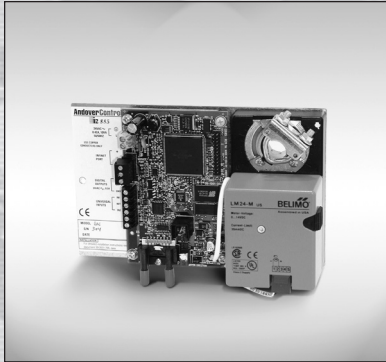


# INFINET II



- **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

## **i2885 VAV Controller with Built-in Actuator**

The Infinet II (i2) 885 is a unique, low-cost VAV box controller that comes equipped with a built-in actuator to streamline hardware installation and save commissioning time. 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 Controls Infinet™ RS-485 field bus; i.e., both Infinet and Infinet II controllers, and is compatible with *Continuum* CyberStation Version 1.5 or greater. Up to 254 Infinet devices can be networked to any Andover network controller.

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### **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.

### **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.

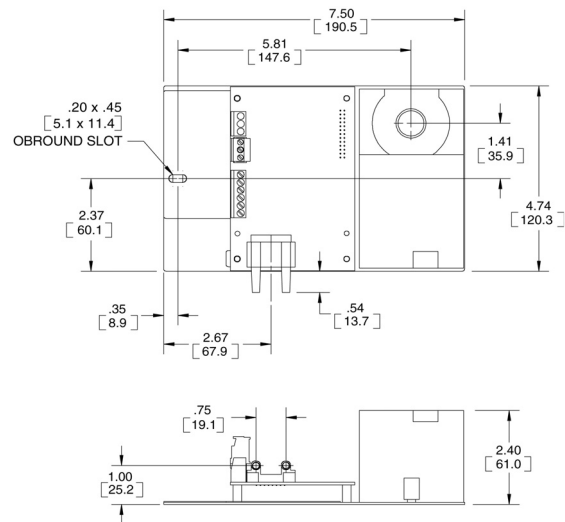
## DAMPER ACTUATOR

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.

## 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 Controls *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 *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's programs can be loaded directly into other i2885's without changing any point names or programs.



Dimensional Drawing

## Andover Controls

**i2885**

24VAC ~ [ 1  
0.42A, 10VA L 2  
50/60HZ

USE COPPER  
CONDUCTORS ONLY

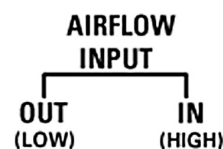
INFINET PORT [ + 3  
- 4  
SHIELD 5

DIGITAL OUTPUTS [ OUT 3 6  
OUT 4 7  
24VAC ~, 0.5A GND 8

UNIVERSAL INPUTS [ IN1 9  
RET 10  
IN2 11



Wiring Drawing



Airflow Input

# SPECIFICATIONS

## I2885 VAV Controller

### ELECTRICAL

<b>Power:</b>	24 VAC, +10% -15%, 50/60 Hz
<b>Power Consumption:</b>	10 VA
<b>Overload Protection:</b>	Fused with 1 amp fuse. MOV protected.
<b>Software Real-Time Clock:</b>	Synchronized through Infinet by network controller

### MECHANICAL

<b>Operating Environment:</b>	32°–120°F (0–49°C), 10–95% RH (non-condensing)
<b>Size:</b>	5.28"H x 7.50"W x 2.40"D (134.5H x 190.5W x 61D) mm
<b>Weight:</b>	1.70 lbs. (0.77kg)
<b>Enclosure Type:</b>	None: UL Open Class. Recommend Nema Type 1 Enclosure. Flammability rating of UL94-5V

### COMMUNICATIONS

<b>Communications Interface:</b>	Through Infinet RS-485 field bus to network controller
<b>Communications Speed:</b>	1200 to 19.2K baud
<b>Bus Length:</b>	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.
<b>Bus Media:</b>	Infinet: twisted, shielded pair, low capacitance cable
<b>Comm. Error Checking:</b>	International Standard CRC 16
<b>Compatibility:</b>	<i>Continuum</i> CyberStation Version 1.5 or greater

### INPUTS/OUTPUTS

<b>Inputs:</b>	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.)
<b>Input Voltage Range:</b>	0-5.115 volts DC
<b>Input Impedance:</b>	10K ohm to 5.120V
<b>Input Protection:</b>	±1000V transients (Tested according to EN61000-4-4)
<b>Input Resolution:</b>	5.0 mV
<b>Input Accuracy:</b>	±15mV (±0.56°C from -23°C to +66°C or ±1°F from -10°F to +150°F)
<b>Airflow Input:</b>	
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)
<b>Outputs:</b>	2 single pole single throw (SPST) Form A Triacs can also be configured as one Tri-state Form K 1 integrated damper actuator

### INPUTS/OUTPUTS (CONTINUED)

<b>SPST Output Rating:</b>	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.
<b>SPST Output Accuracy:</b>	0.1 sec. for pulse width modulation

### DAMPERACTUATOR

<b>Rated Torque:</b>	35 in.-lb. (3.95 Nm)
<b>Range of Travel:</b>	0-95 degrees, with adjustable mechanical stops
<b>Rotation Speed:</b>	1.0 degree/sec nominal
<b>Position Resolution:</b>	0.1 degrees with a 1.0 degree min. positioner movement
<b>Actuator Output:</b>	1.0 sec minimum pulse duration
<b>Shaft Accommodations:</b>	Accepts shafts 1/4" - 5/8" diameter (6.35mm - 15.9mm)

### CONNECTIONS

<b>Power:</b>	2-position fixed screw terminal connector
<b>Communications:</b>	3-position removeable screw terminal connector
<b>Inputs/Outputs:</b>	6-position fixed screw terminal connector
<b>Damper Shaft:</b>	1/4" - 5/8" diameter (6.35mm - 15.9mm)
<b>Service Port:</b>	4-position connector

### USER LEDS/SWITCHES

<b>Status Indicator LED:</b>	CPU Active
<b>CPU</b>	CPU Active
<b>Switch:</b>	Motor Direction Jumper (CW/CCW)

### GENERAL

<b>Memory:</b>	512K SRAM, 1MB FLASH
<b>Processor:</b>	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



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