H-ICS-MDP
Distribution Panel

Purpose

The Hampden **Model H-ICS-MDP** Distribution Panel provides for the control and distribution of pneumatic and electrical services within the laboratory. In addition, it provides a means of interconnecting the various work station locations into complex systems and to allow devices under bench test to be connected to the remote trainer loops.

Description

The panel consists of a free standing code gauge steel cubicle having hinged access doors on both sides. The unit includes a front equipment section and a rear closure section both resting on a welded angle iron base and joined at the top by a formed steel cap. The front and rear sections are approximately 56-1/2" high by 22" wide and are formed back two inches all around with an addition - all one inch return on the sides. All corners are welded and ground smooth.

The top cap is 20" by 22" with two inch flanges and one inch returns all around. Doors are formed from sheet steel and have a one inch flange on all sides. A continuous hinge is welded to the rear door flange and screwed to the flange of the rear section. The locking doors fit flush between the return flanges of the front and rear sections. The section bolts together without bolts being visible from the exterior. The panel assembly is finished in a high grade hammertone enamel. All equipment functions are identified by means of engraved legend plates or by silk screening.

The panel receives clean, dry air at 100 PSI from an external source. The incoming air is fed through a three-way solenoid valve controlled by an “on-off” pushbutton station through an auxiliary relay to allow system shut off from remote locations. In the off position the load side of the valve is connected to atmosphere through a muffler. The incoming air is then connected to a series of twelve switch controlled solenoid valves which feed 100 PSI air to the work stations. Pilot lights indicate valve status.

The incoming air supply is also connected to a 30 PSI regulator which feeds to an adjustable panel mounted regulator and gauge, providing a source of 0-30 PSI air terminating to a quick connect jack. Two groups of twelve jacks provide for distribution of two 0-30 PSI lines to each work station. Two groups of 13 jacks are connected in multiples forming a distribution manifold. Four needle valves, connected to jacks, provide for the addition of line restrictions. Two small air reservoirs, connected to jacks, provide signal delay. All pneumatic jacks are Swagelok quick disconnect type.

Two groups of twelve BNC type coaxial jacks are provided for connection to the work stations. With each of the groups, a set of 13 BNC jacks connected in multiples are provided. Also provided are twelve pairs of Hampden HR-2P 25 ampere pin type receptacles to allow electrical connections to and from the work stations. Two groups of twelve HR-2S socket receptacles, each bussed to an HR-2P, are provided for multiple connections. Incoming AC power is fed through a 60 ampere, three pole, circuit breaker with indicating pilot light. The load side of this breaker is bussed to 12 single-pole, 20 ampere, circuit breakers, feeding 120VAC to the work stations. The main circuit breaker is the shunt trip type to allow it to be tripped from the remote emergency shut off stations. Patch cords and hoses for use with the distribution circuits are provided.

Dimensions: 60"H x 22"W x 24"D
Shipping Weight: 600 lbs.

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

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Instrumentation and Process Control

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H-ICS-PLC-5

Programmable Logic Controller

General

The Hampden **Model H-ICS-PLC-5** Programmable Logic Controller allows logic control of all flow loop configuration valves; and the motor and heater power found on the Hampden H-ICS Series instrumentation panels. The PLC is able to operate as a stand-alone package or interface with a host computer as part of an integrated management strategy.

Instrumentation

The PLC is capable of controlling all logic functions necessary to control the Hampden **Model H-ICS** Series Instrumentation Trainers. The PLC consists of a central processor, power supply, 4-20mA input and output modules, and RS-232 communications module. All of these modules are housed in an I/O chassis. Also available, at extra cost, a menu-driven software package for program development (IBM compatible).

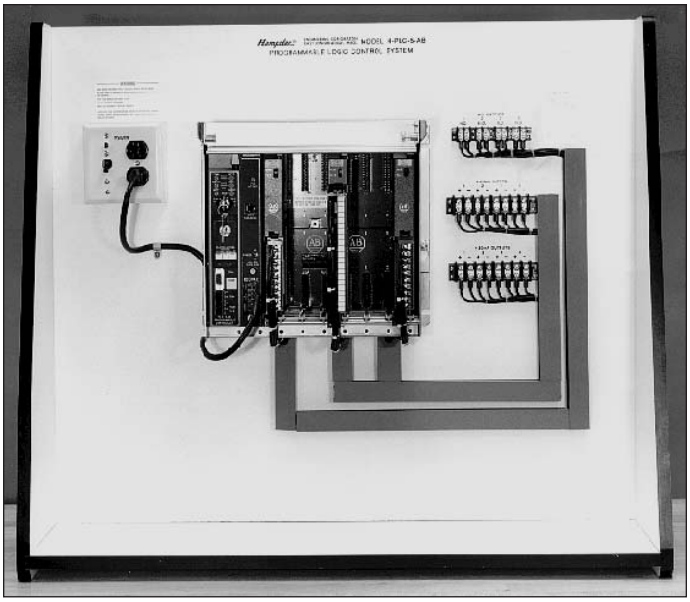
The H-ICS series instrumentation trainers utilize solenoid operated valves instead of manually operated valves to determine the flow paths. The solenoid valves, heater power and pump power is controllable via adjacent switches or other remote devices, e.g. a PLC or computer. Each panel contains a local/supervisory transfer switch for quick selection of type of control desired.

Educational Features

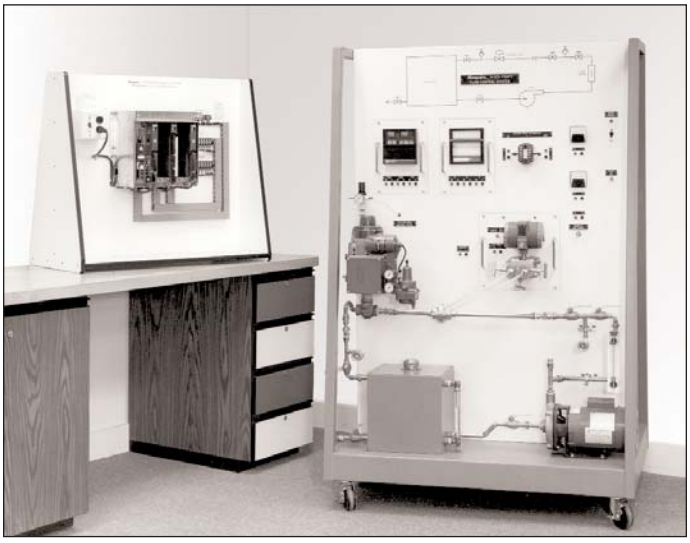
The Hampden **Model H-ICS-PLC-5** offers the trainee the opportunity to gain practical experience in the utilization of total plant management. They learn how to construct ladder logic diagrams needed to configure a process. The trainee will be able to operate isolated control loops and later, combine them into more complex loops.

Computer Compatibility

The Hampden **Model H-ICS-PLC-5** shall be equipped with a 25-pin subminiature “D” connector so that the salient signals of the process may be supervised by an IBM compatible personal computer as a part of an integrated management scheme.



MODEL H-ICS-PLC-5AB



MODEL H-ICS-PLC-5 shown with MODEL H-ICS-FX Panel

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