VISUALLOGIC® UNITARY FIELD CONTROLLER

The Alerton® VisualLogic® VLC-1600-E is a versatile, BACnet-compliant, fully programmable input monitoring device. It is ideally suited for applications with high input density, where it can augment the input capabilities of other controllers. As a native BACnet controller, it integrates seamlessly with your BACnet system, communicating at up to 115 Kbps on a BACnet MS/TP LAN.

The VLC-1600-E is a cost-effective choice when extensive monitoring of process variables is required for fault detection & diagnostics, as well as for cloud-based analytics.

The VLC-1600-E supports 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 VLC-1600-E control logic is programmed using Alerton's easy-to-learn graphical programming language, VisualLogic™. Programming and setup data are stored in non-volatile flash memory, ensuring stable and reliable operation.

High-resolution 16-bit universal inputs are auto-selectable for thermistor, dry contact, pulse, 0-5 V, 0-10 V, or 4-20 mA. The VLC-1600-E has no control outputs.

FEATURES AND HIGHLIGHTS

- Fully BACnet-compliant on MS/TP LAN at up to 115.2 Kbps.
- Programmable control logic can be field-modified.
- Downloadable operating code to allow for future software improvements.
- 32-bit processor architecture with all program data backed up in nonvolatile flash memory.
- High-speed processing of DDC program, with an internal logical loop time of 100 msec.
- Backwards compatible with older VLC-1600 and VLC-1600C3 models.

APPLICATIONS

Recommended for applications with high input density, where it can cost effectively augment the input capabilities of other controllers and allow for system troubleshooting.

VLC-1600-E						
UI UNIVERSAL INPUTS	HBO HOT SWITCHED TRIAC BINARY OUTPUTS	GBO GROUND SWITCHED BINARY OUTPUTS	RO RELAY OUTPUT	AO ANALOG OUTPUTS	AF AIR-FLOW SENSOR	F FILTER
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TECHNICAL DATA

POWER – 24 VAC @ 50-60 Hz. 5 VA minimum (maximum 26 VA with loads). Half-wave rectified.

INPUTS – 16-bit universal inputs accept 3k (Ibex) or 10k thermistor (type II), dry contact, 0-20 mA, 0-10 V, 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).

POWER OUTPUT FOR EXTERNAL SENSORS – 20 VDC ±10% @ 100 mA maximum

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

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

MAX DIMENSIONS – 4.9" (125mm) H x 5" (127mm) W x 1.4" (36mm) D

MOUNTING – Screw mounting

ENVIRONMENTAL – 0 to 158°F (-17 to 70°C) / 5 to 95%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.

ORDERING INFORMATION

ITEM NUMBER

VLC-1600-E	ALERTON VISUALLOGIC CONTROLLER BACNET

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 Open Energy Management Equipment (PAZX) under the UL Standard for Safety 916; listing includes both U.S. 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.

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