Descriptions

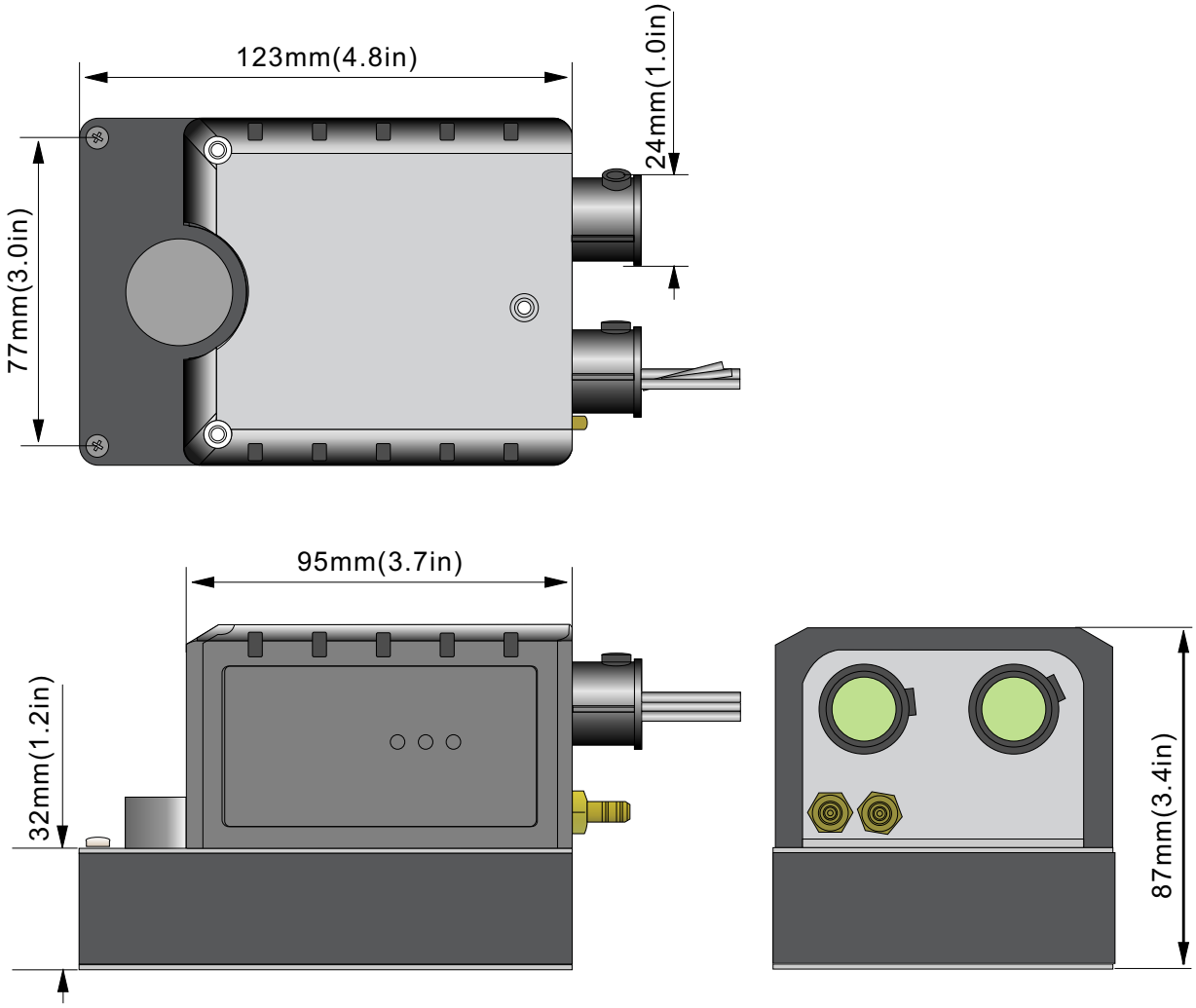
VAV is a multiple controller with rotate position control function ,which makes it more convenient for the other devices to control the temp, hum and so on. Continuously modulating type damper actuator which is controlled by 0-5V, 0-10V, or 0-20mA can provide correspondent position feedback signal. It's specially designed for damper control in HVAC system.

