

## Airstream Insertion Thermostat

### SPECIFICATION DATA



### FEATURES

- Direct-acting, one-pipe, bleed-type controller
- Invar rod and seamless brass tube insertion type sensing element provides direct-acting, proportional control for valves and damper actuators in the system
- Gage tee and tank valve facilitate checking line pressures.

### GENERAL

The LP907A Airstream Insertion Thermostat is most commonly used as a discharge controller in unit ventilator applications.

Other applications include a limit device when used with other controllers and as a proportioning type controller for pneumatic valves and dampers in fan room applications. When used as limit controllers, they provide a "submaster action" caused by overcontrol during light load conditions.



# SPECIFICATIONS

**Model:**

LP907A: Direct acting

**Thermostat Setpoint Scales:**

40 to 140F (5 to 60C) [40 to 90F front, 90 to 140F back (5 to 32 front, 32 to 60 back)]

**Throttling Range:**

Adjustable internally from 10 to 70F (6 to 39K). Factory set at 25F (14K). Duct mounted version — LP907A — internally adjustable from 5 to 35F (3 to 19K); factory set at 15F (8K)

**Maximum Safe Air Pressure:**

20 psig (138 kPa)

**Temperature Limits**

From 20 to 250F (-7C min. to +120C max.)

**Restriction:**

External 0.007 in. (0.2 mm) fixed restriction (order separately).

**Adjustment Means:**

Dial under cover

**Type of Element:**

18-3/4 in. (4375 mm) long x 11/32 in. (9 mm) diameter invar rod and seamless brass tube.

