

Network Thermostats BACstat II: DNT-T221/H121B

Description

The DNT-T221 is an intelligent room thermostat with a custom 3-value, 96 segment, LCD display. The DNT-T221 can communicate directly on a BACnet MS/TP network.

The DNT-T221 can display a wide-range of digital or analog values including setpoints, temperature, airflow, heating and cooling status, fan speed, valve and damper position, and more. When connected on a BACnet MS/TP network, the DNT-T221 functions as an independent BACnet thermostat. When connected to a Controller, on a LINKnet network, the DNT-T221 provides a programmable remote sensor and expanded I/O capabilities.



Application

The DNT-T221 is designed to be a low cost solution for control of unitary equipment. The DNT-T221 has built-in algorithms for configuring VAV, VWT, fan coil/unit ventilator, heat pump, radiation and humidification applications.

The DNT-T221 may also be connected to a LINKnet network to provide remote sensor and expanded I/O capabilities.

Features

- Native BACnet™ firmware
- BACnet MS/TP
- Configurable 3-value, 96 segment, LCD display
- 4 Configurable push buttons
- Controller firmware can be flash loaded over the network
- Network termination is jumper selectable on each device
- Derived Network Addressing (DNA) for simple integration into a standard network architecture
- Field selectable applications
- Service port

Specifications

BACnet Device Profile

BACnet Application Specific Controller (B-ASC)

LCD

3-value and various icons (96 total segments) with optional backlighting

Push Buttons

4 stylized momentary push buttons

Temperature Sensor

Thermistor Input - 10kΩ at 77°F (25°C)

Accuracy +/-0.36°F from 32-158°F (+/- 0.2°C from 0-70°C)

Display resolution of 0.1°

Stability 0.24°F over 5 years (0.13°C)

Humidity Sensor

Accuracy of +/- 3%RH from 20% -80% RH (linearized accuracy of +/- 3% to +/- 5% from 0-20% and 80-100% RH)

Display Resolution of 0.1%

Stability of < 0.5% RH/yr (typical)

Inputs

2 Universal inputs - 10 bit (supporting 0-5v, 0-10v, 10kΩ)*

*Note: the humidity option uses one of the available universal inputs

Outputs

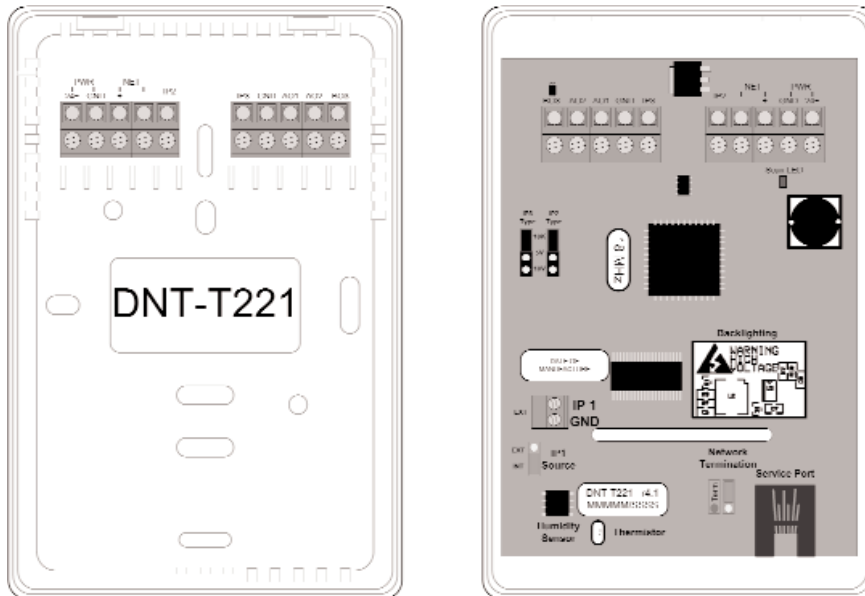
2 Analog outputs, 0-10VDC @ 20mA maximum

1 Binary triac output (supporting binary, PWM, or tri-state)

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Network Thermostats

DNT-T221/H121B: Board Layout Diagram



Accessories

DZNR-768—Delta Network Repeater for BACnet

MS/TP

CON-768BT—Delta Network Converter

Ordering

Order the DNT-T221 with the desired options, according to the following product numbers:

DNT-T221—Internal Thermistor Input, Additional I/O (2 IP and 3 OP)

DNT-T221BX—Backlighting, External Thermistor Terminator

DNT-H121B—Internal Thermistor Input, Internal Humidity Input, Additional I/O (1 IP and 3 OP), Backlighting, External Thermistor Terminator

An appended button icon code must be included to specify the desired icons embossed on the buttons. If a button icon code is not specified, the product is shipped with the default button icons.

Default—Bottom 2 buttons are ▼ & ▲ (Setpoint Adjust), top 2 buttons are OFF and ON

INT—Bottom 2 buttons are ▼ & ▲ (Setpoint Adjust), top 2 buttons are 0 and 1 (International)

Specifications (Continued)

Technology

32-bit processor with internal A/D, Flash and RAM

Device Type

Configured as a LINKnet or subnet device

Device Addressing

Set via keypad

Communications Ports

BACnet MS/TP @ 9600, 19200, 38400 or 76000 bps (default) (maximum of 99 devices per BACnet MS/TP segment)

Connectors

Screw-type terminal connectors

Wiring Class

Class 2

Power

24V AC

3 VA without output loading
or 15 VA maximum

Ambient

32° - 131°F (0° - 55°C)

10 - 90% RH (non-condensing)

Dimensions

5 x 3.25 x 1 in. (12.7 x 8.3 x 2.5 cm) with housing

0.3 lb. (136 g) with housing

Listings

UL 916 Listed

BTL Listed

Compliance

CE

FCC Class B