

# BACnet Field Control Device

## Analog I/O Expansion Module



# DIM..M

### 【Description】

DIM....B is a standalone BACnet B-ASC class controller. They have been designed for monitor and/or control of building electro-mechanical devices. They use a 32-bit microprocessor, transmission rates up to 76,800 bps, transmission distance up to 1,200 meter. Analog input points have 12-bit resolution which provides high accuracy resolution. The analog output points also have 12-bit resolution for precise control. The DIM modules provide various combination of control points for low cost expansion to an Automation system. DIM....B conforms to international BACnet MS/TP communication protocol and is fully compatible with any BACnet system.



### 【Features】

- Conforms to ASHRAE and ISO16484-1 defined BACnet MS/TP standard communication protocol, compatible with BACnet system.
- An MS/TP(Master-Slave/Token-Passing) communication interface, with Peer to Peer function.
- Analog Input (AI) has 12-bit resolution, can be jumper selectable to accept 3K $\Omega$  or 10K $\Omega$  NTC thermistor, 0~5VDC, 0~10VDC, 0~20mA or 4~20mA input signal or dry contact.
- Analog Output (AO) has 12-bit resolution, can be DIP switch and software selected as 0~10VDC, 2~10VDC, 0~20mA or 4~20mA output signal, each point has a manual /auto output control switch and onboard pot for manual control.
- 8 MAC Address DIP switches for address 0~127.
- Low cost expansion to MS/TP network, adds flexibility.
- Din Rail mount design for space-saving and easy installation.
- Plug-in terminal blocks and LED Indicators for communication and status's are convenient for system debug.

### 【Specification】

Model	AI Points	AO Points	AV Points	Max. number of DIM module on each MS/TP network			
				GC-RB01	GC-RT12	GC-RB21/23	WC-RB12
DIM0800B	8	0	8	16	32	32	32
DIM0004B	0	4	4				
DIM0402B	4	2	6				

Power Supply : 24VAC/DC, 2 VA.

Microprocessor : 32 bit high speed processor (MCU)

Analog Input (AI) : 12-bit resolution, jumper selectable to accept 3K/10K $\Omega$  NTC thermistor, 0~(5)10VDC, or 0(4)~20mA signal.

Analog Output (AO) : 12-bit resolution, 0(2)~10VDC or 0(4)~20mA output, attached a manual override/auto output control switch.

Minimum load for 0(2)~10VDC output is 100 ohm. Maximum load for 0(4)~20mA is 500 ohm.

(Note: Only DIM0402B has 0(4)~20mA output signal.)

MS/TP Port : MS/TP RS-485 bus, communication speed 9,600/ 19,200/ 38,400/ 76,800 bps, auto select, with 2500Vrms electrical isolated protection and TVS ARRAY surge protection.

Environment : 0~70 $^{\circ}$ C, 0~95%RH non-condensing.

Certification : EMC Directive 89/336/EEC (European CE Mark) UL listed.

## [Wiring]

- Recommend using a separate power supply.
- Use a Belden or equivalent cable, 2Core #AWG18 ~22 shielded twisted with overall shield. Keep clear of power cabling to avoid interference.
- RS-485 network should be daisy chained, do not use T shape or star shape configuration.
- Use a 120Ω termination resistor at both end of the network, the total length should not exceed 1,200 meters.
- The input and output of DIM module suggest use #AWG 22 shielded cable configurations.
- **Attention!** Auto/Manual switch of AO points override any program command or Priority level (P1-16).
- The binary output contacts are rated to 5A/250VAC capacity, do not exceed this capacity. Slave relays should be used if higher current ratings are to be used.

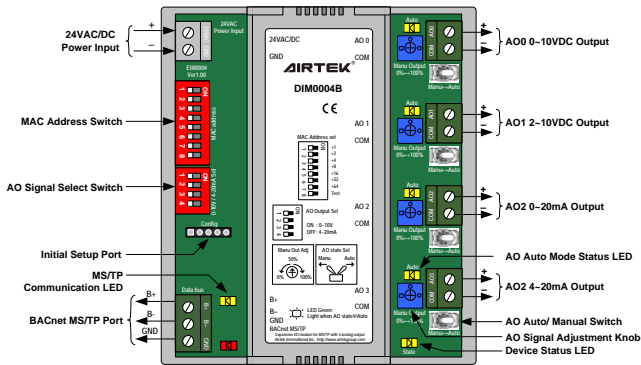


FIG. 1 DIM0004B

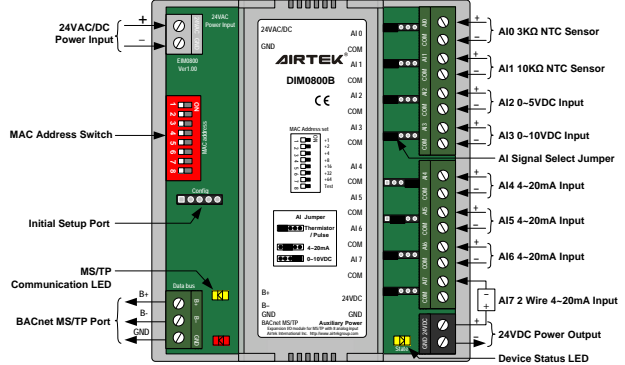


FIG.2 DIM0800B

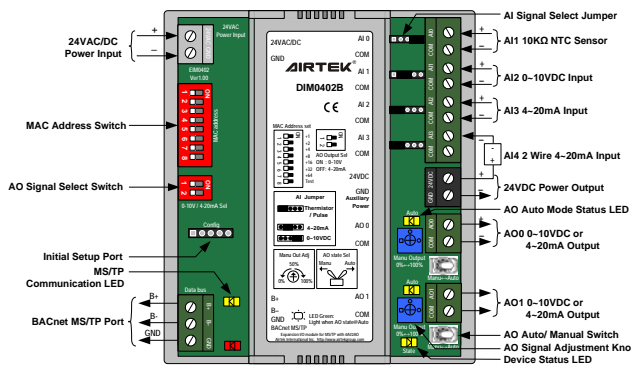


FIG. 3 DIM0402B

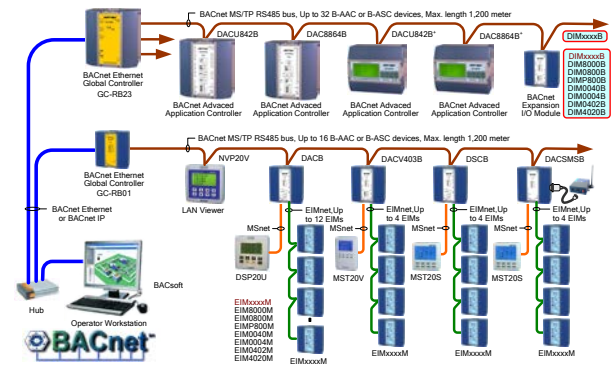


FIG. 4 Network architecture diagram

## [Dimensions] unit : mm

