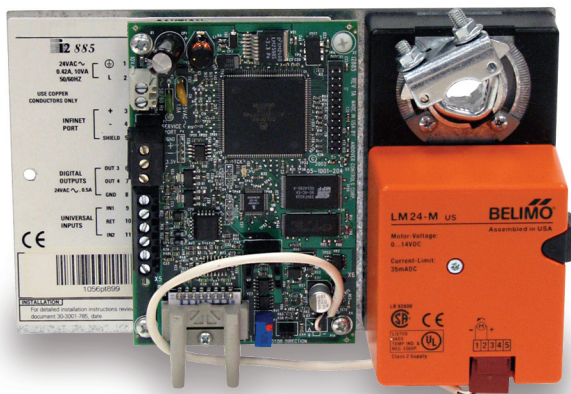


# Andover Continuum™ Infinet II

## i2885 VAV Controllers with Built-in Actuator

The Andover Continuum Infinet II i2885 is a unique, low-cost VAV box controller that comes equipped with a built-in actuator to streamline hardware installation and save commissioning time.



# Andover Continuum Infinet II i2885 VAV Controllers with Built-in Actuator Features



Two universal inputs, an airflow sensor, two Form A triac-based outputs, and an integrated damper actuator, make these controllers perfect for smaller VAV applications.

Similar to all i2 controllers, the i2885 features Flash memory and a fast (32-bit) processor for faster scan times.

The i2885 communicates with the entire Andover Continuum Infinet RS-485 field bus (i.e. both Andover Continuum Infinet and Andover Continuum Infinet II controllers) and is compatible with Andover Continuum CyberStation version 1.5 or greater. Up to 254 Andover Continuum Infinet devices can be networked to any Andover Continuum network controller.

**Increased Reliability with Flash Memory**  
The i2885's non-volatile Flash memory stores your operating system and application programs, so that in the event of a power loss, your application will be restored when power is returned. In addition, the Flash memory allows for easy upgrades of your operating system via software downloads, eliminating the need to swap out proms.



## PRODUCT AT A GLANCE

- Compact Terminal Controller Provides Low-cost VAV Control
- Built-in Damper Actuator Simplifies Hardware Installation
- Two Universal Inputs; Two Form A Outputs for Flexible Control Options
- Non-Volatile Flash Memory Provides Utmost Reliability – Stores Both Application Program and Operating System
- Flash Memory Allows Easy On-Line Software Updates
- On-Board Airflow Sensor
- Local On-Board Service Port
- Typical VAV Applications:
  - Cooling-Only
  - Cooling with 1 or 2-Stage Electric Heat
  - Cooling with Reheat Valve, PWM Control
  - Fan Powered with 1-Stage Electric Reheat



# Andover Continuum Inffinet II i2885 VAV Controllers with Built-in Actuator Features (continued)

## Inputs

The input configuration on the i2885 consists of two full range universal inputs that accept voltage (0-5VDC), digital (on/off), counter signals (up to 4Hz), or temperature signals, plus an on-board air flow sensor. Typically the two inputs are used for room temperature, and either supply air temperature or a setpoint adjustment signal.

