



# SYNCHRONEX II

*Static Exciter for Synchronous Motors*

AC INPUT

230 or 460 V  
3-phase, 60 Hz

KW RANGE

1-21 kW at 125 or 250 V dc  
25-40 kW at 250 V dc

Synchronex II static exciters have E-M UC (Unitized Construction) enclosures, an all welded reinforced system using standard dimension increments.

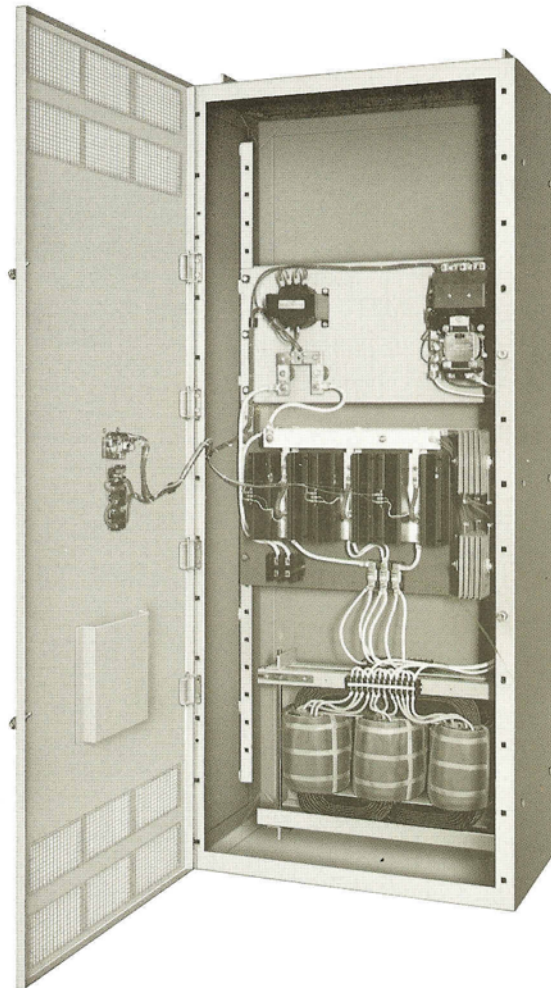
Saves space. Synchronex II is available for floor or wall mounting.

Quiet operation. All units are convection cooled.

Minimum maintenance. No brushes, commutator, or bearings to maintain—rectification is completely static.

High Efficiency. Overall efficiency of 92% to 95%.

Easy-Adjustment. Output current can be changed by merely changing knob setting.



Floor mounted Synchronex II.

## SYNCHRONEX II, A COMPACT, RELIABLE DC EXCITER FOR SYNCHRONOUS MOTORS

Synchronex II is an ac to dc power rectifier used for variable field excitation of synchronous motors. It uses high quality silicon controlled rectifiers which allow current to flow in only one direction thus providing rectification. The

SCRs are arranged in a 3-phase, full-wave, bridge connected assembly.

Synchronex II replaces motor-generator set or rotating dc exciter for synchronous motor field excitation. The self-contained unit is easily installed. It requires only three ac input connections and two dc output connections. Protection against surge voltage from the motor field is provided by surge suppressors.



# SYNCHRONEX II Static Exciter

## AC TO DC POWER RECTIFIER:

### VOLTAGE ADJUSTMENT:

Voltage adjustment with the SCR trigger control is from 40% to 100% of rated dc output voltage. Two 10% taps are provided on the transformer secondary to compensate for high or low line voltage.

### PERFORMANCE CHARACTERISTICS:

Power factor at rated load—95%  
Efficiency at rated full load—92% to 95%

### MOUNTING:

Rating of 3 kW and 4.5 kW are for wall mounting only. 6.5 kW through 40 kW are available for floor mounting.

### RATINGS:

3, 4, 5, 6.5, 9, 13, 17, and 21 kW units are available at either 125 or 250 volts dc output. 25, 33, and 40 kW units are available at 250 volts dc output.

