



Andover Infinet II

i2887 Terminal Controllers

The Andover Infinet II (i2) 887 is a fully programmable, low cost, general purpose terminal controller. It has all the power of an Andover Infinet II controller, but with a small form factor. With its unique mix of three universal inputs, one Smart Sensor/room sensor input, four triac outputs and one relay output, the i2887 can be easily configured to control Heat Pumps, Fan Coils, or AC units. Use the i2887 for direct control of fans, staged heating and cooling and monitoring of room temperature, outside air temperature, return air temperature or occupancy status.

- Compact Terminal Controller Provides Low-cost Fan Coil and Heat Pump Control
- Three Universal Inputs and One Smart Sensor/Room Sensor Input
- Four Form A Triac Outputs, One Form A Relay, 277 VAC @3A
- Non-Volatile Flash Memory Provides Utmost Reliability — Stores Both Application Program and Operating System
- Flash Memory Allows Easy On-Line Software Updates
- Removable Terminal Blocks for Easy Serviceability
- View and Modify Information with Optional Andover Continuum Smart Sensor Display
- Local On-Board Service Port
- Typical Applications:
 - Fan Coil Unit
 - Heat Pump
 - Chilled Beams

The i2887 is compact so it can be installed in tight locations with three mounting screws; and its removable terminal connectors allow for easy servicing.

While the standard i2887 version uses 24 VAC input power, the i2887-L model accepts incoming line voltage at 115 or 230 VAC, has an onboard transformer, and the same versatile I/O configuration.

Similar to all i2 controllers, the i2887 features Flash memory and a fast (32-bit) processor for faster scan times, with plenty of additional memory available for data logging of your critical data.

The i2887 communicates with the entire Andover Infinet™ RS-485 field bus; i.e., both Andover Infinet™ and Andover Infinet II controllers, and is compatible with Continuum™ CyberStation™ Version 1.6x or greater. Up to 254 Andover Infinet devices can be networked to any Andover Continuum network controller.

