

ELECTRONIC PRESSURE INDEPENDENT AIRFLOW CONTROL VALVE



AVC
US Pat #6,991,177 & 7,543,759



- AccuValve with ePI™
(Electronic Pressure Independence)**
- Single Setpoint Constant Volume Applications
 - 2-4 Position Constant Volume Applications
 - Tracking Pair Applications
 - Native BACnet®
 - Intuitive Graphical User Interface Dashboard



DESCRIPTION

The Accutrol AVC is an Electronic Pressure Independent (ePI™) **AccuValve®**. The revolutionary AVC is the first airflow control valve created for critical environments that achieves pressure independence electronically. It accomplishes this by incorporating a controller with an integrated transmitter. The AVC comes standard with “Native BACnet®” allowing direct communication to the Building Automation System. The AVC provides owners and designers with all the benefits of the low pressure drop **AccuValve®** as well as many application options for electronic pressure independent control.

APPLICATION

The AVC applications are numerous when applied to the low pressure drop **AccuValve®**.

- Constant Volume Configuration for various applications (Individual Equipment, High Performance Fume Hood, etc.)
 - Single set point pre-programmed at factory
 - Dry contact input (up to 4 discreet set points)
 - Analog Input
 - BACnet® programmed set point value
- Variable Volume (set point programmed through the following methods)
 - Analog Input
 - BACnet® programmed set point value
- Tracking Pair Configuration for various applications (Vivarium, OR's, Isolation Rooms, etc.)
 - Master AVC Analog Output wired directly to Slave AVC Analog Input
 - Master AVC set point can be programmed by Analog Input, Digital Inputs or BACnet® MSTP

FEATURES

- Plug and Play Operation - AVC can be pre-programmed at the factory with required set points
- ePI™ (Electronic Pressure Independent) Airflow Control
- True Closed-loop control valve
- Native BACnet®
- Provides true actuator position feedback for valve position
- Valve position available via BACnet®
- BAS can easily perform Demand Based Static Pressure Reset Control meeting ASHRAE STD 90.1
- Provides set point offset for intuitive bias programming for tracking pair applications
- USB User interface for field configuration
- Intuitive Graphical User Interface Dashboard

SPECIFICATIONS - AVC (For AccuValve® Specifications refer to AV3100 & AV3200 Documentation)

PERFORMANCE

Accuracy	+/- 5% of reading or 5 CFM, whichever is greater
Speed of Response	2 seconds, full-open to full-closed
Shut-off Leakage Rate @ 3"wc valve DP	Standard Round Valves (Model AVC1xx-xx) <1.5% FS Round Valves with Blade Seals (Model AVC1xx-xx-S) <0.5% FS Standard Rectangular Valves (Model AVC2xx-xx) <4% FS
Operating Pressure	3"wc maximum differential pressure across valve
Failure Mode	Fail Last Position or Fail Open/Closed (selectable by model code)

ENVIRONMENTAL

Temperature	Operating: 0 to 140 deg. F Storage: -40 to 140 deg. F
Humidity	0 to 90% non-condensing

ELECTRICAL

Input Power	24VAC +/- 20% 50-60Hz, 27 VA max. for all sizes except 36 and 48, which are 50 VA max. or 24VDC +/-10%, 15W max. for all sizes except 36 and 48, which are 28 W max.
Analog Output	0-10Vdc or 0-20mA (jumper configurable) 12-bit Resolution Input Impedance when configured for 0-10Vdc is 100K ohms Input Resistance when configured for 0-20mA is 500 ohms
Digital Inputs	2 dry-contact inputs
Analog Output	0-10Vdc or 0-20mA (jumper configurable) 12-bit Resolution
Alarm Relay Output	DPDT, rated load 1A @ 30 vDC or 0.3A @ 125vac Max operating voltage = 125VAC or 60 vDC Max carry current = 1A Max switching capacity = 37 VA, 30W
Network Com Port	EIA 485 2-wire BACnet® MS/TP Data Rates 9600, 19200, 38400, 57600, 76800 and 115200 ¼ Unit Load Receiver Input Impedance DIP Switch provided for setting the MAC address Internal 120-ohm end-of-line termination resistor (jumper configurable)
Configuration Port	USB 2.0 Type B, Isolated
Status Indicators	LED Status Indicators for Power, Alarm, Analog Output, BACnet® Communications, USB Communications and AVC Status
Terminal Blocks	2 and 3 position vertical pluggable screw terminal blocks

AVC SELECTION TABLE FOR OPERATING PRESSURE

Valve Size	Airflow Range (CFM)								Transmitter Range (CFM)
	Min	Maximum Design Airflow							
6"	30	69	99	123	143	206	254	315	0-330
8"	80	169	252	315	367	528	650	800	0-850
10"	120	304	428	524	606	860	1056	1300	0-1370
12"	180	413	591	726	840	1192	1461	1790	0-1900
14"	250	678	979	1191	1364	1884	2275	2750	0-3000
12x18"	260	722	1003	1235	1437	2086	2596	3200	0-3400
12x24"	350	890	1261	1558	1812	2614	3237	4000	0-4200
12x36"	520	1443	2005	2470	2875	4172	5191	6400	0-6800
12x48"	700	1780	2522	3115	3625	5228	6473	8000	0-8400
Operating Pressure*	<0.01"	0.025"	0.05"	0.075"	0.1"	0.2"	0.3"	0.45"	

*Minimum operating pressure when tested in accordance with ANSI/ASHRAE 130

Use highlighted area for optimal energy efficiency.

For more information on the use of the table please refer to "AccuValve® Selection Guide for Operating Pressure" iPad and iPhone App available for "AccuValve® Selection Guide for Operating Pressure"
ALL SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

Your AccuValve® Representative is:



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