

High Current/Circuit Breaker Test Sets

12,000 – 75,000 Amp Output

Testing Applications

- Test virtually any low voltage, molded case, or metal clad direct acting AC circuit breaker by simulating overload and fault conditions
- Test current transformers and thermal or magnetic motor overload relays
- Configured in a series, can be used for substation maintenance, primary injection testing on high voltage circuit breakers and protective relays

Models Available

- HC-12C
- HC-20C
- HC-40C
- HC-75C

- Fully **automated** testing
- Precise, **repeatable current pulses** with minimal distortion
- Current **wave form** display
- **ISO17025 calibration** upon request



Model
HC-20C



Model
HC-75C



Safety and Design Features

- Circuit breaker protection
- Control power switch with indicator and Output On indicator
- Interlock open indicator
- Emergency Off pushbutton
- Highly reliable SCR's combined with programmable phase angle firing system
- Continuously variable output over entire test range utilizing a motorized vernier and programmable tap selector allowing for both auto-jog and current-hold capabilities
- Sensing circuit selectable between current or contacts
- Digital AC voltmeter for monitoring input, output, and external voltage up to 600 VAC
- Currentmeter accuracy 0.8% of reading +0.3% of range
- Meters calibrated with standards certified by NIST
- Standard HCSS1 and HCSS2 stab sets supplied with optional stab sets available
- Operation/maintenance manual

Computer-Control via WIN HC Software

User-friendly, menu-driven commands provide advanced database and report capabilities for test duplication and recall, report generation, and current wave shape display.

Testing Modes

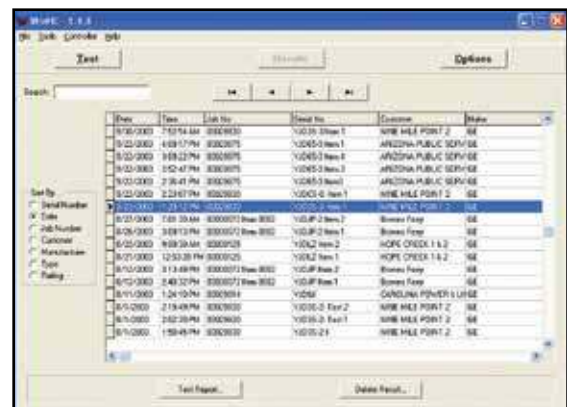
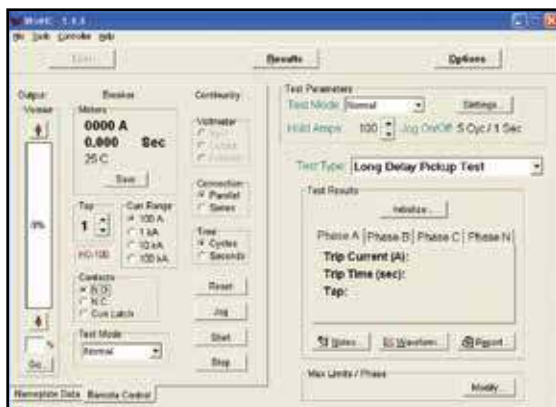
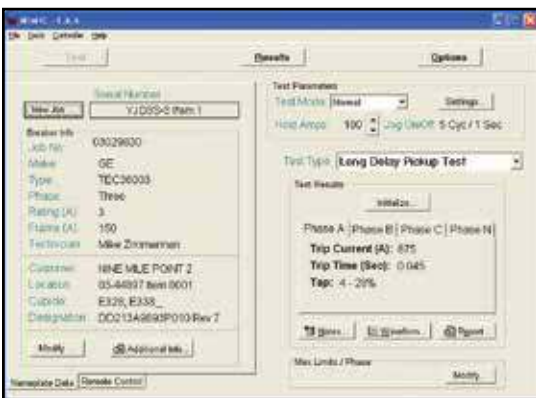
- Normal – the operator manually controls all functions of the test set.
- Jog-to-Hold – the test set jogs the output on at “Jog on Cycles” and off for “Jog off Secs” and raises the output until the “Hold Amps” is reached.
- Jog-to-Trip – the test set jogs the output on at “Jog on Cycles” and off for “Jog off Secs” until the circuit breaker under test trips.
- Current Hold – the output is held to within 1% of the “Hold Amps”.
- Memory – used for testing the sensitivity pickup of electronic controllers (when the stop button is pressed, the current level is recalled).

Programmable Phase Angle Firing

This feature assures precisely repeatable current pulses with minimal distortion and DC offset. This is achieved by combining the use of highly reliable SCR's and computer-controlled firing system.

Wave Form Display

This feature allows for viewing of the current wave form injected through the breaker. Detection of DC offset or contact bounce can be seen. With the use of the programmable phase angle firing circuit, DC offset may be corrected by varying the firing phase angle.



