

P906C Proportional Differential Pressure Controllers

PRODUCT DATA



FEATURES

- Proportional control
- 4 – 20 mA current output
- Control range: 0 – 70 psi (0 – 483 kPa)
- Adjustable throttling range

APPLICATION

The P906C differential pressure controller provides proportional control to maintain the desired pressure difference between two points in a water system. It is suitable for use with modulating control valves to regulate the by-pass differential pressure of water chillers.

SPECIFICATIONS

Model	Control Differential Pressure Range psi (kPa)	Operating Pressure psi (kPa)		Output
		Minimum	Maximum	
P906C	0 – 70 (0 – 483)	5 (35)	225 (1551)	4 – 20 mA

Dimensions: See Fig. 1.

Electrical Ratings:

Power Supply: 220 Vac 50 Hz

Ambient Ratings:

Operating Temperature: 0 – 60 °C
 Operating Humidity: 5 – 95% RH non-condensing

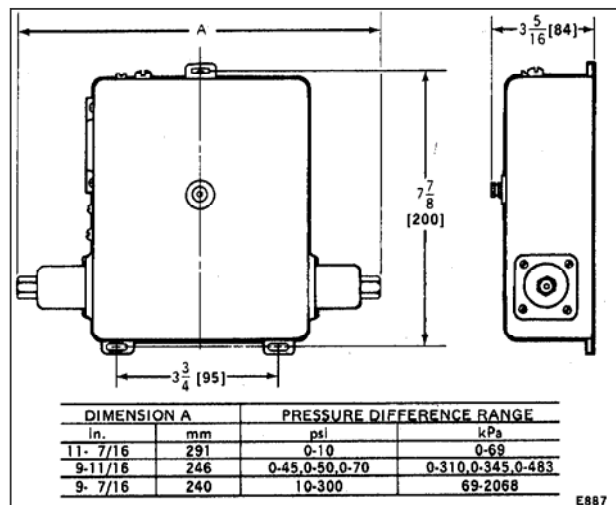


Fig. 1. Dimensions of P906C in inch [mm].

INSTALLATION

When Installing this Product...

1. Read these instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

IMPORTANT

All wiring must agree with applicable codes, ordinances and regulations.

! CAUTION

Electrical Shock or Equipment Hazard. Can shock individuals or short equipment circuitry.

Disconnect power supply before installation.

Location and Mounting

Mount the controller on a surface that is free of excessive vibration. Level the control using appropriate leveling devices.

NOTE: To prevent strain on the bellows, use the proper fittings when connecting the tubing or pipe to the bellows connections (See Fig. 2). Use care when running lines so that pipe dope and scale do not get into the internal lines.

WIRING

Disconnect power supply before beginning installation to prevent electrical shock and equipment damage. All wiring must comply with local electrical codes and ordinances. See Fig. 3 and 4 for typical system hookup and wiring.

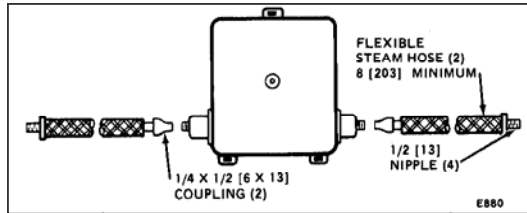


Fig. 2. Recommended Tubing Fittings

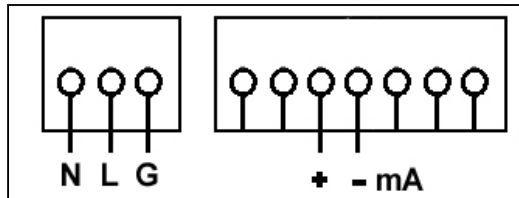


Fig. 4. Typical Wiring

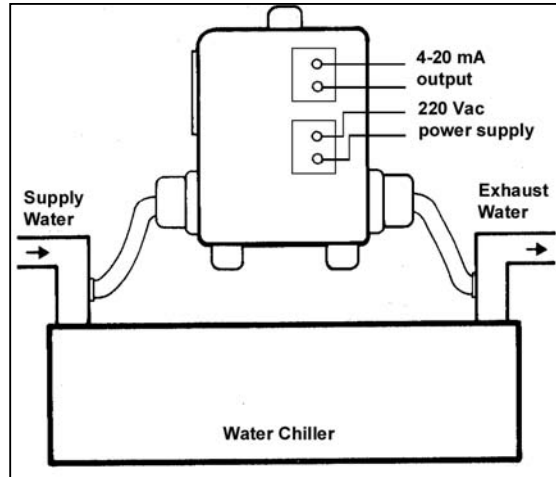


Fig. 3. Typical System Hookup

OPERATION

Pressure Difference Adjustment

Because these controllers have such a wide variety of applications, they are adjusted on the job with the system in operation.

IMPORTANT

The device controls the difference between the pressures exerted upon the 2 bellows, not the gauge pressure.

