BACnet Field Control Device

BACnet Application Specific Controller

DSCU842B

【Description】

DSCU842B is a standalone BACnet B-ASC class programmable controller with a LCD control panel. 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, transmission rate up to 76,800 bps, transmission distance up to 1,200 meter. DSCU842B has 8 Universal Inputs(UI), 4 Binary Outputs(BO) and 2 Analog Outputs(AO). In addition it also has MSnet port can connect a external LCD screen control panel, for field engineer easy operation and access. DSCU842B conforms to international BACnet MS/TP communication protocol and fully compatible with any BACnet system. It is absolutely the best product for your building.

【Features】

● Conforms to ASHRAE and ISO16484-1 defined BACnet AAC standard communication protocol, compatible with BACnet system.
● With an MS / TP (Master-Slave / Token-Passing) port, uses Peer-to-Peer Master Slave/Token Passing communication mode.
● With a MSnet port can connect MST20V, MST20S, DSP20U control panel or MODBUS Master or Slave devices.
● Universal Input (BI) has 12-bit resolution, accept dry contact, pulse, 3K or 10KΩ NTC thermistor, 4 ~ 20mA or 0 ~ 10VDC signal.
● Binary Output (BO) has a 1,000 VDC optical coupling isolation, 8A/250VAC/SPST relay (Relay), Status Indicator design.
● Analog Output (AO) has 12-bit resolution, can be selected by DIP switch or Internal parameters as 0 ~ 10VDC / 2 ~ 10VDC or 0 ~ 20mA / 4 ~ 20mA output signal.
● User's control program can be downloaded, edited and saved in flash memory of the controller.
● Carry out calculations such as proportional, integral, differential, floating, logic, arithmetic and etc.
● 100 Binary Value(BV) and 100 Analog Value(AV) points, the analog value adopts high precision floating-point calculation.
● Priority control array by 16 for all BO, AO and BV.
● Provide power failure backup function for all AI/BO/AO/BV/AV values keep in FRAM for at least 10 years.

【Specification】

Model	UI	DO	AO	Binary Value(BV)	Analog Value(AV)
DSCU842B	8	4	2	100	100

Power Supply : 24VAC/VDC, 5VA.

Microprocessor : 32-bit high performance MCU, 64K RAM, 32K FRAM and 384K Flash memory.

Universal Input (UI) : 12-bit resolution, accept dry contact, pulse, 3K or 10KΩ NTC thermistor, 4 ~ 20mA or 0 ~ 10VDC.

Pulse signal to accept the largest 100HZ open collector or dry contact input

Binary Output (BO) : 8A/250VAC, no voltage SPST contacts.

Analog Output (AO) : 12-bit resolution, dip switch selection for 4~20mA or 0~10VDC output.

Auxiliary Power : Provide 24VDC/160mA power supply for sensor.

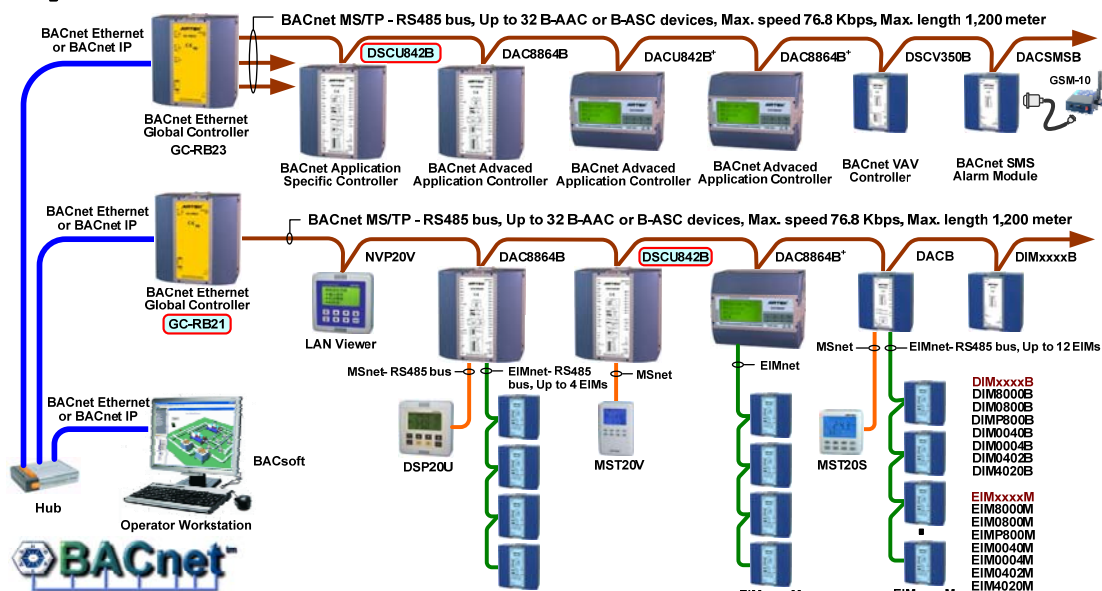MS/TP Port : Two-wire RS-485 network transmission rate 9,600 / 19,200 / 38,400 / 76,800 bps automatic adjustment.

