ALERTON® VISUALLOGIC® IP CONTROLLER (VIP)

The Alerton® VisualLogic® IP Controller (VIP) is a BACnet Advanced Application Controller (B-AAC) with a real-time clock, high resolution 16-bit universal inputs and outputs, and a 32-bit processor. The VIP controllers include on-board Hand-Off-Auto (HOA) switches for all outputs. It can operate as a stand-alone controller using its real-time clock.

VIP-363-HOA

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The VIP-363-HOA is designed for central plant systems, air handling units, clean rooms, fume hoods, large terminal units, and similar control and process equipment.

VIP-363-VAV

The VIP-363-VAV is designed for pressure-independent control of any single duct variable air volume (VAV) box; it is ideally suited for critical environment applications such as Laboratory Airflow Tracking, Critical Patient Rooms, and Operating Rooms, and other applications requiring precise control of airflows. The VIP-363-VAV has a field-replaceable integral airflow sensor. The airflow sensor is factory calibrated at multiple velocity points. Minimum, maximum, and reheat airflows can be entered using a Microset wall unit or compatible operator workstation software.

VIP-363-VAV

FEATURES AND BENEFITS

- As a native BACnet B-BC, the VIP controllers integrate seamlessly with your BACnet system, communicating at up to 1000Mbps on BACnet/Ethernet, BACnet IPv4, or BACnet/IPv6 networks.

- The VIP controllers support the Alerton Microtouch™, the BACtalk® Microset, Microset II, and Microset 4 intelligent wall sensors, which offer convenient data display, setpoint adjustment, and technician access to equipment setup parameters.

- All control logic is programmed using Alerton's easy-to-learn graphical programming language, VisualLogic®.

- The VIP controllers can execute more complex calculations to meet the needs of increasingly demanding sequences of operations for building systems.

- The VIP controllers have an integral 4-port switch that supports tar, daisy-chain, and ring network topologies in addition to Rapid Spanning Tree Protocol (RSTP).

- Switch ports can be enabled/ disabled.

- Programming and setup data are stored in non-volatile flash memory, ensuring stable and reliable operation.

- The VIP controller host automation features such as schedules, trend logs, alarms, and zones.

- The VIP-363-VAV supports one VXIO-322-HOA or VXIO-965 HOA expansion module.

VIP-363			
UI	**BO**	**UIO**	**AF**
UNIVERSAL INPUTS	BINARY OUTPUTS	UNIVERSAL INPUTS/OUTPUTS (Selectable between UI and AO)	AIR-FLOW SENSOR (VIP-363-VAV only)
3	6	3	1

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PRODUCT SPECIFICATIONS

TECHNICAL DATA

POWER: 24 VAC nominal, 20 VAC min., 30 VAC max. @ 50-60 Hz. 50 VA minimum (maximum: 24VAC = 100 VA, HOT(A) = 100 VA, HOT(B) = 72 VA). Half-wave rectified. See IMPORTANT NOTE below.

INPUTS: 16-bit universal inputs accept 10k thermistor (type II and III), dry contact, 1k platinum RTD, 0-20 mA, 0-10 V, or dry-contact pulse. External resistor required for 0-20 mA. Pulse input maximum frequency of 100 Hz. Pulse input minimum duty cycle 5ms ON / 5ms OFF.

POWER OUTPUT FOR EXTERNAL SENSORS: 20 VDC ±10% @ 250 MA maximum.

BINARY OUTPUTS: Solid-state relay rated 20-30 VAC @ 50/60 Hz, 1.5 amp continuous, 3.5 amp inrush for 100ms. Hand-Off-Auto (H-O-A) switches for manual override, software controlled, monitored switch position status. See IMPORTANT NOTE below.