1. Connect a pressure gauge with adequate range to each element assembly.
2. Connect the differential pressure controller and gauges to the pressure points to be controlled.
3. Turn the pressure difference adjustment screw counterclockwise (↺) until the scale indicators reach the low (minimum) end of the scale (Fig. 5).
4. Turn the throttling range adjustment screw until the throttling range indicator is midway between C and D on the throttling scale plate.
5. Apply typical operating pressures in sequence to the left and right elements (high and low pressure sides, respectively). Turn the pressure difference adjustment screw clockwise (↻) until the desired differential pressure is reached.
6. Adjust the throttling range as needed. To increase the throttling range, turn the throttling range adjustment screw clockwise (↻). To decrease the throttling range, turn the throttling range adjustment screw counterclockwise (↺).
7. Apply pressures through a typical cycle while checking the differential pressure controller operation. Readjust settings if necessary. If there is any indication of short cycling or a hunting condition, increase the throttling range setting.
8. When the system operates as desired, mark the settings on the scaleplate.

NOTE: Do not go beyond the point at which the linkage begins to show slack.

- Remove the gauges and connect the differential pressure controller into the system with the higher pressure on the

left element and the lower pressure on the right element.

CHECKOUT

Check operation of controller after installing in system.

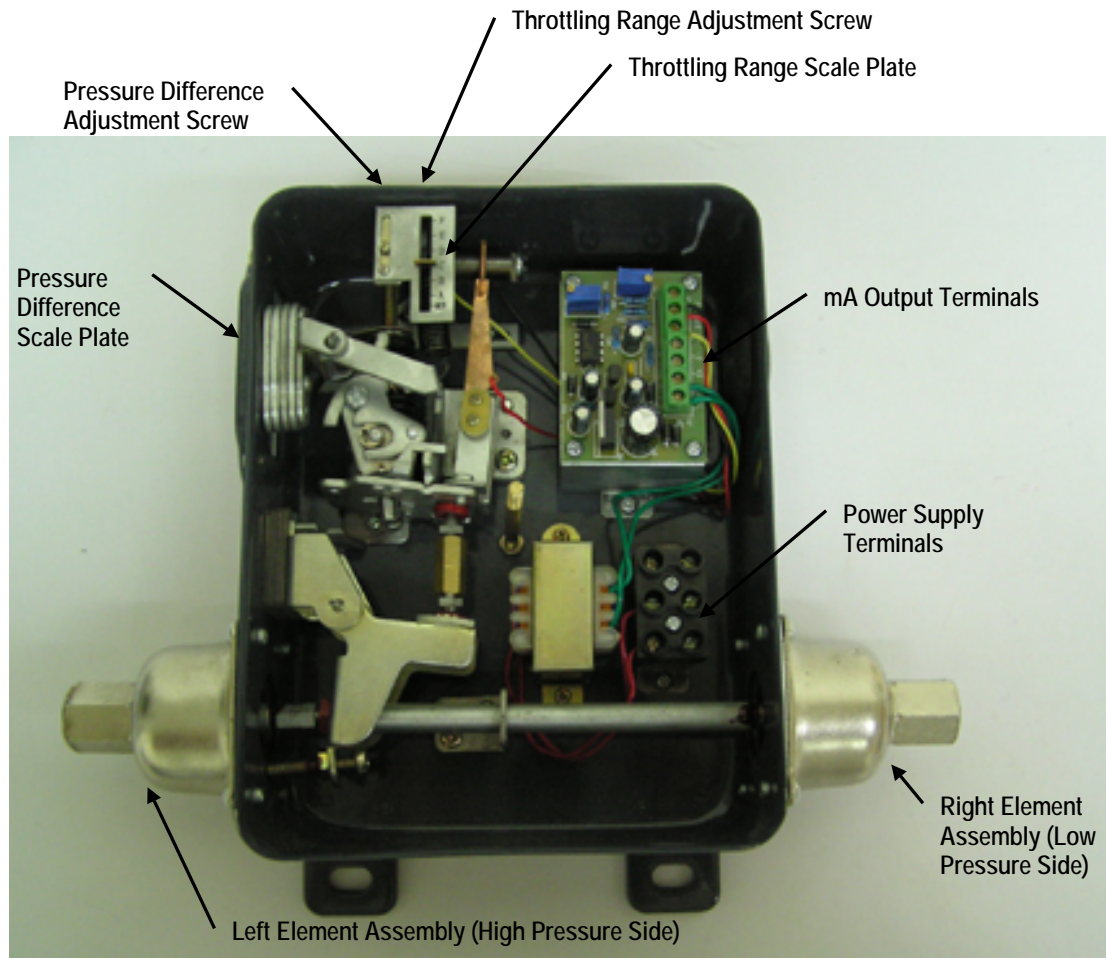


Fig. 5. Internal View of the P906C Differential Pressure Controller

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