Field Control Layer Device

BACnet ASC VAV controller with 5Nm actuator

DSCVB5NM

【Application】

DSCVB5NM is a combination of controller and motorize driver certified by BTL to meet specific application BACnet Controller (B-ASC) grade programmable VAV box controller, with independent pressure sensors can be used to control a single duct VAV BOX. It uses a 32 bit microprocessor, communication speed up to 76,800 BPS.

Its MSnet communication port can be connected to the LCD screen control panel. Its EIMnet communication port can connect to 12 EIM I/O expansion modules.

DSCVB5NM provides a full range of options for precise control of the variable air volume box. It is definitely the best equipment for your monitoring system.

【Features】

- In accordance with the ASHRAE BACnet protocol. Compliance with the standard BTL B-ASC class specifications.
- MS/TP (Master-Slave/Token-Passing) communication interface. Communication speeds up to 76,800BPS and transmission distance up to 1,200 meters.
- MSnet communication interface can connect MST32V display panel.
- NTC temperature sensor port can connect 10KΩ NTC temperature sensor.
- High accuracy air pressure differential sensor, same in either direction, low air flow, fully IC packed to prevent dust influence.
- Damper motor using actual position feedback signal, more accurate than the floating control.
- Support online editor, download control logic program, real-time program debugging and firmware update function.
- With enthalpy, dew point temperature, PID control and all common program functions such as logarithms, trigonometric functions, roots and other advanced math function.
- 100 BV and 100 AV points.
- Standard floating point operation for analog point. Its large value range saves additional work for ratio multiplication.
- Provide power failure backup functions for all AI/BO/BV/AV values keep in FRAM for at least 10 years.
- Priority control array by 16 for all AO and BV.

【Specifications】

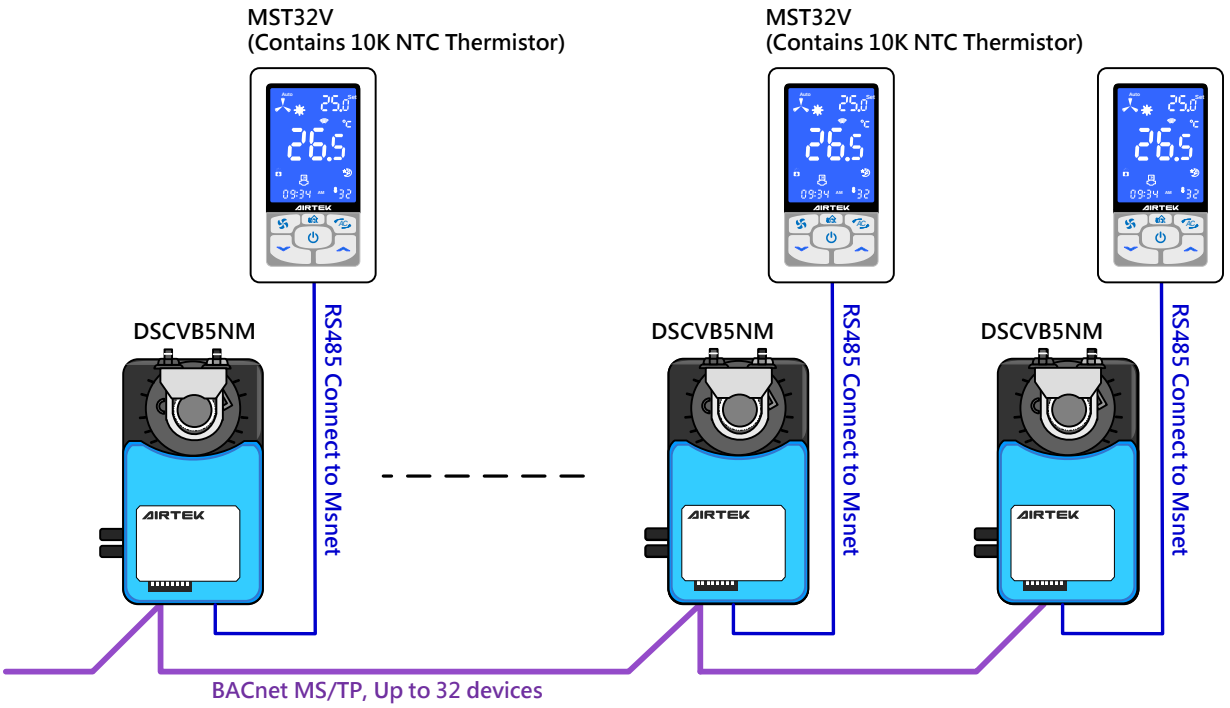
Model	Apparent power	Output torque	Action time	Damper size	Axis Dimension	Rotate Angle	Temp	Flow	External points			Actuator	BV	AV
							AI	AI	Panel	Network	I/O	AO		
DSCVB5NM	5VA	5 Nm	70～100 Sec	1 m^2	Round φ6～16mm or Square 5～12mm	90° Set range 5～85° 5° a step	(1)	(1)	MSnet* 1	BACnet MS/TP *1	EIMnet *1	(1)	100 points	100 points

