

MODEL NUMBER RP973A

General

The RP973A is a direct acting, three-port pneumatic relay suitable for use in control systems where the average of two input pressures is required to operate a valve or damper motor, or as a controller input.

Features

- In-line mounting, but can be surface or panel mounted through mounting tab.
- Air connections (sharp barb) for 5/32 in. (4 mm) O.D. plastic tubing.
- Constructed of sonic welded plastic.
- High reliability, no moving parts.
- High efficiency filters on inputs.

Specifications

FILTERED RESTRICTION SIZE

.005 in. (.13 mm)

AIR CONSUMPTION

.007 SCFM max. (198 SCCM)

OPERATING AIR PRESSURE

3 to 15 psi (20 to 105 kPa) input and output. (Output accurate to $\pm 15\%$ of the difference of the two inputs.)

MAXIMUM SAFE AIR PRESSURE

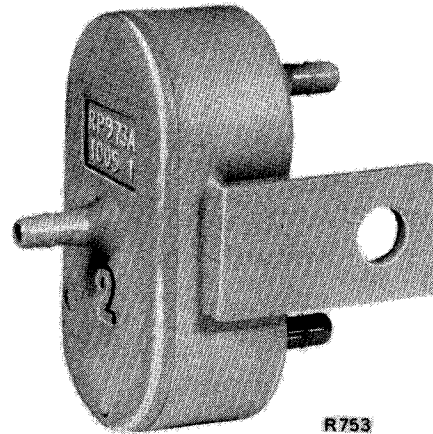
30 psi (205 kPa)

AMBIENT OPERATING LIMITS

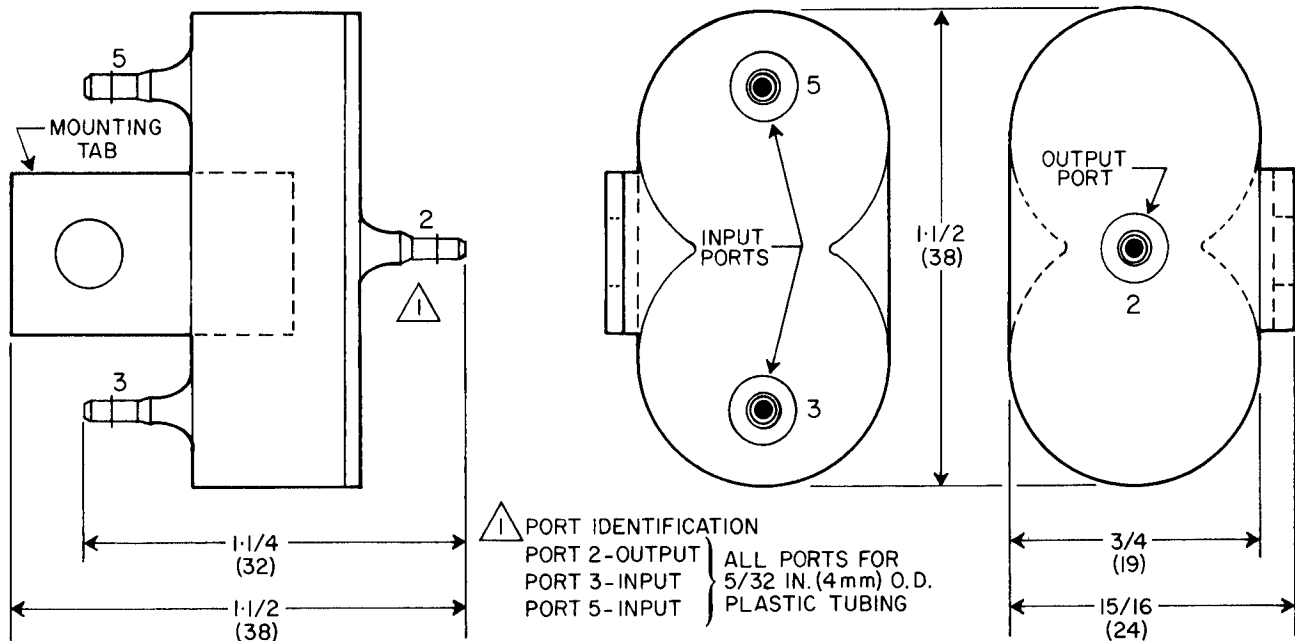
Temperature: 32 to 125F (0 to 52C)
Humidity: 5 to 95%

DIMENSIONS

Refer to Fig. 1



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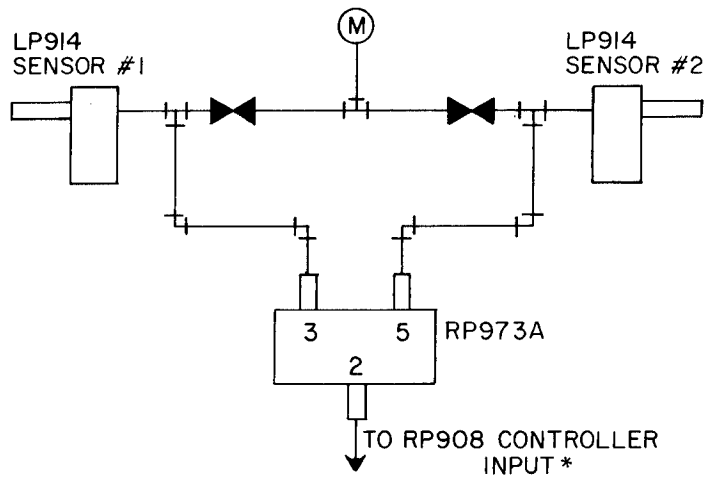
FIG. 1—APPROXIMATE DIMENSIONS OF RP973A IN INCHES (MILLIMETERS)

Typical Operation

[Refer to Fig. 2]

In small ducts where a long averaging element is impractical or undesirable, averaging may be accomplished with two smaller rod type sensors such as LP914's. When temperature at the two sensors remains constant, the output of the RP973A Averaging Relay also remains steady, at the average of the two input signals.

On a change in temperature at one or both of the sensors the input pressure(s) to the RP973A changes. The relay output simultaneously shifts to the new average of the two inputs, thereby causing the controller to open or close a valve or damper to satisfy the averaged sensor requirements.



$$* \text{ OUTPUT} = \frac{\text{INPUT \#1} + \text{INPUT \#2}}{2}$$

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FIG. 2—TYPICAL OPERATION