

3. Specifications and Controls

3.1. Model 7704 and 7700 Functional Specifications

INPUT		
Voltage		100/115/200/230 VAC \pm 10%, Single Phase, User selection
Frequency		47 - 63 Hz
Fuse		15 Amp 250V fast blow internal
DIELECTRIC WITHSTAND TEST MODE		
Output Rating		5 KV @ 100 mA AC, 6 KV @ 10 mA DC
Output Adjustment		Range: 0 - 5 KV AC, 0 - 6 KV DC Resolution: 1 volt/step Accuracy: \pm (2% of setting + 5 volts)
Ramp-HI		12mA peak maximum, ON/OFF selectable
Charge-LO		Range: 0.0 - 350.0 μ A DC or Auto set
HI-Limit	AC	Range: 0.00 - 99.00 mA Resolution: 0.01 mA/step
	DC	Range: 0 - 9999 μ A Resolution: 1 μ A/step
	Accuracy:	AC or DC \pm (2% of setting + 2 counts)
LO-Limit	AC	Range: 0.000 - 9.999 mA Resolution: 0.001 mA/step
	DC	Range: 0.0 - 999.9 μ A Resolution: 0.1 μ A/step
	Accuracy:	AC or DC \pm (2% of setting + 2 counts)
Arc Detection		Range: 1 - 9
Failure Detector		Audible and Visual
Voltage Display		Range: 0.00 - 6.00 KV Full Scale Resolution: 10 volt/step Accuracy: \pm (2% of reading + 2 counts)

Current Display	AC	Auto Range
		Range 1: 0.000mA - 3.500mA Resolution: 0.001mA/step Accuracy: \pm (2% of reading + 0.003mA)
	DC	Range 2: 3.00 - 99.00 mA Resolution: 0.01 mA/step Accuracy: \pm (2% of reading + 0.06mA)
		Range 1: 0.0 μ A - 350.0 μ A Resolution: 0.1 μ A/step Accuracy: \pm (2% of reading + 0.3uA)
		Range 2: 300 μ A - 3500 μ A Resolution: 1 μ A/step Accuracy: \pm (2% of reading + 2uA)
		Range 3: 3000 μ A - 9990 μ A Resolution: 10 μ A/step Accuracy: \pm (2% of reading + 60uA)
DC Output Ripple		\leq 4% Ripple RMS at 6 KV DC @ 3.5 mA, Resistive Load
Discharge Time		\leq 200 ms
Maximum Capacitive Load		1uF < 1KV 0.08uF < 4KV 0.75uF < 2KV 0.04uF < 5KV
DC Mode		0.5uF < 3KV
AC Output Wave Form		Sine Wave, Crest Factor = 1.3 - 1.5
Output Frequency		Range: 60 or 50 Hz, User Selection Accuracy: \pm 1%
Output Regulation		\pm (1 % of setting + 5 volts) from no load to full load
Dwell Timer		Range: 0, 0.3 - 999.9 sec (0 = Constant) Resolution: 0.1 sec increments Accuracy: \pm (0.1% + 0.05 sec)
Ramp Timer		Range: AC 0.1 - 999.9 sec DC 0.4 - 999.9 sec Resolution: 0.1 sec increments Accuracy: \pm (0.1% + 0.05 sec)

