Features and highlights

• Capable
  Four 10-bit inputs, four ground-switched binary outputs and three hot-switched binary outputs.

• Interoperable
  Fully BACnet-compliant on MS/TP LAN at up to 76.8 Kbps.

• Versatile
  Fully programmable control logic can be field-modified.

• Reliable
  AZ60 processor, 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-DD7 controller is a versatile BACnet-compliant terminal unit device that provides pressure-independent control of any dual-duct variable air volume (VAV) box. Three hot-switched outputs and four ground-switched triacs make the VAV-DD7 ideally suited for applications with auxiliary equipment. As a native BACnet controller, it integrates seamlessly with your BACnet system, communicating at up to 76.8 Kbps on a BACnet MS/TP LAN. The VAV-DD7-F includes a filter to reduce dust contamination.

The VAV-DD7 supports the Alerton Microtouch™, as well as the Microset™ and Microset II intelligent wall sensors, which offer convenient data display, setpoint adjustment, and technician access to equipment setup parameters.

Each of the two integral airflow sensors is factory-calibrated at multiple velocity points. Additional inputs can be used to monitor discharge air or other field inputs. Minimum, maximum, and reheat airflows for the hot and cold ducts can be entered either at a Microset wall unit or using operator workstation software. 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 flash memory and can be field-modified. The VAV-DD7 can execute control algorithms independently of other equipment. All calibration, programming and operator-entered setup data is stored in nonvolatile flash memory for further assurance of stable, reliable and independent operation.
Technical Data

- **Power** 24 VAC @ 10 VA min., plus binary output loads (100 VA max.). Utilizes a half-wave rectifier, which allows multiple VLCs to be powered from a single transformer. 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** 7 outputs, each rated 24 VAC, 0.5 A. Four are ground-switched triacs for damper motor control. Three are hot-switched triacs for auxiliary equipment control.

- **Airflow Sensor** 0–1.25 inches water column pressure range.

- **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.

- **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) level device; 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; 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

<table>
<thead>
<tr>
<th>Item number</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>VAV-DD7</td>
<td>Field controller for dual-duct VAV box applications with four 10-bit inputs, 4 ground-switched binary outputs, and 3 hot-switched binary outputs</td>
</tr>
<tr>
<td>VAV-DD7-C</td>
<td>VAV-DD7 field controller with available custom DDC</td>
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Specifications subject to change without notice