

VAV-SD-E-S

UL 864 / UUKL SMOKE CONTROL RATED SINGLE DUCT VAV CONTROLLER



FEATURES AND HIGHLIGHTS

- Underwriters Laboratories, Inc. Listed UL 864 / UUKL Smoke Control System Equipment (UL Standard 864, Edition 10 - Standard for Control Units and Accessories for Fire Alarm Systems)
- Fully BACnet-compliant on MS/TP LAN at up to 115.2 Kbps
- Compatible with Alerton Microset II and Microset 4 intelligent wall sensors, which can be used for display, setpoint adjustment, and technician access to equipment setup parameters
- One integral airflow sensor provides pressure independent operation of a VAV box. The airflow sensor is factory calibrated at multiple velocity points and is field adjustable
- Control logic can be field-modified utilizing Alerton's easy to learn VisualLogic® programming language.
- Programming and setup data stored in non-volatile flash memory ensuring stable and reliable operation
- Download-able operating code to allow for future software improvements
- 32-bit processor architecture for high-speed processing of DDC programming, with an internal logical loop time of 100 msec
- Backwards compatible with Alerton VAV-SD-S UL 864/UUKL controllers

The Alerton VisualLogic® VAV-SD-E-S controller is designed to provide pressure-independent control of single-duct variable air volume (VAV) boxes in UL 864 / UUKL Life Safety Smoke Control Systems. The VAV-SD-E-S controls the functions of UL Listed smoke control devices such as floor smoke control dampers, fans, actuators, and proof sensors in order to regulate the movement of smoke within the building, aiding in the creation of safe exit routes and areas of refuge in the event of a fire. The VAV-SD-E-S receives its instructions from smoke control DDC logic in the Alerton VisualLogic® VGC-S or via a manual override from the Firefighters' Smoke Control Station (FSCS).

VAV-SD-E-S						
UI	HBO	GBO	RO	AO	AF	F
UNIVERSAL INPUTS	HOT SWITCHED TRIAC BINARY OUTPUTS	GROUND SWITCHED BINARY OUTPUTS	RELAY OUTPUT	ANALOG OUTPUTS	AIR-FLOW SENSOR	FILTER
4	3	2	0	0	1	--

TECHNICAL DATA

POWER – 24VAC @ 50-60 Hz. 4 VA minimum (maximum 64 VA with loads). Half-wave rectified

INPUTS – 16-bit universal inputs accept 3k (Ibex) or 10k thermistor (type II), dry contact, 0-20 mA, 0-10V, 0-5V, or dry-contact pulse. External 250-ohm resistor required for 0-20 mA inputs. Pulse input maximum frequency of 100 Hz. Pulse input minimum duty cycle 5mS ON / 5mS OFF (pulse input not supported on IN-0)

BINARY OUTPUTS – Triacs rated 24 VAC @ 50/60 Hz, 500 mA continuous and 800 mA (AC rms) for 60 milliseconds

IMPORTANT NOTE:

Binary Output loads are restricted to a maximum rating@12VA each

MICROSET – Supports Microset II or Microset 4 on input 0 (IN-0)

INPUT/OUTPUT TERMINATIONS – Removable header-type screw terminals accept 14-24 AWG wire

PRESSURE SENSOR – 16-bit polarity insensitive pressure sensor. 0-2 in. w.c. (500 Pa) range. 0.0004 in. w.c. (0.1 Pa) zero-point accuracy. 0.5% span repeatability. 1/8-inch x 3/8-inch long barb-fitting

FILTER – In-line filter for pressure sensor included to enhance long-term stability

MAX DIMENSIONS – 5.2" (132mm) H x 3.3" (84mm) W x 1.1" (28mm) D

MOUNTING – Screw mounting

ENVIRONMENTAL – 32 to 120°F (0 to 49°C) / 5 to 85% RH, non-condensing

COMMUNICATIONS – EIA-485 (RS-485) over twisted shielded-pair (TSP); auto-baud switching (9.6kbps, 19.2kbps, 38.4kbps, 76.8kbps, or 115.2kbps); communication status LED

PROTOCOLS – BACnet MS/TP (master)

PROGRAMMING – Supports Alerton’s BD4 DDC file format using Alerton’s VisualLogic® toolset

MICROPROCESSOR – 32-bit ARM Cortex-M4F, 80 MHz

MEMORY – 512 MB non-volatile flash

SECURITY – Integrated secure boot prevents loading of tampered firmware. DDC and firmware updates password protected

ORDERING INFORMATION

ITEM NUMBER

VAV-SD-E-S ALERTON VAV BACNET CONTROLLER FOR UL 864/UUKL SMOKE CONTROL SYSTEMS

VAV-FILTER-50 ALERTON VAV FILTER BULK PACK (50)

CERTIFICATION AND CONFORMANCE

BACNET CONFORMANCE – An application specific controller (ASC) level device; tested and approved by BTL. See Protocol Implementation Conformance Statement (PICS)

UL

- Listed Underwriters Laboratory for Smoke Control Systems under UL 864/UUKL
- Open Energy Management Equipment (PAZX) under UL916; listing includes both USA and Canadian certification

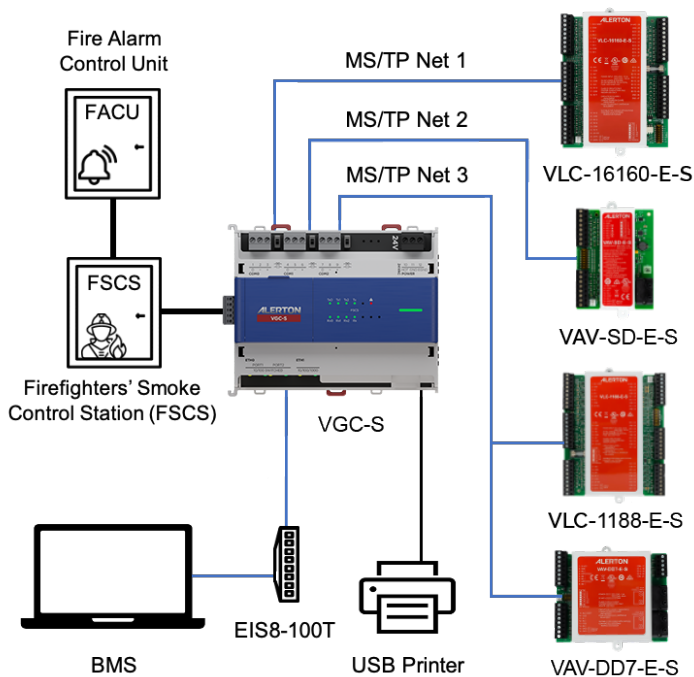
EMC – EMC Directive 89/336/EEC (European CE Mark)

FCC – This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE:

This device is UL listed and limited to 100VA maximum. DO NOT EXCEED 100VA MAXIMUM RATING

ALERTON Smoke Control Solution



For additional details and solution information, please refer to the Alerton Smoke Control Guidelines Document.



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