INCREASED RELIABILITY WITH FLASH MEMORY

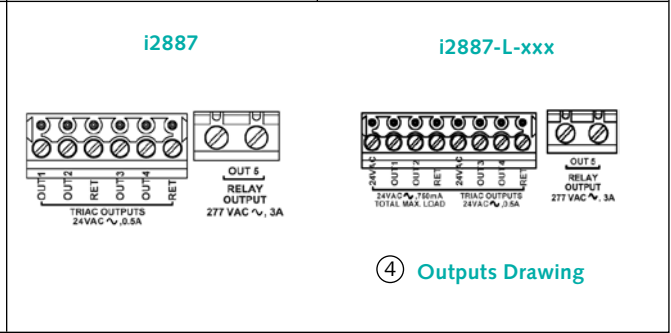
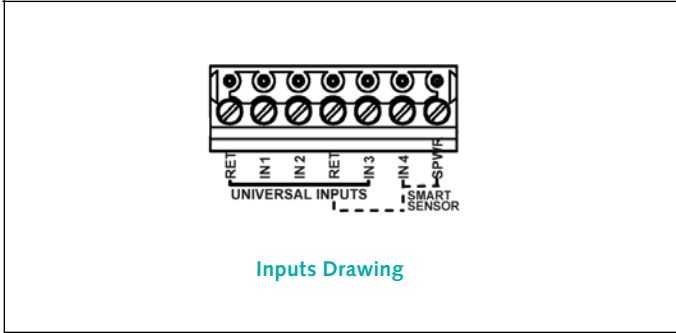
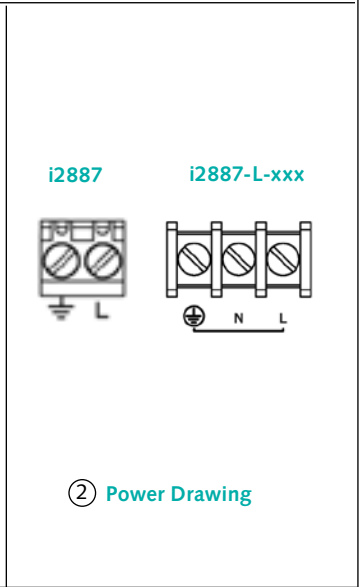
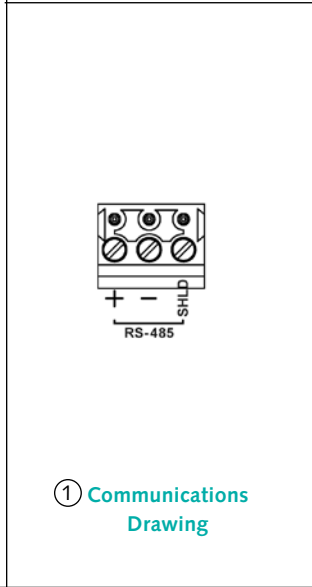
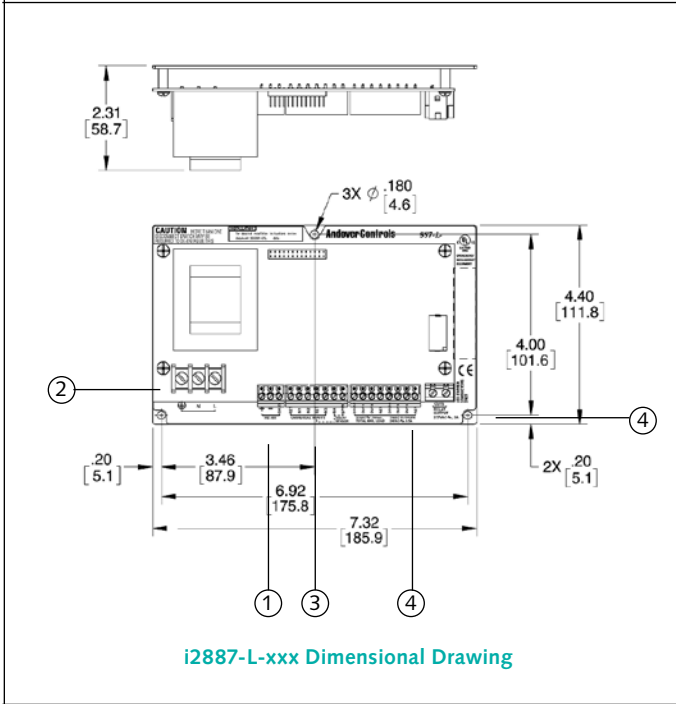
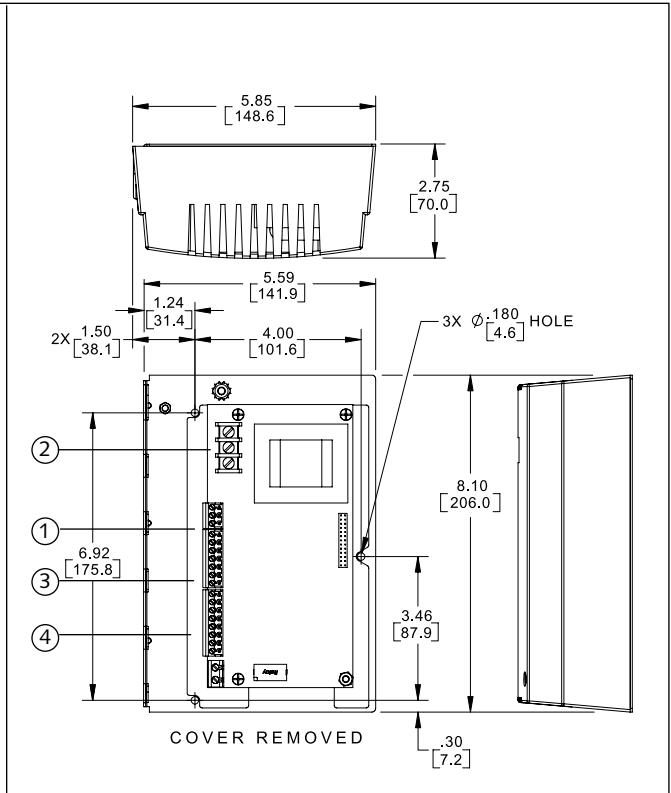
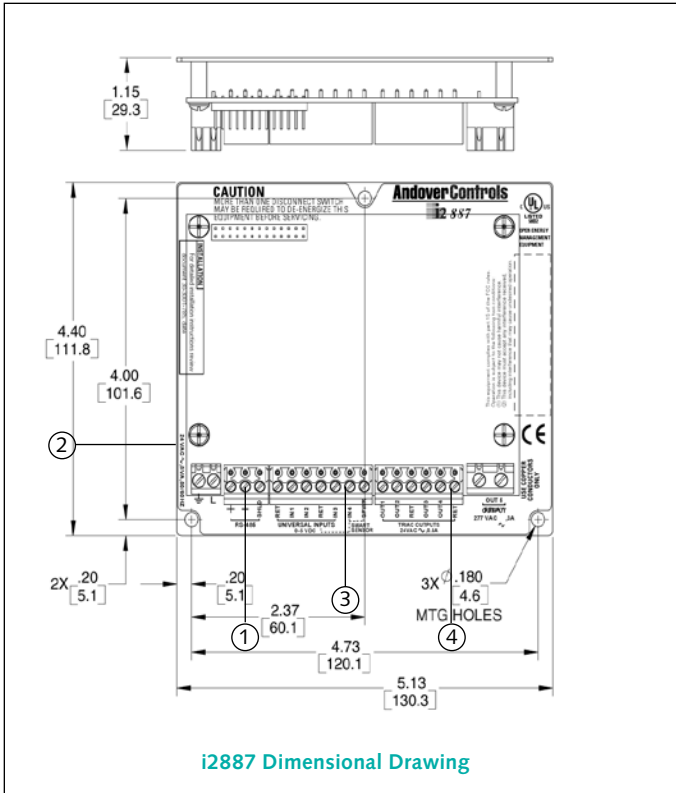
The i2887's non-volatile Flash memory stores your operating system and application programs, so that in the event of a power loss, your application will be restored when power is returned. In addition, the Flash memory allows for easy upgrades of your operating system via software downloads, eliminating the need to swap out proms.