### WHEN ORDERING SPECIFY:

- ac voltage, phase, and frequency
- kW rating      • dc output voltage
- type of mounting   • options desired

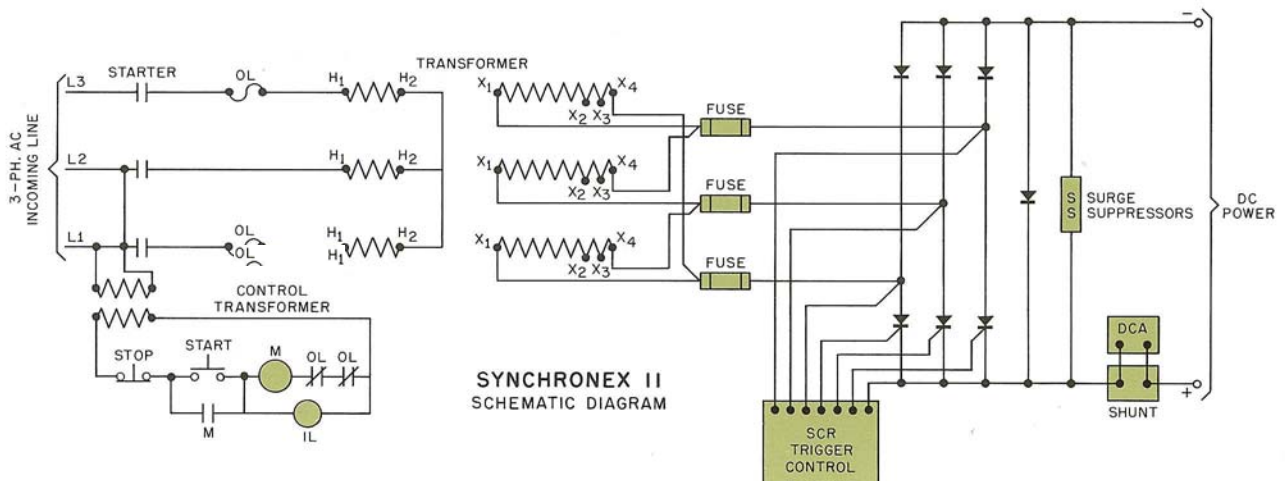
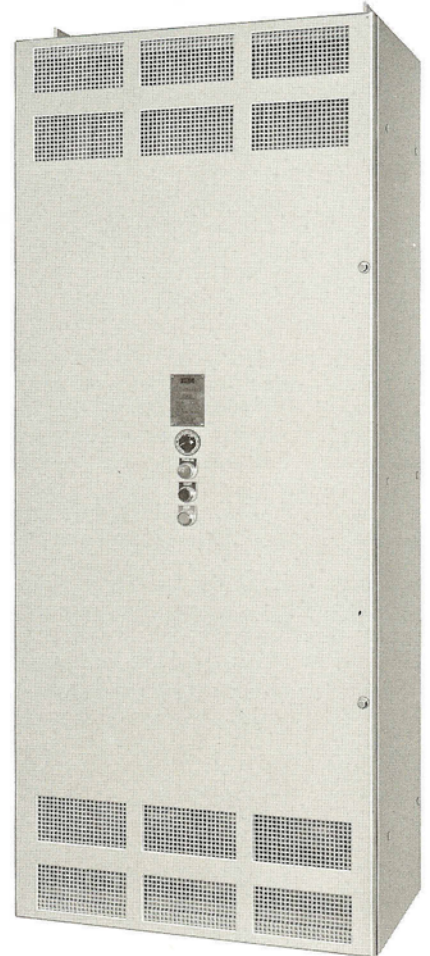
### Specifications:

The following components are mounted and wired as standard in a convection ventilated NEMA I enclosure.

- 1-ac line starter with suitable overload relays and heaters
- 1-three-phase, SCR bridge rectifier assembly
- 1-two-winding insulated transformer
- 1-voltage surge suppressors on dc side rectifier
- 1-set of current limiting fuses in transformer secondary for short circuit protection
- 1-SCR trigger control circuit for adjusting the dc output voltage
- 1-start-stop push button and indicating light
- 1-dc ammeter

### Options:

- dc voltmeter
- primary molded case air circuit breaker.



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