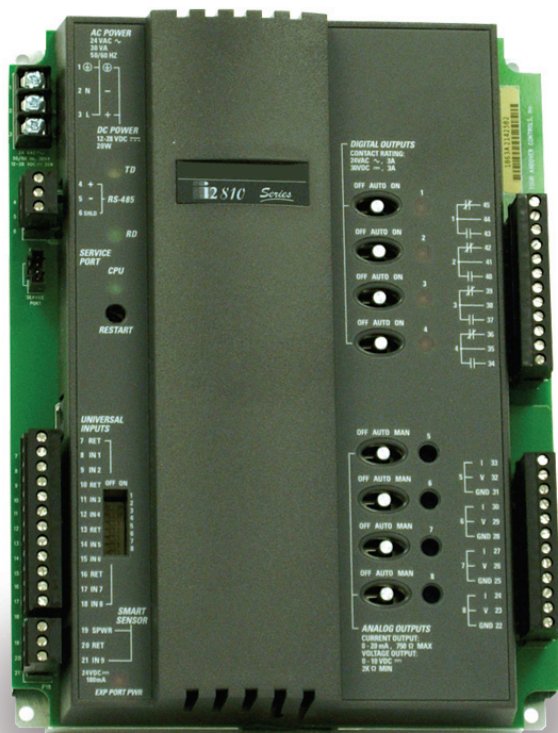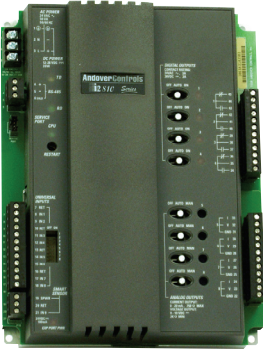# Andover Continuum™ Infinet II

i2810 Series Local

The i2810 Series controllers are designed for control of Air Handling Units, Roof Top Units, and other mechanical plant equipment.

Schneider Electric

Andover Continuum Infinet II
i2810 Series Local Controllers
Features

Choose the i2810 model with the configuration that matches your application:

- The **i2810**, designed for stand-alone equipment control of Roof Top Units, Air Handling Units, or other packaged mechanical equipment, features eight universal inputs, one Smart Sensor/Room Sensor input, plus eight program-controlled digital outputs.

- The **i2814**, designed for stand-alone equipment control of Roof Top or Air Handling Units, features eight universal inputs, one Smart Sensor/Room Sensor input, plus four program-controlled digital outputs and four analog outputs for direct control of devices requiring 0-10 volt control signals.

    Note: The i2814 is only compatible with Andover Continuum.

Both models feature an additional room sensor input, which supports Andover Continuum Smart Sensor, or any standard room temperature sensor. The i2810 Series also features universal inputs, a real-time clock, override switches on all outputs, two-piece removable connectors, and the ability to expand the I/O for additional points.

The i2810 Series features Flash memory, increased user memory, and a fast (32-bit) processor for faster scan times, with plenty of memory available for data logging of your critical data.

The i2810 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 both the Andover Continuum CyberStation and Infinity SX 8000 front-ends. The i2814 is only compatible with Andover Continuum. Up to 254 Andover Continuum Infinet devices can be networked to any Andover Continuum network controller.

PRODUCT AT A GLANCE

- Powerful, Flexible Local Controller for the Most Demanding Applications

- Expandable I/O Meets Additional Point Count Needs

- Non-Volatile Flash Memory Provides Utmost Reliability — Stores Both Application Program and Operating System

- Optional Display/Keypad Provides Easy Operator Interface (Mounted Separately)

- Local, Extended Storage of Log Data

- View and Modify Information with Optional Smart Sensor Display

- Local, On-Board Service Port

i2 INFINET

WIRELESS OPTIONAL

Schneider Electric

SDS-I2810-A4.BU.N.EN.11.2007.0.00.CC

Andover Continuum Infinet II
i2810 Series Local Controllers
Features (continued)

Increased Reliability with Flash Memory

The i2810'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.

The i2810 controllers include an on-board battery to safeguard your runtime data — protecting all point data and log data from being lost if power is removed.

Inputs

The input configuration on the i2810 Series consists of eight full range, 12-bit universal inputs that accept voltage (0-10VDC), digital (on/off), counter signals (up to 4Hz), temperature signals, or supervised alarm circuits for security applications or broken wire detection. The i2810 Series offers an additional input to support the Andover Continuum Smart Sensor, or any standard room temperature sensor.

