High Current/Circuit Breaker Test Sets

12,000-75,000 Amp Output

- **Manual or computer control operation with numerous automated test modes**
- **Precise, repeatable current pulses with minimal distortion**
- **Current wave form display via software**

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

Model HC40C

Model HC20C

CABLE | GIS SWITCHGEAR | CIRCUIT BREAKER | TRANSFORMER | MOTOR | GENERATOR | INSULATION MATERIALS | RECLOSER | PROTECTIVE EQUIPMENT | PORTABLE

Brochure No. **30207**

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 a 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
- Standard HCSS1 and HCSS2 stab sets supplied (optional stab sets available)
- Digital AC voltmeter for monitoring input, output, and external voltage up to 600 VAC
- Currentmeter accuracy 0.8% of reading +0.3% of range
- Interface port for optional printer
- Casters for ease of mobility
- Two copies of operation/maintenance manual

TECHNICAL SPECIFICATIONS

User Interface via HC-Controller

The HC-controller allows fully manual testing capabilities without the need for computer software. Test results can be easily printed using printer port.

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

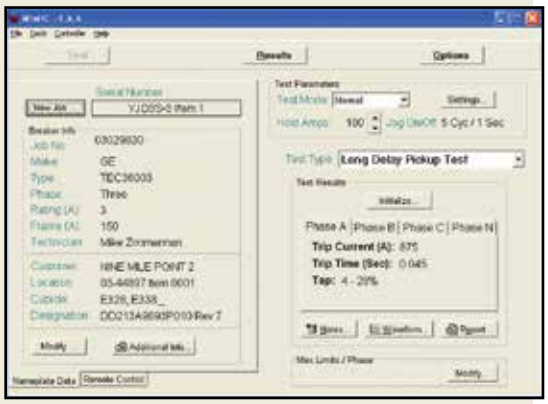
- **Normal** – the operator manually controls all functions of the test set.
- **Jog-to-Hold** – the test set jogs the output on at "Jog on Cycles" and off for "Jog off Secs" and raises the output until the "Hold Amps" is reached.
- **Jog-to-Trip** – the test set jogs the output on at "Jog on Cycles" 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).

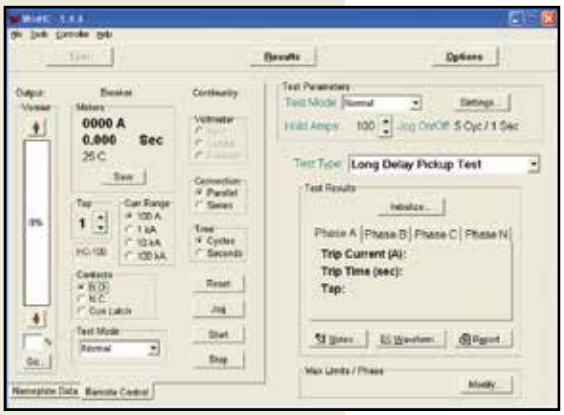
Programmable Phase Angle Firing

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	Voltage/Current/ Frequency (one must be specified)		240/480 V, 60 Hz or 400 V, 50 Hz 80/40 A	240/480 V, 60 Hz or 400 V, 50 Hz 150/75 A	240/480 V, 60 Hz or or 400 V, 50 Hz 320/160 A	480 V, 60 Hz or or 400 V, 50 Hz 400 A
			(Other input voltages are available; for example, 380 V, 50 Hz or 600 V, 60 Hz)			
OUTPUT VOLTAGE	**Open Circuit Number of Taps**		3	4	6	8
	Parallel Connection					
	50 Hz		6 V	8.3 V	10 V	13.3 V
	60 Hz		7.5 V	10 V	12 V	16 V
	Series Connection					
	50 Hz		12 V	16.6 V	20 V	26.6 V
	60 Hz		15 V	20 V	24 V	32 V
OUTPUT CURRENT	**Parallel Connection**					
	continuous		1200 A	2000 A	4000 A	7500 A
	30 min ON / 30 min OFF		1700 A	3000 A	6000 A	10,000 A
	1 min ON / 10 min OFF		2500 A	4500 A	9000 A	15,000 A
	1 sec ON / 2 min OFF		12,000 A	20,000 A	40,000 A	75,000 A
	Series Connection					
	30 min ON / 30 min OFF		850 A	1500 A	3000 A	5000 A
	1 min ON / 10 min OFF		1250 A	2250 A	4500 A	7500 A
	1 sec ON / 2 min OFF		6000 A	10,000 A	20,000 A	37,500 A
DIMENSIONS & WEIGHT	Controller	L W H	20" (508 mm) x 16" (406 mm) x 8" (203 mm)			
		Weight	17 lbs (8 kgs)			
	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 & 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	4 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 mm^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)

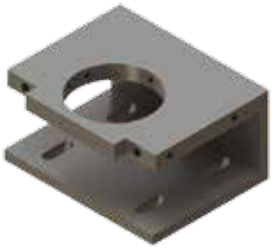
OUTPUT STABS for connection to the circuit breaker under test

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, 575 operation – 480 V or 575 V units
- Stabs (other than HCSS1 and HCSS2 type)
- Stab Plate Adapter for Series Output Connection
- Computer
- External Printer
- Heavy-duty, coated-canvas, Protective Dust Cover (included with models HC12C and HC20C)
- DC circuit breaker testing systems available

High Voltage • High Current • High Power Test Systems and Components

ISO 9001 CERTIFIED

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