



Price Intelligent Controller - SD  
for HVAC Zone Control

**PRICE**<sup>®</sup>

The Science of Comfort<sup>™</sup>

# PIC-SD ZONE CONTROLLER

The PIC-SD is a powerful yet cost effective VAV zone controller for single duct terminals.

An advanced and configurable proportional integral (PI) controller allows for exceptional user comfort and energy efficiency. Installation of the controller and thermostat is simple and error proof with RJ-45 (network type) connections to the thermostat.

The PIC-SD is available with several thermostat options allowing the designer to match the specific needs of the customer. All Price thermostats, except the wireless model, have a RJ-12 service port allowing setup and configuration without having to access the plenum.

## PIC-SD FEATURES

- Fast and error proof RJ-45 thermostat connections
- Integrated Belimo actuator
- Two 24 VAC binary outputs field selectable between hot and common switching
- Two fully-configurable analog (0-10 VDC) outputs for heating, cooling, and auxiliary
- Built in BACnet MS/TP and VAV flow sensing
- Pluggable terminal blocks for easy field wiring
- Diagnostic LEDs for BACnet and controller status



# INTEGRATED THERMOSTAT OPTIONS

FULL LINE OF THERMOSTATS FOR ANY APPLICATION



## LCD Thermostat with Motion Sensor

This model measures room temperature, has an LCD screen with push button set point adjustment, and features a motion sensor. The motion sensor allows for automatic detection of space occupancy and therefore can save energy by shutting down equipment during unoccupied periods.



## LCD Thermostat

This model measures room temperature and houses an LCD screen with push button set point adjustment. With the press of a button, the occupant can override the system's schedule during unoccupied times providing the user with optimal comfort. Temperature set point limits are set through the LCD service menus or over BACnet.



## CO<sub>2</sub>/Humidity LCD Thermostat

This model provides all the features of the standard LCD model but also adds an NDIR CO<sub>2</sub> module and humidity sensor. These points are available on the LCD screen and on BACnet to help the building automation system (BAS) perform at maximum efficiency.



## Room Sensor Thermostat

This model measures room temperature. Temperature set points are set through software, eliminating the need for local set point adjustment (set point can be adjusted through Linkersoft or BACnet).



## Dial Thermostat

This model measures room temperature and features a dial adjustment and an occupancy button with LED lighting. Temperature set point limits are set through software (either Linkersoft or BACnet).



## Wireless Thermostat

This model allows convenient, wire-free placement on any surface in any room. A small receiver module is mounted near the controller with a range of up to 50 feet.

# PIC-SD ZONE CONTROLLER

The PIC-SD zone controller arrives on site fully programmed and configured for a specific sequence of operations. If any changes are needed, you can use the Linkersoft2 interface cable and software to make changes easily after installation. The interface cable plugs into any thermostat model's service port, allowing the installer to adjust virtually any setting in the PIC-SD controller. This gives the installer the ability to access all these functions without having to climb into the ceiling plenum.

Download the latest version of Linkersoft2 from: <http://www.priceindustries.com/resources/type/software>

