

## Features and highlights

- **Capable**  
Four 10-bit inputs and five binary outputs.
- **Interoperable**  
Fully BACnet-compliant on MS/TP LAN at up to 76.8 Kbps.



BACnet is a registered trademark of ASHRAE. ASHRAE does not endorse, approve or test products for compliance with ASHRAE standards. Compliance of third-party products to requirements of ASHRAE Standard 110 is the responsibility of the BACnet Manufacturers Association (BMA). BTL is a registered trademark of the BMA.

- **Versatile**  
Downloadable operating code to allow for future software improvements.
- **Reliable**  
Extensive on-board filtering, with all program data backed up in nonvolatile flash memory.
- **Accurate**  
Factory calibrated at multiple velocity points and field-adjustable during balancing.



The Alerton® BACtalk® VAV-SD controller is a versatile BACnet-compliant field controller that provides pressure-independent control of any single-duct variable air volume (VAV) box. As a native BACnet controller, the VAV-SD integrates seamlessly with your BACnet system, communicating at up to 76.8 Kbps on a BACnet MS/TP LAN. The VAV-SD-F includes a filter to reduce dust contamination.

The BACtalk VAV-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 an Alerton Microset™ wall unit or an operator workstation. A technician can adjust the calibration in the field during balancing to compensate for slight variations in box installation and type.

All control algorithms are factory-loaded into nonvolatile flash memory and can be field-modified. The VAV-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.

The BACtalk VAV-SD is your complete answer to control of all single-duct VAV boxes in a BACnet environment. With its integral airflow sensor and programming flexibility, the VAV-SD provides every option for precision VAV box control.

## Technical Data

- **Power** 24 VAC @ 5 VA min., plus binary output loads (65 VA max). Utilizes a half-wave rectifier, which allows a single transformer to power multiple VLCs. One leg of 24 VAC connects to earth (panel) ground.
- **Inputs** 4 universal inputs with 10-bit resolution. Input 0 can be used for a BACtalk Microset. Inputs 1–3 support thermistor/dry contact.
- **Binary outputs** 5 outputs, each rated at 24 VAC, 0.5 A. Three outputs utilize hot-switched triacs. Two outputs utilize ground switching triacs for damper motor control. All outputs have a common connection to the fused 24 VAC supply.
- **Pressure sensor** 0–1.25 inches water column differential pressure sensor.
- **Processor & Memory** Motorola AZ60 processor with on-board flash memory. Flash memory provides nonvolatile program and data storage and allows for encrypted updates to the program for future product enhancements.
- **Max. Dimensions** 5.20" (132mm)H x 3.30" (84mm)W x 1.40" (36mm)D.
- **Terminations** Removable header-type screw terminals accept 14–24 AWG wire. An additional header is provided for easy connection to MS/TP for testing.
- **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** An application specific controller (ASC); tested and approved by BTL. See Protocol Implementation Conformance Statement (PICS).
- **Ratings**



BACnet is a registered trademark of ASHRAE. ASHRAE does not endorse, approve or test products for compliance with ASHRAE standards. Compliance of listed products to requirements of ASHRAE Standard 110 is the responsibility of the BACnet Manufacturers Association (BMA). BTL is a registered trademark of the BMA.

Listed Underwriters Laboratory for Open Energy Management Equipment (PAZX) under the UL Standard for Safety 916; listing includes both U.S. and Canadian certification

EMC Directive 89/336/EEC (European CE Mark)

FCC Part 15, Subpart J, Class A

## Ordering information

Item number	Description
VAV-SD	Single-duct variable air volume controller
VAV-SD-C	VAV-SD field controller with available custom DDC

Specifications subject to change without notice