



COMPUTERIZED RECLOSER TEST SET



General Description

PHENIX Technologies' Models RCL-19 and RCL-47 Recloser Test Systems are one-piece, mobile test systems with computer control and metering. These test systems are designed to verify proper operation of automatic circuit reclosers under simulated fault conditions. The computer-based controls provide automation of testing procedures, storage of test data, test report generation and insure simple operation with precise test results.

Applications

The PHENIX Technologies' RCL series test sets provide variable high current output and precise instrumentation required to efficiently test virtually all single or three phase direct acting reclosers and sectionalizers. They can also be used for primary injection testing of electronically controlled reclosers.

The RCL-19 and RCL-47 models are able to perform, display and record results of the following three main tests:

- **Minimum Pickup Test**—This test determines the recloser's minimum operating point (usually two times the rating to the coil). It is useful to obtain a general idea of the condition of the recloser and a good indicator of output tap and vernier position needed for the Sequence Test. The test is performed automatically by increasing the current flow through the recloser's operating coil until operation begins. The computer will detect, measure and display this current level. It continues to ramp up until lock-out is achieved.
- **Sequence Test**—This test verifies the proper operating sequence of the recloser to lock-out. The output current is first adjusted to obtain the desired test current level. The output is then energized, the recloser operations are detected and the timing and RMS current levels are recorded. A Manual Output Pulse feature enables operators to determine an appropriate test current level when testing reclosers with no test history.
- **Sectionalizer Test**—This test is performed by pulsing current to the sectionalizer to simulate a recloser operation and the normal sequence to reach lock-out.

Standard Accessories

The RCL-19 and RCL-47 include the following standard accessories:

- Windows compatible computer.
- 120 VAC outlet with 1 kVA rating and ground fault protection.
- Protective cover for storage.
- Output leads, all 6 ft. (2m) in length:
 - 2 pair 4/0 cables
 - 1 pair 2 ga. cables
 - 1 pair timer leads
- Instruction manuals—Two instruction manuals are supplied which contain complete schematics and parts lists.

Exclusive Features

Build Your Own Test Template Library and increase operator productivity, efficiency and accuracy. Eliminate the need to manually adjust the output current for every recloser you test. You can use the test template library to re-use nameplate data that is common from one recloser to another. Templates also store the tap and vernier position used at each test level. If you've tested a particular type of recloser before, you can use a template to recall the original test settings and the vernier will be automatically positioned for each test.

New templates can easily be created by selecting a test from the test history and clicking the Make Template button.

Store Test Reports Electronically—The RCL software keeps a history of all recloser and sectionalizer tests that have been performed. You can sort by a particular test item and organize how you want the results to appear. Browse the results menu to find a previous test or see the most recent test highlighted. Search for a specific result by clicking the search field and entering a search value. Previous test data is at your fingertips. Click Test Report to generate a report that can be previewed on screen before sending it to a printer for a hardcopy.

Safety Features

- Built-in overload protection.
- Built-in over temperature protection.
- Short-circuit protection.
- Emergency off mushroom button.
- Output will be terminated if the recloser exceeds the allowed time to lock-out.

Physical Features

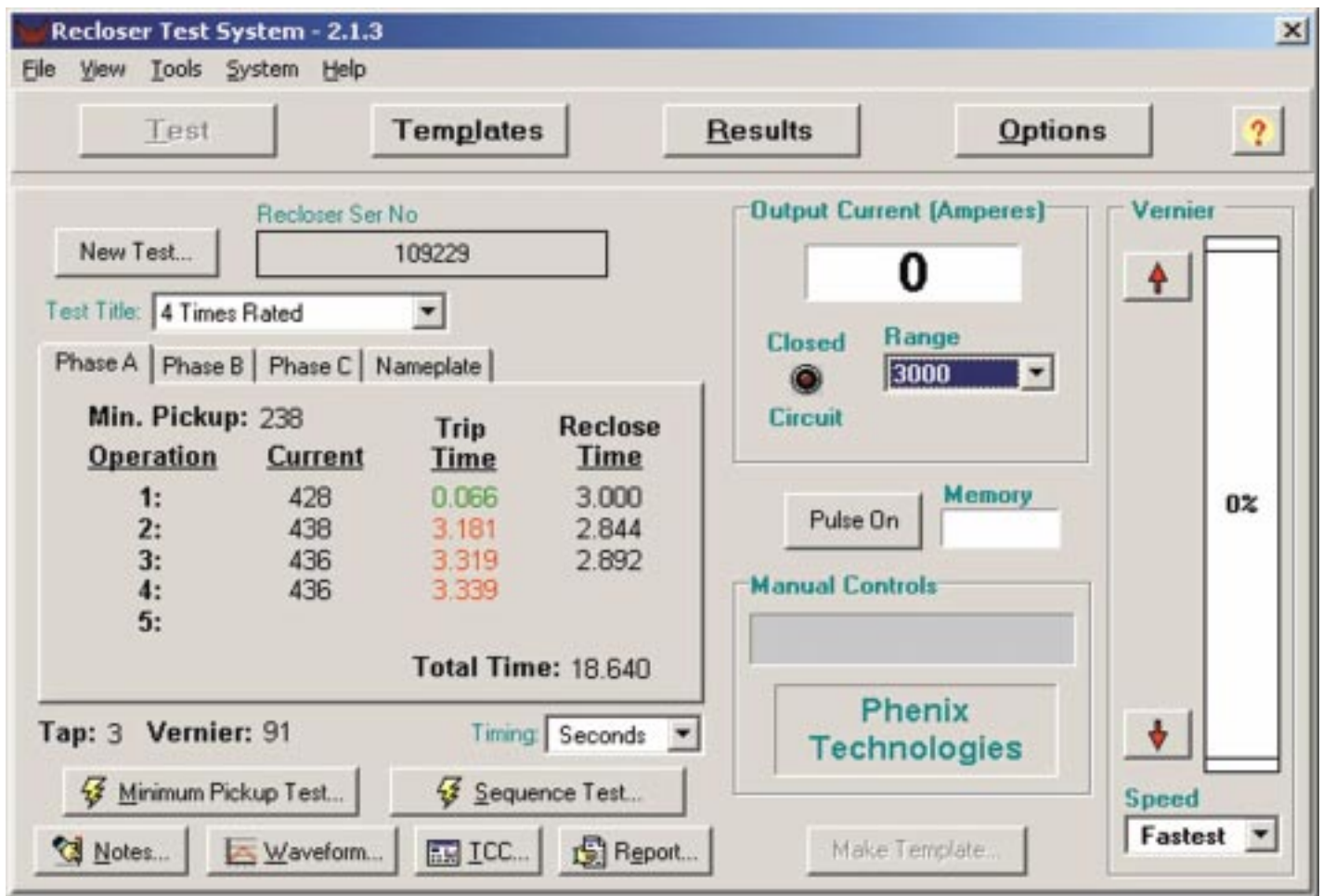
Enclosure:

