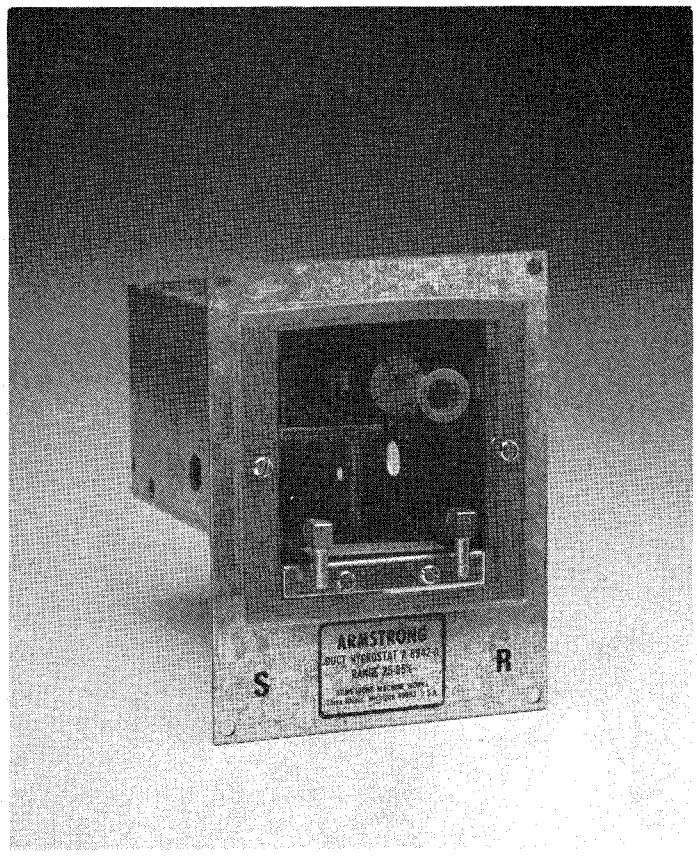
Armstrong
Machine Works

Installation and Maintenance

ARMSTRONG DUCT HYGROSTAT
HIGH LIMIT A-6942
CONTROLLING A-6942-A

This bulletin should be used by experienced personnel as a guide to the installation of Armstrong's duct hygrostat. Selection or installation of equipment should always be accompanied by competent technical assistance. We encourage you to contact Armstrong or its local representative if further information is required.



APPLICATION: A reverse acting proportional control for humidifiers in pneumatic control systems for installation in the duct. The sensing element of this hygrostat consists of a highly sensitive hygroscopic membrane. Model A-6942 is for "high limit" control and Model A-6942-A is for average relative humidity control of humidifiers.

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CONTROLLING A-6942-A

SPECIFICATIONS:

Operating:
Reverse Acting
Range
- High Limit----------55% to 95% R.H.
- Controlling----------25% to 65% R.H.

Proportional Band Setting
- High Limit----------10% R.H.
- Controlling---------- 6% R.H.

Factory Set Point
- High Limit----------90% R.H.
- Controlling----------40% R.H.

Maximum Operating Temperature----------148' F.
Normal Supply Pressure----------l5 to 25 psig
Maximum Supply Pressure----------30 psig
Air Consumption----------15 SCIM max.
Air Usage Rating (For Compressor Sizing)-------60 SCIM
Physical
- Duct Opening Required----------3-5/8" x 5-1/8"
- Duct Box----------Extends 6" into Duct
- Air Connections----------1/8" FPT

INSTALLATION: The High Limit Hygrostat should be installed a minimum of 6 to 8 feet downstream of the humidifier. The controlling stat maybe installed in the return air duct or 10 to 12 feet downstream of the humidifier. Cut opening in the duct 3-5/8" wide by 5-1/8" high. Fasten duct box flange to duct using four No. 8 sheet metal screws. Connect suppy air line to connection marked S (supply air). Run tubing from the connection marked R (regulated air) to humidifier operator.

OPERATION: Adecrease in humidity causes the sensing element to shrink. This'action increases the air signal to the humidifier operator, opening the valve to increase moisture output. With an increase in humidity, the signal from the Hygrostat decreases the air pressure to the operator, thus reducing output of vapor.

CALIBRATION: The controlling Hygrostat is factory calibrated to pass a control pressure of 9 psi at approximately 40% R.H. The high limit model is factory set at 90% R.H.

TO CALIBRATE: 1. Remove plastic cap plug from plexiglass cover.
2. Insert an allen head wrench through the opening in the plexiglass cover and turn calibration wheel to desired setting. A 1/4 turn will change the set point about 10% R.H.
3. Replace plastic cap plug.

MAINTENANCE: The Hygrostat should not be disassembled in the field. If malfunctioning occurs, return it to the factory for repair. After extended use, it may be necessary to clean the sensing element. When dirty, clean with a soft brush -- do not use any chemical cleaners. No treatment of the sensing element is necessary.