Ground Continuity Model 7700 only	Current : DC 0.1 A ± 0.01A, fixed Max. ground resistance : 1 Ω ± 0.1Ω, fixed																		
Ground Fault Interrupt	GFI Trip Current: 450 μA max (AC or DC) HV Shut Down Speed: < 1 ms																		
Output Short Circuit Current	> 200mA																		
INSULATION RESISTANCE TEST MODE																			
Output Voltage	Range: 100 - 1000 Volts DC Resolution: 1 volt/step Accuracy: ± (2% of reading + 2 volts)																		
Short Circuit Current	Maximum: 12mA peak																		
Voltage Display	Range: 0 - 1000 V Resolution: 1 volt/step Accuracy: ± (2% of reading + 2 counts)																		
Resistance Display	Range: 1 - 9999 MΩ (4 Digit, Auto Ranging) Resolution: <table><tr><td></td><td>500VDC</td><td>1000VDC</td></tr><tr><td></td><td>MΩ</td><td>MΩ</td></tr><tr><td>0.001</td><td>1.000 - 5.388</td><td>1.000 - 9.999</td></tr><tr><td>0.01</td><td>1.40 - 53.88</td><td>2.80 - 99.99</td></tr><tr><td>0.1</td><td>14.0 - 538.8</td><td>28.0 - 999.9</td></tr><tr><td>1</td><td>104 - 9999</td><td>280 - 9999</td></tr></table> Accuracy: ± (2% of reading + 2 counts) at test voltage 500 - 1000V and 1 - 1000 MΩ ± (8% of reading + 2 counts) at test voltage 500 - 1000V and 1000 - 9999 MΩ ± (8% of reading + 2 counts) at test voltage 100 - 500V and 0 - 1000 MΩ		500VDC	1000VDC		MΩ	MΩ	0.001	1.000 - 5.388	1.000 - 9.999	0.01	1.40 - 53.88	2.80 - 99.99	0.1	14.0 - 538.8	28.0 - 999.9	1	104 - 9999	280 - 9999
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Charge-LO	Range: 0.000 - 3.500μA or Auto Set																		
HI-Limit	Range: 0 - 9999 MΩ (0 = Off)																		
LO-Limit	Range: 1 - 9999 MΩ																		
Delay Timer	Range: 0, 0.5 - 999.9 sec (0 = Constant) Resolution: 0.1 sec/step Accuracy: ± (0.1% + 0.05 sec)																		

Ground Fault Interrupt	GFI Trip Current: 450 μ A max (AC or DC) HV Shut Down Speed: < 1 ms
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GROUND BOND TEST MODE Model 7704 only	
Output Voltage (Open Circuit Limit)	Range: 3.00 - 8.00 Volts AC Resolution: 0.01 volt/step Accuracy: $\pm (2 \% \text{ of Setting} + 0.03\text{V})$ O.C. Condition
Output Frequency	Range: 60 or 50 Hz, User Selection Accuracy: $\pm 1\%$
Output Current	Range: 3.00 - 30.00 Amps AC Resolution: 0.01 Amp/step Accuracy : $\pm (2 \% \text{ of Setting} + 0.02 \text{ A})$
Current Display	Range: 0.00 - 30.00 Amps Resolution: 0.01 Amp/step Accuracy: $\pm (3 \% \text{ of Reading} + 0.03 \text{ A})$
Resistance Display	Range: 0 - 600 m Ω Resolution: 1 m Ω /step Accuracy: $\pm (2 \% \text{ of Reading} + 2 \text{ m}\Omega)$
HI-Limit	Range: 0 - 600 m Ω for 3 - 10 A 0 - 150 m Ω for 3 - 30 A Resolution: 1 m Ω /step Accuracy: $\pm (2 \% \text{ of Setting} + 2 \text{ m}\Omega)$
LO-Limit	Range: 0 - 600 m Ω for 3 - 10 A 0 - 150 m Ω for 3 - 30 A Resolution: 1 m Ω /step Accuracy: $\pm (2 \% \text{ of Setting} + 2 \text{ m}\Omega)$
Dwell Timer	Range: 0, 0.5 - 999.9 sec (0 = Constant) Resolution: 0.1 sec/step Accuracy: $\pm (0.1\% + 0.05 \text{ sec})$
Milliohm Offset	Max. Offset 200 m Ω Capability: Resolution: 1 m Ω / step Accuracy: $\pm (2 \% \text{ of Setting} + 2 \text{ m}\Omega)$

GENERAL SPECIFICATIONS	
PLC Remote Control	Input - Test, Reset, Recall memory # 1, # 2 and # 3 Output - Pass, Fail, Test-in-Process
Memory	Allows storage of up to 50 groups different test programs and 8 step/each memory.
Security	Programmable password lockout capability to avoid unauthorized access to test set-up program.
LCD Contrast Setting	9 ranges set by the numeric keys on the front panel.
Buzzer Volume Setting	10 ranges set by the numeric key on the front panel.
Calibration	Software and adjustments are made through front panel.
Mechanical	Bench or rack mount with tilt up front feet.
Dimension	7700 and 7704: (W x H x D) 17 x 5.8 x 16.5 in. (432 x 147 x 419 mm)
Weight	7704: 68.75 lbs (31.25 Kgs) 7700: 61.65 lbs (28 Kgs)