

Building Control Systems



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TO: Alerton Dealers

FROM: Dan Sullivan, Product Manager
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SUBJECT: New ZonePRO™ Commercial Modulating Thermostat
— *Cost Effective Modulating Control*
— *Floating or Analog Zone Control*

BULLETIN: 06-0080

Honeywell is proud to introduce the new ZonePRO Commercial Modulating Thermostat, designed for control of valve or damper actuators to offer a cost effective substitute to expensive networked zoning systems.

Sleek, Modern Design

ZonePRO thermostats have a sleek, modern design—ideal for those customers looking to upgrade the appearance and functionality of their older zoning systems.



Four Models Meet All Your Zoning Needs

There are four ZonePRO models, two for floating control, two for analog control. ZonePRO thermostats provide modulating control (floating or analog) for each zone to control valve or damper actuator. It can be configured for cool only, heat only, or auto changeover. Up to 2 re-heat outputs are available if the discharge air from the air handler needs to be heated at the zone. Analog outputs can be configured as 0-10V or 2-10V. Remote sensors are compatible if remote room sensing or return air temperature sensing is desired.

OS #	Description
TB6980A1007	Floating output
TB6980B1006	Floating output plus an additional analog output and triac output ¹
TB7980A1006	Analog output ²
TB7980B1005	Analog output plus an additional analog output and triac output ^{1, 2}
OS #	Description
R841	Family of electromechanical relays
50014156-002	Remote room sensor
50014157-001	Duct temperature sensor
209651A	Cover wall plate

¹ Additional analog output can be configured as a triac digital output;

² All analog outputs are configurable for 0-10Vdc or 2-10Vdc

Easy to Install

For zoning control in retrofit applications, ZonePRO thermostats are the perfect choice. ZonePRO thermostats are easy to install and feature a configuration code that's a snap to program.

Saves Energy

As a cost effective alternative to DDC systems, ZonePRO provides digital accuracy with energy-saving features that help to reduce costs even more.

- **Night Setback Input:** Though this thermostat is non-programmable, it has an input that will set the thermostat to an energy-saving setpoint when an external time clock or occupancy sensor is activated.

- **Range Stop Temperature Limits:** Set a maximum heating/minimum cooling setpoint.
- **Timed Occupancy Override:** When the user enters the building after hours and wants to adjust the temperature, this feature brings the space to a comfortable temperature. The thermostat automatically returns to its energy-saving setpoint after two hours.
- **Output Position Graph:** Lets installer know actuator is working properly.

Numerous Applications

ZonePRO thermostats are a cost-effective solution for a variety of applications. ZonePRO has additional analog and triac outputs which allow you to control several types of applications.

- **Zone Applications:** Pressure-dependent VAV systems, cooling-only VVT zone with reheat, hydronic hot/cold water valve
- **Reheat Applications:** Radiant panel heaters, cabinet heaters, fin-tube radiators
- **Air Handler:** Automatic changeover, discharge air, limited cooling

Pricing

OS #	Description	Base Price
TB6980A1007	Single Output Floating Modulation	\$183.33 per unit
TB6980B1006	Multi Output Floating Modulation (Re-heat)	\$233.33 per unit
TB7980A1006	Single Output Analog Modulation	\$206.67 per unit
TB7980B1005	Multi Output Analog Modulation (Re-heat)	\$266.67 per unit
50014157-001	Remote Duct Sensor – 10K Ohm	\$46.67 per unit
50014156-002	Remote Wall Sensor – 10K Ohm	\$53.33 per unit

Availability

ZonePRO will eventually replace all Honeywell T6984 and T7984 product families (refer to the replacement chart below.) ZonePRO is an unrestricted product available to all Honeywell customers and is available now.

OS #	ZonePRO Replacement
T6984A1059	TB6980A1007
T6984D1046	TB6980B1006
T6984E1043	TB6980B1006
T7984A1057	TB7980A1006
T7984A1065	TB7980A1006
T7984B1055	TB7980B1005
T7984C1053	TB7980B1005

Compatibility

ZonePRO is compatible with the following Honeywell devices:

OS #	Dimensions	Compatible Valves	Compatible Actuators	Sensors and Accessories	Replaces
TB6980A1007	2.7 x 4.6 x 1.0 in. (69 x 118 x 27 mm.)	VC6930, VC6934,	ML6984A10096, ML6420,	R841 Series of electromechanical relays, 50014157-001 air duct sensor 50014156-002 space sensor, ST6008A1003 and ST7009A1003 time clocks, 209651A wall plate, Dampers: D640, D690	T6984A1059
TB6980B1006		VC6936, M6410, M6435	ML6161B2024, MN6105A1011		T6984D1046, T6984E1043
TB7980A1006		VC7930, VC7934,	ML7984A4009, ML7420,		T7984A1057, T7984A1065
TB7980B1005		VC7936, M7410, M7435	ML7161A2008, MN7505A2001		T7984B1055, T7984C1053

Also compatible with:

- Bypass loop control
- Pressure sensors P7640B1008 and P7640B1024
- Bypass actuator ML7174A2001

Competitive Direct Coupled Actuator Cross Reference

If you're looking for other competitive direct coupled actuators, reference 63-8563 on <http://customer.honeywell.com>. You'll find information on Belimo, Siemens, Johnson Controls, and Invensys.

Thermostat Specifics

TB6980A1007: A single floating output thermostat. This model has only one modulating output that can be configured for tri-state (floating control) of heating or cooling. Minimum opening times and open percentages can be configured. Compatible accessories: relays, cover plates, timers, remote sensors, actuators.