The RCL-19 and RCL-47 are housed in a single, rugged, sheetmetal cabinet which features:

- Tubular steel frame construction.
- Low center of gravity.
- Tow ring & lifting eyes.
- Large swivel casters with brakes.

Dimensions:	RCL-19	RCL-47
	57" L x 30" W x 44" H (1448 mm L x 762 mm W x 1118 mm H)	61" x 34" x 48" H (1549 mm L x 864 mm W x 1220 mm H)
Weight:	1700 lbs. (771 kg)	1800 lbs. (816 kg)

Main Screen Display



Specifications

INPUT:

Model	Volts**	Amps
RCL-19 (50/60 Hz, 19 kVA single phase)	208/220	100
	230/240	90
	380/416	52
	440	48
	460/480	45
RCL-47 (50/60 Hz, 47 kVA single phase)	440	125
	480	115

OUTPUT RANGES:

Tap	Voltage	Current	
		RCL-19	RCL-47
1	0-7.50 VAC	2500 A	2500 A
2	0-15.0 VAC	1250 A	2500 A
3	0-30.0 VAC	625 A	1560 A
4	0-60.0 VAC	313 A	783 A
5	0-150 VAC	125 A	313 A
6	0-300 VAC	63 A	156 A
7	0-600 VAC	32 A	78 A

POWER: 19 kVA 47 kVA

DUTY CYCLE:

ON Time	OFF Time	Rating (kVA)
30 min.	30 min.	100%
90 sec.	5 min.	200%
30 sec.	5 min.	300%

Instrumentation

Current Measuring System:

Ranges: 0-30/100/300/3000/7500 Amps
Accuracy: $\pm 0.5\%$ of each range,
 \pm last digit

Timing System:

Ranges: 0-9999 sec.; 0-9999 cycles
Resolution: 0.001 sec.; 0.01 cycles
Accuracy: ± 1 digit or 0.005% of reading (sec. mode)
 ± 1 digit or 0.005% of reading (cycles mode)

Options

- Time/Current Curve, Pass/ Fail software
- External printer
- Other output ratings
- CD software demo available upon request

*Specifications subject to change without notice.

**Voltage must be specified.



Company Profile

PHENIX Technologies is a leading manufacturer of high voltage, high current, and high power test systems and components. Our AC and DC test Systems are in operation around the world satisfying the testing requirements of our customers.

Our 33,000 square feet headquarters is a modern manufacturing facility where all the major components of our systems are produced. All of our equipment is designed to satisfy the testing requirements of our customers. Our engineering resources, manufacturing capability, and commitment to flexibility has earned us the reputation as the

supplier of choice. From portable test equipment to large, cutting edge automated and computerized test systems, Phenix provides solutions for your testing needs.

Because we have complete confidence in our products, we offer the longest warranty in the industry. Our Service & Calibration Department stands ready to assist you during and after installation to insure years of trouble free service.

Our engineers offer a unique blend of theoretical knowledge and practical experience. You owe it to yourself to discuss your special requirements with PHENIX TECHNOLOGIES.

The PHENIX Technologies Product Line

- AC Dielectric Test Sets
- Resonant Test Sets
- DC Hipots and Insulation Test Sets
- Automatic Insulating Material Testers (DI49)
- Liquid Dielectric Test Sets
- Megohmmeters
- Vacuum/Oil Interrupter Testers
- Bucket Truck Testers
- High-Frequency Cable Aging Test Sets
- Heat Cycling Test Sets
- Rubber Goods—Protective Equipment Testers
- Core Loss Testers
- AC, DC and AC/DC Motor Test Sets
- Transformer Test Systems
- Computerized Circuit Breaker Test Sets
- Computerized Recloser Test Sets
- DC Power Supplies
- High Voltage DC Cable Thumpers
- High Voltage Terminations
- High Power Column-Type Variable Transformers
- High Power Thoma-Type Variable Transformers
- Voltage and Current Stabilizers

Your local representative is



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