INPUTS

The input configuration on the i2887 consists of three full range Universal inputs that accept voltage (0-5VDC), digital (on/off), counter signals (up to 4Hz), or temperature signals. The i2887 also offers a fourth input to support the Andover Continuum Smart Sensor, or any standard room temperature sensor.

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i2887 Terminal Controllers



SPECIFICATIONS

i2887 Terminal Controllers

ELECTRICAL

Power

i2887: 24 VAC, +10% -15%,
50/60 Hz or i2887-L-xxx: 115/230 VAC,
+10% -15%, 50/60 Hz

Power Consumption

i2887: 10 VA
i2887-L-xxx: 32 VA
i2887-L-xxx-C 32 VA

Overload Protection

Fused with 1 amp fuse. MOV protected

Software Real-Time Clock

Synchronized through Andover Infinet
by network controller

MECHANICAL

Operating Environment

32°–120°F (0–49°C), 10–95% RH
(non-condensing)

Size

i2887: 4.40"H x 5.13"W x 1.15"D (111H
x 130W x 30D) mm
i2887-L-xxx: 4.40"H x 7.32"
W x 2.31"D (111H x 186W x 59D) mm

Weight

i2887: 0.5 lbs. (0.23 kg)
i2887-L-xxx: 1.9 lbs. (0.86 kg)
i2887-L-xxx-C: 2.63 lbs. (1.19 kg)

Enclosure Type

UL Open class, IP 10. Flammability
rating of UL94-5V
i2887-L-xxx-C
UL Close class, IP20
Flammability rating of UL-94-5V

Mounting

Panel mount

COMMUNICATIONS

Communications Interface

Through Andover Infinet RS-485 field
bus to network controller

Communications Speed

1200 to 19.2K baud

Bus Length

4,000 ft. (1,220m) standard for
Andover Infinet, i2 Infilink module al-
lows extension to longer distances and
is required after every group of 32 units
on the network.

