

Network Thermostats

BACstat II: DNT-T103/H103

Description

The DNT-T103 is an intelligent room thermostat with a custom 3-value, 96 segment, LCD display. The DNT-T103 can communicate on Delta's LINKnet network or directly on a BACnet MS/TP network.

The DNT-T103 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-T103 functions as an independent BACnet thermostat. When connected to a Controller, on a LINKnet network, the DNT-T103 provides a programmable remote sensor and expanded I/O capabilities.



Application

The DNT-T103 is designed to be a low-cost solution for control of unitary equipment. It has built-in, configurable algorithms for VAV, VVT, fan coil/unit ventilator, heat pump, radiation and humidification applications.

The DNT-T103 may also be connected to a LINKnet network to provide programmable remote sensor and expanded I/O capabilities.

Features

- Native BACnet™ firmware
- BACnet MS/TP or LINKnet communications
- Configurable 3-value, 96 segment, LCD display (with optional backlighting)
- 4 Configurable push buttons
- 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 +/-2% RH from 0-100% RH
(25°C, Vsupply = 5Vdc)

Display resolution of 0.1%

Stability of +/- 1% RH (typical at 50% RH over 5 years)

Note: Extended exposure to >90% RH causes a reversible shift of 3% RH

Inputs

1 Universal input - 10 bit (supporting 0-5v, 0-10v, 10kΩ)

Outputs

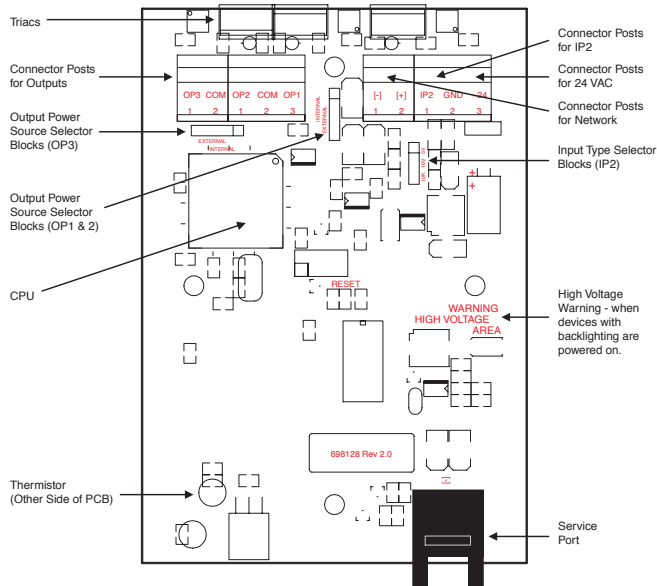
3 Binary triac outputs (supporting binary, PWM or tri-state)

Technology

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

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Network Thermostats BACstat II: DNT-T103/H103 Board Layout Diagram



Specifications (Continued)

Device Type

Configured as a LINKnet or subnet device

Device Addressing

Set via keypad

Communications Ports

BACnet MS/TP @ 9600, 19200, 38400 or 76800 bps (maximum of 99 devices per BACnet MS/TP segment)

Delta LINKnet @76800 bps (maximum 12 devices, depending on the controller with no more than 2 DFM/DNT devices per LINKnet segment)

Connectors

Screw-type terminal connectors

Wiring Class

Class 2

Power

24V AC

41 VA (with internally powered outputs)

Ambient

32° to 131°F (0° to 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. (120 g) with housing

Approvals/Standards

UL 916 Listed

CE

FCC Class B

BTL Listed

Accessories

RPT-768—Delta Network Repeater for BACnet MS/TP

TRM-768—Delta Network Terminator for BACnet MS/TP

CON-768—Delta Network Converter

Ordering

Order the DNT-T103/H103 with the desired options, according to the following product numbers:

DNT-T103—Internal Thermistor Input, Additional I/O (1 IP and 3 OP), Backlighting (Option B), External Thermistor Terminator (Option X)

DNT-H103—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)