VLCA-1688

Features and highlights

- **Capable**
  16 universal inputs, eight binary outputs and eight analog outputs.
- **Interoperable**
  10Base-T/100Base-Tx BACnet/Ethernet or BACnet/IP LAN or BACnet MS/TP LAN at up to 115.2 Kbps.
- **Flexible**
  HOA switches and potentiometers provide ability to perform manual overrides of binary and analog outputs.
- **Powerful**
  Complex DDC control logic math and analog functions monitored by software.
- **Fast**
  User-selectable internal logic loop of 50 mS or 100 mS.
- **Reliable**
  Extensive on-board filtering, with all program and configuration data backed up in nonvolatile flash memory.

The Alerton® BACtalk® VLCA-1688 is a BACnet advanced application controller (B-AAC) with a real-time clock, high resolution 12-bit A/D; D/A converter and a 32-bit processor. The VLCA-1688 includes on-board Hand-Off-Auto (HOA) switches, Ethernet connectivity, and complex math functions. It also leverages DDC Function blocks that calculate additional DDC analog functions.

As a B-AAC controller, the VLCA-1688 integrates seamlessly with your BACnet system. The VLCA-1688 supports 10Base-T and 100Base-Tx on BACnet/Ethernet or BACnet/IP. It communicates at up to 115.2 Kbps on a BACnet MS/TP LAN or can operate as a stand-alone controller using its own real-time clock.

There is memory allocated to supporting BACnet objects, including a minimum of 3 BACnet schedule objects: Standard, Holiday and Event; 50 trendlogs at 60-second intervals; and 25 alarms. Other BACnet features include change of value (COV) support and writeable object names.

The VLCA-1688 offers many control logic functions and user adjustable DDC loop execution speed, and can execute more complex calculations to meet the needs of increasingly complex sequence of operations in mechanical systems.

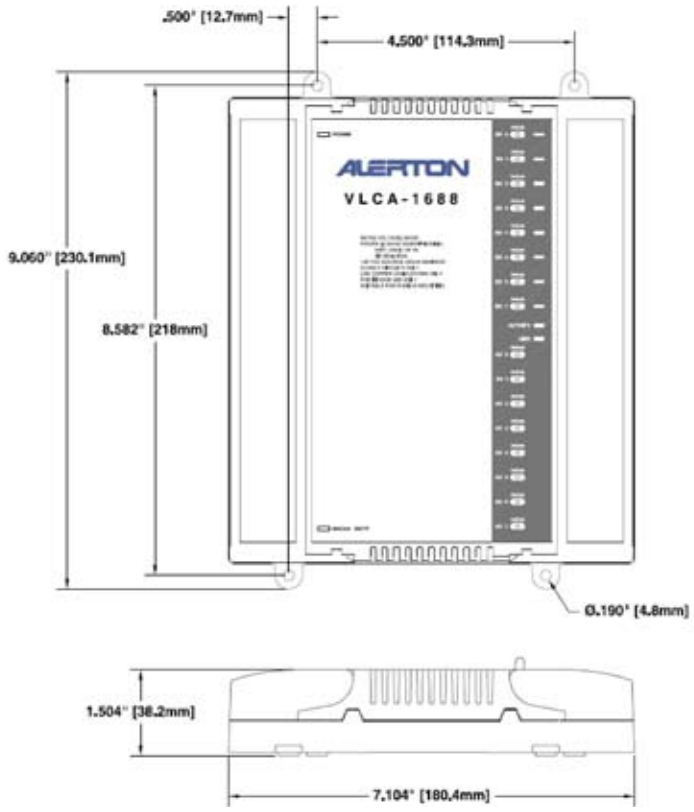
6670 185th Avenue Northeast, Redmond, WA 98052 USA • Tel: 425.869.8400 • Fax: 425.869.8445 • www.alerton.com

LTBT-VLCA-1688 Rev. 0003

VLCA-1688

Technical Data

- **Power** Unit requires 24 VAC, 50–60 Hz at 50 VA. Utilizes a half-wave rectifier, which allows a single transformer to power multiple VLCAs. Output loads powered separately.
- **20 VDC Output** Up to 500 mA of 20 VDC power is provided to power transducers or other devices.
- **Battery** 3.0 V replaceable lithium coin cell battery has up to 10 year operational life.
- **Inputs** 16 universal inputs with 12-bit resolution. Input 0 can be used for a BACtalk Microset. All inputs accept thermistor, 1000 Ohm Platinum RTD, dry contact, 0–10 VDC, or 4–20 mA signals. Inputs 1–7 support pulse input with 10 mS minimum pulse length. No external resistor is required for 4–20 mA.
- **Binary Outputs** 8 triac outputs rated 24 VAC @ 0.5 A with Hand-Off-Auto (HOA) switches for manual override. HOA status can be monitored in software. Power source isolated from unit power.
- **Analog Outputs** 8 analog outputs are driven by precision D/A converter (12 bit). Automatic configuration between 0–20 mA or 0–10 VDC. Each analog output has an HOA switch and an adjustment for manual override that can be monitored in software.
- **Processor & Memory** 32-bit processor, 4 MB flash memory. Flash memory provides nonvolatile program and data storage, and allows for firmware (ROC) updates for future product enhancements.
- **Real-time Clock** On-board, battery backed real-time clock, supports schedules, trendlogs and timed automation functions.



- **Max. Dimensions** 9.05” (230.10mm)H x 7.10” (180.4mm)W x 1.7” (43.3mm)D.
- **Terminations** Removable header-type screw terminals accept 14–24 AWG wire.
- **Environmental** -40°C to 55°C (-40°F to 131°F). 5–95% RH, non-condensing.
- **BACnet Internet Protocol** Annex J BACnet/IP.
- **Communications** Ethernet or BACnet MS/TP LAN up to 115.2 Kbps.
- **BACnet** Meets the B-AAC (BACnet Advanced Application Controller) device profile. See Protocol Implementation Conformance Statement (PICS).
- **Ratings**

  UL/cUL (E244152) listed under UL916 (Standard for Open Energy Management Equipment).

  European CE Mark

  Australian C-Tick Mark [pending]

  Meets FCC Part 15, Subpart B, Class B

Ordering information

Item number	Description
VLCA-1688	BACnet controller with 16 universal inputs, 8 binary outputs and 8 analog outputs

Specifications subject to change without notice

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