Transformer Learning System

Purpose

The **Model H-TTC-PIL-1** Transformer Learning Center provides, in one convenient mobile console, all of the instrumentation, loading, and control apparatus necessary for the analysis of transformer characteristics and circuits.

Description

The Transformer Learning Center contains three 1KVA transformers with multiple taps on their respective secondaries. Each winding and tap is breaker-protected to provide full overload and short circuit protection. All leads from windings and taps terminate in Hampden HR-2P 25A receptacles.

Input power is 208/120V 3Ø, 4-wire, 10A. An AC circuit breaker with pilot lamp is provided to control input power terminated in four pairs of bussed Hampden HR-2 receptacles. Also provided is a variable autotransformer terminated in three pairs of bussed HR-2 receptacles.

Instrumentation

At the top of the sloping panel are the following instruments: two 5-range AC ammeters, two 4-range AC voltmeters, single-range wattmeter, 6-range wattmeter.

MODEL H-TTC-PIL-1
Dimensions: 61"H x 60"W x 32"D
Weight: 925 lbs.

The diode and breaker-protected ammeters each have the following ranges: 0-0.1, 0.5, 1.0, 5.0, and 10A. Four insertion-type ammeter receptacles are also provided.

The diode-protected voltmeters each have the following ranges: 0-15, 75, 150, and 300V.

The single range wattmeter is 30 watts compensating.

The diode-protected multi-range wattmeter has top range values of 300 watts to 2400 watts

H-TTC-PIL-1
Transformer Learning Center

through six possible combinations of voltage and current ranges.

Loading

Resistive, inductive, and capacitive loads are contained within the Learning Center Console.

Resistive—Three 1Ø resistive loads are simultaneously controlled by switches in ten steps of 300 watts each.

Inductive—Three 1Ø inductive loads, each with circuit breaker, are simultaneously adjusted by the control knob of a 3-gang variable autotransformer.

Capacitive—Three 1Ø capacitive loads are each controlled by toggle switches in six steps (10, 20, 30, 40, 40, and 40 microfarads).

Accessories

The **Model H-TTC-PIL-1** is provided complete with patchcord set and manual set.

Also available is a Facilon cover, specify **Model H-TTC-C**.

Hampden H-TTD-1A Transformer Trainer Demonstrator

Description

The Hampden **Model H-TTD-1A** consists of:

- Component panel
- Transformers
- Instruments
- Resistance-Inductance-Capacitance loads
- Variable AC power supply
- Mobile stand

All component electrical terminals are Hampden HB-3 color-coded five-way captive head non-jam binding post. Provided are 10 ft. power cord and patch cords.

Transformers

Three double-wound multi-tapped single-phase transformers, rated 120 volt-amperes at 60Hz. Each tap is circuit breaker protected.

Instruments

Eight individual diode-protected metering instruments, complete with graphics.

Loads

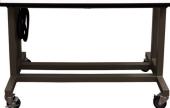Three individual load modules complete with graphics.

Power Supply

One 0-240/140V AC-3Ø-4 wire, 9A complete with graphics.

One fixed 208/120V AC-3Ø–4 wire.

Mobile Stand

Provided with one full-width table top, and swivel casters (two with locks).

MODEL H-TTD-1A
Dimensions: 72"H x 51"W x 30"D
Weight: 400 lbs.

Computer Data Logging Option

The CDL Option consists of eight digital meters and eight analog inputs which go to microprocessor controlled high-resolution 16 bit sigma-delta A/D converters to acquire the appropriate sensor signal. The digital data is translated into the appropriate format such as engineering units; when the computer requests this data, it is sent over a single USB interface cable.

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

Hampden
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