Highlights:
Low sound power level.
Long life circles.
Input/output is configurable with software.
Good flow sensor for high performance.
Quick and easy wiring thanks to clearly identified, removable terminal blocks.
Precise control of actuator.

Specifications

Model	VAV
Analog Input	1 input @0-5V, 0-10V, 0-20mA, thermistor
Analog Output	2 output @0-10V Max:100mA
Digital Output	1 relay @24VAC, Max: 750mA
Communications	2 RS485 Network
Baudrates	9600, 19200, ...
Supply Voltage	15~24VAC/DC ±10%, 50-60Hz
Operating Ambient Temperature	-5° C~+50° C
Storage Temperature	-30° C~+70° C
Usage Life	>60000 times
Rotate Angle	90°<limitation≤ 95°
Noise Level	Maximum 45dB(A)
Torque	71lb.in
Time	156s
Power Consumption	4VA
Flow sensor	

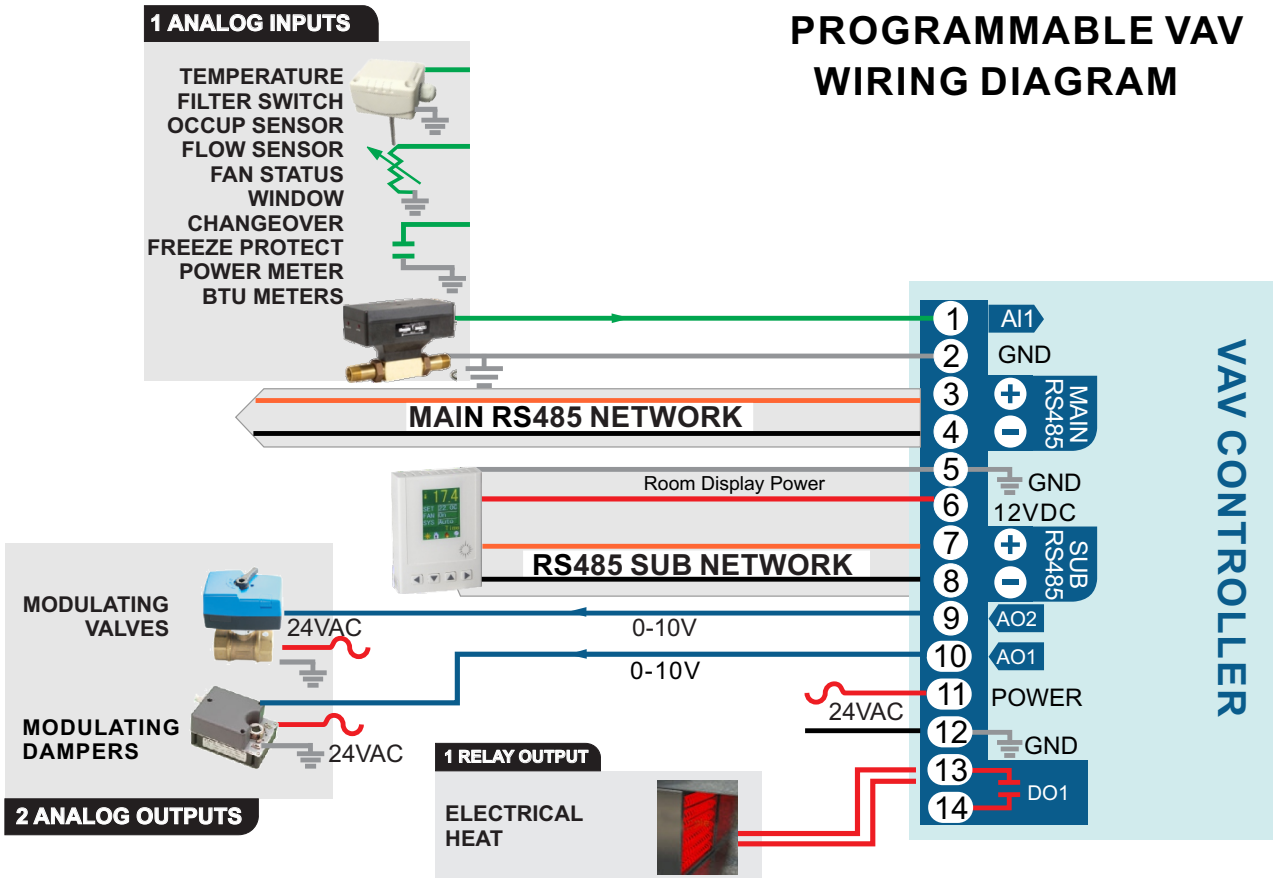
Dimension



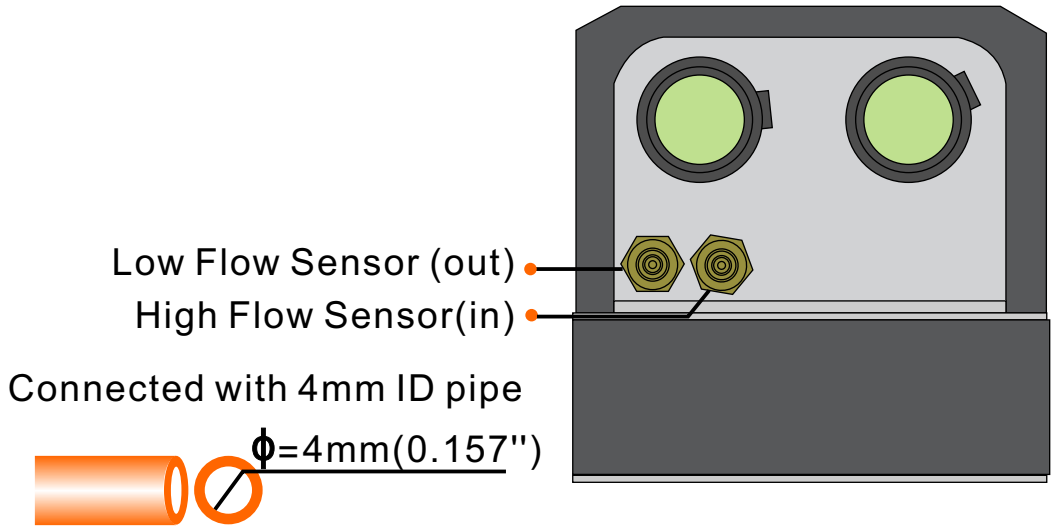
Wiring Diagram

This unit with network can be communicated via RS485, which can support 254 nodes, while the other one cannot. Pin 11 and 12 as shown in the following diagram is the power 24VAC. Pin 5 and 6 is the supply provided for external equipment for example connected with tstats. Pin 3 and pin 4 is the main RS485 network, pin 7 and pin 8 is the sub RS485 network. There is 1 channel analog input, 2 channel analog output, 1 channel digital output.