TB6980B1006: A multi-output modulating thermostat. This model has a first stage heating/cooling modulating output that can be configured for tri-state (floating control) of heating or cooling plus 2 outputs available for 2nd/3rd stage heating/cooling. Output 2 can be configured up to 8 different ways with 4 triac floating configurations and 4 analog configurations available. Output 2 controls heating only. Output 3 is configured as triac or discrete on/off only and can be used for heating or cooling. Minimum opening times/open percentages can be configured. Compatible accessories: relays, cover plates, timers, remote sensors, actuators.

TB7980A1006: A single analog modulating output thermostat. This model has only one analog output that can be configured as either 0-10V or 2-10V (heating or cooling). Minimum opening percentages can be configured. Compatible accessories: relays, cover plates, timers, remote sensors, actuators.

TB7980B1005: A multi-output modulating thermostat. This model has a first stage heating/cooling analog output that can be configured as either 0-10V or 2-10V plus 2 outputs available for 2nd/3rd stage heating/cooling. Output 2 can be configured up to 8 different ways with 4 triac floating configurations and 4 analog configurations available. Output 2 controls heating only. Output 3 is configured as triac or discrete on/off only and can be used for heating or cooling. Minimum opening percentages can be configured. Compatible accessories: relays, cover plates, timers, remote sensors, actuators.

Background On Modulating Control

A modulating actuator moves to a position according to the modulating signal (2-10 Volts or 4-20 mA) it receives from a controller like the ZonePRO. So if there were hot water running through a coil, or hot air running through a duct, the ZonePRO would give a constant signal to the actuator somewhere between 2-10 Volts and the actuator would move to a position that corresponds to that voltage (e.g., 6 volts may correspond to an actuator position of 50% open, so only a percentage of hot water or hot air would be sent into the water coil or space).

A floating actuator moves to a position according to the digital signal (on/off) it receives from a controller like the ZonePRO. Rather than sending a constant signal to the actuator, a floating controller gives an on/off signal for a certain amount of time, during which the actuator will be closing or opening. For example, if you have a 90-second actuator (actuator which takes 90 seconds to move from full closed to full open and vice-versa) and the ZonePRO decides that the actuator should be 1/3 of the way open, it would send an on signal for 30 seconds, assuming the actuator was fully closed to begin with.

Features, Functions & Benefits

FEATURE	FUNCTION	BENEFIT
Low Profile, Attractive Design	Blends in well with the building environment and is less noticeable	Owners and architects favor modern looking and low profile thermostats
Digital Display With Backlight	Easy to read, more accurate control	Easy to read, more accurate control
Configuration Codes	Configuration codes allow for custom configuration and feature set-up	Allows for fast configuration and reduces inventory SKUs
Power Output Graph	Displays the percentage output opening of the modulating relays	Allows the installer to determine if actuator positions match thermostat outputs
Night Setback	Sets back thermostat setpoints when night setback inputs are activated	Saves energy by reducing the setpoints when zones are unoccupied
Range Stops	Allows a range of thermostat setpoints to be chosen by user	Saves energy by only allowing a certain range of accessible setpoints
Fresh Air Control and Limited Cooling	Configuration modes available for air handler functions	Saves energy by utilizing free cooling of outdoor air

Sales Strategy

1. Sell the ZonePRO for standalone control applications on pressure dependent VAV (VVT) jobs as a cost effective alternative to networked zoning.
2. Target networked zoning competitors Carrier VVT and Trane Tracker (see below).
3. Sell the solution to Consulting Engineers and get them to consider as a substitute spec to Carrier VVT and Trane Tracker. Sell architects on how good it looks.
4. Emphasize the digital nature of the thermostat and its cosmetic appeal to up sell customers from the older looking T6984/7984 family. They are similarly priced, so the customer is getting a lot more feature/benefits for the same price.
5. Target applications that include multi-tenant facilities and commercial building areas that are not automated and have comfort problems. ZonePRO is a cost effective solution to fix comfort problems without complete DDC automation.
6. Emphasize the complete product line of ZonePRO: analog and floating, single output and multi output.
7. Sell the energy savings that ZonePRO provides: override button, range stop limits, night setback configuration, and system control configuration modes that include fresh air control and limited cooling modes for the air handler.
8. Sell the ease of installation of ZonePRO: easy-to-wire sub-base, power graph output for actuator position, and easy-to-program configuration codes.

Sales Tactics Against the Competition

1. **Carrier VVT/Trane Tracer:** These are networked zoning systems that compete with RapidZone. ZonePRO can be positioned as a standalone non-networked zoning system that can be considered a less expensive solution.
2. **KMC:** KMC is a leader in the standalone pressure dependent and pressure independent market. KMC has an unattractive wall module (CTE-1000) that has a non digital display. Go after the KMC business with ZonePRO.

Contact Information

- To order products and literature: Customer Care, 866-680-4190
- Technical support 8:00 am – 5:00 pm CST: 763-954-6464
- Sales and product information: contact your local Honeywell sales representative

Literature

- 62-0238 ZonePRO Installation/Product Data
- 63-4370 ZonePRO Guide Specification
- 63-9555 ZonePRO brochure

SPECIAL NOTE:

Tradeline Catalog Descriptions are incorrect for “Additional Outputs & Description Column.” Tradeline Column on page 473 should read:

<u>Product Number</u>	<u>Additional Output</u>	<u>Description</u>
TB6980A1007	None	Floating Control
TB6980B1006	1 Analog/TRIAC, 1 TRIAC	Floating Control with 2 additional outputs
TB7980A1006	None	Modulating (0-10VDC) control
TB7980B1005	1 Analog/TRIAC, 1 TRIAC	Modulating (0-10VDC) with 2 additional outputs