ANALOG OUTPUTS: 16-bit universal analog outputs support:
- **Voltage Mode:** 0-10 VDC @ 10 mA maximum (1k ohm minimum).
- **Current Mode:** 4-20 mA @ 550 ohms Maximum.
- **Binary Mode:** 12 VDC @ 20mA maximum relay coil current (for controlling low-coil current 12 VDC relays and solid-state relays). Hand-Off-Auto (H-O-A) switches with potentiometers for manual override, software controlled, monitored switch position, and potentiometer status.

MICROSET: Supports BACtalk® Microset, Microset II, or Microset 4 on input 0 (IN-0).

INPUT/OUTPUT TERMINATIONS: Removable header-type screw terminals.

PRESSURE SENSOR (VIP-363-VAV): 16-bit polarity insensi- tive 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. Field replaceable.

MAX DIMENSIONS:
5.32" (135 mm) W x 4.33" (110 mm) H x 2.26" (57.4 mm) D.

MOUNTING: 35mm DIN rail or screw mounting.

ENVIRONMENTAL:
- **Ambient:** -20 to 55°C (-4 to 131°F).
- **Storage:** -20 to 85°C (-4 to 185°F) / 5 to 95 % RH non-condensing.

COMMUNICATIONS: Built-in 4-port Gigabit Ethernet Switch supports 10/100/1000BASE-T.

PROTOCOLS:
- BACnet/Ethernet
- BACnet/IPv4
- BACnet/IPv6
- Rapid Spaning Tree Protocol (RSTP)

PROGRAMMING: Supports Alerton's BD9 DDC file format using Alerton's Visual Logic® toolset.

REAL TIME CLOCK: 24-hour, 365-day, multi-year calendar, with 24-hour power fail backup.

AUTOMATION FEATURES: Supports 100 trendlogs, 100 alarms, 10 schedules, and 1 zone (internal points only).

MICROPROCESSOR: 32-bit ARM Cortex-A9, 800 MHz.

MEMORY: 1GB LPDDR3 RAM and 2GB solid-state disk storage.

I/O MICROCONTROLLER: 32-bit ARM Cortex-M4F, 180 MHz.

SECURITY: Integrated secure boot prevents the loading of tampered firmware.

INPUT/OUTPUT EXPANSION: VIP-363-HOA model supports up to eight expansion I/O modules VXIO-322-HOA and VXIO-965-HOA. VIP-363-VAV supports one VXIO-965-HOA or one VXIO-322-HOA I/O module. Expansion I/O modules can be directly connected to VIP-363 controllers or remotely located up to 3000 feet away from the VIP-363 controllers.

ORDERING INFORMATION

ITEM NUMBER	DESCRIPTION
VIP-363-HOA	VISUALLOGIC® IP CONTROLLER
VXIO-322-HOA	VISUALLOGIC® EXPANSION I/O MODULE
VXIO-965-HOA	VISUALLOGIC® EXPANSION I/O MODULE
VIP-363-VAV	VISUALLOGIC® IP CONTROLLER WITH INTEGRAL AIRFLOW SENSOR
VAV-FILTER	SINGLE FILTER FOR VIP-363-VAV

CERTIFICATION AND CONFORMANCE

BACNET CONFORANCE: BACnet Building Controller (B-BC) level device; BTL listing, certification, and compliance to Revision 18.

UL: Listed with Underwriters Laboratory for Energy Management Equipment (PAZX)under the UL Standard for Safety 60730-1; listing includes both U.S. and Canadian (CSA/cUL) certification. Listed in UL File# E87741. UL 2043 and CAN/ULC-S142 compliance for use in plenum applications.

EMC: EMC Directive 2014/30/EU (European CE Mark).

ROHS: RoHS Directive 2011/65/EU.

FCC: FCC Part 15, Subpart B.

IC: ICES-003 Issue 6.

IMPORTANT NOTE

This device is UL listed and limited to 100VA maximum. This maximum VA rating restricts binary output loads. If all six binary outputs are connected and fully loaded (@24VA each), the total VA of the device will exceed the UL listed and limited maximum rating. DO NOT EXCEED 100VA MAXIMUM RATING!

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