

# BACnet Field Control Device

# DT4211B

## BACnet LCD PID temperature controller

### 【Description】

DT4211B is a BACnet B-ASC class PID temperature controller. It is designed for monitor and control building AHU or PAH. It has a 32 bit microprocessor. Works in a MS/TP network, communication speed up to 76,800bps. DT4211B has 4 binary inputs (BI), 2 analog inputs (AI), 1 binary output (BO), and 1 analog output (AO). LCD back light control panel for user control and monitor the system. DT4211B conforms international BACnet MS/TP communication protocol and fully compatible with any BACnet system.



### 【Features】

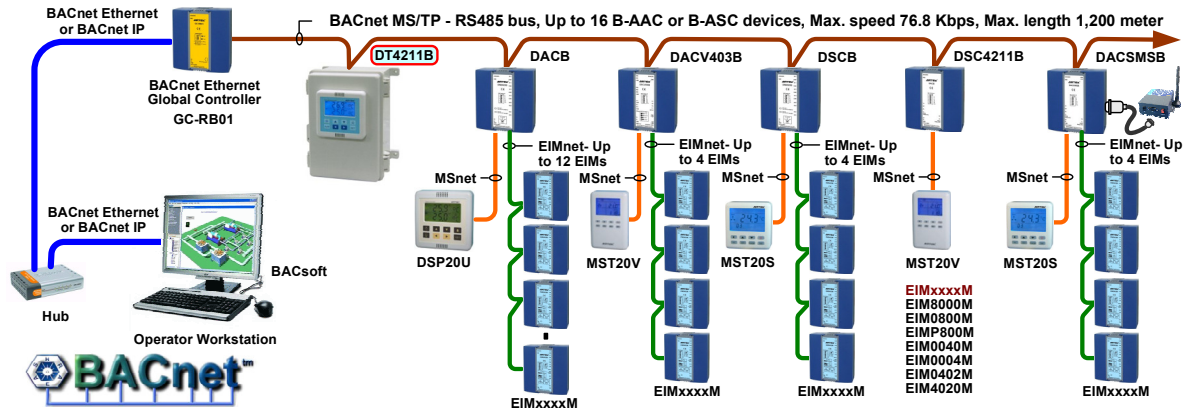
- Conforms to ASHRAE and ISO16484-1 defined BACnet B-ASC standard communication protocol, compatible with BACnet system.
- One MS/TP Master-Slave/Token- Passing port, peer-to-peer master/slave communication.
- A stand alone 32 bits CPU with preset control firmware.
- Large LCD display, show setting and actual temperatures with four characters each line. Show unit for these two values with three characters each. High lumen backlight.
- A control panel ready design. Installation in a control room directly. Save time to design and make panel.
- Four digital inputs (BI) to monitor running status, overload interrupt, filter, smoke detector.
- Two 12bit analog inputs (AI), the first one for 10K $\Omega$  (25 $^{\circ}$ C) NTC thermistor, range 0~70  $^{\circ}$ C, the second one for 0~10Vdc or 4~20mA signal inputs, to monitor valve position, humidity sensor, CO2 sensor. Input signal type is selectable by the system management software.
- One 8A/250VAC dry contact output (BO) can drive fan directly.
- One PID analog output (AO), output signal can be 4~20mA or 0~10Vdc, control damper or valve motor.
- Eight operation buttons for start/stop, temperature setting, alarm confirm, and setting.
- Selectable alarm style as LCD code display, LCD backlight flash, or buzzer
- Password setting for each user group. Time display, show current system time.
- Fail-save function, keep save all setting status in flash memory

### 【Specification】 DT4211B comes with DT4211B-LCD, DT4211-IOB, PPC, and TL

Accessories List	Model	Name	Model	Name	Model	Name
	<b>DT4211B-LCD</b>	Control Panel	<b>PPC01902914</b>	PC Box	<b>TL220T24015</b>	Transformer 220/24&12,15VA
	<b>DT4211-IOB</b>	I/O board	<b>PGS01902914</b>	Metal Box	<b>TL380T24015</b>	Transformer 380/24&12,15VA

Power Input	: 220 or 380VAC power input, a 220 or 380 to 24 VAC 15VA transformer is included in box. (Standard is 220VAC)
Power Output	: 24 VAC, 12VA power output for valve, 12 VAC, 3VA for control board, 16 VDC for two wire sensor
Digital Input (BI)	: Four 12VDC dry contact inputs
Digital Output (BO)	: One 8A/250VAC SPST Relay output
Analog Input (AI)	: Two 12bit analog inputs, the first one for 10K $\Omega$ (25 $^{\circ}$ C) NTC thermistor, range 0~70 $^{\circ}$ C, the second one for 0~10Vdc or 4~20mA signal input
Analog Output (AO)	: An eight bit analog output, jumper select 0~10Vdc or 4~20mA
LCD Display	: Eight 7- segment display, six 8-segment display, icon display, 160 pixels in total, with back light
MS/TP Network	: A BACnet MS/TP RS-485 port, communication speed 9,600~76,800 bps adjustable
Box Material	: PC fire resistant, UL-94V2, light gray (Default)
Environment	: 0~70 $^{\circ}$ C, 0~95%RH, non-condense
Certification	: EMC Directive 89/336/EEC (European CE Mark)