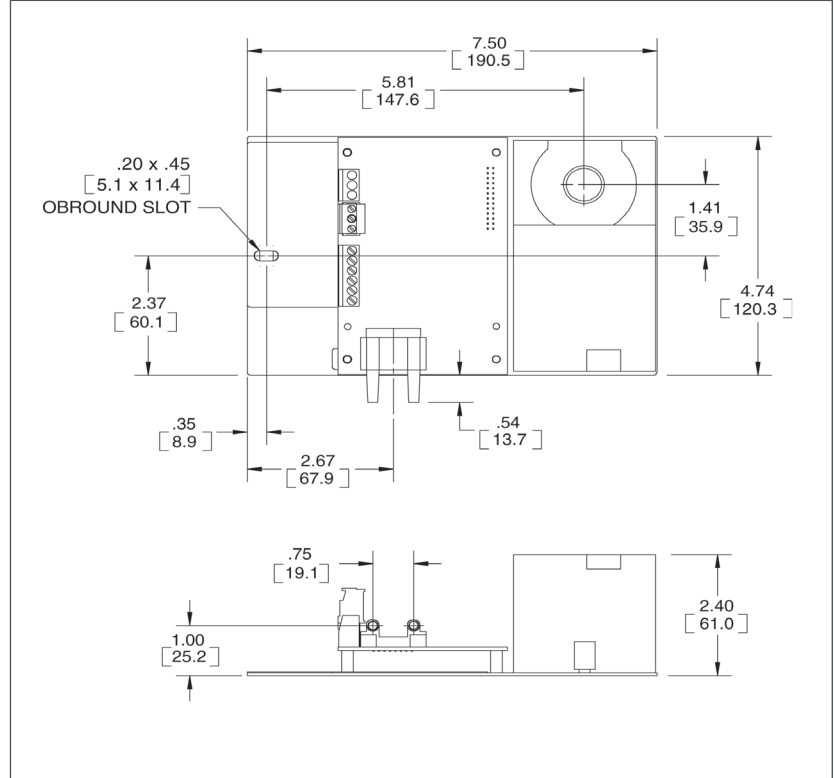
## Outputs

The i2885 contains two Form A Triac-based outputs. Each Triac is ground referenced. These outputs can be used separately for on/off or pulsed control of lighting, heat, and fan units or for bi-directional control of dampers and valves; or configured into one Form K Tri-state output. Outputs are rated for AC loads only. Typically, the outputs are used for 1- or 2-stages of electric heat, or a PWM reheat valve.

## Damper Actuator

The integrated Belimo® damper actuator allows simple direct mounting of the i2885 directly over the existing damper shaft. This eliminates the need for separate mounting, wiring, and positioning of the damper motor. All i2885 controllers have built-in software over-drive protection which senses repeated motor limit stall conditions and helps to prevent motor damage. Also, the actuator has a built-in clutch button to temporarily disengage the direct-drive gears during commissioning. The i2885 actuator may be preset for a limited range of motion using the mechanical “stops” provided.

## Dimensional Drawing



# Andover Continuum Infinet II i2885 VAV Controllers with Built-in Actuator Features (continued)

## Software Capabilities

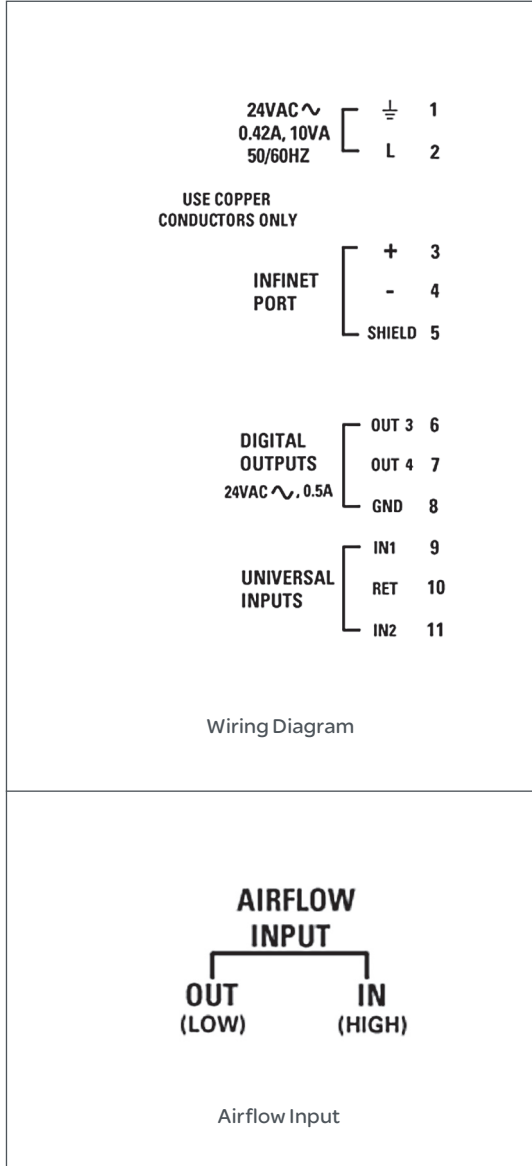
The dynamic memory of the i2885 can be allocated for any combination of programs, scheduling, alarming, and data logging using the powerful Andover Continuum Plain English™ programming language. Our object-oriented Plain English language with intuitive keywords provides an easy method to tailor the controller to meet your exact requirements. Programs are entered into the i2885 using the Andover Continuum CyberStation or local user terminal. Programs are then stored in, and executed by, the i2885.

Programming multiple i2885's is inherently easy with Plain English. A complete copy of one i2885 controller's programs can be loaded directly into other i2885 controllers without changing any point names or programs.

## Optional Wireless Andover Continuum Infinet

The i2885 Andover Continuum Infinet controllers can also communicate using a wireless mesh network. Simply plug Andover Continuum Wireless Adapters into the service ports of these controllers with wireless compatible firmware to create a wireless mesh network that sends and receives Andover Continuum Infinet messages.

