Hampden H-SWGT-1 Switchgear Trainer

Bulletin 180-120

Purpose

The Hampden **Model H-SWGT-1** Switchgear Trainer has been designed to NEMA standards for the purpose of introducing students to correct equipment selection and wiring practices used in switchgear and motor control centers. The modular design permits component re-arrangement to demonstrate design and wiring variations.

Description

The Hampden **Model H-SWGT-1** Switchgear Trainer is a custom made assembly of standard components, which are sized for use in a typical electrical teaching shop. This Trainer is rated for 208 volts, three-phase, four-wire, with a 30 amp main breaker. The main bus bar is rated at 600 amps and the ground bus bar is rated at 300 amps. Other voltage, current and frequency ratings are available up to 480 volts and 600 amps.

The construction is modular consisting of two frames, each with a 300 amp bus system. Each frame has a total capacity of several modules which will total 72 inches high, and consisting of a mix of control devices and blank panels. There is a 9-inch wire way top and bottom, and a 4-inch vertical wire way.

The first frame contains the main circuit breaker, current transformers, two 1/3 HP motor starters, and blank panels, which could allow for future expansion.

The second frame contains the electrical system monitor, two 15 amp feeder circuit breaker modules, and blank panels, which could allow for future expansion.

Each motor starter assembly consists of a circuit breaker, control transformer, fuses, motor starter, run pilot light, stop pilot light, and on-off selector switch. The motors to be controlled are not included with this trainer.

Each feeder breaker assembly consists of the circuit breaker and control handle. The external circuitry to be feed from these circuits is not included with this trainer.

The electrical system monitor is a microprocessor-based monitoring and protective device that provides electrical metering and system protection. This device is designed to replace individual meters, relays and recorders.

The electrical system monitor consists of a operator control panel, a three-phase power module and a I/O module. The operator control panel consists of membrane pushbuttons for the selection of voltage, current watts, vars, VA, PF, frequency, watt-hours, var-hours, and VA-hours. Alarm data and alarm reset are also pushbutton selectable. Other selectable parameters include % total harmonic distortion, demand, minimum and maximum values, and reset capabilities.

Features

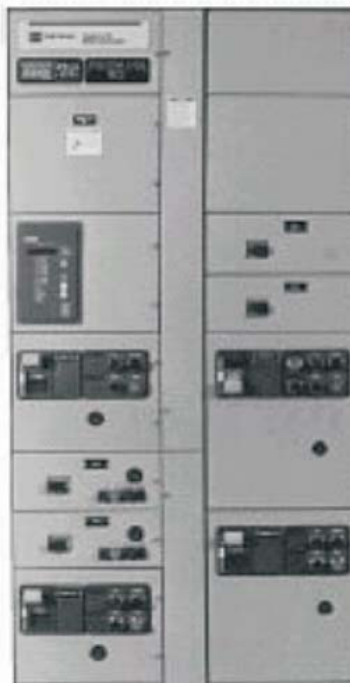
The Hampden **Model H-SWGT-1** Switchgear Trainer is a 40-inch wide by 21-inch deep enclosure mounted on a 44-inch wide by 48-inch deep mobile base. The over-all height of the enclosure is 92- inches, above the floor. The mobile base contains four swivel casters with brakes. A 10 foot, 5/c, power cord with plug is provided.

Accessibility

All parts and wiring are front accessible. Terminal blocks are side mounted in each unit. Vertical wireways separate from control units provide safe and convenient access to wiring and conduits without de-energizing any equipment.

Flexibility

Modular, framed design permits structure arrangement to be tailored to exactly meet any control requirements with a minimum of unusable space. Vertical compartments are incremented for maximum space utilization and unit interchangeability. A 6-inch starter unit provides users the ability to solve demanding space requirements and still meet all NEMA and U/L standards.



Typical Switchgear Trainer
(shown without steel base)

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