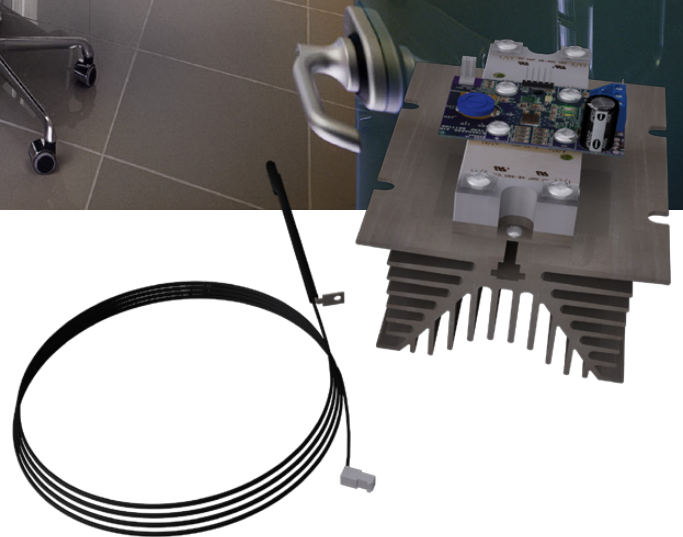


SCR

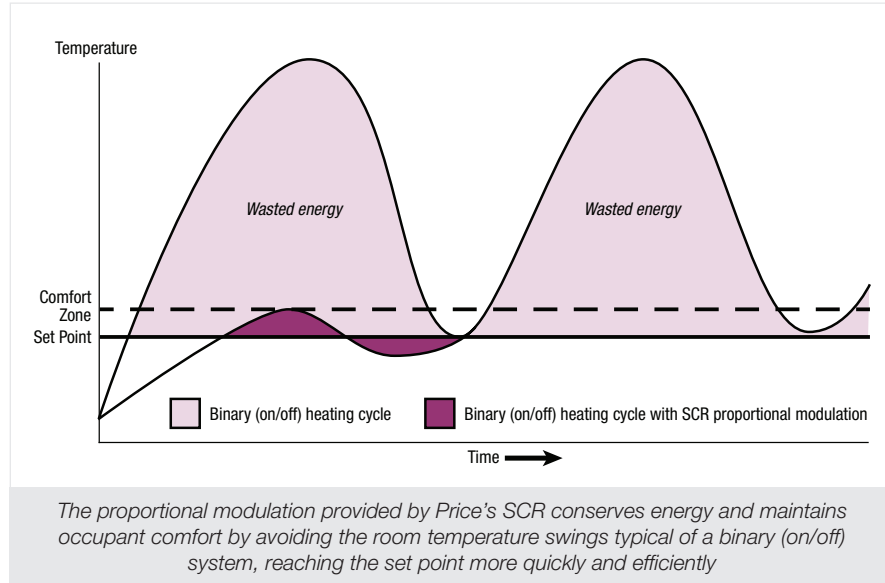
SILICON CONTROLLED RECTIFIER



Typical System Configuration

Price's Silicon Controlled Rectifier (SCR) controller acts like an electronic switch that turns on and off large amounts of power to the load (heater). It provides **proportional modulation** of the heater's full operating range, ensuring reliable, efficient and silent operation.

This controller uses a zero cross-switching feature that allows for a soft start of the electronic load, eliminating power surges.



Product Highlights

Energy Efficiency & Occupant Comfort

Binary (on/off) heat is the simplest and most economical type of heating available, but is neither energy efficient nor particularly comfortable for occupants, as it can cause room temperature swings while trying to reach the set point.

The addition of an SCR allows an operator to enjoy the benefits of a binary system while addressing the downsides, as it provides silent proportional modulation of a heater's full operating range. Proportional modulation reduces temperature swings caused by overshooting or undershooting, thereby conserving energy and maintaining occupant comfort.

Discharge Air Temperature (DAT) Probe (Optional)

A discharge air temperature (DAT) probe can be added to any Price SCR. In order to prevent stratification of warm air, maximum discharge temperature should be limited, and this DAT probe provides the SCR with feedback on the air temperature being provided to the space.

When the optional DAT probe is provided with the SCR, it must be field-mounted in the ductwork downstream from the heater. Price recommends mounting the probe at least two feet downstream from the heater.

Using the SCR's on-board dial, the installer can select a heating temperature of anywhere between 65°F to 130°F. ASHRAE recommends limiting the heating air temperature to a maximum of 15°F above the room temperature. Therefore, a DAT setting of approximately 90°F is recommended for typical applications.

With the DAT probe connected during a call for heat, the SCR will cycle on and continue increasing the heat output every few seconds until the temperature reaches the dial set point. Note that any input signal (above 2 VDC for BAS; above 4mA or 24VAC in pulse mode) will cause the SCR with DAT to target its dial set point. If the DAT probe is disconnected, the SCR will revert to normal operating mode (non-DAT mode) and modulate proportionally based solely on input signal.

FEATURES

- + Accurately maintains room setpoints, preventing undershooting and overshooting and thereby reducing operating costs
- + Silent operation: Solid state switching of the coil elements eliminates noisy contactors and the requirements for more costly mercury contactors
- + Optional discharge air temperature (DAT) probe limits discharge air temperature
- + Large, finned aluminum heat sink provides optimal heat dissipation
- + Industry-standard inputs accepted: 0-10 VDC, 4-20mA, 24 VAC (steady or pulse)

PRICE | CONTROLS

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