

Application Controllers

DVC-V322

Description

The DVC-V322 is a fully programmable, Native BACnet® Advanced Application Controller that communicates on an RS-485 LAN using the BACnet MS/TP protocol. This controller is specifically designed for VAV applications and supports the Delta BACstat® and LINKnet I/O. The damper actuator assembly is available with or without position feedback. Additional inputs and outputs can be configured as required.



Application

The DVC-V322 is an application-specific controller for VAV and includes an actuator and differential pressure sensor with integrated housing.

The fully programmable DVC-V322 allows GCL+ programs and BACnet objects to be tailored to any VAV application.

Features

- ▶ Native BACnet firmware
- ▶ BACnet MS/TP communications
- ▶ Supports 4 BACstat network sensors on LINKnet for room sensing and control or 2 Delta Field Modules on LINKnet for I/O expansion
- ▶ Integrated housing with damper assembly for easy, cost-effective installation
- ▶ Reliable industry standard actuator (with optional position feedback)
- ▶ Fully programmable in GCL+
- ▶ Zero drift differential pressure sensor
- ▶ LED indicator for each output, communication port and SCAN status
- ▶ Application database and firmware can be flash loaded over the network
- ▶ Optional field upgrade to Modbus® RTU with hardware key
- ▶ Service port

Specifications

BACnet Device Profile

BACnet Advanced Application Controller (B-AAC)

External Inputs

- 1 10K Thermistor or Dry Contact
- 2 Universal Inputs (10-bit) supporting:
 - 0-5 VDC
 - 0-10 VDC
 - 10 kΩ Thermistor
 - 4-20 mA
 - Dry Contact (using 10 kΩ Thermistor jumper setting)

Internal Inputs

- 1 Actuator position feedback (optional)
- 1 Air flow sensor, differential pressure, use jumper to select 0 to 1 inH₂O (0 to 248 Pa) or 0 to 2 inH₂O (0 to 498 Pa)

External Outputs

- 2 Binary TRIAC Outputs
- 2 Analog Outputs (0-10 VDC, 8-bit)

Internal Outputs

- 2 Binary Outputs for damper open/close, one jumper selectable for analog damper control

Belimo Actuator

Analog and tri-state options
45 in-lbs. (nominal torque)
Less than 35 db (A) noise level

Siemens Actuator

Tri-state actuator
44 in-lbs. (nominal torque)
Less than 35 db (A) noise level

Device Addressing

Set via DIP switch and jumpers or software setup

Connectors

Removable screw-type terminal connectors

Wiring Class

Class 2

BACstat is a registered trademark of Delta Controls Inc.
BACnet is a registered trademark of the American Society of Heating, Refrigerating and Air Conditioning Engineers Inc.

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Application controllers

DVC-V322: Board Layout Diagram



Ordering

Order the DVC-V322 application controller according to the following product numbers:

	No Actuator	Belimo (Analog)	Belimo (Tri-state)	Siemens (Tri-state)
Controller Analog board (2 AOs, 2 BOs), DP sensor for flow, integrated housing	DVC-V322	--	DVC-V322A-B UL864-DVC-V322A-B-V340	DVC-V322A UL864-DVC-V322A-V340
Feedback Option	--	DVC-V322-AAFB	DVC-V322AF-B UL864-DVC-V322AF-B-V340	DVC-V322AF UL864-DVC-V322AF-V340
Dual Duct Option Includes separate termination board with sensor for flow, integrated housing and tri-state actuator	--	--	DVC-V322A-B-DD DVC-V322AF-B-DD	DVC-V322AF-DD DVC-V322A-DD

Accessories

TRM-768	Delta Network Terminator for BACnet MS/TP**
CON-768	Delta Network Converter
CON-768BT	Delta Bluetooth Network Converter
DZNR-768	4-port Delta Network Repeater for RS-485 BACnet MS/TP**
DFF099-CDT	Additional 50 credit blocks for the Modbus flash key
DFF099-KEY	Modbus flash upgrade key with 50 credits pre-loaded

** UL 864 versions available

Specifications (Continued)

Tubing

Flow sensor tubing must be 5/32 in. inside diameter

Power

24 VAC 50/60 Hz @ 15 VA (not including output loading; 32 VA max with fully loaded TRIAC Outputs)

Power (UL864)

24 VAC 50/60 Hz @ 15 VA (32 VA max with fully loaded TRIAC Outputs)

Technology

16-bit processor
1 MB (8-megabit) flash memory
128 KB SRAM memory for database

Communications Ports

Main LAN

RS-485 NET1
BACnet MS/TP up to 76800 bps, max 99 devices per port

SubLAN

RS-485 NET2
Delta LINKnet up to 76800 bps, max 4 devices on LINKnet with no more than 2 DFM devices
Optional Modbus up to 38400 bps, max 5 devices

Ambient

0 to 55°C (32° to 131°F)
10 to 90% RH (non-condensing)

Dimensions

23.7 x 12.7 x 9.6 cm (9.3 x 5.0 x 3.8 in.) with housing

Weight

761 g (1.68 lb.) with housing and actuator

Compliance

CE
FCC
EAC (DVC-V322, DVC-V322A-B, DVC-V322A-B-DD, DVC-V322AF-B, DVC-V322AF-B-DD)

Listings

UL 916 Listed
C-UL Listed
BTL Listed
UL 864 Listed for UL 864 product numbers



Subject to change without notice.