

DEC-VAV

Variable Air Volume Controller

Westco's DEC-VAV is the next generation Variable Air Volume and Temperature Controller. Plug-in modules are available for flow sensing, actuator and external relay control. These plug-in modules allow easy customization of the DEC-VAV for any type of VAV application. This peer-to-peer, stand alone or networkable VAV controller can control ANY type of variable air volume unit.



- Cooling only (with series and parallel fan control)
- Cooling and Hot Water reheat (with series and parallel fan control)
- Floating/Proportional Hydronic Reheat
- Cooling and multi-stage electric heating for up to four stages
- Dual duct VAV systems
- Zone Lighting control with ambient light sensors
- Control of any other load within a VAV zone



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BACnet®

DEC-VAV (Rev. 3 01/17)
*Conditions Apply

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Variable Air Volume Controller



HARDWARE FEATURES/BENEFITS

- Networkable Distributed
 - fully peer-to-peer modular system architecture
 - scalable
- Instrumentation level air flow sensor with built in ambient temp sensor and other unique capabilities:
 - Auto no flow reset
 - Duct air temp compensation for true CFM
 - K factor compensation
 - Altitude compensation
- Fully isolated (optical and power supply) output circuitry - immune to electrical noise
- On board isolation transformer - for transient protection and noise immunity
- Stand alone capability - controller operates if network is down
- Remote programming and monitoring
- Flash based memory backup of critical system data
 - ensures retention of operating data after extended power failure
- Lithium back-up of control program and logged data via lithium battery: 7 + years
- Flash based operating controller: Eliminates obsolescence and operating system can be uploaded remotely
- Extensive data logging and monitoring
 - past 35 days peak value recording for all points
 - past 48 hours of point value is recorded with 15 minute average values
 - point value totalization
 - override time totalization
 - 48 hour logging of 0-10VDC and digital output status
- output status
- programmable input averaging period
- run time based operation if applicable
- All points are global
- Software pass code lock out
 - for system security
- Compact size
 - ideal for limited space applications
- Industrial ABS 787 packaging with color coded and pad printed removable terminal strips
 - for simple, accurate and fast installation and wiring
- BACnet® device profile = B-ASC
- Local Service Port with DEC HH device.
- Digital Outputs: Up to four (4) Digital Outputs would require one (1) plug-in relay modules (DEC-R4)

PROGRAMMING FEATURES

Sophisticated temperature control, building automation and energy management strategies in stand-alone or networked applications.

- Time of day scheduling
- Adaptive/non-adaptive optimum start/stop for heating/cooling
- PID control of outputs
- Demand management strategies = load shedding
- Global overrides
- enabling programs based on any global point value
- primary/secondary output switchover based on run time
- Event and holiday scheduling
- Security
- user defined security access codes
- Alarm
- multiple phone, pager, cell phone or email dial out with interface
- run time limit alarm
- Global point value alarm
- ICMS 5.0
- Graphically Programmed in Native BACnet® with Tridium®
- Title 24 Demand Compliant with Tridium®

SPECIFICATIONS

- DEC VAV Controllers
 - Many different types of Zone Temperature sensor options
 - Discharge Air temperature sensor input
 - Modular flow sensor for air volume control
 - Two (2) 0-10 VDC Analog outputs for modulating two actuators
 - Two (2) 0-10 VDC Analog Inputs for actuators position feedback
 - Three (2) output ports for controls
 - Option: Two (2) Floating type actuator control with position feedback (optically isolated from the processor)
 - Option: 4 Channel NO Relay module, form C, 5 Amps@ 24 VAC with HOA switches and status LEDs
 - 4 Channel NC Relay module, form C, 3 Amps@ 24 VAC with HOA switches and status LEDs
- Serial Sub-LAN port: wiring via CAT-5 cable for multiple zone sensors
- Future expansion Flash Memory ID Tag port
- Hand Held terminal interface port via CAT-5 cable (DEC-HH-1 Device)
- Communications
 - Programmable from 1200 Bauds to 57K Bauds
 - RS485 - MS/TP
 - 2 or 3 wire with network TXT and RCV status LEDs
 - Power supply and optical isolated
 - Flash based non-volatile configuration
- Electrical- input power: Transorb and self-resetting fuse protected
 - class 2, 22-26VAC, 50/60Hz 8VA max.
 - Lithium battery back up, 7 year
- 24 VDC build in DC power supply can supply up to 50 mA @ regulated 24 VDC
- Additional built in 8 VDC power supply
- Environmental
 - operating: 0°F to 140°F and 10%-90% RH, non condensing
- Mechanical: ABS 787 housing construction
- Shipping weight 2 lb.
- User interface- remote or direct through a personal computer utilizing ICMS Windows® based front-end software. Optional equipment allows for web browser based control
- Each DEC controller contains a powerful 16 bit flash microprocessor to automate and monitor any mechanical system while continually logging pertinent programmed system operating data.



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