Solid State Controllers

Educational Training Equipment for the 21st Century

Bulletin 257K

H-VFD-100C Variable Frequency Drive Trainer

MODEL H-VFD-100C
Dimensions 18"H x 23"W x 12"D
Shipping Weight: 155 lbs.

The Hampden **Model H-VFD-100C** Fractional Horsepower, 3Ø, Variable Frequency Drive controls the speed of induction or synchronous motors rated to 1/3 horsepower.

The unit consists of two sections. The first is the basic adjustable frequency drive with reversing capability. Protection includes electronic over-voltage, under-voltage, and over-current trip. The output is 0-230V, 3Ø, 0-120Hz. Power factor correction circuitry is included to cut I^2R losses when running at low load levels. The second unit supplies isolated feedback or voltage-following capability. Block diagrams of the system circuitry are silkscreened on the inside of the clear plastic panel where inputs and outputs terminate in HR-1S socket receptacles. Also on the front panel are pushbuttons, potentiometer, indicator LEDs, 15 test points, two meters, and a keypad. A 120V AC isolated receptacle is located on the side of the case. Furnished complete with interconnecting cords.

Input power is 120V AC, 1Ø, 50/60Hz through an isolation transformer. This permits grounding of the control circuit for measurement and test purposes.

Model H-VFD-300C is also available for 3 HP machines.

H-ACVD-100 AC Vector Drive Trainer System

The Hampden **Model H-ACVD-100** AC Vector Drive Trainer System provides students with hands-on experience with advanced motor controls and is available in two configurations; as a stand-alone trainer and as an adjunct trainer to the Hampden Series 100 Rotating Machine System. Either system is designed for bench top mounting or may be used with the optional **Model HMT-4** Mobile Table.

MODEL H-ACVD-100 Vector Drive
Dimensions: 20"H x 16"W x 10"D
Shipping Weight: 120 lbs.

The Hampden AC Vector Drive Trainer System incorporates state-of-the-art features which surpasses the inverter drive for many applications. The basic difference is the on board high-speed processing computer with its associated three channel encoded motor. This system basically eliminates the "slip factor" of the motor by using a closed-loop feedback.

This system has many applications such as handling very high torque at low or even no speed which is desirable in a pick and place stacker crane or elevator. It also has precise speed regulation, hence can be used in applications where precise timing is required between interconnecting drives. Other applications include accurate positioning utilizing motion control cards for servo performance, braking, regeneration, high performance dynamometer, and precise metering pumps.

This system includes seventeen system diagnostic indications, six instructor insertable faults, and operating instructions. Furnished complete with interconnecting cords.

Vector Drive Motor

The Vector Drive motor is a 1/3 HP squirrel-cage induction motor with built-in multi-channel encoder.

When ordering this system for a standalone configuration, the following components are necessary:

- **Model H-ACVD-100** AC Vector Drive
- **Model MGB-100DG** Base
- **Model DYN-100A-DM** Dynamometer
- **Model RL-100A** DC Resistance Load

Option

- **HMT-4** Mobile Table

Input power is 120V/208V AC, 3Ø, 60Hz

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

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