

BACnet Thermostat | Model: X-THB-24-DL00



Specifications

- **Rated Voltage:** 20V to 30VAC, 24VAC nominal, or 24VDC with jumper removed on faceplate
- **Rated A.C. / D.C. Current:** 0.05 to 0.75 AC / 0.0 to 0.75 DC Amp continuous, per output, surges to 3 Amps maximum
- **Thermostat Sensing Range:** 32°F to 124°F (0°C to 48°C)
- **Control Accuracy:** $\pm 1^\circ\text{F}$ @ 68°F ($\pm 0.5^\circ\text{C}$ @ 20°C)
- **Temperature Control Range:**
 - **Heating:** 38 to 88°F (6 to 30°C) in 1° steps
 - **Cooling:** 60 to 108°F (16 to 40°C) in 1° steps
- **Minimum Deadband:** 2°F (1°C)
- **Equipment Terminations:** R - 24VAC switching voltage from HVAC Equipment
 W1 - Heat1 or Aux/Emer Heat
 G - Fan, Y1-Compressor1
 Y2 - Compressor2
 O/W2 - Heat2 or Rev. Valve in Cooling
 B - Rev. Valve in Heating
- **Aux Relay Terminations:** K/H/D – Humidify / Dehumidify / Relay Schedule (KHD or K2) / Damper / IAQ / CO2
 K2 – Relay Schedule (KHD or K2) / Damper / IAQ / CO2
- **Power Terminations:**
 R - 24VAC switching voltage from HVAC Equipment
 24V - Separate Power (24VAC/DC), requires faceplate jumper removal
 24V(c) - power return
- **Input Terminations:** LED1 (Filter Icon Selectable), LED2 (Fault Icon Selectable), CLK1 (+), CLK2 (-) (Occupancy)
- **Remote Sensor Terminations:** RS+V - Power, RS2 - Return, RS1 - Data
- **Wireless Radio:** 2.4GHz 802.11b/g, Security: Open, WEP, WPA-PSK, WPA2-PSK

Description

The **BACnet Thermostat** is a Wi-Fi touchscreen thermostat with an advanced remote sensor bus, designed for new or replacement commercial and residential applications. Use the X-THB for either conventional or heat pump applications (Gas/Elect 2H/2C, HP 3H/2C), along with humidification, fresh air damper, IAQ controls, CO2 controls, and more. Daily commercial scheduling (4 events per day) and up to 80 Additional Events (40 Special and 40 Calendar Events) and Demand Response Control are included in all X-THB thermostats. The unique scheduling structure also supports the powerful features of adjustable temporary override times and temperature ranges, occupied and unoccupied events, keypad lockout, and many more features.

Certifications



Installation

The **BACnet Thermostat** needs to be installed within 30 feet of the closest device within the Bluetooth Mesh network and for best operation be Ethernet hardwired; for WiFi connection, make sure signal at install location is strong.

Connectivity

Devices are repeaters for other devices and should be installed within a certain maximum distance from each other.

Typical maximum distance:

<u>Outdoor (line of sight):</u>	200ft
<u>Indoor (through building material):</u>	
Glass:	100ft
Drywall:	70ft
Cinderblock:	60ft
Brick:	50ft
Concrete + rebar	0ft

Devices with external antenna should have the antenna outside any metal box and away from metal surfaces as metal reduces connectivity.

For design purposes a 60ft. maximum distance is appropriate for most installations.