NT network thermostat

X5N-SM

- Full Color Touchscreen
- Standard (Gas/Electric) up to 2H/2C
- Heat Pump (Standard or Dual Fuel) up to 3H/2C
- Humidity Sensing
- Up to 11 Sensors via Advanced Sensor Bus
- Integrated NetX™ StrongMesh™ Communications

GENERAL DESCRIPTION:

Complete Stand-Alone Solution

The X5N-SM is a communicating setback color touchscreen thermostat designed for new or replacement commercial or residential applications. Our integrated logic for both conventional and heat pump applications may be configured for up to three (3) stages of heating and two (2) stages of cooling with an advanced remote sensor bus. The X5N-SM is a direct replacement for the US32-SM thermostat.

The X5N-SM is designed to operate as a stand-alone unit or be controlled using any NetX™ NT-IPXB network controller, one or more NetX™ WCM-2 StrongMesh™ wireless coordinator and the NetX™ Command Center software or Netx-Web.com. For maximum security, the X5N-SM may be controlled and operated behind your firewall. For ultimate control over energy usage, the X5N-SM offers a digital lockout that permits limited temperature overrides based on your requirements. The advanced remote sensor bus allows up to 6 indoor remote sensors, humidity sensor, outdoor sensor, and up to 3 auxiliary sensors for needs such as supply air, return air, water temperature, walk-in freezers and refrigerators, and any other temperature monitoring desired.

STANDARD FEATURES:

Free NetX Command Center PC App for Controlling Multiple Thermostats from a Single Screen

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

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

Connectivity

- StrongMesh™ Self-Healing Wireless Mesh Network Communications with the WCM-2 Wireless Coordinator
- NetX Command Center™ Software for Local Internal Network and Port Forwarded Access
- Integrated NetX™ API

Facility Management

- Commercial Lockout with Programmable Temporary Override Time and Temperature Range Adjustment
- 2 Occupied (Day-Cool & Day-Heat) and 2 Unoccupied (Night-Cool & Night-Heat) Setpoints
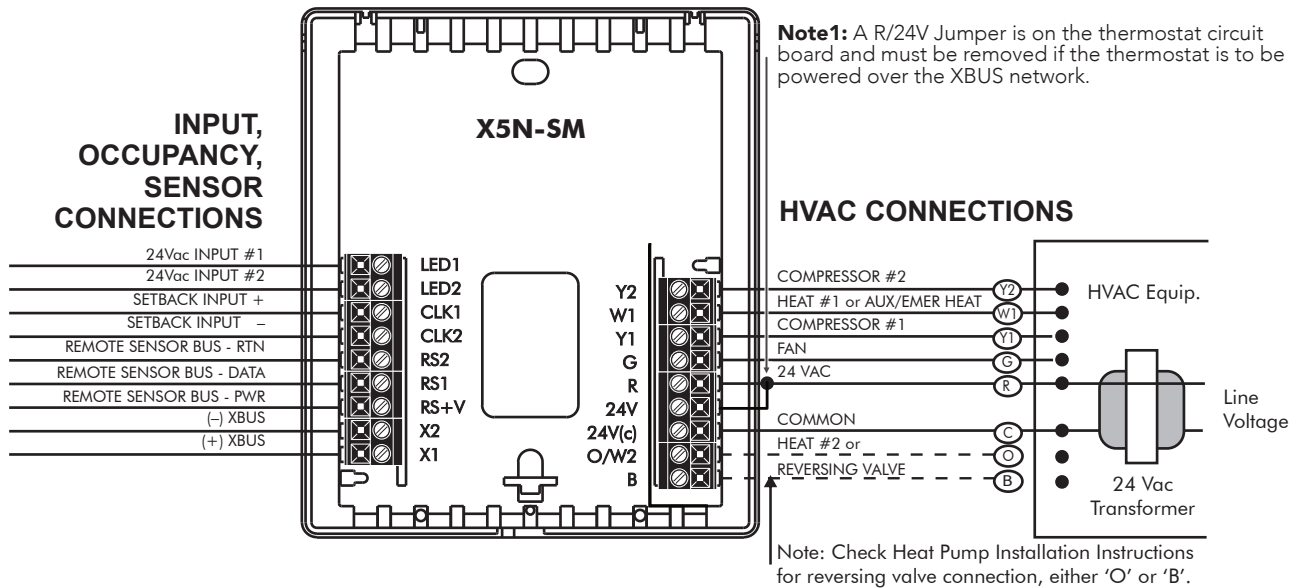
General

- Color Selectable Touchscreen Display
- Modes: Heat, Cool, Automatic Changeover, and Off
- Integrated Humidity Sensor
- Fan Selector for Automatic or Continuous Fan Operation; Programmable Recirculation Fan

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)
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 - remote power (not used), 24V(c) - power common (from HVAC equipment)
Input Terminations:	LED1 (Filter Icon Selectable), LED2 (Fault Icon Selectable)
Occupancy Terminations:	CLK1 (+), CLK2 (-)
Remote Sensor Terminations:	RS+V - Power, RS2 - Return, RS1 - Data
Communication Terminations:	X1 - XBus (+) , X2 - XBus (-)
Radio:	(802.15.4) 2.4GHz IEEE 802.15.4

Note1: A R/24V Jumper is on the thermostat circuit board and must be removed if the thermostat is to be powered over the XBUS network.

INPUT, OCCUPANCY, SENSOR CONNECTIONS

X5N-SM

HVAC CONNECTIONS

24Vac INPUT #1 — LED1
24Vac INPUT #2 — LED2
SETBACK INPUT + — CLK1
SETBACK INPUT – — CLK2
REMOTE SENSOR BUS - RTN — RS2
REMOTE SENSOR BUS - DATA — RS1
REMOTE SENSOR BUS - PWR — RS+V
(–) XBUS — X2
(+) XBUS — X1

Y2 — COMPRESSOR #2
W1 — HEAT #1 or AUX/EMER HEAT
Y1 — COMPRESSOR #1
G — FAN
R — 24 VAC
24V
24V(c) — COMMON
O/W2 — HEAT #2 or
B — REVERSING VALVE

HVAC Equip.

Line Voltage

24 Vac Transformer

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 Dry contact closure input for setback

CLK2 Dry contact closure input for setback

RS2 Remote Sensor Bus (Power Return)

RS1 Remote Sensor Bus (Data)

RS+V Remote Sensor Bus (Power)

X2 Communications bus (–)

X1 Communications bus (+)

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, auxiliary/emergency 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

NT network thermostat