MSnet Port : A MODBUS RTU RS-485 network transmission rate 9,600 / 19,200 / 38,400 bps adjustable, can connect MST20V, MST20S, DSP20U control panel or MODBUS Master or Slave devices.
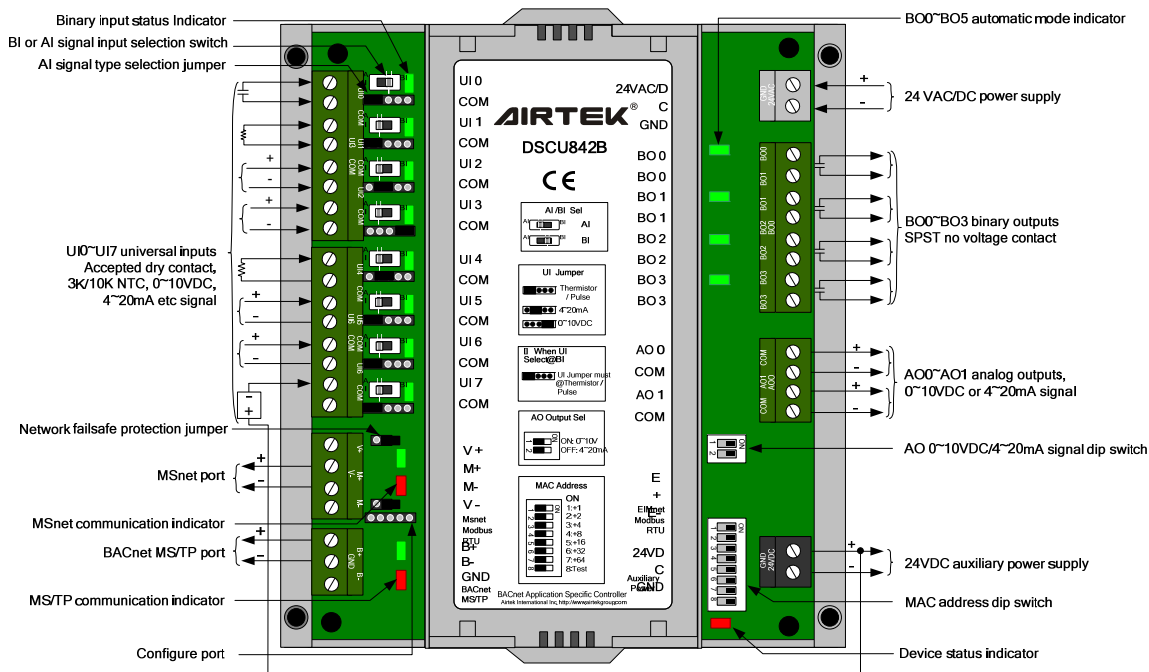
Envirenment : 0～70℃, 0～95%RH, non-condensing

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

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【Network】

BACnet Ethernet or BACnet IP

BACnet Ethernet Global Controller GC-RB23

BACnet MS/TP - RS485 bus, Up to 32 B-AAC or B-ASC devices, Max. speed 76.8 Kbps, Max. length 1,200 meter

DSCU842B DAC8864B DACU842B+ DAC8864B+ DSCV350B DACSMSB

GSM-10

BACnet Application Specific Controller | BACnet Advaced Application Controller | BACnet Advaced Application Controller | BACnet Advaced Application Controller | BACnet VAV Controller | BACnet SMS Alarm Module