Note ： The above table which has a ( ) marked as a dedicated I/O point.

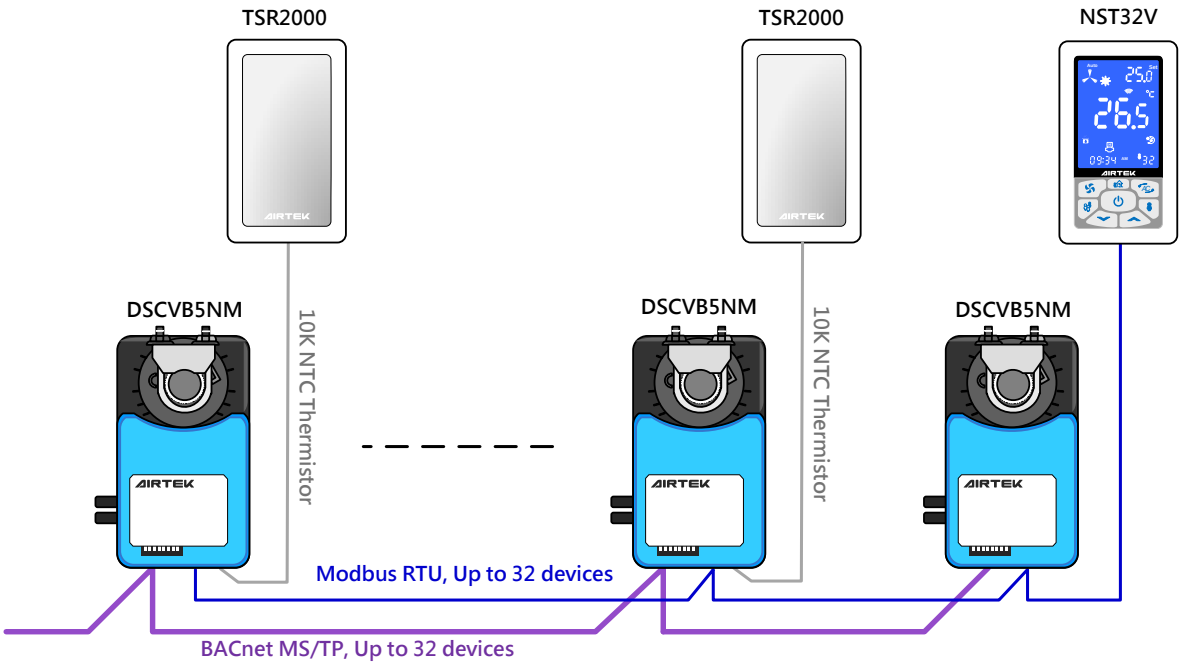
Input power	： 24VAC/VDC, 5VA. (Half-wave rectification)
Processor	： 32-bit processor (MCU), with 20K SRAM, 8K FRAM and 128K Flash memory storage.
Airflow sensor	： Built-in air flow sensor, with ±500 Pa differential pressure sensor, measurement accuracy of ± 3% in reading.
AI Input	： 10KΩ NTC thermistor signal.
AO output	： Built-in DC motor, programmable proportional control. Damper motor using actual position feedback signal, not floating control.
MS/TP Port	： RS-485 bus, communication speed 9,600/19,200/38,400/76,800 BPS, auto select.
MSnet port	： RS-485 bus, communication speed 9,600 BPS, can connect MST display panel.
EIMnet port	： RS-485 bus, communication speed 38,400 BPS, can connect up to 12 x EIM I/O expansion module.
Operate environment	： 0～55℃, 5～95%RH no condensation.
Certification	： CE, RoHS.

