Model 510L
Functional Specifications

510L INPUT		
Voltage	115/230 VAC ± 15%, Single Phase, User selection	
Frequency	50/60 Hz ± 5%,	
Fuse	2 A 250 V Slo-Blo	
DUT POWER		
Voltage	30 - 300 VAC Single Phase Unbalanced (One Hot or Line conductor and One Neutral)	
Current	30 AAC max continuous	
Voltage Display	Range:	30.0 - 300.0 VAC Full Scale
	Resolution:	0.1 V
	Accuracy:	± (1% of reading + 0.2 V)
Short Circuit Protection	32 AAC, Response Time < 600 ms	
LEAKAGE CURRENT		
Current Display	Range 1:	0.0 µA - 999.9 µA
True RMS Responding	Resolution:	0.1 µA/step
	Range 2:	1000 µA - 6000 µA
	Resolution:	1 µA/step
	Accuracy:	
	DC to 100 kHz	± (1.5% of reading + 3 counts)
	>100 kHz to 1 MHz	± 5% of reading, (10.0 µA – 6000 µA)
Measuring Device	A	UL 544 Non Patient
	B	UL 544 Patient
	C	IEC 601-1, UL 2601, EN 60601-1
	D	UL 1563
	E	IEC 1010, UL 3101, IEC 950, UL 1950
MD A - D components	Accuracy:	Resistance ± 1% Capacitance ± 5%
MD E components	Accuracy:	Resistance ± 0.1% Capacitance ± 1%
MD Voltage Limit	Maximum 20 V peak or 20 VDC	

HI-Limit / LO-Limit	Range:	0 - 6000 μA (0 = Off)
	Resolution:	1 μA
	Accuracy:	Same as Leakage Current Display Accuracy
Delay Timer	Range:	0, 1.0 - 999.9 sec (0 = Constant)
	Resolution:	0.1 sec/step
	Accuracy:	± (0.1% + 0.1 sec)
GENERAL SPECIFICATIONS		
PLC Remote Control	Input - Test, Reset, Execute memory # 1, # 2 and # 3 Output - Pass, Fail, Test-in-Process, and Reset	
Memory	Allows storage of up to 10 groups of 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 keys on the front panel.	
Calibration	Software and adjustments are made through front panel.	
Mechanical	Bench or rack mount with tilt up front feet.	
Dimension	(W x H x D) 17 x 4 x 16.5 in. (432 x 102 x 419 mm)	
Weight	15.9 lbs (7.2 Kgs)	

KEY FEATURES & BENEFITS SUMMARY: MODEL 510L

FEATURES	BENEFITS
Provides 8 of the most common safety tests	No need to manually set up the test or to switch test leads around.
The 5 most common measuring devices are built-in and can be selected through software control	A versatile tester that can be set-up to meet multiple specifications without the need for complicated external connections, or the need for separate instruments.
Fully complies with the latest European Norms	Complies with the latest EN such as the Low Voltage Directive and Medical Directive.
Programmable security password system	Avoids tampering with settings by only allowing authorized personnel with a user programmable security password to change test parameters.
Front panel calibration	All calibration is done through a simple user interface from the front panel. No need to open the instrument.
PLC, RS-232 or GPIB Control	Provides flexibility for semi-automatic or automatic operation with a choice of communication protocols which provides the capability for easy test data storage.
Microprocessor control with software menuing	Microprocessor control allows for many advanced features such as automatic testing, memories and software control.
External measurement circuit	One external measurement circuit is provided for measurement of other devices.
Separate current trip points for each test	Each test can have a separate trip point for failure analysis.
50 Memories for test storage	Storage of test set-ups so parameters only need to be entered once then memorized.
Complete with software driver	National Instruments LabVIEW® software driver is provided for automated applications to ease the testing process.
Ranges from DC to 1 MHz	Complies with even the 1 MHz specification for IEC testing.