Field Control Layer Device

BACnet Application Specific Controller+Touch panel

DSC8846B

【 Description 】

DSC8846B is a standalone BTL listed BACnet B-ASC class programmable controller. It is designed for monitor and control building electromechanical device, large AHU, clean room, fume hood, large-scale end device control. It uses 32-bit microprocessor core, communication speed up to 76,800 bps, transmission distance up to 1,200 meters. DSC8864B has 8 Binary Inputs(BI), 8 Analog Inputs(AI), 4 Binary Outputs (BO) and 6 Analog Outputs (AO). In addition, it has an EIMnet port can connect up to 12 EIM series of expansion modules, allowing you to expand in response to the needs of various points. Another MSnet port can connect an external LCD control panel to make user operation and control easily at the job site. DSC8846B is a BTL listed device, and is fully compatible with any BACnet system. It is absolutely the best product for your building.

DSC8846B   DSC8846B-T

【 Features 】

- BACnet Application Specific Controller (B-ASC) class listed device.
- An MS/TP (Master-Slave/Token-Passing) communication interface connect to the upper layer, global controller.
- An MSnet communication interface can connect an MST, DSP, DST control panel or a MODBUS RTU device.
- An EIMnet communication interface can connect up to 12 I/O expansion modules.
- With RS-232 interface can be connected via an AD - Linker line to HyperTerminal program for change of configuration.
- Binary input (BI) with 1,000VDC optical coupling isolate capabilities and status indicator design.
- Digital BO with 24VAC, 0.5A, hot-switched triacs with 7,500Vpeak anti-interference optically coupled isolation, Status indicator and HOA (manual/stop/automatic) switch with switching status feedback monitoring function.
- Analog Input (AI) with 16-bit resolution, can be jumper selectable to accept 3KΩ or 10KΩ NTC thermistor, 0~10VDC or 4~20mA input signal.
- Analog Output (AO) has 16-bit resolution, 0~10VDC standard output signal. Each AO both with manual / automatic switch and manual output adjustment knob, and can be manually converted to an output point state returns monitoring computer to facilitate on-site commissioning and maintenance adjustments maintenance work
- Online edit DDC control functions can be edited online, download control logic programming, and real-time debugging, with enthalpy, dew point temperature, PID control, HVAC common computing functions, and have logarithms, trigonometric functions, roots and so on Advanced Math function.
- The cumulative value of all analog input (AI), digital output value (BO), analog output (AO), digital software point (BV), analog software point (AV) both with power failure memory function, can automatically write to the FRAM upon power failure, the data can be stored for more than 10 years.
- With 100 points (BV) and 100 points of analog software point (AV), as calculated values, set points, such as the use of a timer or point guard, which supports 16 BV points rank priority matrix (Priority arrays) control function.

【 Specification 】

Model	BI	AI	BO	AO	EIM Q'TY	BV Points	AV Points	Touch Panel
DSC8846B	8	8	4	6	12	100	100	X
DSC8846B-T	8	8	4	6	12	100	100	V

Power Supply：24VAC, 35VA.

Microprocessor：Dual 32-bit high performance MCU, 128K FRAM, 1M+128K+16K SRAM, 8M+1M+64K Flash memory.

Binary Input (BI)：12VDC detection voltage, 5,000Vrms optically coupled isolation capability, accepts dry contact or open collector input signals.

Analog Input (AI)：16-bit resolution, jumper selectable to accept 3K/10KΩ NTC , 0~10VDC, or 4~20mA signal.

Binary Output (BO)：0.5A/24VAC/DC (Hot-switched triacs) output. With manual on /off /auto switch, can monitor the status.

Analog Output (AO)：16-bit resolution, 0~10VDC.With manual / automatic switch and output signals adjust knob.

MS/TP Port：RS-485, 32 controller, communication rate 9,600/ 19,200/ 38,400/ 76,800 bps, auto select, max. length 1,200 meters, having 2500Vrms optical coupling isolate and TVS ARRAY surge protection.