Bus Media

Andover Infinet: twisted, shielded pair,
low capacitance cable

Comm. Error Checking

International Standard CRC 16
Compatibility: Continuum CyberStation
1.6x or greater

Compatibility

Continuum CyberStation 1.6x or greater

INPUTS/OUTPUTS

Inputs

3 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 Smart Sensor Temperature Input (32°F
to 105°F) (0°C to 41°C)

Input Voltage Range

0-5.115 volts DC

Input Impedance

10K ohm to 5.120V

Input Protection

24 VAC or 24 VDC temporarily on
any single channel, ±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)

Outputs

4 single pole single throw (SPST) Form
A Triacs (any two consecutive outputs
can be configured as one Tri-state
Form K)

1 Form A Relay, 277 VAC @3A

Triac Output Rating

Maximum 0.3A, 24VAC, ±2000V
transients (Tested according to
EN61000-4-4)

Minimum: 30 mA AC

Each Triac is ground referenced, DC
loads not permitted

Output Accuracy

0.1 sec. for pulse width modulation

CONNECTIONS

Power

2-position fixed screw terminal
connector
(i2887-L: 3-position fixed)

Communications

3-position removable screw terminal
connector

Inputs/Smart Sensor

7-position removable screw terminal
connector

Outputs

6-position removable screw terminal
connector (i2887-L: 8-position)

Relay

2-position fixed screw

Service Port

4-position connector

USER LEDS/SWITCHES

Status Indicator LEDS

CPU CPU Active

GENERAL

Memory

512K SRAM, 1MB FLASH

Processor

Motorola 32-bit Coldfire

USER LEDS/SWITCHES

i2887: Power: 24 VAC
i2887-L-115: Power: 115 VAC
i2887-L-230: Power: 230 VAC
i2887-L-115-C: Power: 115 VAC-

Closed Class
i2887-L-230-C: Power: 230 VAC-
Closed Class

Note: i2887-L models provide onboard
24 VAC @750 mA for external loads.

AGENCY LISTINGS

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

OUTPUTS

The i2887 contains five digital outputs — four Form A Triac-based outputs plus one Form A Relay output, capable of switching line voltage.

These outputs can be used separately for on/off or pulsed control of lighting, heat, and fan units or can be configured into Form K Tri-state outputs (2-max) for bi-directional control of dampers and valves. (Note: Any two consecutive Triac outputs can be configured as a Form K output.) All Triac outputs are ground referenced and rated for AC loads only.

SOFTWARE CAPABILITIES

The dynamic memory of the i2887 can be allocated for any combination of programs, scheduling, alarming, and data logging using the powerful Andover 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 i2887 using the Continuum CyberStation. Programs are then stored in, and executed by, the i2887.

Programming multiple i2887s is inherently easy with Plain English. A complete copy of one i2887's programs can be loaded directly into other i2887s without changing any point names or programs. In addition, channel assignments for the i2887 are similar to other Andover Infinet devices such as the i2851 for easy program conversion.

SMART SENSOR INTERFACE

The i2887 provides a built-in connection for Andover Continuum Smart Sensor. The Smart Sensor provides a 2-character LED display and a 6-button programmable keypad that enables operators and occupants to change setpoints, balance VAV boxes, monitor occupancy status, and turn equipment on and off. An enhanced version of the Smart Sensor is also available with a 4-digit custom LCD that provides the following icons: PM, %, °, Setpoint, Cool, Heat, CFM, Fan, OA, and SP.

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SDS-I2887-US
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