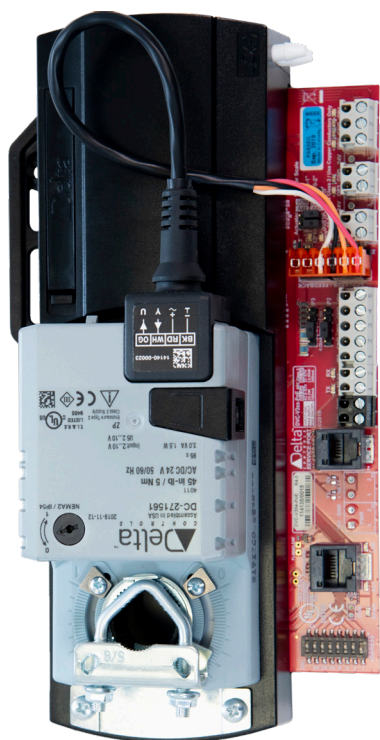# Application Controllers

DVC-V304-PoE

Description

The DVC-V304-PoE 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-V304-PoE 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.

Features

▶ Power Over Ethernet (PoE)

▶ Native BACnet firmware

▶ Fully Programmable

▶ BACnet/IP, 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

▶ Zero drift differential pressure sensor

▶ 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

Application

The DVC-V304-PoE is designed for VAV applications and includes an on-board actuator and differential pressure sensor in a direct mount integrated housing.

The fully programmable DVC-V304-PoE allows GCL+ programs and BACnet objects to be tailored to any VAV application.

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
4 Binary FET Outputs
  24 VDC
  Internally powered switching to ground

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

Device Addressing
Software addressed

Connectors
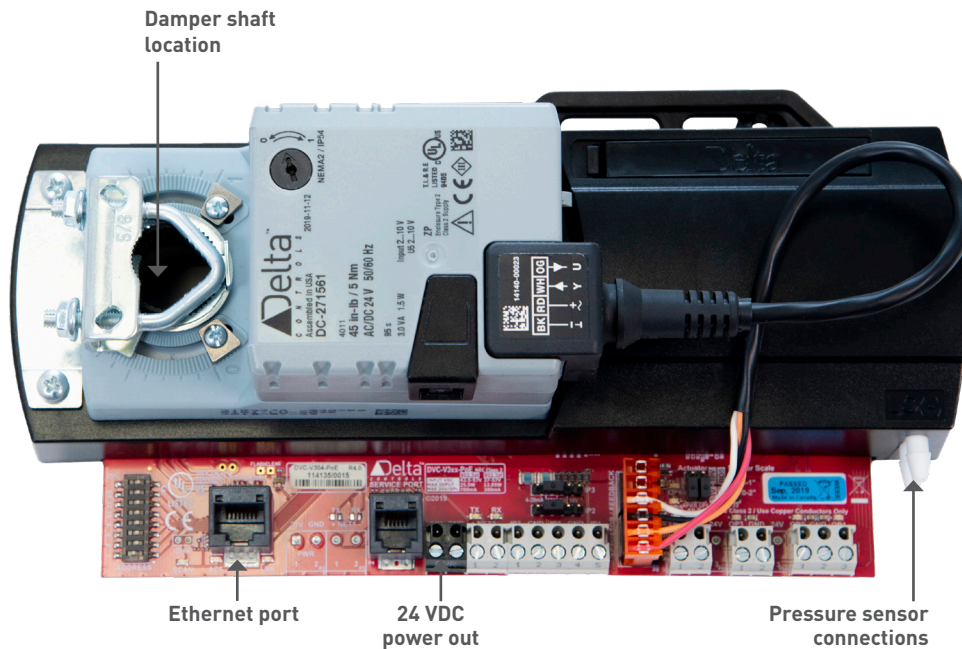Removable screw-type terminal connectors

Wiring Class
NEC Class 2 / SELV

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

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Application Controllers

DVC-V304-PoE-AAFB: Board Layout Diagram

Damper shaft location

Ethernet port

24 VDC power out

Pressure sensor connections

Ordering

Order the DVC-V304-PoE according to the following product numbers:

DVC-V304-PoE	Delta PoE VAV controller, 1 10K/BI, 4 BO and DP airflow sensor
DVC-V304-PoE-AB	Delta PoE VAV controller, 1 10K/BI, 4 BO, DP airflow sensor, Belimo tri-state actuator
DVC-V304-PoE-AFB	Delta PoE VAV controller, 1 10K/BI, 4 BO, DP airflow sensor, Belimo tri-state actuator with damper feedback
DVC-V304-PoE-AAFB	DVC-V304-PoE and Belimo analog actuator 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
CON-768BT	Delta Bluetooth Network Converter
CON-768	Delta Network Converter

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 to 4.

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

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

Weight
772 g (1.7 lb.)

Compliance
CE
FCC
EAC

Listings
UL 916 Listed

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Subject to change without notice.

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