PROGRAMMABLE VAV WIRING DIAGRAM



When the diagram board works, the flow sensor will work too. One is in port connected with high pressure sensor, the other is out port connected with low pressure sensor.



Blow softly into the left side of the flow sensor input:

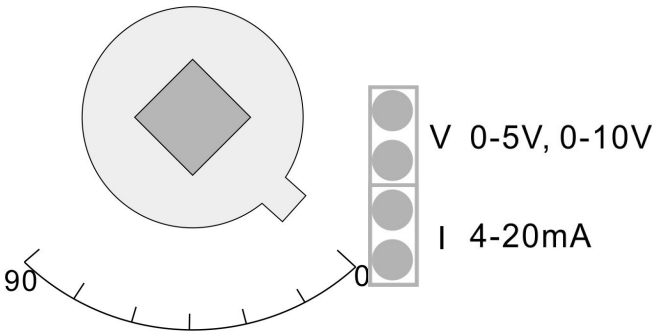
Operations

Input Various Signals Control
Each input of a VAV can be configured in 1 of 4 ways: 0-5V, 0-10V, 0-20mA, thermistor. The standard type is 0-10V, if you want other control type, please inform about it in your order. We will adjust the PCB in factory. You can also use it to update the settings.

When input is 0-10V, the damper actuator position is correspondent 0-90°. When input is 0-5V, the damper actuator position is correspondent 0-90°. The board connects with motor, to drive the gear, to adjust rotate angle, then to control the other devices.

The motor position is decided by input, for example:

0-10V	0°~90°
0V	0°
3V	27°
10V	90°



Input control signal		ROTATE DIRECTION
DA	RA	
Increasing	Decreasing	↻
Decreasing	Increasing	↺