Honeywell

RP913A
Load Analyzer Relay

INSTALLATION INSTRUCTIONS

DESCRIPTION

The RP913A Load Analyzer is a bleed-type, diaphragm-logic, pressure selector used in pneumatic control applications. It selects the highest and/or lowest branch pressure input from up to seven inputs and passes the signal on to operate a final control element.

Figs. 1 and 2 show approximate dimensions in inches (millimeters.)

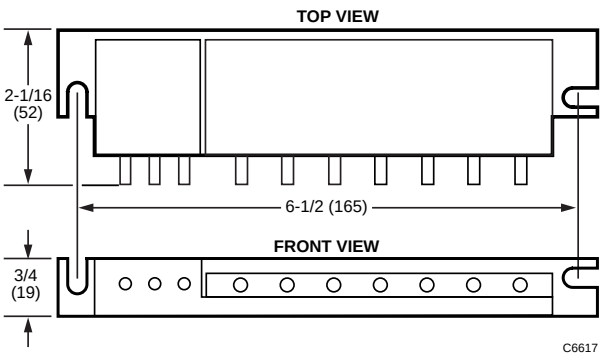

Fig. 1. Dimensions of RP913A.

Fig. 2 shows recommended spacing for two load analyzers.

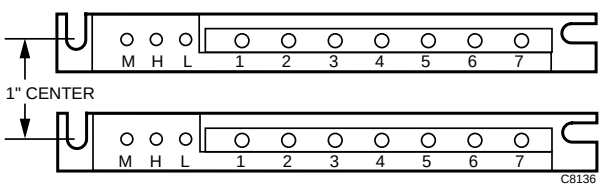

Fig. 2. Dimensions for Two RP913As.

INSTALLATION

Mounting

Mount on a surface with two #8 screws (not provided). Fig. 3 shows two ways of mounting: with ports mounted parallel (3A) and perpendicular (3B) to the mounting surface.

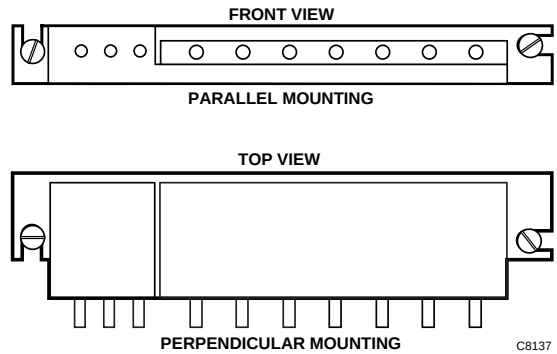

Fig. 3. Parallel and Perpendicular Mounting.

Piping

CAUTION

To prevent damage to the sharp barb connections, do not attempt to cut or pull tubing. To remove the tubing from the barb connections, cut tubing a few inches from the control device. Use a coupling to reconnect tubing.

All ports are 10 sharp-barb type for 1/4-in. O.D., polyethylene plastic tubing.

NOTE: If the system is other than copper or polyethylene tubing, adapt as shown in Fig.4.

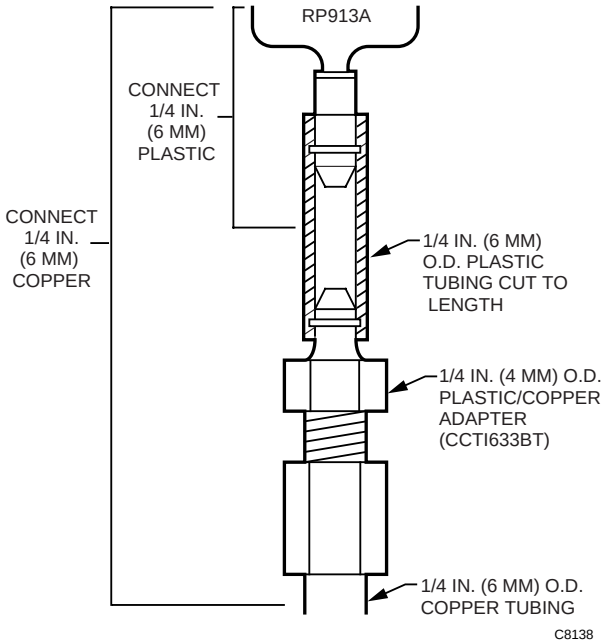

Fig. 4. Adaptation Piping.

Port Identification

There are 10 ports. Ports 1 through 7 are the input ports from zone thermostats (Fig. 5). The Main (**M**) port is connected to the system air supply. The **H** and **L** ports (**H**, higher pressure; **L** lower pressure) provide the output control signals.

Fig. 5 Port Identification.

Port Identification Table

Checkout and Test

Ensure that the output of the **L** port matches the lowest input pressure from the zone thermostat, and the output of the **H** port matches the highest input pressure signal.

1. Plug the unused **H** or **L** port, and connect the unused input ports to used input ports.
2. Adjust all inputs so they are equal, then lower one input. The output of the **L** port should track the lowered input signal.
3. Adjust all inputs so they are equal, then increase one input. The output of the **H** port should track the increased input.
4. If the RP913A still does not operate properly and the main air supply and inputs are correct, check for possible leaks in the input lines. If the malfunction is not located, replace the RP913A and recheck per the above instructions.

ENGINEERING DATA

Specifications

Model:
RP913A Optimatic Load Analyzer

Operating Pressure (Switch and Pilot) Range:
Normal:18 psi (124 kPa
Maximum pressure to any port must not exceed 25 psi (172 kPa.)

Ambient Operating Limits:
Temperature: 40 to 140°F (4 to 60°C)
Relative Humidity: 10 to 90%

Air Consumption
0.04 scfm (0.019 ml/s)

Construction
Manifold and cover plate are glass-filled, molded thermoplastic
Restrictions are stainless steel
Diaphragms are cork neoprene

Operation

The RP913A selects the lowest or highest pressure, which is then available at the **L** or **H** port.

Each RP913A contains 14 small diaphragms and control nozzles (Fig. 6.) The diaphragms are arranged in two rows of seven diaphragms. One row selects the highest pressure, the other row selects the lowest pressure. Each input pressure is connected to two diaphragms, one in each row.