

# Field Modules

## DFM-400/404/440

### Description

The DFM-400/404/440 provide remotely expandable I/O to Delta's BACnet® Controllers. These field modules provide 4 universal inputs, in three different output configurations, and are capable of communicating on Delta's LINKnet network or directly on an RS-485 BACnet MS/TP network (DFM-400 model only).

When connected to a LINKnet network the DFM-400/404/440 provides remote input and programmable output capabilities to the controller. When connected on the MS/TP network (DFM-400 only) the modules function as independent BACnet devices with inputs accessible over the BACnet MS/TP network.



### Application

The DFM-400/404/440 suits a diverse range of application needs where additional inputs and outputs are required, or where a small number of I/O's are remotely located.

### Features

- ▶ Native BACnet device (DFM-400 only) supporting communication on an RS-485 BACnet MS/TP network
- ▶ Supports communicating on LINKnet
- ▶ Easy-to-mount housing
- ▶ Derived Network Addressing (DNA) for simple integration into a standard network architecture
- ▶ Extended temperature range for extreme ambient situations

### Specifications

#### BACnet Device Profile

BACnet Application Specific Controller (B-ASC)

#### Inputs

4 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)

#### Outputs

DFM-400: None

DFM-404: 4 Binary TRIAC outputs, 0.5 A @ 24 VAC, jumper selection for internal or external power on binary outputs, LED status indication

DFM-440: 4 Analog outputs (0-10 V), max 20 mA, LED status indication

#### Device Addressing

Set via DIP switches and jumpers

#### Connectors

Removable screw-type terminal connectors

#### Wiring Class

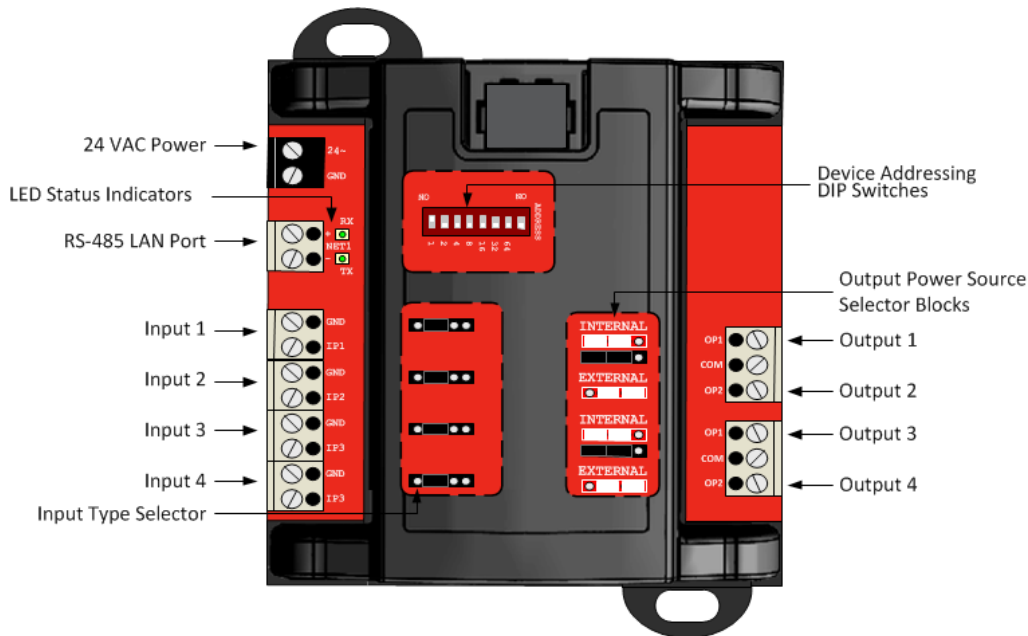
Class 2

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Updated July 2015

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## DFM-400/404/440: Board Layout Diagram (404 shown)



### Specifications (Continued)

#### Power

24 VAC 50/60 Hz

DFM-400:

4 VA Max

DFM-404:

4 VA (Outputs externally powered)  
52 VA (Outputs internally powered)

DFM-440:

6 VA Max

#### Technology

8-bit processor with internal A/D, Flash and RAM

#### Communications Ports

RS-485 Port

Delta LINKnet up to 76800 bps, max 12 devices on LINKnet with no more than 2 DFM devices

or

RS-485 Port (DFM-400 only)

BACnet MS/TP up to 76800 bps, max of 99 devices per port

#### Ambient

-40° to 140°F (-40° to 60°C), with enclosure  
10 to 90% RH (non-condensing)

Note: Internal electronics rated from -40° to 85°

#### Dimensions

4 1/4 x 4 5/16 x 1 1/16 in. (10.7 x 11 x 4.9 cm) with housing

#### Weight

0.362 lb. (164 g) with housing

#### Compliance

CE  
FCC

#### Listings

UL 916 Listed  
UL 864 Listed for UL 864 product numbers

### Ordering

Order the DFM-4xx with the desired options according to the following product numbers:

Note: Maximum of 2 LINKnet I/O Boards on any LINKnet network.

<b>DFM-400</b>	Connects to LINKnet or BACnet MS/TP (jumper setting), 4 universal inputs
<b>DFM-404</b>	Connects to LINKnet, 4 universal inputs, 4 binary outputs
<b>DFM-440</b>	Connects to LINKnet, 4 universal inputs, 4 analog outputs
<b>DFM-400-UL864-340</b>	DFM-400 with UL 864 listing
<b>DFM-404-UL864-340</b>	DFM-404 with UL 864 listing
<b>DFM-440-UL864-340</b>	DFM-440 with UL 864 listing

### Accessories

<b>DZNR-768</b>	RS-485 BACnet MS/TP, 4-port network repeater*
<b>TRM-768</b>	Delta Network Terminator for BACnet MS/TP*

\* UL 864 versions available

Subject to change without notice.