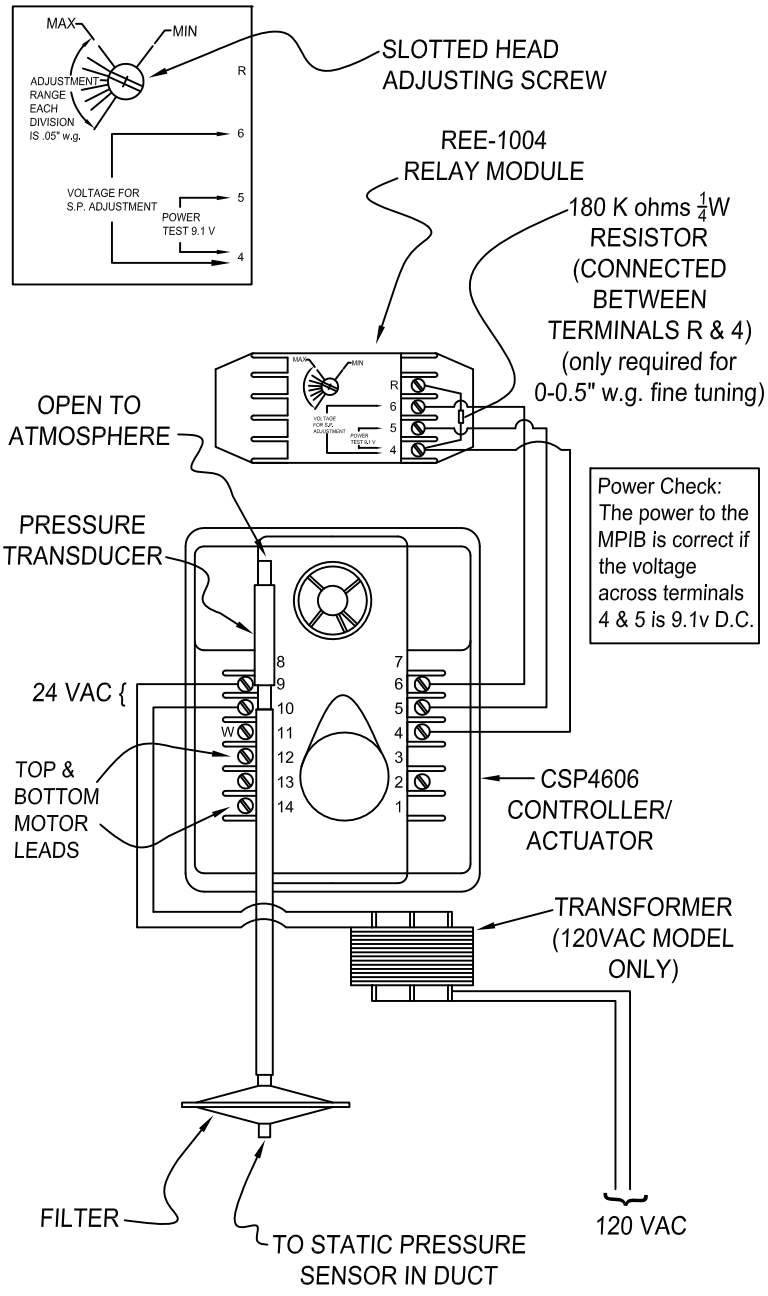
MPIB SYSTEM
Installation Instructions

Exploded Diagram of Components



Pre Installation Check:

Check to make sure the MPIB is connected correctly for the application. MPIBs with factory-installed dampers are wired for the correct rotation. If for any reason the MPIB direction is wrong, swap the RED and BLUE motor leads. (show change on the inside of the MPIB cover by erasing the existing X and X'ing the other block.

Installation Instructions:

1.) Install damper in duct as you would a conventional damper. Usual methods are to install when fabricating the duct or cut an opening on the side of an existing duct to slide the damper in. Do not interfere with operation of damper blades and check the length of screws and insulation. When installing in a transition from medium pressure to low pressure duct, seal between the damper frame and the duct as you would for any medium pressure ducting. If MPIB is supplied loose from damper:

a) Connect to damper shaft by placing the MPIB over the shaft and tightening two allen screws on the acuator hub, and

b) Anchor the MPIB from turning using the bracket provided. The bracket flexes allowing for damper shaft eccentricity. Do not screw the MPIB to the damper or the duct, as this will cause the MPIB to stall. MPIBs supplied with dampers have factory installed brackets. MPIBs for field mounting have an anchor bracket that should be rotated to the side and screwed or riveted to the duct.

2.) Install the static pressure fitting (shipped inside the MPIB enclosure.) Locate the static pressure fitting in the duct 2/3 to 3/4 of the distance between the first and the last takeoff and after at least 6 diameters of straight run. Drill a 3/8" (9.6mm) hole in the duct, insert the fitting and fasten in place.

3.) Remove any rubber protection plugs from transducer and filter ports.

4.) Run 1/4"(16mm) pneumatic tubing (supplied by others) from the static pressure fitting to the filter on the bottom of the MPIB enclosure. (the upper transducer port, P2, is open to atmosphere except when the MPIB is in a fan inlet plenum, run tubing to an outside location.)

5.) Connect Electric power.

a) 120VAC/1Ø/50-6- Hz units are supplied with a transformer. Use wire nuts to connect 120v to the black and white transformer primary leads.

b) 24VAC/1Ø/50-60- Hz units do not have a transformer. Connect 24v leads to terminals 9 & 10. Power required is 3VA.

Balancing:

VAV systems are balanced for design air volume with the system wide open. For balancing, MPIBs installed as zone dampers should be open and MPIBs installed as bypass dampers should be closed. Remove the Pneumatic tubing from the filter and zone dampers should open and bypass dampers should close. If this does not happen check:

1) Top and bottom motors connected correctly (see pre-installation check)

2) Static pressure set point above .10" wg, see (see Adjusting Static pressure set point)

APPLICATION	DAMPER SHAFT ROTATION	MOTOR CONNECTIONS	
		TOP (BLUE LEAD)	BOTTOM (RED LEAD)
ZONE DAMPER Which is normally open and closes with rising pressure	CLOCKWISE TO OPEN	TERMINAL 14	TERMINAL 12
	COUNTER-CLOCKWISE TO OPEN	TERMINAL 12	TERMINAL 14
BYPASS DAMPER Which is normally closed and opens with rising pressure	CLOCKWISE TO OPEN	TERMINAL 12	TERMINAL 14
	COUNTER-CLOCKWISE TO OPEN	TERMINAL 14	TERMINAL 12

Static Pressure in. wg. / Pa	DC Voltage across terminals 4 & 6
.10 / 24.9	1.28
.15 / 37.3	1.40
.20 / 49.8	1.55
.25 / 62.2	1.68
.30 / 74.7	1.83
.36 / 87.1	1.95
.40 / 93.6	2.08
.45 / 112.0	2.23
.50 / 124.4	2.35

Adjusting Static Pressure Set Point:

Determine static pressure point wanted. Preferably use the static pressure set point from the balancing procedure. Otherwise begin with a .2" wg setting (1.55v). Measure the voltage across terminals 4 & 6 and adjust the slotted screw on the relay module to obtain the voltage corresponding to the wanted static pressure in the table (left).

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