GENERAL DESCRIPTION
The HP21-NX and HP32-NX communicating thermostats are designed for new or replacement commercial or residential heat pump applications. The Net/X thermostats represent the latest in solid-state surface mount electronics and manufacturing techniques incorporated into an extremely low-profile, ultra-slim white ABS plastic case. Both units offer "user-friendly" control of the heating/cooling equipment along with an easy-to-read vertical LCD that displays complete operating status. An included 2-wire communications port allows complete scheduling, remote control and status with a separate serial interface. A direct-wire, easy-to-install sub-base mounts directly on a standard vertical outlet box or any drywall surface using hardware provided.

Standard Features
- Selectable Celsius or Fahrenheit temperature display
- Fan selector for continuous fan operation
- Built-in anticipation and droop
- Built-in short cycle protection
- Electronic circuitry replaces conventional mechanical anticipator
- Internal switch to lockout the keypad to prevent unauthorized tampering
- Day/Night (Occupied/Unoccupied) button allows setpoint setback for energy savings
- No battery required (maintains last setpoint/mode of operation following power outages)
- Lockable access cover
- Commercial lockout with 1 or 3 hour temporary override; +/- 3°F adjustment during override
- Plenum fan switch
- Two LED lights available for status indication with switchable LCD icons
- One LED light available for emergency heat status indication
- Automatic changeover from heat-to-cool and cool-to-heat
- 2°F (1°C) minimum Heat/Cool separation
- Complete control and status via any of NetworkThermostat’s interfaces
- Selectable minimum on/off time (2 or 4 minutes)
- HVAC equipment control using dry contact relays
- Optional remote indoor, outdoor, supply air and return air sensing modules

Note: Specifications subject to change without notice.
**SPECIFICATIONS**

**Rated Voltage:** 20 to 30 Vac, DC 24 nominal

**Rated A.C. Current:** 0.05 to 0.75 Amp continuous per output, with surges to 3 Amps maximum

**Rated D.C. Current:** 0.0 to 0.75 Amp continuous per output, with surges to 3 Amps maximum

**Control Range:**
- **Heating:** 38 to 88°F in 1° steps (6 to 30°C in 1° steps)
- **Cooling:** 60 to 108°F in 1° steps (16 to 40°C in 1° steps)

**Thermostat**

- **Measurement Range:** 28 to 124°F or 0 to 48°C
- **Control Accuracy:** +/- 1°F @ 68°F (0.5°C @ 20°C)
- **Minimum Deadband:** (between heating and cooling) 2°F or 1°C

**Dimensions:** 4.5" H x 4" W x 7/8" D (114mm x 102mm x 22mm)

**Equipment Terminations:**
- R-switching volt., W1-aux heat, Y1-compressor stage 1, G-fan, O/B-reversing valve cool/heat, LED1-light, LED2-light
- HPT-2 only Y2-compressor stage 2

**Power Terminations:**
- 24V - power, 24V(c) - power common

**Communication Terminations:**
- X1 - comm(+), X2 - comm(-)

**Sensor Terminations:**
- RS+V - sensor power, RS1 - comm(+), RS2 - comm(-)

**Setback Terminations:**
- CLK1, CLK2 dry contact closure

**NOTE:** This thermostat contains electronic circuitry that replaces the conventional mechanical anticipator.

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**OUTPUT TERMINAL FUNCTIONS**

- **LED1** Free light for status or function indication
- **LED2** Free light for status or function indication
- **CLK1** Dry contact closure input for setback
- **CLK2** Dry contact closure input for setback
- **RS2** Remote indoor, outdoor and/or wet location sensor
- **RS+V** Power for remote sensors
- **X2** Communications bus input/output
- **X1** Communications bus input/output
- **Y2** Energizes compressor for second stage heating or cooling, HP32 only
- **W1** Energizes Auxiliary Heat as second stage heating or Emergency Heat
- **Y1** Energizes compressor with a call for heating or cooling
- **G** Energizes fan circuit with a call for heating or cooling
- **R** Independent Switching Voltage
- **24V** 24Vac
- **24V(c)** 24Vac Common
- **O** Energizes the reversing valve in cooling mode
- **B** Energizes the reversing valve in heating mode