

## Application Controllers

### DFC-304R3-240: Fan Coil Controller

#### Description

The DFC-304R3-240 is a fully programmable, Native BACnet™ Advanced Application Controller that communicates on an 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-304R3-240 is designed for fan coil control. The binary model, with 4 additional triac outputs for heating and cooling, covers a wide range of fan coil unit applications, including two- and four-pipe fan coils.

The DFC-304R3-240 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
- Stand alone operation or on BACnet
- Fully programmable in GCL+
- Pre-loaded fan coil application database
- Direct connection to BACstat II (DNS-24 or DNS-24L)
- Direct connection for up to 2 tri-state valve Actuator
- 3 relays rated for motor loads to control 1-, 2- or 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 (on-board 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 0-5v, 0-10v, 10kΩ, 4-20mA)

1 10kΩ or dry contact input - 10 bit

##### Outputs

4 Binary triac outputs (24 VAC)

3 Binary relay outputs for fan speed control

240 VAC, 1HP (60 LRA/10 FLA)

LED status indication of each output

##### Technology

1 MB (8 megabit) Flash memory

127 KB SRAM memory for database

CPU status LED

##### Device Address

Set via DIP switch and jumpers or software setup

##### Device Type

Pre-configured 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)

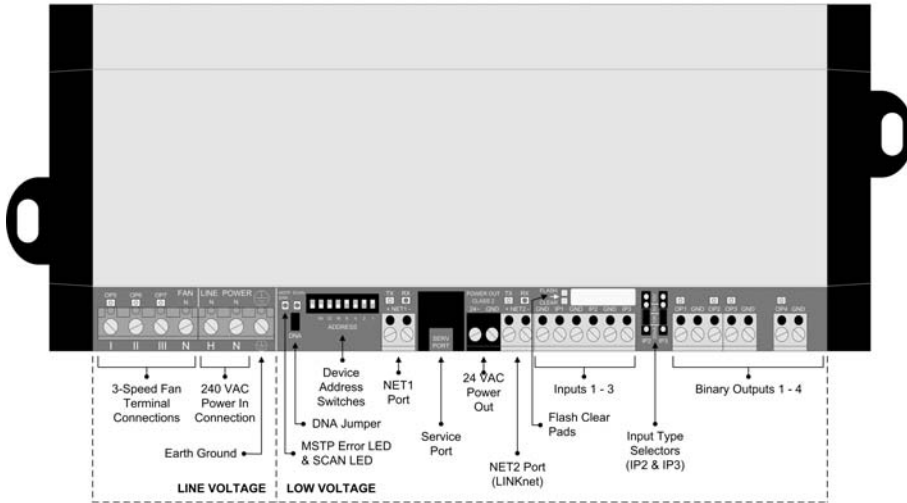
Note: On board transformer only provides enough power for 1 BACstat

Document Edition 3.0 January 2007

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### DFC-304R3-240: Board Layout Diagram

#### DFC-304R3 Fan Coil Controller (Binary)



#### 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 to 90% RH (non-condensing)

##### Dimensions

24.13 cm x 10.0 cm 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  
& IEC 61010-1

FCC Class B

ICES Class B

#### Accessories

DNS-24L-FAN—Delta Network Sensor (LINKnet only)  
with Fan Keys

RPT-768—Delta Network Repeater for BACnet MS/TP

TRM-768—Delta Network Terminator for BACnet MS/TP

CON-768—Delta Network Converter

#### Ordering

Order the Delta Fan Coil Controller according to the  
following product number: DFC-322R3-240