Instrumentation and Process Control

Educational Training Equipment for the 21st Century

Bulletin 131-101A

H-ICTS-1

Industrial Control Training System

General

The Hampden **Model H-ICTS-1** Industrial Control Training System is designed to teach basic process control instrumentation, utilizing both electronics and pneumatic applications.

Description

This system consists of five basic components:

- Bench
- Pneumatics Package
- Electronics Package
- Accessories Package
- Electronics Instrumentation Package.

The Bench consists of a workstation containing an electrical supply panel, an air supply panel, rails for mounting instrumentation modules, four storage drawers, two half-size storage cabinets, and one full-size storage cabinet having additional component rails. All drawers and cabinets have locks with individual keys and can be operated with a master key.

The electronic supply panel consists of one circuit breaker switch, one indicator light, three duplex receptacles, ground binding post, and one 8 ft. power cord. The air supply panel provides three sets of air regulators, gauges, and output fittings.

The *Pneumatics Package* consists of the following components:

Model H-ICTS-PB Temperature Transmitting Element Module

Model H-ICTS-PC Low Pressure Transmitter Module

Model H-ICTS-PD High Pressure Transmitter Module

Model H-ICTS-PE Chart Recorder Module

Model H-ICTS-PF Control Valve - Air-to-Close Module

Model H-ICTS-PG Control Valve - Air-to-Open Module

Model H-ICTS-PH Digital Thermometer

Model H-ICTS-PI Water U-Tube Manometer

Model H-ICTS-PJ Air Regulator Module

Model H-ICTS-PK Air Regulator Module



Model H-ICTS-1 Industrial Control Training System
Dimensions: 77"H x 70"W x 30"D, Shipping Weight: 1,026 lbs.

Model H-ICTS-PAS Accessory Set consists of union tees and 1/4" flexible tubing for interfacing the various pneumatic modules.

The *Electronics Package* consists of the following components:

Model H-ICTS-EA Voltage Regulator Module

Model H-ICTS-EB Electronic Controller Module

Model H-ICTS-EC Temperature Transmitter Module

Model H-ICTS-ED Computing Element Module

Model H-ICTS-EE E/P Transducer Module

Model H-ICTS-EF P/E Transducer Module

Model H-ICTS-EAS Accessory Set consists of an assortment of stacking cords for interfacing the various electronic modules.

The Accessories Package consists of the following components:

Model H-ICTS-AP Accessory Package consists of Spirit Filled Thermometers, Hot Plate, Stainless Steel Beakers, Stop Watch.

The *Electronics Instrumentation Package* consists of the following components:

Model H-ICTS-EIP Electronics Instrumentation Package consists of 5-ft. Roll of Type J (Iron-Constantan) Thermocouple Wire (used with Model H-ICTS-EC Temperature Transmitter), Digital Multimeter, Digital Function Generator, Dual Trace 20MHz Oscilloscope with probe set

Power Requirements

120VAC-1Ø-60Hz 220VAC-1Ø-50Hz

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



092809