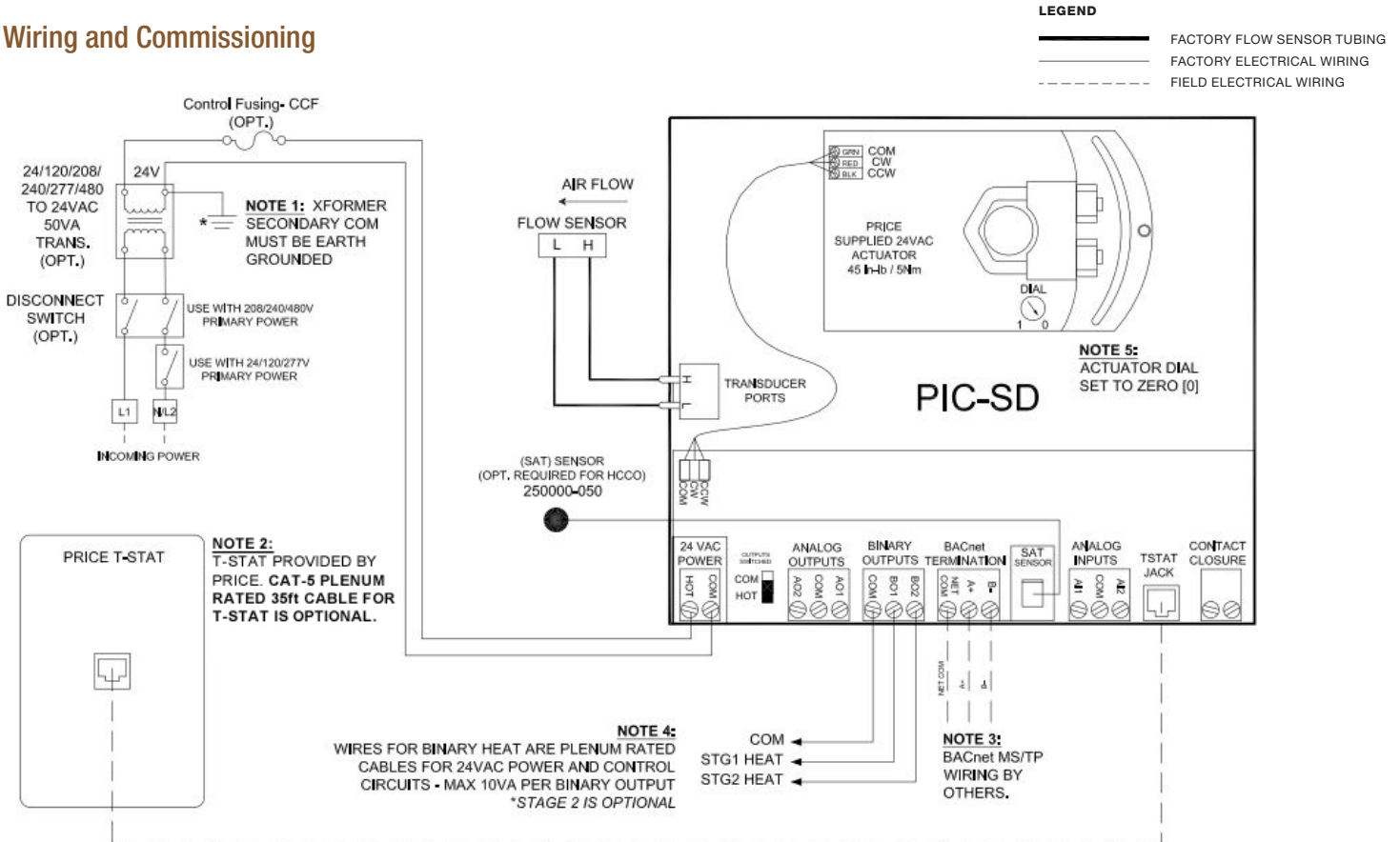


# INTEROPERABILITY WITH BACNET

Using its built-in native BACnet MS/TP connection, the PIC-SD can connect to the latest building automation systems (BAS). Our fully certified BACnet controller ensures no issues with communication onsite, reducing expensive troubleshooting and delays. Pluggable terminal blocks, and receive and transmit LEDs all assist the installers in getting the job site up quickly. Setting BACnet addresses is simple using our LCD thermostat or Linkersoft2 commissioning software.



## Wiring and Commissioning



### Control Sequence

All PIC-SD controllers come factory programmed for their sequence of operations. A typical sequence is shown (#1811). This shows the wiring to the PIC-SD as a single duct terminal with heat/cool changeover and two stages of binary (on/off) electric reheat. More detailed information on the control sequence and wiring can be found in the PIC-SD operation and maintenance (O&M) manual.

### Power

The PIC-SD requires low voltage 24 VAC connection to operate. Price can supply a factory mounted transformer in a variety of voltages or the installer can use an alternate 24 VAC power source.

### Thermostat

All PIC-SD thermostats use an RJ-45 connection. Price can supply this cable (standard model is 35 feet and can be doubled to 70 feet with a cable coupler), or the installer can build their own cables on site. To save time and cost on site, Price recommends purchasing our 35-foot cable with the PIC-SD.

### BACnet

The BACnet connection requires a low capacitance twisted pair and network ground wire. Price recommends using a plenum rated CAT5 cable for this (using the orange and orange complement pair for Net - and Net + and the brown and brown complement together for Net ground). Price recommends not exceeding 30 devices and 1,000 feet per MS/TP segment. This ensures a fast and reliable BACnet network.



# SPECIFICATIONS

**Transformer Options:** 120/208/240/277 VAC to 24 VAC, 50/60 Hz, 50VA Class 2

**PIC-SD Input Power:** 24 VAC, 50/60Hz, 6VA (plus external loads), Class 2

**Environmental (operating):** 10°C to 50°C (50°F to 122°F), 5% to 95% R.H. (non-condensing)

**Environmental (storage):** -30°C to 50°C (-22°F to 122°F), 5% to 95% R.H. (non-condensing)

**Inputs:** 2 analog inputs: 0-10 VDC

1 binary input: dry contact closure

1 thermistor input: 10k ohm- type "J"

**Differential Pressure Sensor:** +/-500 Pa (2.0 in. w.g.), temperature compensated

**Outputs:** 2 analog outputs: 0-10 VDC - configurable through setup tools - max 10mA each

2 binary outputs: 24 VAC rated at 0.5 amps max each - switched HOT or COM by jumper

**Indicators:** White status LED, red/green LEDs for BACnet receive and transmit

**Connections:** RJ-45 straight through cable (568-B standard) required for thermostat connection. Recommended optional cable is available from Price (35 foot, plenum rated)

Maximum cable length from controller to thermostat is 70 feet

RJ-12 on thermostat for Linkersoft setup/commissioning tool

Removable terminal blocks for 24 VAC power and I/O connections

Mta-100 header for connection to supply air temperature probe (10k)

**Circuit Board:** Lead free, 94V-0 flame rating

**Actuator:** 24 VAC, 50/60Hz, 4VA

95 second run time

Brushless DC motor for long life

Noise level <35 dB (A)

**Quality Standard:** ISO 9001:2008

**Weight (including actuator):** 0.70 kg (1.55 lbs)





MANUFACTURING DIVISION

# PRICE ELECTRONICS

Part of the Price Group of Companies ([www.priceindustries.com](http://www.priceindustries.com)), Price Electronics provides full turnkey contract manufacturing services for several North American customers.

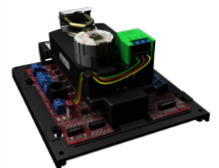
Based in a modern facility in Winnipeg, Manitoba, Canada, Price employs the latest lean principles in the manufacturing of high-reliability products for its customers. Price's current customer base includes companies from the HVAC, industrial automation, medical, and transportation sectors.

The products Price manufactures are often expected to operate in harsh or hostile environments where quality and reliability are critical.

Price Electronics provides a full range of services to its customers including project management, new product development, and contract manufacturing services. Price's manufacturing capabilities include automated equipment, that is set up to cost-effectively support a full range of production volumes and product technologies. Price Electronics is committed to providing outstanding value to its customers through excellent quality and continuous process improvement.



PRICE ROOFTOP UNIT CONTROLLER



PRICE INTELLIGENT CONTROLLER



ECM DELUXE CONTROLLER



PRODIGY SMART DIFFUSER

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