Application Controllers

DVC-V322PoE

Description

The DVC-V322PoE is a fully programmable, native BACnet®, Advanced Application Controller for VAV applications featuring Power over Ethernet (PoE). PoE provides high speed communications and device power in a single cable, simplifying wiring and eliminating the need for a local control transformer.

The DVC-V322PoE supports BACnet IP, and BACnet over Ethernet protocols on its Ethernet port. It also supports a RS-485 subLAN of Delta LINKnet devices such as the BACstat® line of smart network sensors and DFM I/O expansion modules.

Application

The DVC-V322PoE is designed for VAV applications and includes an on-board actuator and airflow sensor in a direct mount integrated housing.

The fully programmable DVC-V322PoE allows GCL+ programs and BACnet objects to be tailored to any VAV application.

Features

- Power Over Ethernet (PoE)
- Native BACnet firmware
- Fully Programmable
- BACnet IP and/or BACnet over Ethernet Main LAN communications
- Supports a RS-485 subLAN of Delta LINKnet smart network sensors and I/O expansion modules
- Direct mount housing integrates controller, damper actuator and airflow sensor into a single package for easy, cost effective installation
- Firmware upgrade and database load/ save over the network
- LED status indications for inputs, outputs, CPU Scan status, communication ports and power
- Service Port
- Optional field upgrade to Modbus® RTU with hardware key
- Local trending and alarming

Specifications

BACnet Device Profile
BACnet Advanced Application Controller (B-AAC)

External Inputs
1 10 kΩ or Binary Input (10-bit)
2 Universal Inputs (10-bit), jumper configurable for:
- 0-5 VDC
- 0-10 VDC
- 10 kΩ Thermistor
- 4-20 mA
- Dry Contact (using 10 kΩ Thermistor jumper setting)

Internal Inputs
1 Air flow Input, true differential pressure sensor, use jumper to select 0 to 1 inH_2O (0 to 248 Pa) or 0 to 2 inH_2O (0 to 498 Pa)

1 power monitoring Input

1 Actuator position feedback input (optional)

External Outputs
2 Universal Outputs
- 0-10 VDC @ 20 mA max per output
- Software configurable as binary or analog

2 Binary FET Outputs
- 24 VDC
- Internally powered switching to ground

Internal Outputs
2 Binary Outputs for damper open/close

Damper Actuator
45 in-lbs. (nominal torque)
Less than 35 db (A) noise level

Device Addressing
Software addressed

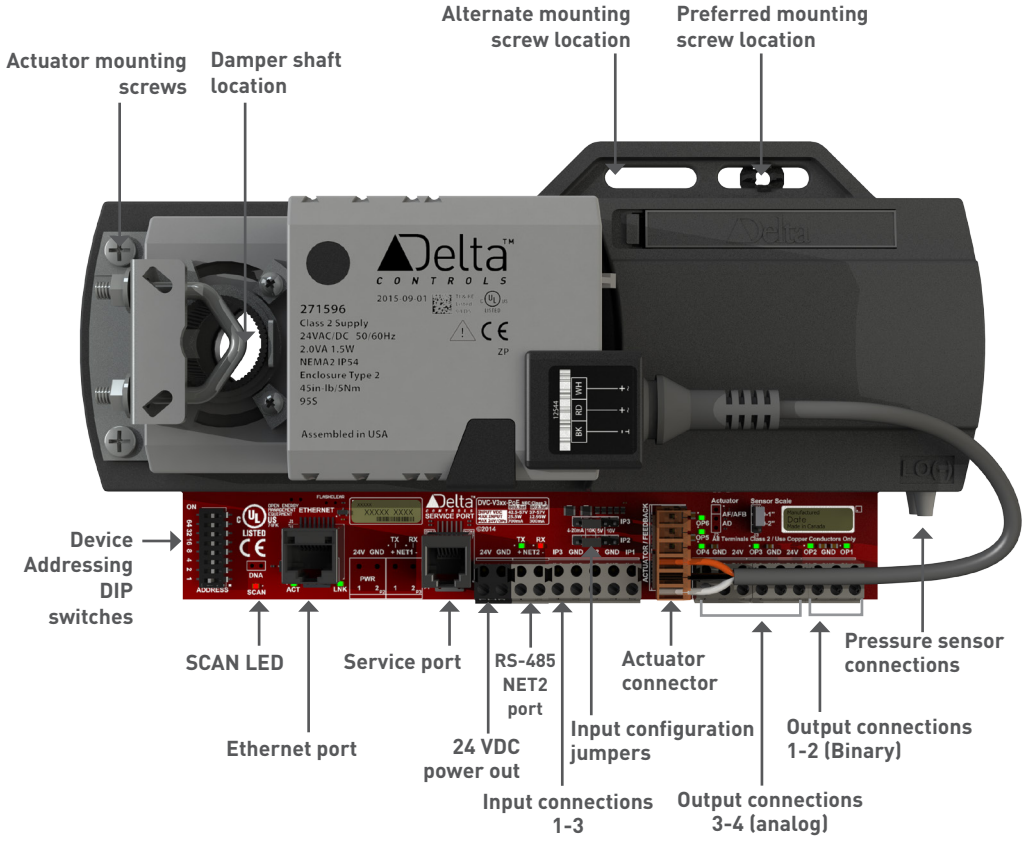
Connectors
Removable screw-type terminal connectors

Wiring Class
NEC Class 2 / SELV

Tubing
Flow sensor tubing must be $^5/_{32}$ in. inside diameter

Application Controllers

DVC-V322PoE-AB: Board Layout Diagram



Ordering

Order the DVC-V322PoE according to the following product numbers:

DVC-V322PoE	Delta PoE VAV controller, 1 10K/BI, 2 UI, 2 AO, 2 BO and DP airflow sensor
DVC-V322PoE-AB	Delta PoE VAV controller, 1 10K/BI, 2 UI, 2 AO, 2 BO and integrated damper actuator and DP airflow sensor
DVC-V322PoE-AFB	DVC-V322PoE-AB with damper feedback

Accessories

DFF099-CDT	Additional 50 credit blocks for the Modbus flash key
DFF099-KEY	Modbus flash upgrade key with 50 credits pre-loaded

Specifications (Continued)

PoE Power In
802.3at PoE: 53 VDC, 25.5 W max*
802.3af PoE: 48 VDC, 12.95 W max*
*See installation guide for details on calculating PoE power budget.

24 VDC Power Out
802.3at PoE supply: 16.8 W (700 mA) max**
802.3af PoE supply: 7.2 W (300 mA) max**
**Max total power available for external field devices powered from either 24 VDC out terminal or binary outputs 1 and 2.

Technology
16-bit processor
2 MB Flash memory
319 KB SDRAM memory
Real-time clock
Super Capacitor for 72-hour backup of real-time clock and SRAM

Communications Ports
Ethernet (10-BaseT)
BACnet IP, BACnet over Ethernet

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

Dimensions
9.3 x 5.0 x 3.7 in. (23.6 x 12.6 x 9.3 cm)

Weight
1.7 lb. (772 g)

Compliance
CE
FCC

Listings
UL 916 Listed
BTL Listed

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

Updated April 2016

Subject to change without notice.

Copyright © 2016 Delta Controls. All rights reserved.