



VISUALLOGIC® UNITARY FIELD CONTROLLER

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-660R and VLC-660RC3 models.

APPLICATIONS

Recommended for unit ventilator and fan-coil applications, or any application that requires multi-speed fan or motor control.

The Alerton VisualLogic® VLC-660R-E is a versatile, BACnet-compliant, fully programmable field controller, with three software-controlled high-current relays. The VLC-660R-E is well suited for unit ventilator and fan-coil applications, or any application that requires multi-speed fan or motor control. 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-660R-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-660R-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. Isolated relay contacts are rated to handle motor loads of 120VAC-1HP, 240VAC-2HP, and 277VAC-3/4HP; as well as general purpose loads of 120VAC @ 15A and 240/277VAC @ 10A.

SPECIFICATION STATEMENT

Solution shall be a BACnet certified VisualLogic Control device capable of communicating on an MS/TP LAN or as a stand-alone controller. Device shall provide 32-bit processor to maintain programmable timers with a resolution of 100msec. Terminal configurations shall provide three binary triac outputs and three binary high-current relay outputs. Device shall support the Microset protocol.

VLC-660R-E

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

TECHNICAL DATA

POWER – 24 VAC @ 50-60 Hz. 20VA minimum (maximum 78 VA with loads). Half-wave rectified.

INPUTS – 16-bit universal inputs accept 3k (lbe) 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 $\pm 10\%$ @ 100 mA maximum

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

RELAY OUTPUTS – Form-A normally open isolated contacts. Motor load rating: 120VAC, 1HP (15FLA); 240VAC, 2HP (12FLA); 277VAC, 3/4HP (6.9FLA). General purpose rating: 120VAC @ 15A; 240/277VAC @ 10A.

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 5.5" (140mm) 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-660R-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. Listed under UL 2043 for Plenum applications.

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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