

Residential Distribution Trainer

Educational Training Equipment for the 21st Century

Bulletin 180-106B

H-7947

Direct Burial Transformer Switching Trainer

Purpose

The Hampden **Model H-7947** Transformer Switching Trainer has been developed to assist utility company linemen in developing the necessary skills required for expeditiously locating and isolating underground faults, and adding new transformer locations into a existing system.

Description

The system depicted on the graphics of this trainer, is of a U-shaped street, fed from both ends by separate poles, each having its own disconnect device. There are six underground three-phase transformers, and one underground single-phase transformer. The single and three phase transformer locations are designed to simulate a typical 15–23kV, multigrounded, direct buried, pad mounted transformer. The graphics are typical of lines and symbols used as industry standards. The operating voltage of the system is 24/40 volts AC, three-phase, four wire.

Incorporated within each transformer location are A and B transformer bushings, parking terminals, a ground terminal and cables. A unique system for simulating the Fault Indicating Devices is also incorporated into each transformer location. Three LEDs, located within the transformer location, are connected to a transfer switch so they can be positioned on either set of connection cables or parked, if not required. Each LED simulates a fault indicating device on each of the three phases. (One LED is located in the single-phase vault.)

All of the necessary procedures for locating a fault, that would be followed in actual practice, can be duplicated on this trainer. Faults are introduced by the instructor, using the computer. There are twenty-two faults built into this trainer.



Model H-7947 Direct Burial Transformer Switching Trainer
Dimensions: 72"H x 60"W x 28"D, Shipping Weight: 400 lbs.

One pad location, Pad-100, has been designed to include the ability to convert it from a future location, to an operational location. This is accomplished by including a splicing trench for this location.

All of the necessary procedures for cutting in a new location, that would be followed in actual practice, can be duplicated on this trainer.

The two poles, located at each end of the street, are each simulated by three single pole circuit breakers, which trip when a fault is applied. Each circuit breaker (phase) has a color coded pilot light to indicate when the line is energized.

The simulator is controlled by a VB-based computer system, integral to the simulator. It contains the control program, written in a high level language, along with USB ports for future expansion with the **H-7947-STO** Student Tracking Option.

Accessories

- Set of phase sticks with indicating light
- Six yellow ground cords

Services Required

Power required: 120/208V.AC-3Ø-4W-5A*
A five conductor, eight foot long cord, with a Hubbell #2511 plug, is provided.

**Unit available for operation on any voltage or frequency.*

Options Available

H-7947-STO

A data terminal and printer that provide the instructor with complete step-by-step hard-copy records of the operator's actions when operating and troubleshooting the simulator.

H-7947-C

A nylon facilon cover for protecting the trainer when not in use.

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

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