【Network Architecture】

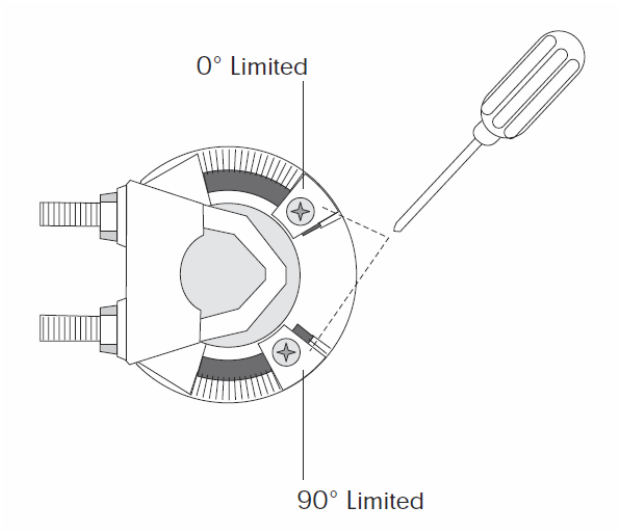
The connection of MST32V panel (Selectable internal temperature sensor).



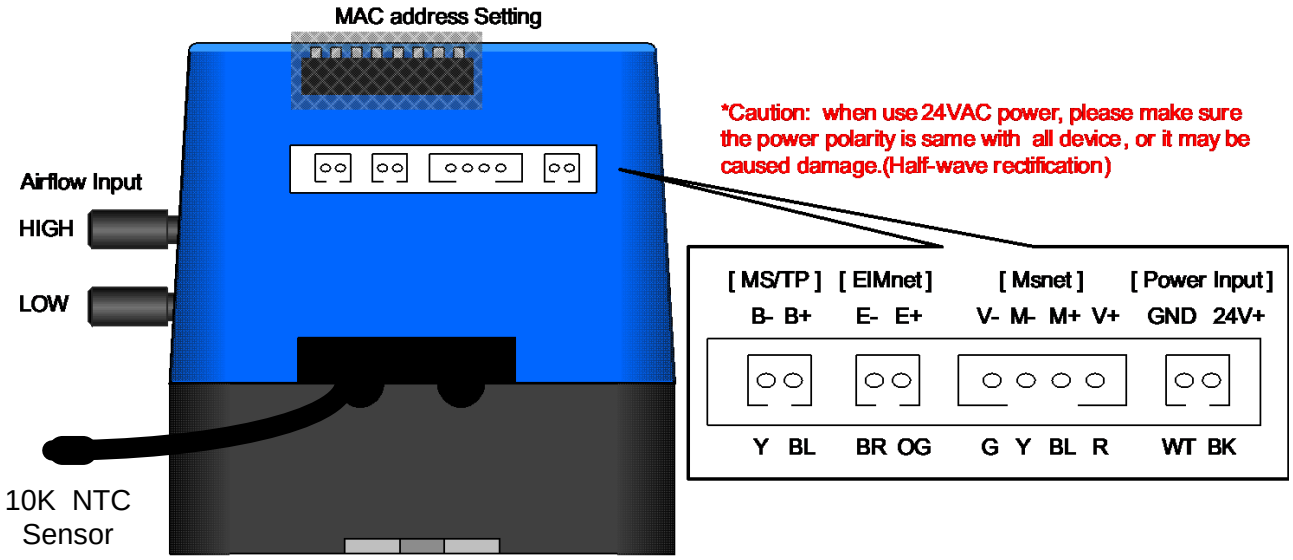
The connection of NST32V panel and TSR2000 temperature sensor.



【Rotate angle limitation】



【Wiring】



【Dimension】Units：mm