**Air Connections:**

Push-on barb fro 1/4 in. (6 mm) poly tubing

**Mounting:**

Insertion mounting with locknut on boss of insertion shank

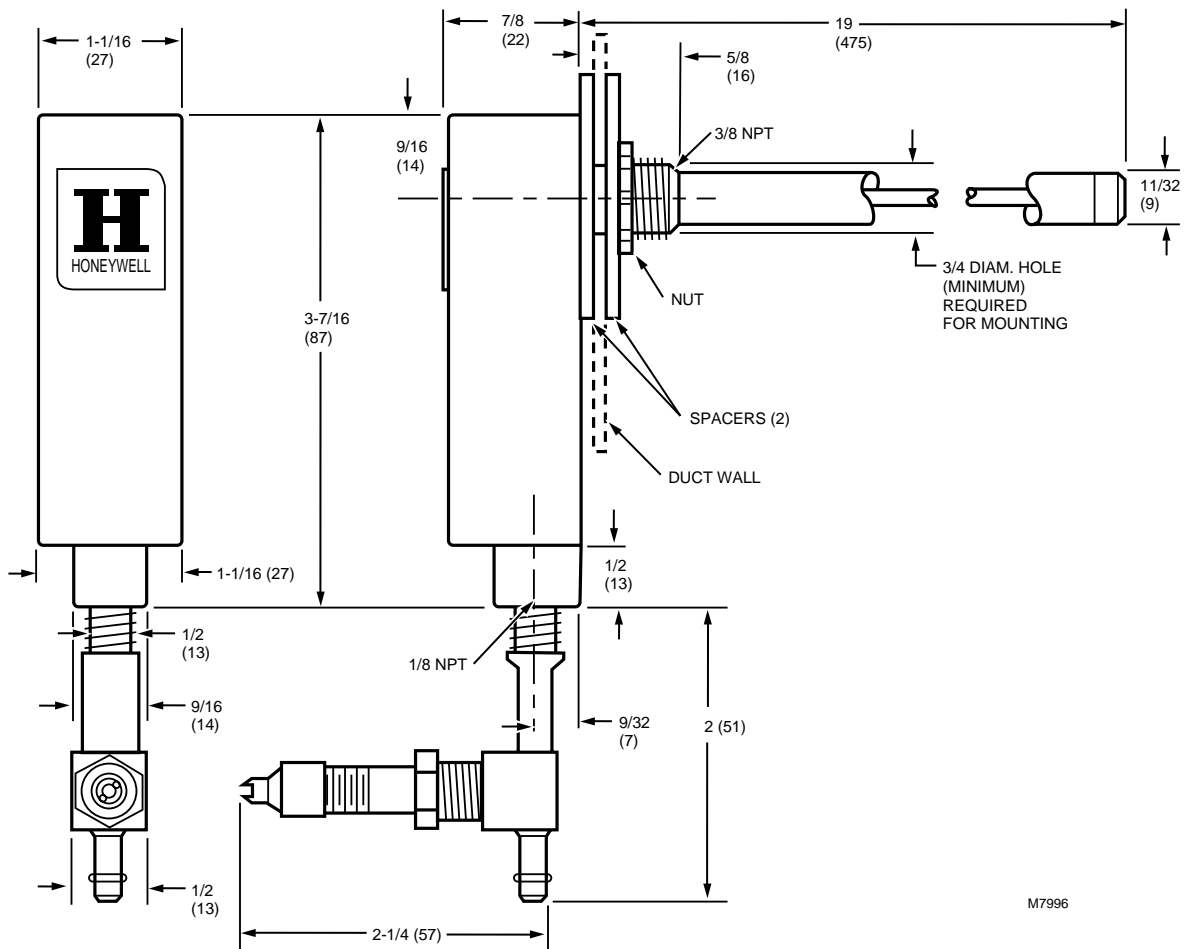
**Finish:**

Gray

**Accessories Available:**

CCT 2085 gage adapter

14002913-002 External 0.007 in. (.2 mm) restriction



**Fig. 1. Dimensions of LP907A in inches (millimeters).**

# OPERATION

Due to its bleed-type construction and wide throttling range, the LP907 provides submaster-type operation in a normal unit ventilator system.

Whenever discharge air temperatures are within the throttling range of the LP907, branch-line pressure changes from the room thermostat reset the control point of the LP907. By this, the LP907 directly controls airstream temperature except during morning warm-up and heavy load conditions.

In Fig. 3, the RP670 switching relay is directly connected to the main. The action of this relay "locks-out" the LP907 during the summer (cooling) cycle, whenever the main pressure is 14 psig (95 kPa) or less (normal 13 to 18 lbs {90 to 125 kPa}). This allows 1 lb main line variation.

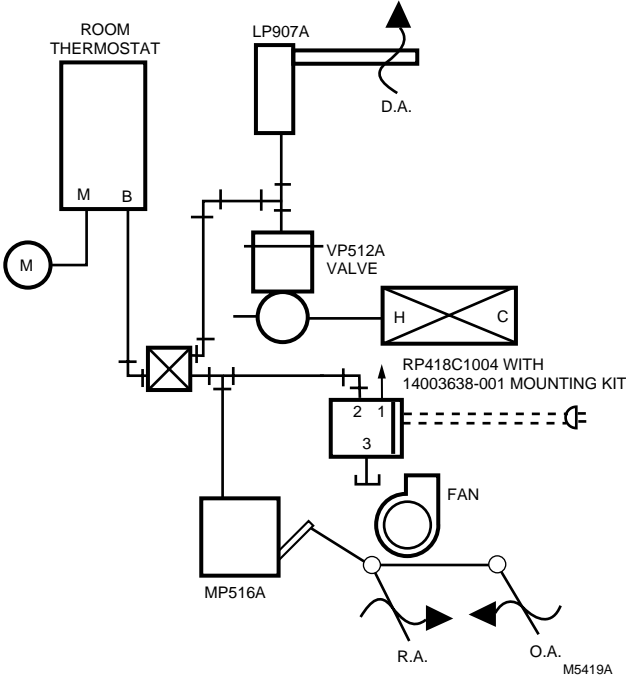


Fig. 2. Typical operation.

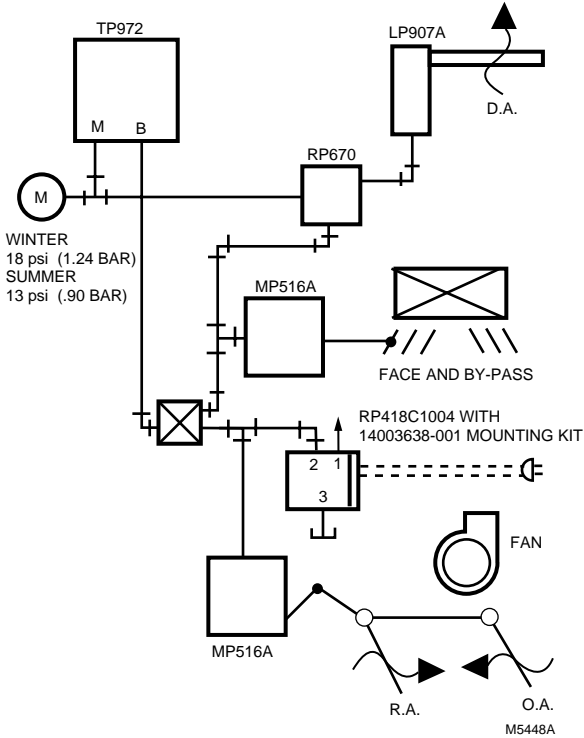


Fig. 3. Typical operation of LP907 in heating-cooling application (unit ventilator).

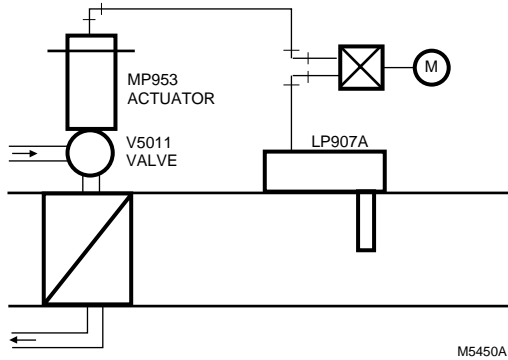


Fig. 4. Typical operation of duct mounted LP907.

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