MODEL	HC12C		HC20C		HC40C		HC75C	
INPUT (50 Hz or 60 Hz must be specified)	240 V, 60 A, 60 Hz		240 V, 150 A, 60 Hz		240 V, 320 A, 60 Hz		480 V, 400 A, 60 Hz	
	480 V, 30 A, 60 Hz		480 V, 75 A, 60 Hz		480 V, 160 A, 60 Hz		400 V, 400 A, 50 Hz	
	400 V, 30 A, 50 Hz		400 V, 75 A, 50 Hz		400 V, 160 A, 50 Hz			
	Input currents based on 30 minute output ratings. Other input voltages are available, for example; 380 V, 50 Hz or 600 V, 60 Hz							
NUMBER of TAPS	3		4		6		8	
OUTPUT VOLTAGE	OPEN CIRCUIT VOLTAGES							
	Parallel	Series	Parallel	Series	Parallel	Series	Parallel	Series
	6.25 V, 50 Hz	12.5 V, 50 Hz	8.3 V, 50 Hz	16.6 V, 50 Hz	10 V, 50 Hz	20 V, 50 Hz	13.3 V, 50 Hz	26.6 V, 50 Hz
7.5 V, 60 Hz	15 V, 60 Hz	10 V, 60 Hz	20 V, 60 Hz	12 V, 60 Hz	24 V, 60 Hz	16 V, 60 Hz	32 V, 60 Hz	
OUTPUT CURRENT	Parallel	Series	Parallel	Series	Parallel	Series	Parallel	Series
Continuous Duty	1200 A	600 A	2000 A	1000 A	4000 A	2000 A	7500 A	3750 A
30 min ON / 30 min OFF	1700 A	850 A	3000 A	1500 A	6000 A	3000 A	10,000 A	5000 A
1 min ON / 10 min OFF	2500 A	1250 A	4500 A	2250 A	9000 A	4500 A	15,000 A	7500 A
1 sec ON / 2 min OFF	12,000 A	6000 A	20,000 A	10,000 A	40,000 A	20,000 A	75,000 A	37,500 A
DIMENSIONS / WEIGHT (approx)								
Regulator								
Length	27 3/8" (695 mm)		29 3/8" (746 mm)				Regulator & Transformer are enclosed in 1 cabinet	
Width	25 3/4" (654 mm)		25 3/4" (654 mm)					
Height	17 7/8" (454 mm)		19 3/8" (492 mm)					
Weight	165 lbs (75 kgs)		200 lbs (91 kgs)					
Transformer								
Length	28 1/4" (718 mm)		30 1/4" (768 mm)				Regulator & Transformer are enclosed in 1 cabinet	
Width	26 5/8" (676 mm)		26 5/8" (676 mm)					
Height	27" (686 mm)		27" (686 mm)					
Weight	300 lbs. (196 kgs)		350 lbs. (159 kgs)					
Total Unit (Regulator and Transformer)								
Length	28 1/4" (718 mm)		30 1/4" (768 mm)		45" (1143 mm)		45" (1143 mm)	
Width	26 5/8" (676 mm)		26 5/8" (676 mm)		27" (686 mm)		27" (686 mm)	
Height	44 1/4" (1124 mm)		45 1/4" (1149 mm)		46" (1168 mm)		46" (1168 mm)	
Weight	465 lbs. (211 kgs)		550 lbs. (249 kgs)		1125 lbs. (512 kgs)		1300 lbs. (590 kgs)	
SHIPPING SIZE								
Length	41" (1041 mm)		41" (1041 mm)		59" (1499 mm)		59" (1499 mm)	
Width	33" (838 mm)		33" (838 mm)		36" (914 mm)		36" (914 mm)	
Height	68" (1727 mm)		68" (1727 mm)		70" (1778 mm)		70" (1778 mm)	
Weight	780 lbs (354 kgs)		840 lbs (381 kgs)		1400 lbs (635 kgs)		1620 lbs (735 kgs)	
CABLES INCLUDED								
Output Leads 4/0 (107 m m ²)	5' (1.5 m) (8)		5' (1.5 m) (8)		n/a		n/a	
Continuity Sense/ Auxiliary Contact Leads	5' (1.5 m) (2)		5' (1.5 m) (2)		5' (1.5 m) (2)		5' (1.5 m) (2)	

Output Stabs for connection to the circuit breaker under test



HCSS1



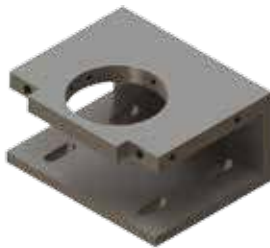
HCSS2



HCSS3



HCSS4



HCSS5



HCSS6



HCSS7



HCSS8

	Model #	Connection to Circuit Breaker
INCLUDED	HCSS1	.5" (12.7 mm) thick blade
	HCSS2	.75" (19.05 mm) thick blade
OPTIONAL	HCSS3	3.15" (80 mm) clamp diameter
	HCSS4	3.5" (88.9 mm) diameter
	HCSS5	3.15" (80 mm) clamp diameter
	HCSS6	2.25" (57.15 mm) diameter
	HCSS7	.5" (12.7 mm) thick blade 10.5" (266.7 mm) long
	HCSS8	2" (50.8 mm) diameter

Options

- Multiple-tap input Auto Transformer for 208, 240, 480, 575 operation – 480 V or 575 V units
- Stab Plate Adapter for Series Output Connection
- External Printer
- Heavy-duty, coated-canvas, Protective Dust Cover (included with models HC12C and HC20C)
- DC circuit breaker testing systems available
- ISO17025 calibration



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