BACnet Ethernet or BACnet IP

BACnet Ethernet Global Controller GC-RB21

BACnet MS/TP - RS485 bus, Up to 32 B-AAC or B-ASC devices, Max. speed 76.8 Kbps, Max. length 1,200 meter

NVP20V DAC8864B DSCU842B DAC8864B+ DACB DIMxxxxB

LAN Viewer

MSnet — EIMnet- RS485 bus, Up to 12 EIMs

BACnet Ethernet or BACnet IP

BACsoft

Hub

Operator Workstation

MSnet- RS485 bus | EIMnet- RS485 bus, Up to 4 EIMs | MSnet | EIMnet | MSnet

DSP20U MST20V MST20S

DIMxxxxB
DIM8000B
DIM0800B
DIMP800B
DIM0040B
DIM0004B
DIM0402B
DIM4020B

EIMxxxxM
EIM8000M
EIM0800M
EIMP800M
EIM0040M
EIM0004M
EIM0402M
EIM4020M

EIMxxxxM EIMxxxxM EIMxxxxM

【Wiring】

Binary input status Indicator
BI or AI signal input selection switch
AI signal type selection jumper

UI0~UI7 universal inputs Accepted dry contact, 3K/10K NTC, 0~10VDC, 4~20mA etc signal

Network failsafe protection jumper
MSnet port
MSnet communication indicator
BACnet MS/TP port
MS/TP communication indicator
Configure port

BO0~BO5 automatic mode indicator
24 VAC/DC power supply
BO0~BO3 binary outputs SPST no voltage contact
AO0~AO1 analog outputs, 0~10VDC or 4~20mA signal
AO 0~10VDC/4~20mA signal dip switch
24VDC auxiliary power supply
MAC address dip switch
Device status indicator

DSCU842B

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UI 0, COM, UI 1, COM, UI 2, COM, UI 3, COM, UI 4, COM, UI 5, COM, UI 6, COM, UI 7, COM

24VAC/D C, GND, BO 0, BO 0, BO 1, BO 1, BO 2, BO 2, BO 3, BO 3, AO 0, COM, AO 1, COM

AI /BI Sel

UI Jumper: Thermistor / Pulse, 4~20mA, 0~10VDC

When UI Select@BI: UI Jumper must @Thermistor / Pulse

AO Output Sel: ON: 0~10V / OFF: 4~20mA

MAC Address: ON 1:+1, 2:+2, 3:+4, 4:+8, 5:+16, 6:+32, 7:+64, 8:Test

V+, M+, M-, V-, Msnet Modbus RTU, B+, B-, GND, BACnet MS/TP

E, +, -, EIMnet Modbus RTU, 24VD C, Auxiliary Power, GND

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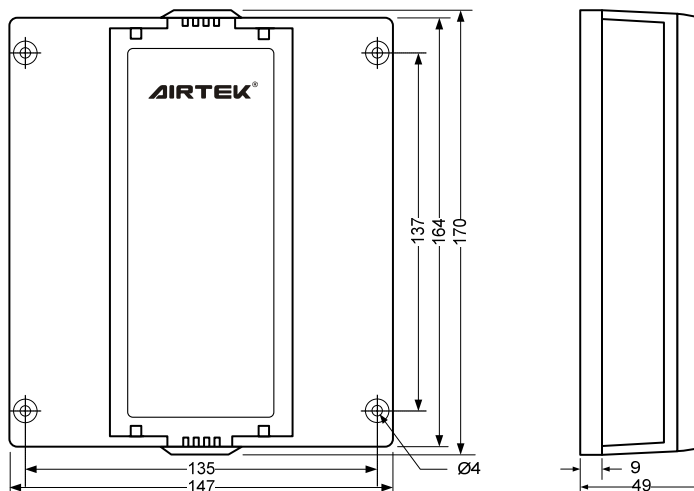Airtek International Inc, http://www.airtekgroup.com

Note: 1. All GND and COM are connected together EXCEPT the GND of BACnet MS/TP.
2. Select a proper I/O signal type for UI and AO.

【Dimension】 Unit：mm

137, 164, 170
135, 147
Ø4
9, 49

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