## Diagrams



# Andover Continuum Infinet II i2885 VAV Controllers with Built-in Actuator Specifications

## i2885 VAV Controllers

### Electrical

#### Power

24 VAC, +10% -15%, 50/60 Hz

#### Power Consumption

10 VA

#### Overload Protection

Fused with 1 amp fuse. MOV protected

#### Software Real-Time Clock

Synchronized through Andover

Continuum Infinet by network controller

### Mechanical

#### Operating Environment

32°–120°F (0–49°C),

10–95% RH (non-condensing)

#### Size

5.28" H x 7.50" W x 2.40" D

(134.5H x 190.5W x 61D) mm

#### Weight

1.70 lbs. (0.77kg)

#### Enclosure Type

None; UL Open Class. Recommend

Nema Type 1 Enclosure.

Flammability rating of UL94-5V

### Communications

#### Communications Interface

Through Andover Continuum Infinet

RS-485 field bus to network controller

#### Communications Speed

1200 to 19.2K baud

#### Bus Length

4,000 ft. (1,220m) standard for

Infinet, I2 Infilink module allows extension

to longer distances and is required after

every group of 32 units on the network.

#### Bus Media

Twisted, shielded pair,

low capacitance cable

#### RS-485 port for implementing Wireless

#### Infinet II connection, including:

Standard service port, four-position

shrouded connector

#### Comm. Error Checking

International Standard CRC 16

#### Compatibility

Continuum CyberStation Version

1.5 or greater

### Inputs

2 Universal inputs: Voltage (0-5.115 VDC);

Temperature -30°F to 230°F

(-34°C to 110°C), Digital (on/off),

Counter (up to 4Hz at 50% duty cycle,

125 ms min. pulse width). Current input

(0 - 20 mA) using external 250 ohm resistor

1 airflow sensor (0 to 1" W.C.)

### Input Voltage Range

0-5.115 volts DC

### Input Impedance

10K ohm to 5.120V

### Input Protection

±1000V transients

(Tested according to EN61000-4-4)

### Input Resolution

5.0 mV

### Input Accuracy

±15mV (±0.56°C from -23°C to +66°C or

±1°F from -10°F to +150°F)

### Airflow Input

Range: 0 to 1" W.C. (0-250 Pa)

Resolution: 0.005" W.C. (1.25 Pa) @

23° C (73° F)

Accuracy: ±0.05" W.C. (12.50 Pa)

@23°C (73°F)

### Outputs

2 single pole single throw (SPST)

Form A Triacs can also be configured

as one Tri-state Form K 1 integrated

damper actuator

### SPST Output Rating

Maximum 0.5A, 24VAC, ±2000V transients

(Tested according to EN61000-4-4)

Minimum: 30 mA AC

Each Triac is ground referenced,

DC loads not permitted

### Output Accuracy

SPST Output Accuracy: 0.1 sec. for

pulse width modulation

# Andover Continuum Infinet II i2885 VAV Controllers with Built-in Actuator Specifications (continued)



## i2885 VAV Controllers

### User LEDs/Switches

#### Status Indicator LEDs

CPU CPU Active

#### Switch

Motor Direction Switch

### Damper Actuator

#### Rated Torque

35 in-lb. (3.95 Nm)

#### Range of Travel

0-95 degrees, with adjustable  
mechanical stops

#### Rotation Speed

1.0 degree/sec nominal

#### Position Resolution

0.1 degrees with a 1.0 degree min.  
positioner movement

#### Actuator Output

1.0 sec minimum pulse duration

#### Shaft Accommodations

Accepts shafts 1/4" - 5/8" diameter  
(6.35mm - 15.9mm)

### Connections

#### Power

2-position fixed screw terminal connector

#### Communications

3-position removable screw  
terminal connector

#### Inputs/Outputs

6-position fixed screw terminal connector

#### Damper Shaft

1/4" - 5/8" diameter (6.35mm - 15.9mm)

#### Service Port

4-position connector

### General

#### Memory

512KB SRAM, 1MB FLASH

#### Processor

Motorola 32-bit Coldfire

### Agency Listings

UL/CUL 916, FCC CFR 47 Part 15,  
ICES-003, EN55022, AS/NZS 3548,  
and VCCI Class A, CE

### Models

#### i2885

Infinet II i2885 VAV Controller  
(uses Belimo Actuator)

#### i2885-WL

Wireless Infinet II i2885 VAV Controller  
(uses Belimo Actuator)

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