

# TB6980/TB7980

## Floating/Modulating Thermostats

### FOR HYDRONIC AND VAV ZONED SYSTEMS

#### GUIDE SPECIFICATION

## GENERAL

- A. Overview:** The contractor shall furnish, install, and place in operating condition, an HVAC control system described herein. All units shall be located in accordance with the plans.
- B. Type of System:** System Requirements:
- a. Control up to 1 modulating/floating actuator (all models) plus an additional modulating output and digital output (TB6980B and TB7980B).
  - b. Include a comfort adjust feature to modify setpoints for the override duration.
  - c. Provide Proportional plus Integral (P + I) temperature control.
  - d. Display room temperature in °F or °C.
- System Components:
- a. Duct mount temperature sensors (optional).
  - b. Wall mount temperature sensors (optional).
  - c. Outdoor air sensor (optional).
  - d. Modulating or Floating damper or valve actuators.
- C. Codes and Standards:** The system shall comply with applicable provisions of ASHRAE® 90-75. These specifications are based on equipment from Honeywell to set a standard for design and quality.
- D. Wiring:** All wiring shall meet national electrical codes and local electrical codes.
- E. Testing Guarantee Service:** Prior to installation, the contractor shall provide copies of submittals. The contractor is responsible for assuring that conduit and wire quantity, size, and type are suitable for the equipment supplied. Upon completion, the contractor shall conduct a total system test for the owner and engineer. All components, parts, and assemblies supplied by the manufacturer shall be guaranteed against defects in materials and workmanship for 5 years. Warranty service shall be performed by the contractor.

## SEQUENCE OF OPERATIONS

Space temperature deviation above or below the setpoint shall generate a demand signal to control the system as follows:

- A. Heating:** The thermostat shall control the heating output based on the demand signal communicated from the thermostat, taking into account both space temperature deviation (proportional gain) and the duration of that temperature deviation (integral gain). The thermostat shall energize heating equipment when space temperature falls below heating setpoint.
- B. Cooling:** The thermostat shall control the cooling output based on the demand signal communicated from the thermostat program, taking into account both space temperature deviation (proportional gain) and the duration of that temperature deviation (integral gain). The thermostat shall energize cooling equipment when space temperature exceeds cooling setpoint.
- C. Power Interruption:** The thermostat shall return to its last temperature setpoint and state after a power interruption. All the parameters set shall stay in memory after the power interruption duration.
- D. Overrides:** The thermostat shall provide an override button that will change the setpoint of the thermostat from its setback temperature to its regular occupied setpoint (must be used in conjunction with the setback input).



## THERMOSTAT MODELS AND FEATURES

**Table 1. TB6980/TB7980 Thermostat Features.**

Model	Applications	Outputs
TB6980A	Floating	1 Floating
TB6980B	Floating	1 Floating, 1 Modulating or Triac, 1 Triac
TB7980A	Modulating	1 Modulating
TB7980B	Modulating	1 Modulating, 1 Modulating or Triac, 1 Triac

## OPTIONS

- A. Duct Temperature Sensors:** 50014157-001.
- B. Temperature Sensors (Remote):** 50014156-002, T7770A3002.
- C. Other Accessories:** 32004800-001 (bare thermistor), R841 electromechanical relays, VC6930, VC6934, VC6936, VC7930, VC7934, VC7936, ML6984, ML7984, ML6410, ML7410, ML6161B2024, MN6105A1011, ML7161A2008, MN7505A2001.

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