



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

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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, 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.

The Alerton® VisualLogic® IP Controller (VIP) is a BACnet Building Controller (B-BC) 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 own real-time clock.

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, BACnet/IPv6 networks and Network Time Protocol (NTPv4). The VIP controllers have an integral 4-port switch that supports star, daisy-chain, and ring network topologies in addition to Rapid Spanning Tree Protocol (RSTP). Switch ports can be enabled/disabled.

The VIP controllers support the Alerton Microtouch™, as well as 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. Programming and setup data are stored in non-volatile flash memory, ensuring stable and reliable operation.

The VIP controllers host automation features such as schedules, trendlogs, alarms, and zones (optimum start).

The VIP-363-HOA model supports up to eight expansion input/output modules VXIO-322-HOA and VXIO-965-HOA. The VIP-363-VAV does not support the VXIO modules.

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

TECHNICAL DATA

POWER – 20 to 30 VAC @ 50-60 Hz. 15 VA minimum (maximum 100 VA across all BO loads). Half-wave rectified. Refer to the VIP-363 Installation and Operations Guide for more detailed information on power requirements and transformer sizing. See IMPORTANT NOTE below.

INPUTS – 16-bit universal inputs accept 10k thermistor (type II), dry contact, 1k platinum RTD, 0-20 mA, 0-10 V, or dry-contact pulse. No 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 \pm 10% @ 250 MA maximum.

BINARY OUTPUTS – Solid-state relay rated 20-30 VAC @ 50/60 Hz, 1.0 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; or 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 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. 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 Ethernet switch supports 10/100/1000BASE-T; and remote enable/disable of ports 2, 3, and 4 via BACnet.

VIP-363-HOA v1.16.x supports 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/Ethernet, BACnet/IPv4, BACnet/IPv6, BACnet MSTP (VIP-363-HOA v1.6.x), Network Time Protocol v4 (NTPv4), and Rapid Spanning Tree Protocol (RSTP).

PROGRAMMING – Supports Alerton's BD3 and BD9 DDC file formats using Alerton's VisualLogic[®] 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 (Optimum Start - 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 loading of tampered firmware.

INPUT/OUTPUT EXPANSION – VIP-363-HOA model supports up to a maximum of eight expansion I/O modules VXIO-322-HOA and VXIO-965-HOA. Expansion I/O modules connect directly to VIP-363-HOA or can be remotely located up to 3000 feet away from the VIP-363-HOA. VIP-363-VAV does not support the VXIO modules.

ORDERING INFORMATION

ITEM NUMBER

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

CERTIFICATION AND CONFORMANCE

BACNET CONFORMANCE – 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. Binary output loads are restricted by this maximum VA rating. If all 6 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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