Hampden H-IEC-B1 Paralleling and Voltage Control

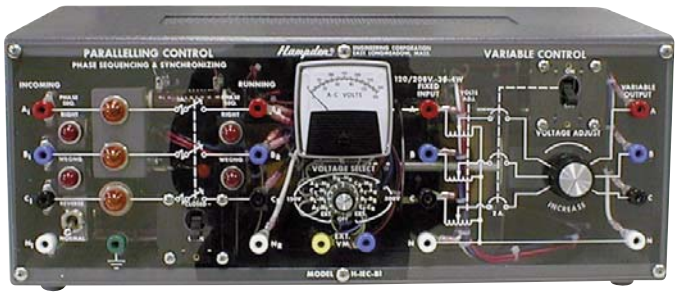
Purpose

The Hampden **Model H-IEC-B1** Paralleling and Voltage Control provides students with an understanding of the method employed in paralleling an incoming alternator with the power company's line or with a second alternator.

Description

Four conditions of an incoming alternator must be matched with a running alternator before paralleling can be effected: (1) voltage, (2) frequency, (3) phase rotation, and (4) phase displacement. The **Model H-IEC-B1** graphically demonstrates these conditions with a built-in voltmeter, phase sequence indicating lamps, and synchronizing lamps.

The unit is furnished complete with a student manual that explains paralleling theory as well as providing student exercises. Also provided with the trainer is a set of cords.



MODEL H-IEC-B1
Paralleling and Voltage Control
Dimensions: 7½"H x 19"W x 8½"D
Shipping Weight: 25 lbs.

The dual range voltmeter measures both running and incoming phase-to-phase and phase-to-neutral voltage as well as the voltage between incoming and running lines. In addition, either range (0-150 or 0-300V.AC) can be used for external voltage measurements. All are switch-selectable.

Input to the variable control section may be any single-phase or three-phase voltage up to 208VAC. A three-gang variable auto-transformer reduces this voltage to any desired value via the voltage control knob.

Hampden H-IEC-B2 Alternator-Voltage Regulator Controller

Purpose

The Hampden **Model H-IEC-B2** provides students with an understanding of the methods (pulse width modulation and pulse frequency modulation) employed in regulating the terminal voltage of an alternator, including voltage and frequency feedback.

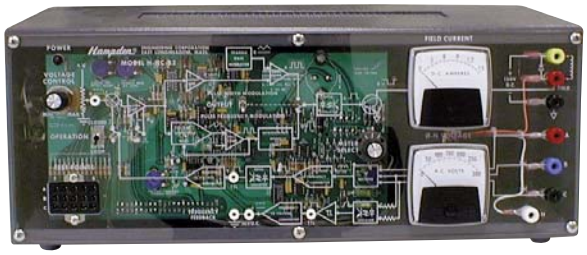
Description

The terminal voltage of an alternator depends on three factors: (1) the speed at which it is driven; (2) the alternator field current; and (3) the load. Normally, alternators are driven at a constant speed so as to maintain a constant frequency. If the field current is constant, terminal voltage tends to decrease as load is applied, providing there is no automatic control.

The **Model H-IEC-B2** controls field current through either pulse frequency modulation (PFM) or pulse width modulation (PWM), switch selectable by the student. The unit may be operated in either the open-loop mode or closed-loop mode. The student learns feedback theory as well as regulation principles. Alternator field current and terminal voltage are continuously monitored by built-in meters. Fourteen test points provide access to the various control circuits.

In addition, there is an input terminal to the voltage setpoint circuit and output terminals from the feedback circuit to facilitate computer control of alternator voltage. Fault switches on the rear of the unit provide realistic troubleshooting experience.

The unit is furnished complete with a student manual that explains alternator regulation theory as well as student exercises. Also provided with the trainer is a set of cords.



MODEL H-IEC-B2
Dimensions: 7½"H x 19"W x 8½"D
Shipping Weight: 25 lbs.

All Hampden units are available for operation at any voltage or frequency

Hampden® ENGINEERING CORPORATION

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