

Powerstar Heating/Cooling Pneumatic Room Thermostats



192 HC Thermostat chassis.



Typical wall plate and screws.



192 HC Thermostat with plastic cover. Chassis wall plate with easy maintenance plug-in adapters shown (optional).



Description

Providing proportional single output, dual setpoint with 2-pipe for high air capacity pneumatic room temperature control, the 192 HC Powerstar Heating/Cooling Pneumatic Room Thermostat provides two thermostats under one cover; one side for heating and the other for cooling. Switchover is accomplished by changing the air pressure to the thermostat.

Features

- Dual setpoint dial available in Fahrenheit or Celsius scales
- Available in direct or reverse acting models
- Sensitive bimetal responds to temperature changes
- Integral, field adjustable limit stops
- Adjustable changeover pressure
- Large volume air capacity relay
- Wall mounting plates provides connection to a variety of rough-in terminal boxes
- Test port for fast check of output pressure without removing the cover
- Field replaceable thermometer, setpoint dials, restrictor and filters

Options

- Fixed limit stops to meet government specifications
- Quick-connect air connections for ease of installation and service
- Large, 1/2" setpoint knob for convalescent homes

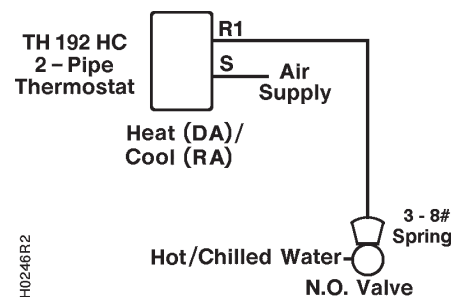
Applications

Designed for temperature control of heating and cooling applications, the 192 HC Powerstar Heating/Cooling Pneumatic Room Thermostat controls valves and damper actuators in cooling equipment. Providing energy management and occupant comfort, the thermostat automatically adjusts to seasonal changes from heating setpoint to cooling setpoint in commercial and institutional facilities.

Recommendation

For control of multiple valves and actuators, use with or without high/low limiting controls.

Application Drawing



192 HC Thermostat Specifications

For complete conversion kits, refer to the Retroline® Retrostats starting on page F-15.

Scale; Range
Major (minor) Divisions.....45 to 85°F, 10(2)°F
(7 to 30°C, 5(1)°C)

Factory Calibration 72°F, 7.5 psi ± 0.3
(22°C, 52 kPa @ 1.8)

Sensitivity Adjustment Range 1 to 4 psi/°F (12 to 50 kPa/°C)

Factory Setting 2.5 psi/°F (31 kPa/°C)

Limit Stop
Field Adjustment Range 45/85°F (7/30°C)
Fixed Limit Stop Range.....55/75°F (3/24°C)

Temperature
Storage.....-10 to +140°F (-23 to +60°C)
Ambient Operating40 to 140°F (4 to 60°C)

Accuracy at Factory
Calibration ±2°F (±1.1°C)
Response0.1°F (0.06°C)

Supply Air Pressure
Two Pressure (Recommended) Cooling/Heating..... 18 psi (124kPa)/
(124 kPa)/25 psi (172 kPa)

Supply Air Pressure
Two Pressure (Range)
Cooling 15 to 19 psi (103 to 131 kPa)
Heating 23 to 30 psi (159 to 207 kPa)

Two Pressure, Honeywell Competitive Model
Cooling/Heating..... 13 psi (90 kPa)/18 psi (124 kPa)

Two Pressure, Johnson Competitive Model¹
Cooling/Heating 15 psi (103 kPa)/20 psi (138 kPa)

Nominal Air Consum. for Air Compressor Sizing25 scim (6.8 ml/s)

Nominal Air Capacity for Air Main Sizing40 scim (11 ml/s)

Nominal Air Capacity
Supply/Chassis Exhaust..... 150 scim (41 ml/s)/150 scim (41 ml/s)

Air Connections 5/32" (4 mm) OD tube








Dimensions (with cover) 2.16" W x 3.34" H x 1.59" D
(55 mm W x 85 mm H x 40 mm D)

Shipping Weights
Thermostat Chassis and Wall Plate 0.53 lb. (0.24 kg)
Plastic Cover0.07 lb. (0.04 kg)
Metal Cover (single/dual) 0.27 lb. (0.12 kg)/0.7 lb. (0.3 kg)

1. Some Johnson Controls heat/cool thermostats have a cooling supply pressure of 20 psi (138 kPa) and a heating supply pressure of 15 psi (103 kPa). For this application, the heating and cooling actions must be reversed. If exposed setpoint is required, order special cover, **192-773**.

192 HC Thermostat Product Ordering

Model #	Thermostat Chassis Type				Thermostat Chassis & Wall Plate	
	Output	Setpoint	Air Output Capacity	Thermometer & Setpoint Scales	Control Action	
					Heat Direct	Heat Reverse
192 HC 2-pipe	Single	Dual (Heat and Cool)	High (Integral Relay)	°F °F °C °C	192-207 Cool (DA)	192-209 Cool (DA)
					192-208 Cool (RA)	192-210 Cool (RA)
					192-227 Cool (DA)	192-229 Cool (DA)
					192-228 Cool (RA)	192-230 Cool (RA)

Thermostat Covers (Sold Separately)	Plastic Part No.		Metal Part No.
	Desert Beige	White	
 <ul style="list-style-type: none"> • Adjustment setpoint concealed • Indicator setpoint concealed • Chassis thermometer concealed • No logo 	192-257	192-257W	192-357
 <ul style="list-style-type: none"> • Adjustment setpoint concealed • Indicator setpoint concealed • Chassis thermometer concealed • With logo 	192-256	192-256W	192-356
 <ul style="list-style-type: none"> • Adjustment setpoint concealed • Indicator setpoint concealed • Chassis thermometer exposed 	192-254	192-254W	192-354
 <ul style="list-style-type: none"> • Adjustment setpoint key • Indicator setpoint exposed • Chassis thermometer concealed 	192-267	192-267W	192-367
 <ul style="list-style-type: none"> • Adjustment setpoint key • Indicator setpoint exposed • Chassis thermometer exposed • Use with 1/2" setpoint knob option 	192-268	—	192-368
 <ul style="list-style-type: none"> • Adjustment setpoint exposed • Indicator setpoint exposed • Chassis thermometer concealed • Use with 1/2" setpoint knob option 	192-258	—	—
 <ul style="list-style-type: none"> • Adjustment setpoint exposed • Indicator setpoint exposed • Chassis thermometer concealed 	192-260	192-260W	192-360

Note: • “Exposed features” are indicated in red on corresponding illustration.
• Universal Cover sold on page F-92.

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Pneumatics