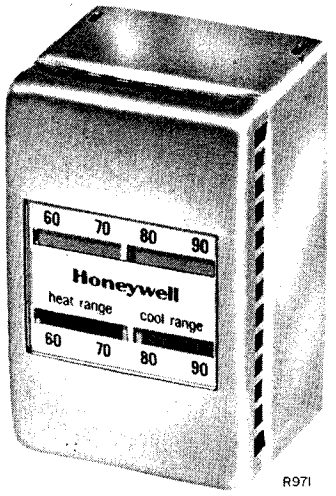
Honeywell

INACTIVE PRODUCTS
OBSOLETE FORM
OK BAC 4/27/92

TP972A Pneumatic Limited Control Range Thermostats

GENERAL

The TP972A is a limited setpoint, two-pipe, proportional pneumatic thermostat. Two bimetal elements, one for cooling and one for heating, provide automatic summer/winter changeover by responding to a change in main line pressure. The TP972A controls a pneumatic valve actuator and/or damper operator in HVAC control systems.



FEATURES

- Meets Department of Defense Energy Limitation Requirements.
- Individually adjustable throttling ranges for heating and cooling.
- Accessible or Concealed Setpoint Adjustment.
- Automatic Changeover from Main Line Pressure Change.
- Concealable, Accurate, Spiral Bimetal Thermometer.
- Two Separate Sensing Elements
- Fully Modulating.
- Replaceable Cartridge Type Filter.

SPECIFICATIONS

Table 1. Model Specifications.

Model	Mode	Action	Changeover Pressure	Setpoint Limit	Setpoint Range
TP972A1051 (INACTIVE)	Summer	R.A.	13 psi (90 kPa)	78 to 90 F (26 to 32 C)	60 to 90 F (16 to 32 C)
	Winter	D.A.	18 psi (124 kPa)	60 to 72 F (16 to 22 C)	
TP972A1093 (INACTIVE)	Summer	D.A.	13 psi (90 kPa)	78 to 90 F (26 to 32 C)	60 to 90 F (16 to 32 C)
	Winter	D.A.	18 psi (124 kPa)	60 to 72 F (16 to 22 C)	
TP972A1119 (INACTIVE)	Summer	D.A.	25 psi (138 kPa)	78 to 90 F (26 to 32 C)	55 to 90 F (13 to 32 C)
	Winter	R.A.	20 psi (172 kPa)	55 to 65 F (13 to 18 C)	

Throttling Range:
2 to 10 F (1 to 5.5 C). Separately adjustable for heating and cooling.
Factory set at 4 F (2.2 C).

Filter:
Replaceable cartridge type.

Maximum Air Pressure:
30 psi (207 kPa).

Air Consumption:
0.011 scfm (TP972A1051; A1093).
0.013 scfm (TP972A1119).

Adjustment Means:
External removable thumbwheel.

Thermometer:
Spiral bimetal, 60 to 90 F scale.

Bar 6/15/88

Form No. 77-9858
Commercial Bldg. Group
MLF TAB: II. C. 2.

Mounting:
Wall or duct mounted.

Dimensions:
1-7/8 x 3 x 1-1/2 in. deep (50 x 80 x 40 mm).

Accessories:
Cover: Part No. 14002132-701.
Fittings: See Form No. 95-7134.
For accessories, e.g., standoff rings, finish plates, guards, see Form No. 77-9828.

TYPICAL OPERATION

See Figures 1, 2, and 3

In the cooling cycle, when the thermostat is set below 78 F (26 C) with 4 degree TR, space temperature will be controlled at 78 F. When temperature falls below 76 F (24 C), no energy is required. A rise in space temperature at the thermostat lowers branch line pressure, opening the valve (chilled water) to control the temperature at setpoint.