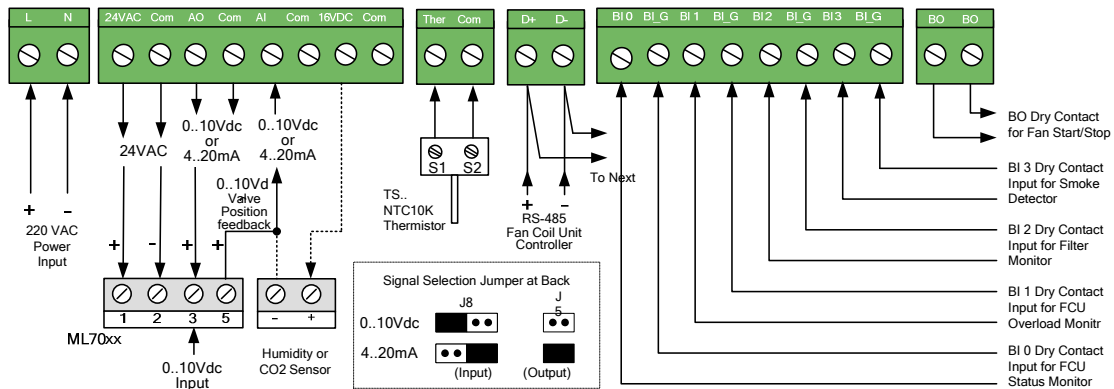
## [ Network ]



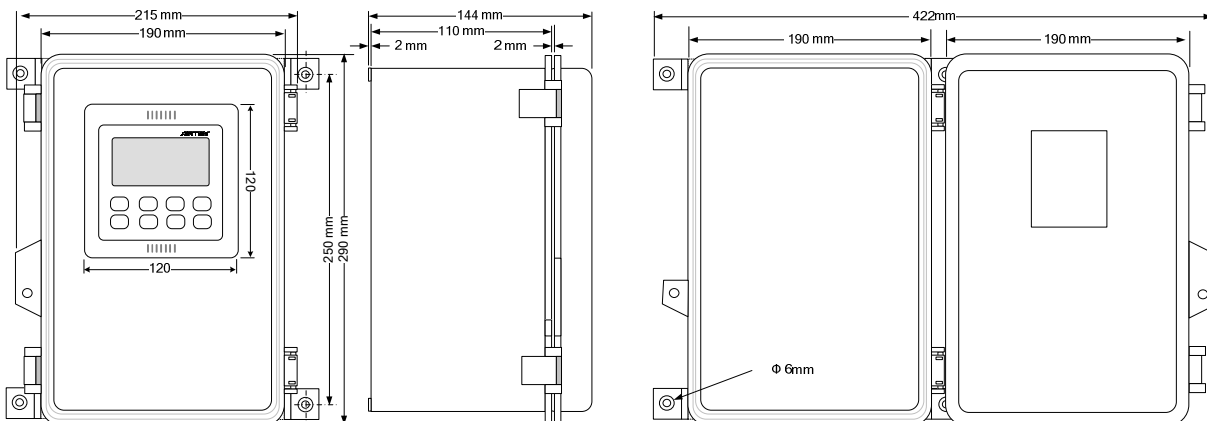
## [ Installation ]

- When the controller and the PID control valve use the same power supply transformer, their common pole should connect to the same terminal of the transformer to prevent damage.
- Use a 1.25mm<sup>2</sup> control wire for start/stop control in its own EMT pipe. Do not go with other wires to prevent signal noise.
- Except Start/Stop control, all communication wire should be 2 twisted AWG22 shield wire and put in an EMT pipe without power line together.
- RS-485 network have to be wired one by one in serial. No T type or star type wiring. Maximum length is 1,200M. Put 120Ω end resistance at both side.
- Install this package a one set, do not remove the control panel and install it separate with the box. It may not work.
- Selectable time display, it can be time synchronized by its control system.
- To install the control panel, install the mounting plate first, then put the panel on it and push down.
- Jumper select input signal to be 0~10Vdc or 4~20mA for AI and AO at back of the panel.
- Button set a unique network address for each DT4211B.

## [ Wiring ]



## [ Dimension ] Unit : mm ( This is the dimension of PC box )



Please refer to <http://www.airtek.com.au> for the most recent updated information.