no load, < 100 msec for capacitor load (All capacitance values in MAX load spec below)		
Maximum Capacitive Load	1 μF < 1 kV 0.75 μF < 2 kV 0.50 μF < 3 kV	0.08 μF < 4 kV 0.04 μF < 6 kV	
Output Frequency	50/60 Hz ± 0.1% , User Selection, 400/800 Hz Option		
AC Output Waveform	Sine Wave, Crest Factor = 1.3 – 1.5		
Output Regulation	± (1% of output + 5 V) from no load to full load and over input voltage range		
Dwell Timer	AC 0, 0.4 – 999.9 sec (0=Continuous) DC 0, 0.3 – 999.9 sec (0=Continuous)		
Ramp Timer	Ramp-Up AC: 0.1 – 999.9 Ramp-Down AC: 0.0-999.9 Ramp-Up DC: 0.4 – 999.9 Ramp-Down DC: 0.0, 1.0-999.9		
Ground Continuity	Current: DC 0.1 A ± 0.01 A, fixed Max. Ground Resistance: 1 Ω ± 0.1 Ω, fixed		
Ground Fault Interrupt	GFI Trip Current: 5.0 mA max HV Shut Down Speed: < 1 ms		
*Output voltage limited to 3.5 kV with 620L option 03			

CONTINUITY TEST MODE		
Output Current	DC 0.1 A \pm 0.00001 A	
Resistance Display	Range:	0.00 – 10,000.00 Ω
HI and LO-Limit	0.00 – 10,000 Ω	
Dwell Timer	Range:	0.0, 0.3 – 999.9 sec (0=Continuous)
Milliohm Offset	Range:	0.00 – 10.00 Ω
GROUND BOND TEST MODE		
Output Voltage	Range:	3.00 – 8.00 VAC
Output Frequency	50/60 Hz \pm 0.1%, User Selection	
Output Current	Range: Resolution: Accuracy:	1.00 – 40.00 A 0.01 A \pm (2 % of setting + 2 counts)
Output Regulation	\pm (1% of output + 0.02 A) Within maximum load limits, and over input voltage range	
Maximum Loading	1.00 – 10.00 A, 0 – 600 m Ω 10.01 – 30.00 A, 0 – 200 m Ω 30.01 – 40.00 A, 0 – 150 m Ω	
HI and LO-Limit	Range:	0 – 150 for 30.01 – 40.00 A
	Range:	0 – 200 for 10.01 – 30.00 A
	Range:	0 – 600 for 6.00 – 10.00 A
	Range:	0 – 600 for 5.99 – 1.00 A
	Resolution:	1 m Ω
	Accuracy:	6.00 – 40.00 A, \pm (2% of setting + 2 Counts) 1.00 – 5.99 A, \pm (3% of setting + 3 Counts)
Milliohm Offset	Range:	0 – 200 m Ω
INSULATION RESISTANCE TEST MODE		
Output Voltage	Range:	30 – 1,000 VDC
Charging Current	Maximum > 20 mA peak	
HI and LO-Limit	Range: Resolution:	0.05-99.99 M Ω 0.01 M Ω
	Range: Resolution:	100.0 – 999.9 M Ω 0.1 M Ω
	Range: Resolution:	1000 – 50,000 M Ω 1 M Ω
Charge-LO	0.000 – 3.500 μ A or Auto Set	
Ramp Timer	Ramp Up: Ramp Down:	0.1 – 999.9 secs 0.0, 1.0 – 999.9 secs
Dwell Timer	0, 0.5 – 999.9 (0=Continuous)	
Delay Timer	0.5 – 999.9 secs	
Ground Fault Interrupt	GFI Trip Current: 5.0 mA max HV Shut down Speed: < 1 ms	

GENERAL SPECIFICATIONS	
Interface	Standard: USB, RS-232 Optional: Ethernet, GPIB
Safety	Built-in SmartGFI® circuit
Memory	620L: 50 memories, 30 steps per memory OMNIA® II: 10,000 steps
AC POWER SOURCE	
AC Power Source	Up-to 6 kVA compatible power sources available
Configuration	AC Power Source configuration depends on application. MedTEST hardware is configured for testing products with one side of the supply mains at earth potential (Fig 10 UL60601-1). MedTEST hardware is configured for unbalanced 0-277 V DUT input power. Custom Configurations available. Contact us for details.

For reading specifications, please refer to the user manual.

Why We Use Counts

Associated Research publishes some specifications using “counts” which allows us to provide a better indication of the instrument’s capabilities across measurement ranges. A count refers to the lowest resolution of the display for a given measurement range. For example, if the resolution for voltage is 1V then 2 counts = 2 V.

Specifications subject to change without notice.