MSnet Port：RS-485 , communication speed 9,600/19,200/38,400bps bps selectable, max. length 1,200 meters, connect to MST…, DSP…, or DST…comtrol panel, or a MODBUS master or slave device.
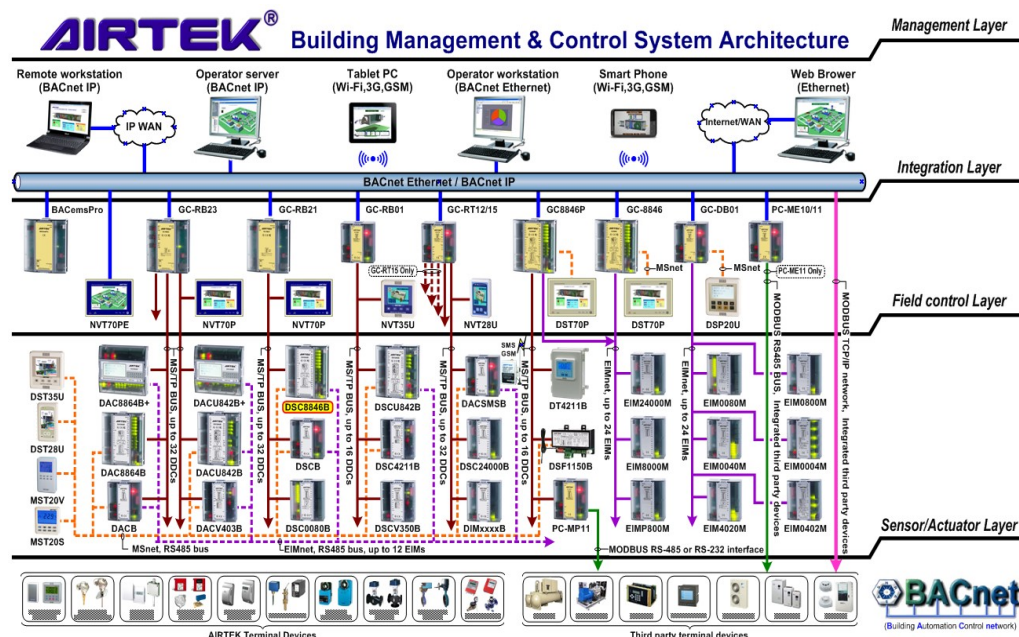
EIMnet Port：RS-485, communication rate 38,400 bps, max. length 1,200 meters, up to 12 EIMs.

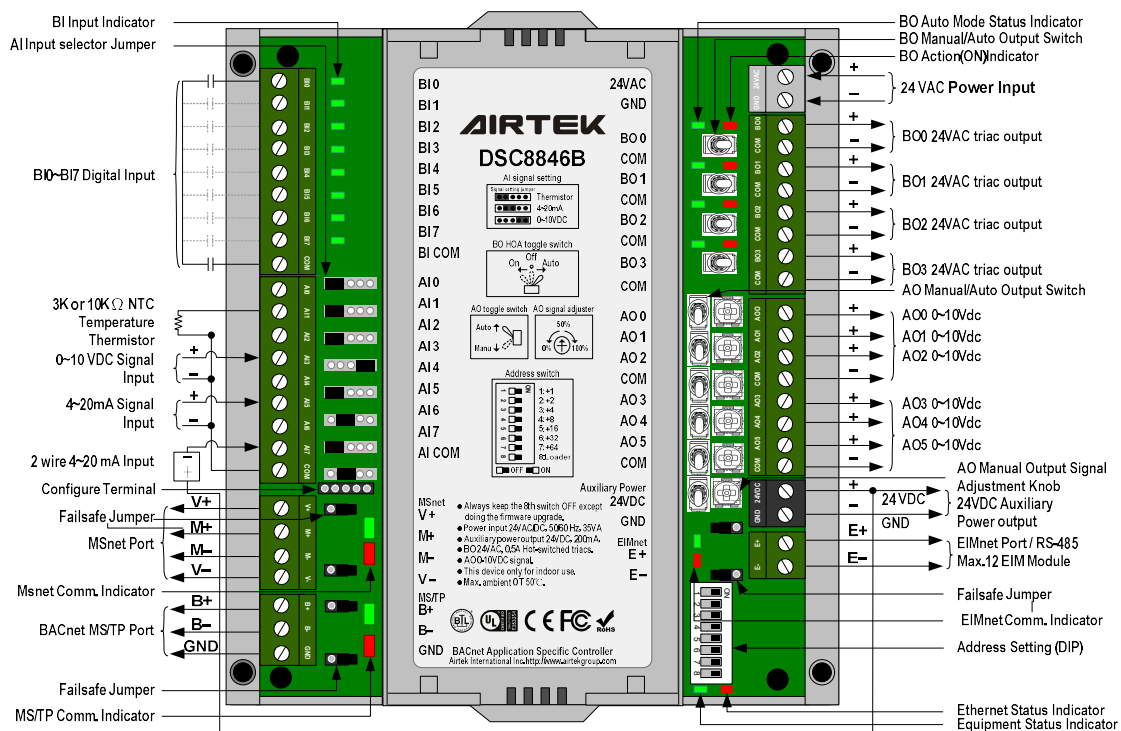Real Time Clock：Real Time clock with ultra capacitor back up design.

