NT™ network thermostat

X5-WIFI

- **Commercial Grade Wi-Fi Thermostat**
- **Standard (Gas/Electric) up to 2H/2C**
- **Heat Pump up to 3H/2C**
- **Humidity Sensing**
- **Advanced Remote Sensor Bus**
- **Full Color Touchscreen**
- **7 Day Programmable ~ 4 Events/Day**
- **80 Additional Event Schedules**
- **Onboard Data Logging**
- **BACnet/IP and Modbus TCP/IP Included**

GENERAL DESCRIPTION:

Complete Stand-Alone Solution

The X5-WIFI is a Wi-Fi color touchscreen thermostat with an advanced remote sensor bus, designed for new or replacement commercial or residential applications. Our integrated logic for both conventional and heat pump applications can be configured for up to three (3) stages of heating and two (2) stages of cooling. DirectConnect™ helps deliver a near-effortless setup of your daily schedules (4 events per day) and up to 80 Additional Events (40 Special and 40 Calendar Events). 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. The X5-WIFI also includes full BACnet/IP support over Wi-FI, directly on the thermostat.

The X5-WIFI is designed to operate with our CloudConnect™ Online Management software or, for maximum security, behind your firewall using DirectConnect™ or our PCConnect™ Software. Since all HVAC functions are stored in the thermostat, the X5 will continue to operate even during network outages, allowing you to maintain your energy savings. For ultimate control over energy usage, the X5 offers a digital lockout that can permit limited temperature overrides based on your requirements. Our on-board data collection allows for historical review, sub-metering, and run-time reporting.

STANDARD FEATURES:

CloudConnect™ & CloudManager™ Available

Energy Savings
- Efficient Equipment Restart™ randomizes equipment starts to minimize multiple units turning on simultaneously when there are multiple NetX thermostats at the location
- Random Restart on power up staggers restart of HVAC system after a power outage to minimize peak in-rush current
- Adaptive Recovery for Schedules allows system to achieve desired setpoint at the beginning of the schedule

Monitoring
- 11 Remote Sensors: up to 6 indoor, 1 humidity, 1 outdoor, and up to 3 auxiliary sensors for monitoring items such as supply air, return air, walk-in refrigerators and freezers, etc.
- 2 Digital Inputs for Fault Conditions, including Condensate and Equipment Faults
- Occupancy Sensor Input
- On-board Data Logging with Sub-Metering Support

Connectivity
- CloudConnect™ Internet-Based Cloud Service
- PCConnect™ Software Local Network & Port Forwarded Access
- DirectConnect™ Integrated Web Server
- Integrated NetX™ API, Supports 3rd Party Apps
- BACnet/IP and Modbus TCP/IP Embedded
- Optional Modbus RTU Interface via NT-485 Module