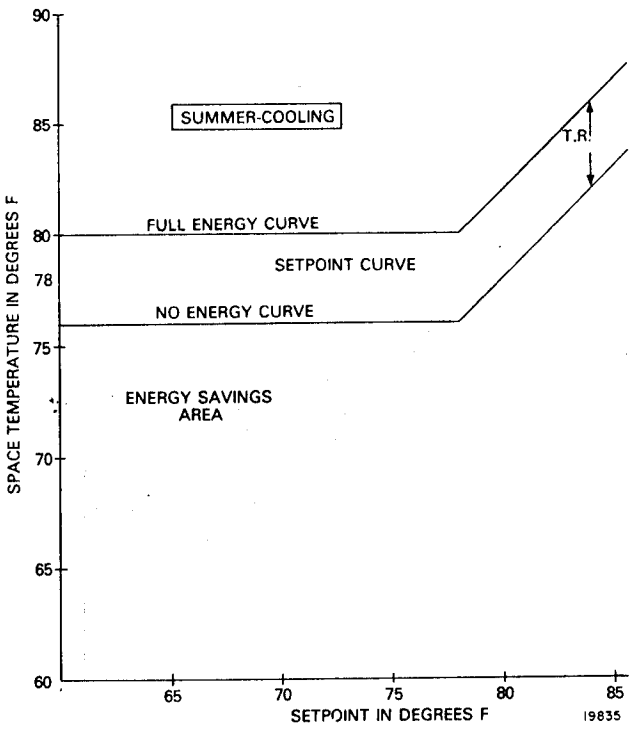


Fig. 1. Graphic Representation of Typical TP972A Operation on Cooling Cycle.

In the heating cycle, when the thermostat is set above 72 F (22 C) for TP972A1051, A1093 or 65 F (18 C) for TP972A1119 with 4 degree TR, space temperature will be controlled at 72 F or 65 F. When temperature rises above 74 F or 67 F, no energy is required. A fall in space temperature at the thermostat lowers branch line pressure, opening the valve (hot water) to control at temperature setpoint.

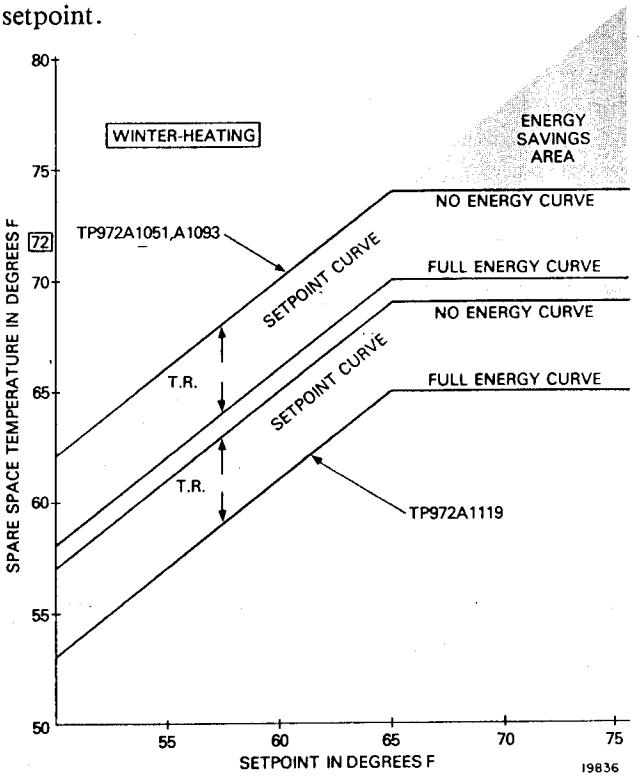


Fig. 2. Graphic Representation of Typical TP972 Operation on Heating Cycle.

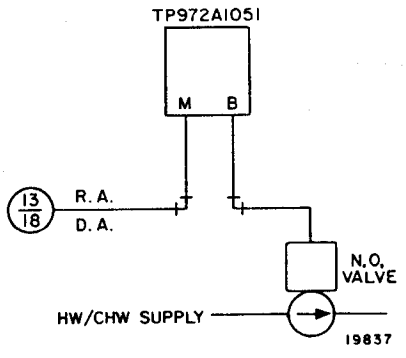


Fig. 3. Typical TP972A1051 Application.

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