

Features and highlights

- **Economical**
Comes with 5 inputs, 6 binary outputs; the separate replaceable actuator enables quicker, less expensive repairs.
- **Adaptable**
Pre-loaded, DIP-switch selectable DDC applications for 5 types of VAV box control.
- **Flexible**
Left- or right-mountable actuator enables flexible mounting configurations.
- **Innovative**
Device addressing and application selection can all be done with common tools for easy installation or replacement.
- **Attractive**
Sleek, updated design.



The Alerton BACtalk® VAViH-SD™ controller with integrated actuator is a versatile BACnet-compliant controller, providing pressure-independent control of any single-duct variable air volume (VAV) box. It features a built-in airflow sensor, five universal inputs (AIs or BIs) and six binary outputs (BOs). As a native BACnet controller, the VAViH-SD integrates seamlessly with your BACnet system, communicating at up to 76.8 Kbps on a BACnet MS/TP LAN. The VAViH-SD-F includes a filter to reduce dust contamination.

Four of the BOs are hot-switched 24 VAC at 0.5A triac outputs; the other two BOs are ground-switched and are reserved for the integrated actuator. Four inputs are permanently configured to operate as open contact/thermistor inputs. The fifth input is user selectable: Open contact/thermistor, 0–5 VDC or 0–10 VDC. All inputs are 10-bit resolution.

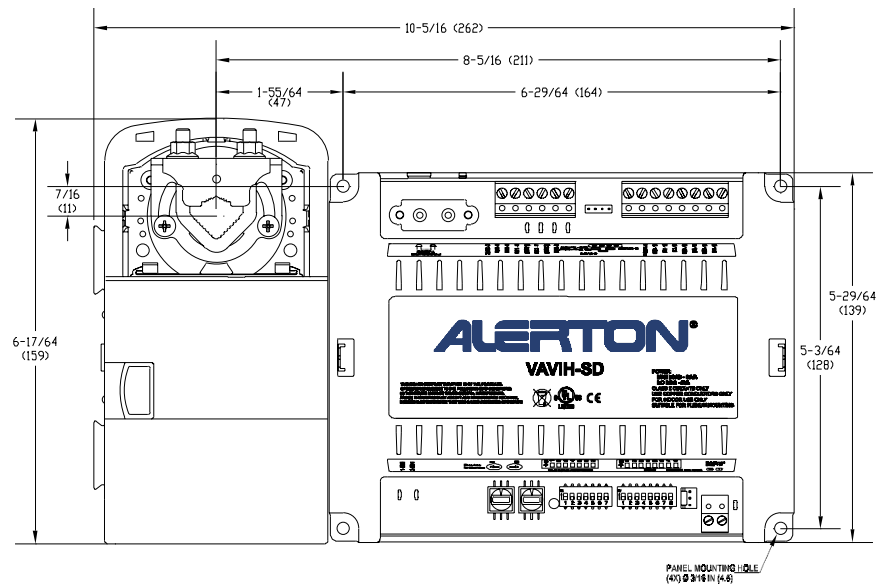
The BACtalk VAViH-SD contains an integral airflow sensor to provide pressure-independent operation of the VAV box. Each airflow sensor is factory-calibrated at multiple velocity points. Minimum, maximum, and reheat airflows can be entered either at a Microset™ wall unit or an operator workstation. A technician can adjust airflow parameters in the field during balancing to compensate for slight variations in box installation and type.

The direct-coupled, brushless actuator is a high-reliability, maintenance-free ON-OFF/floating point control model manufactured by Honeywell. Its universal V-bolt clamp assembly mounts directly to the damper operating shaft.

All control algorithms are factory-loaded into nonvolatile flash memory and can be completely field-modified. The VAViH-SD can execute control algorithms independently of other equipment. All calibration, programming, and operator-entered setup data is stored in flash memory for further assurance of stable, reliable, and independent operation.

Technical data

- **Power** 24 VAC @ 10 VA min. plus binary output loads (65 VA max.). Utilizes a half-wave rectifier, which enables a single transformer to power multiple VLCs.
- **Inputs** 5 inputs with 10-bit resolution. Input 0 supports the BACtalk Microset. Inputs 0–3 support open contact/10K thermistor. Input 4 allows user-selectable configuration: Open contact/10K thermistor, 0–5 VDC or 0–10VDC.
- **Binary Outputs** 6 binary outputs for staged heat or fan control. Except for BO 3 and 4, which are ground-switched for damper motor control, all BO terminals are hot-switched, optically coupled triac outputs rated 24 VAC @ 0.5 A.
- **Airflow Sensor** 0–1.25 inches water column differential pressure sensor.
- **Actuator torque rating** 44 lb-in or 5nm.
- **Processor and Memory** Motorola AZ-60 processor with on-board flash memory. Flash memory provides nonvolatile program and data storage, and allows for updates to the firmware for future product enhancements.
- **Maximum Dimensions** 2.5" (64mm) H X 6.9" (175mm) W X 5.5" (140mm) D.
- **Terminations** Removable header-type screw terminals accept 14–24 AWG wire.



- **Environmental** 0–158 deg. F (-17–70 deg. C). 0–95% RH, non-condensing.
 - **Communications** BACnet MS/TP LAN up to 76.8 Kbps.
 - **BACnet Conformance** Fits application specific controller (ASC) profiles as tested and approved by BTL. See Protocol Implementation Conformance Statement (PICS).
 - **Ratings** Listed Underwriters Laboratory for Open Energy Management Equipment (PAZX) under the UL Standard for Safety 916, 3rd Edition. Listing includes U.S. and Canadian certification. Suitable for plenum mounting.
- FCC Part 15, Class A.
EN 55022, Class A.
EN 61000-3-2, 61000-3-3, 61000-4-2, 61000-4-3, 61000-4-4, 61000-4-8, 61000-4-6, 61000-4-11

Ordering information

VAViH-SD

VAViH-SD with 5 universal inputs, 6 binary outputs; 2 of the binary outputs drive integrated Honeywell actuator

VAViH-SD-C

VAViH-SD field controller with available custom DDC

Specifications subject to change without notice