Facility Management
- 4 independent schedules per day
- 80 Additional Event Schedules (40 Special and 40 Calendar Events)
- Commercial Lockout with Programmable Temporary Override Time and Temp Adjustment
- Email & Text Message Alerting for 4 Locations
- Alerts include Hi/Lo Temps for Indoor, Outdoor, Supply, Return, and Aux Temps, Inefficient Equipment Runs, Change Filter Notifications, and Two Digital Inputs: 19 Alerts in All
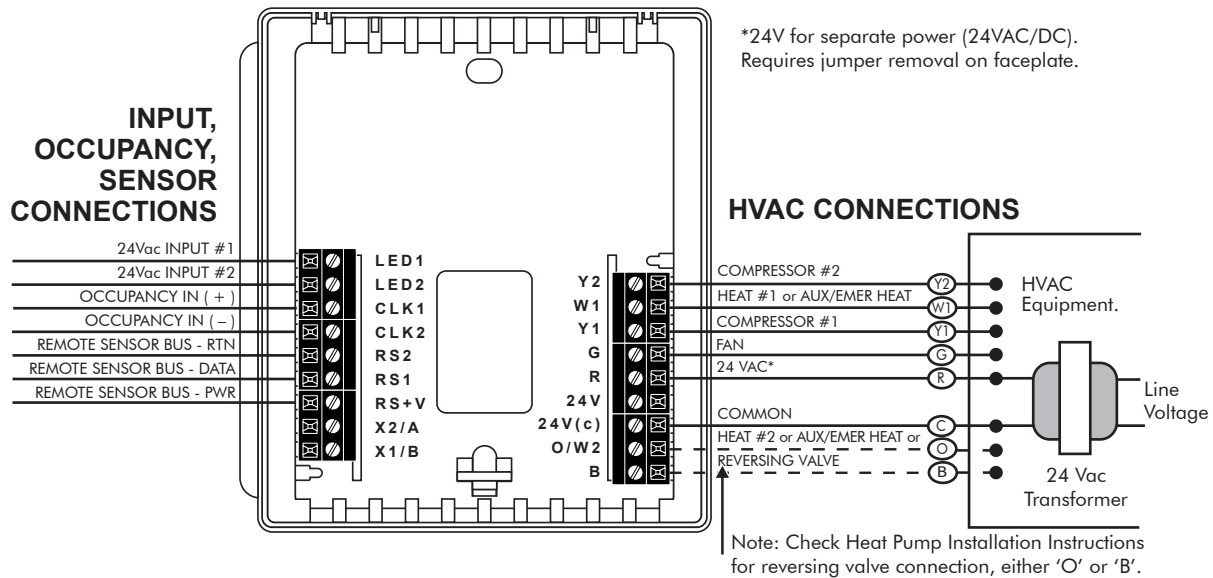
General
- Color Selectable Touchscreen Display, Black or White Case
- Modes: Heat, Cool, Automatic Changeover, and Off
- Integrated Humidity Sensor
- Fan Selector for Automatic or Continuous Fan Operation; Programmable Recirculation Fan
- Integrated Weather with Current Conditions and 7-Day Forecasts

Made in USA

Rated Voltage:	20V to 30VAC, 24VAC nominal
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
Temperature Control Range:	**Heating:** 38˚F to 88°F (4˚C to 31°C) in 1° steps **Cooling:** 60˚F to 108°F (16°C to 42°C) in 1° steps
Thermostat Sensing Range:	32˚F to 118°F (0˚C to 48°C) **Control Accuracy:** ±1°F @ 68°F (±0.5°C @ 20°C)
Minimum Deadband:	2°F (1°C)
Humidity Sensing:	**Range:** 0% - 100% RH **Accuracy:** ±3% From 10% - 90%
Dimensions:	5.1"H x 4.7"W x 1.15"D (130mm x 119mm x 29mm)
Equipment Terminations:	R - 24V switching voltage, 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
Power Terminations:	24V(c) - Power Return, 24V - Separate Power (24VAC/DC) requires jumper removal
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:	2.4 GHz IEEE 802.11b/g/n, Security: WEP, WPA-PSK, and WPA2-PSK
Protocols:	http, native NetX API, BACnet/IP and Modbus TCP/IP over Wi-Fi

WIRING DIAGRAMS:

*24V for separate power (24VAC/DC). Requires jumper removal on faceplate.

INPUT, OCCUPANCY, SENSOR CONNECTIONS

HVAC CONNECTIONS

Note: Check Heat Pump Installation Instructions for reversing valve connection, either 'O' or 'B'.

OUTPUT TERMINAL FUNCTIONS

LED1 24Vac Input #1 for Filter or other Alert

LED2 24Vac Input #2 for Condensate, Fault or other Alert

CLK1 For use with External Occupancy Sensor (+)

CLK2 For use with External Occupancy Sensor (–)

RS2 Remote Sensor Bus (Power Return)

RS1 Remote Sensor Bus (Data)

RS+V Remote Sensor Bus (Power)

X2/A N/A

X1/B N/A

Y2 Energizes compressor for second stage cooling, or for heat pumps, either second stage heating or cooling

W1 Energizes heater for first stage heating, or for heat pumps, aux/emer heat

Y1 Energizes compressor for first stage cooling, or for heat pumps, either first stage heating or cooling

G Energizes fan circuit with a call for heating or cooling

R Independent Switching Voltage from HVAC equip

24V 24Vac

24V(c) 24Vac Common

O/W2 Energizes heater for second stage heating, or for heat pumps, energizes the reversing valve in cooling mode

B Energizes the reversing valve in heating mode

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