Environment：0~50℃, 5~95%RH, non-condensing
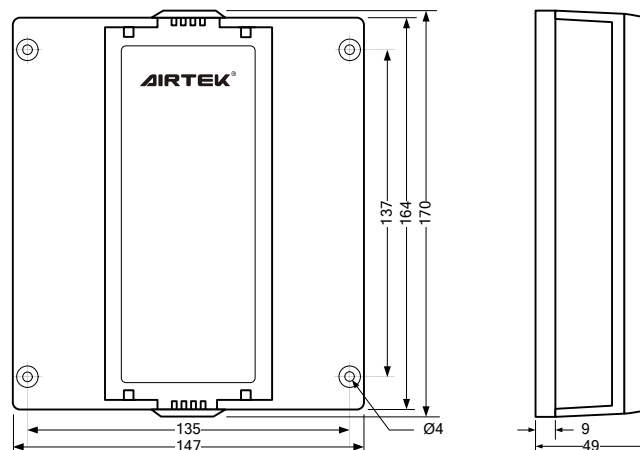
Certification：CE, FCC, BTL(B-ASC), UL916, RoHS

AIRTEK

【Network Architecture】

AIRTEK® Building Management & Control System Architecture

【Wiring Diagram】

DSC8846B
AIRTEK
BACnet Application Specific Controller
Airtek International Inc. http://www.airtekgroup.com

Labels (left side, top to bottom):
- BI Input Indicator
- AI Input selector Jumper
- BI0~BI7 Digital Input
- 3K or 10KΩ NTC Temperature Thermistor
- 0~10 VDC Signal Input
- 4~20mA Signal Input
- 2 wire 4~20 mA Input
- Configure Terminal
- Failsafe Jumper
- MSnet Port
- Msnet Comm. Indicator
- BACnet MS/TP Port
- Failsafe Jumper
- MS/TP Comm. Indicator

Labels (right side, top to bottom):
- BO Auto Mode Status Indicator
- BO Manual/Auto Output Switch
- BO Action(ON) Indicator
- 24 VAC Power Input
- BO0 24VAC triac output
- BO1 24VAC triac output
- BO2 24VAC triac output
- BO3 24VAC triac output
- AO Manual/Auto Output Switch
- AO0 0~10Vdc
- AO1 0~10Vdc
- AO2 0~10Vdc
- AO3 0~10Vdc
- AO4 0~10Vdc
- AO5 0~10Vdc
- AO Manual Output Signal Adjustment Knob
- 24VDC Auxiliary Power output
- EIMnet Port / RS-485 Max.12 EIM Module
- Failsafe Jumper
- EIMnet Comm. Indicator
- Address Setting (DIP)
- Ethernet Status Indicator
- Equipment Status Indicator

Center panel terminal labels:
BI0, BI1, BI2, BI3, BI4, BI5, BI6, BI7, BI COM, AI0, AI1, AI2, AI3, AI4, AI5, AI6, AI7, AI COM
24VAC, GND, BO 0, COM, BO1, COM, BO 2, COM, BO 3, COM
AO 0, AO 1, AO 2, COM, AO 3, AO 4, AO 5, COM
Auxiliary Power 24VDC, GND
EIMnet E+, E−

MSnet V+, M+, M−, V−
MS/TP B+, B−, GND

AI signal setting
Thermistor
4~20mA
0~10VDC

BO HOA toggle switch
On Off Auto

AO toggle switch Auto / Manu
AO signal adjuster 0% 50% 100%

Address switch
1:+1
2:+2
3:+4
4:+8
5:+16
6:+32
7:+64
8:Loader
OFF / ON

Notes:
- Always keep the 8th switch OFF except doing the firmware upgrade.
- Power input 24VAC/DC, 50/60Hz, 35VA
- Auxiliary power output 24VDC, 200mA.
- BO 24VAC, 0.5A Hot-switched triacs.
- AO 0~10VDC signal.
- This device only for indoor use.
- Max. ambient OT 50℃.

【Dimension】 Unit：mm

Dimensions: 137, 164, 170, 135, 147, Ø4, 9, 49