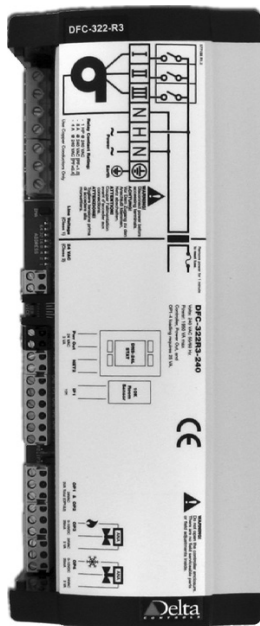# Application Controllers

DFC-322R3-240 Fan Coil Controller

Description

The DFC-322R3-240 is a fully programmable, Native BACnet® Advanced Application Controller that communicates on a RS-485 LAN using the BACnet MS/TP protocol. Direct 240 VAC line voltage terminal connections are provided for 1,2 or 3 speed fans. Room temperature can be a standard 10KΩ sensor or BACstat® II, connected via a secondary LINKnet network and a 24 VAC power out connection.

Application

The DFC-322R3-240 is designed for fan coil control. With 2 TRIAC outputs and 2 analog 0-10VDC outputs, it covers a wide range of fan coil unit applications.

The DFC-322R3-240 allows for sequence modifications as required by the design engineer or building owner. It provides simple, easy-to-install fan coil control solutions for office buildings, hotels or residential buildings.

Features

▶ Native BACnet firmware

▶ BACnet MS/TP communications

▶ Standalone operation or on BACnet

▶ Fully programmable in GCL+

▶ Pre-loaded fan coil application database

▶ Direct connection to BACstat II (DNS-24 or DNS-24L)

▶ 2 tri-state and 2 analog outputs for relay actuation

▶ 3 relays rated for motor loads to control 1-, 2-, 3-speed fans, complete with interlocks and time delays for equipment protection

▶ Slim design fits into narrow fan coil units

▶ Power supplied by power mains (onboard 24 VAC transformer included)

▶ Derived Network Addressing (DNA) for simple integration into a standard network architecture

▶ Service port

Specifications

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

Inputs
2 Universal Inputs (10 bit) supporting:
   0-5VDC
   0-10VDC
   10KΩ
   4-20mA
1 10KΩ or dry contact input (10 bit)

Outputs
2 Analog Outputs (0-10VDC)
2 Binary TRIAC Outputs
3 Binary Relay Outputs for fan speed control
240 VAC, 1HP (60 LRA/10 FLA)
LED status indication of each output

Technology
1MB (8 megabit) flash memory
127KB SRAM memory for database
CPU status LED

Device Address
Set via DIP switch and jumpers or software setup

Device Type
Preconfigured as a subnet device

Communication Ports
Main LAN (NET1)
BACnet MS/TP @ 9600, 19200, 38400 or 76800 bps (default) (maximum of 99 devices per BACnet MS/TP segment)
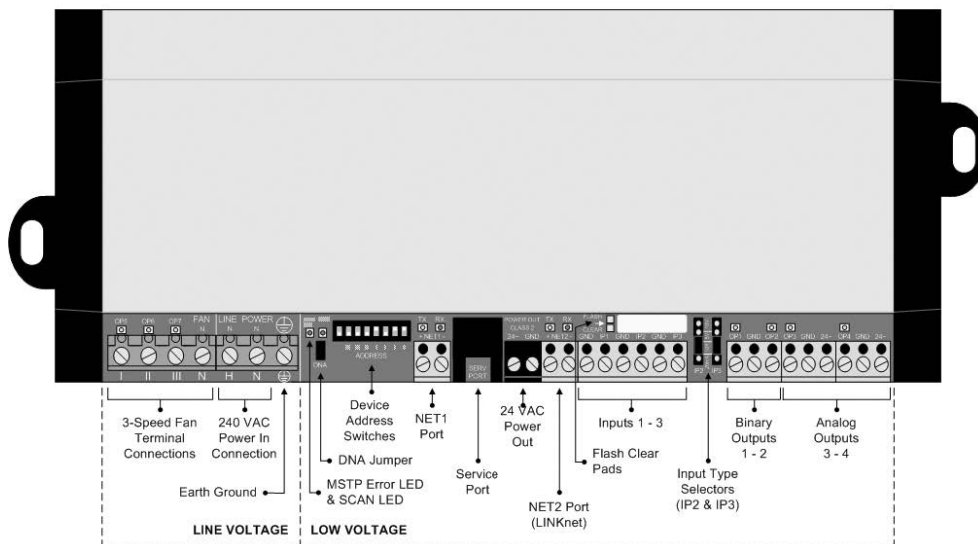
SubLAN (NET2)
Delta LINKnet @ 76800 bps (maximum 4 devices on LINKnet, with no more than 2 DFM/DNT devices per controller)

Note: On board transformer only provides enough power for 1 BACstat.

Delta
CONTROLS

Application Controllers

DFC-322R3-240: Board Layout Diagram

DFC-322R3 Fan Coil Controller (Analog)

Specifications (Continued)

Connectors
Fixed screw-type terminal connectors (Class 1)
Removable screw-type connectors (Class 2)

Wiring Class
NEC Class 1 (Power In)
NEC Class 2, SELV (Power Out)

Power
Power In
    240 VAC, 50/60 Hz
    2000 VA maximum
    (30 VA for internal circuitry)

Power Out (for DNS-24L)
    24 VAC, 50/60 Hz
    3 VA

Ambient
0° to 45°C (32 to 113°F)
10 - 90% RH (non-condensing)

Dimensions
24.13 x 10.0 x 6.96 cm (9.5 x 3.94 x 3.75 in.)
955 g (2.1 lb.)

Compliance
CE-EMC Directive 89/336/EEC and IEC 61010-1
FCC Class B
ICES Class B

Ordering
Order the Delta fan coil controller according to the following product numbers:

DFC-322R3-240	Analog fan coil controller

Accessories

DNS-24L-FAN	Delta Network Sensor (LINKnet only) with fan keys
DZNR-768	Delta Network Repeater for BACnet MS/TP
TRM-768	Delta Network Terminator for BACnet MS/TP
CON-768	Delta Network Converter

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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Subject to change without notice.