Application Controllers

DVC-V304

Description

The DVC-V304 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.

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+

▶ True 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

Application

The DVC-V304 is an application-specific controller for VAV and includes an actuator and true differential pressure sensor with integrated housing.

The fully programmable DVC-V304 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 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, true differential pressure, 0 to 1 inH_2O (0 to 248.8 Pa)

External Outputs
4 Binary TRIAC Outputs

Internal Outputs
2 Binary Outputs for damper open and close

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

Siemens 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
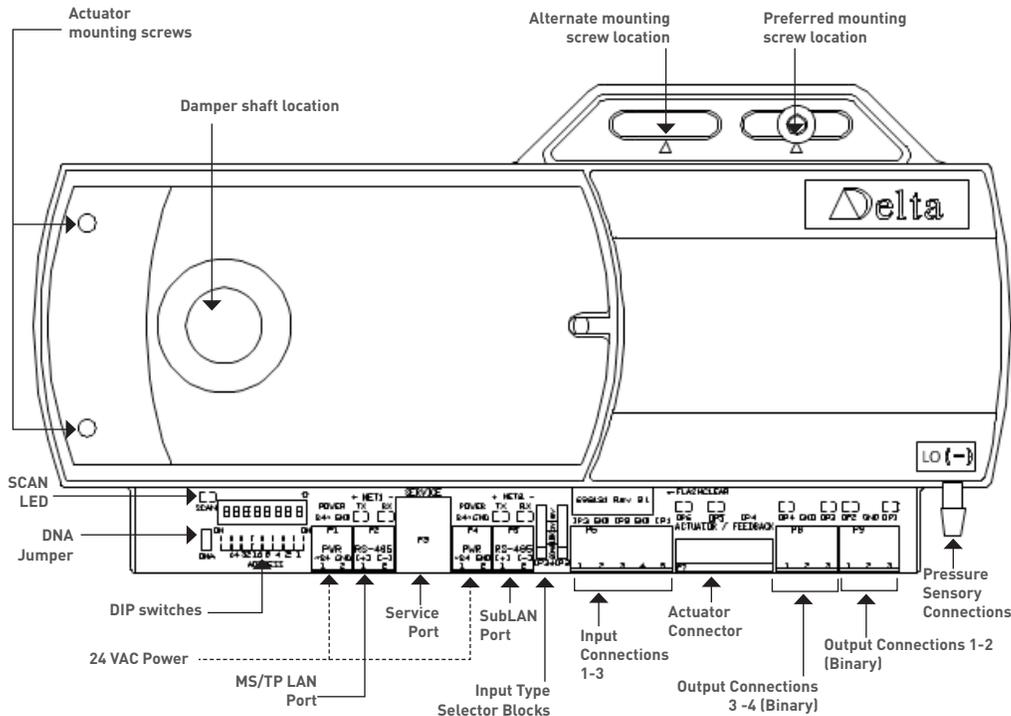Removable screw-type terminal connectors

Wiring Class
Class 2

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

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Application controllers

DVC-V304: Board Layout Diagram

Ordering

Order the DVC-V304 application controller according to the following product numbers:

DVC-V304	Binary board (4 BOs), DP sensor for flow, integrated housing
DVC-V304A	Binary board (4 BOs), DP sensor for flow, integrated housing, Siemens actuator
DVC-V304AF	DVC-V304A with actuator feedback
-B	Belimo actuator option
-DD	Dual duct option (separate sensor for flow, integrated housing and actuator)
DVC-V304A-UL864-340	DVC-V304A with UL 864 listing
DVC-V304AF-UL864-340	DVC-V304AF with UL 864 listing
DVC-V304A-B-UL864-340	DVC-V304A-B with UL 864 listing
DVC-V304AF-B-UL864-340	DVC-V304AF-B with UL 864 listing

Accessories

DZNR-768	RS-485 BACnet MS/TP, 4-port network repeater**
TRM-768	Delta Network Terminator for BACnet MS/TP**
CON-768	Delta Network Converter
CON-768BT	Delta Network Bluetooth Converter
48119	Siemens actuator shart insert, 3/8 in., 24 per package
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, 52 VA max with fully loaded TRIAC Outputs)

Power (UL864)
24 VAC 50/60 Hz @ 15 VA (52 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
32° to 131°F (0 to 55°C)
10 to 90% RH (non-condensing)

Dimensions
$9\frac{3}{8}$ x $4\frac{3}{4}$ x $3\frac{1}{8}$ in. (23.9 x 12.0 x 8.0 cm) with housing

Weight
1.85 lb. (840 g) with housing and actuator

Compliance
CE
FCC

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

Subject to change without notice.