

## H-ICS-120 Pneumatic Instrumentation Modules

### Purpose

The Hampden **Model H-ICS-120** Pneumatic Instrumentation Modules have been developed to provide student experience in the use, calibration and test of pneumatic instruments. Used with the Instrumentation and Calibration Bench, **H-6485** or **H-6485-10**.

### Description

The Pneumatic Modules are panel mounted units that are compatible with the **Model H-ICS-110** Instrumentation Rack. Mounted on these panels are the instrument, a pair of handles, any pneumatic or electrical jacks and legend plates.

#### **H-ICS-110 Instrumentation Rack**

The Instrumentation Rack is a mobile unit constructed furniture stock steel. Each rack will accept up to eight standard size panels, with unused slots occupied by blank panels. The unit is mounted on two swivel and two locking swivel casters and comes equipped with an air regulator, quick-connect pneumatic lines and two convenience outlets.

#### **H-ICS-121 Pneumatic Differential Pressure Transmitter**

Consists of a pneumatic differential pressure transmitter which senses a differential pressure and transmits a proportional 3-15 PSI signal. The unit requires a 20 PSI air supply and is supplied with four quick connect pneumatic lines.

#### **H-ICS-122 Pneumatic Pressure Transmitter**

Consists of a pneumatic pressure transmitter which senses a pressure and transmits a proportional 3-15 PSI signal. This unit requires a 20 PSI air supply and is supplied with four quick-connect pneumatic lines.

#### **H-ICS-123 Pneumatic Square Root Extractor**

Consists of a pneumatic square root extractor which takes a 3-15 PSI signal, transmits another 3-15 PSI signal proportional to the square root of the original signal. This unit requires a 20 PSI air supply and is equipped with three quick connect pneumatic lines.

#### **H-ICS-124 Pneumatic Recorder and Controller**

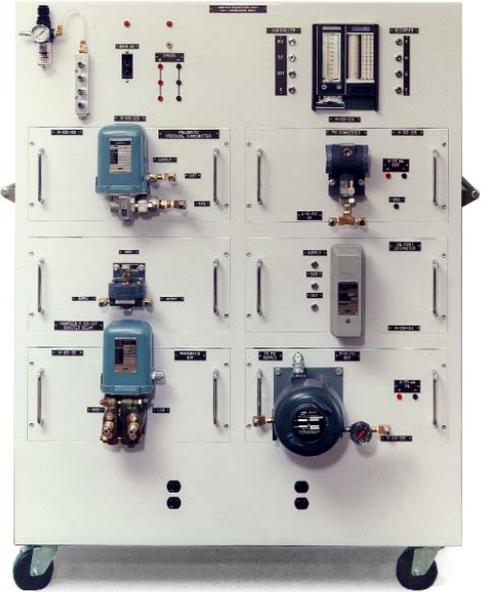
Consists of a pneumatic recorder and controller. The recorder will accept up to three 3-15 PSI inputs, and records the measurements on a rectangular roll chart with a standard chart speed of 20 mm/h. It requires an air supply of 20 PSI and comes equipped with four quick-connect pneumatic lines. The controller is operated by a local or remote setpoint with manual or automatic control and can be operated in any of the following modes: proportional, proportional plus integral, and proportional plus integral plus derivative. The controller transmits a 3-15 PSI signal which is used to control the pump speed or a pneumatic valve. The unit is equipped with three quick-connect pneumatic lines.

#### **H-ICS-125 Pressure to Current Converter**

Consists of a pressure to current converter which takes 3-15 PSI signal and converted it to a 4-20mA signal. This module is used to simulate mixed systems; i.e. when a pneumatic sensing element is used with an electronic controller. The unit is equipped with one quick-connect pneumatic line and two banana jacks.

#### **H-ICS-126 Current to Pressure Converter**

Consists of a current to pressure converter which takes a 4-20mA signal and converts it to a 3-15 PSI signal. This module is used to simulate mixed systems; i.e. when pneumatic control of an electronic sensor is utilized. The module comes equipped with two quick-connect pneumatic lines and two banana jacks.



#### **H-ICS-127 Booster Relay**

Consists of a booster relay which senses a 3-15 PSI signal with a small SCFM and converts it into a 1:1 proportional signal with a high SCFM. The increase in SCFM will improve this stroking speed of the control valve. This unit comes equipped with three quick-connect pneumatic lines.

#### **H-ICS-128 Pressure Gauge**

Consists of a pressure gauge which indicates a 0-30 PSI pressure, with an accuracy of  $\frac{1}{2}$  of 1%. The unit comes equipped with two quick-connect pneumatic lines.

#### **H-ICS-129 Air Regulator**

Consists of an air regulator which will accurately regulates the pressure being supplied to the pneumatic instruments. The module is equipped with a manifold which includes five output ports together with five quick-connect pneumatic lines. The air regulator is equipped with an integral pressure gauge.

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

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