Outputs

The i2810 contains eight Form C relay outputs, each rated for 24 VAC/30 VDC, 3 amp, while the i2814 contains four Form C relay outputs and four analog outputs (0-10V). Both the relay and analog outputs have manual override switches, with software feedback of the switch position.

I/O Expansion

The i2810 contains an I/O expansion port for the addition of up to two Andover Continuum xP expansion modules directly on the bottom of the controller. The xP family of modules includes the xPUI4, xPDI8, xPDO2, xPDO4, xPAO2, and xPAO4. In addition to two input/output modules, the I/O bus supports the xP Local Display Module, which allows the user to view and change point values.

Dimensional Drawings
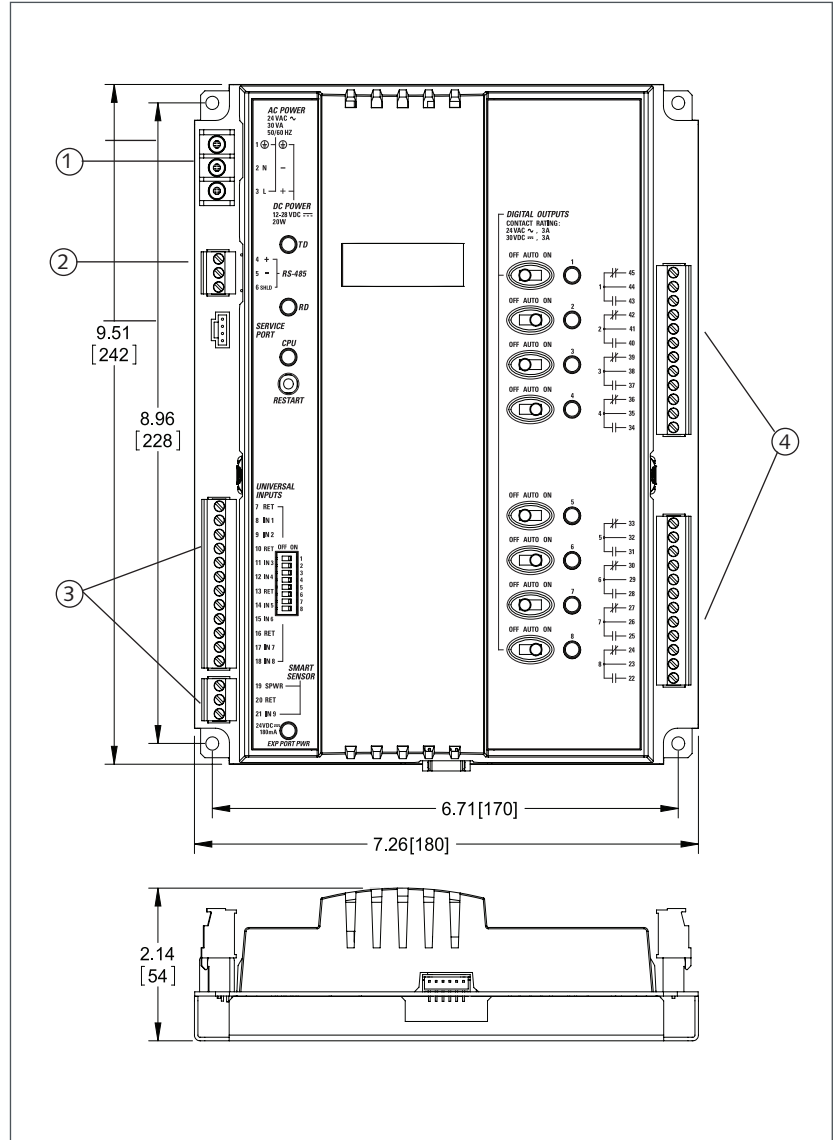
Andover Continuum Infinet II
i2810 Series Local Controllers
Features (continued)

Software Capabilities

The dynamic memory of the i2810 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 i2810 using the Andover Continuum CyberStation. Programs are then stored and executed by the i2810 controllers.

Programming multiple i2810 Series controllers is inherently easy with Plain English. A complete copy of one i2810 controller's programs can be loaded directly into other i2810 controllers without changing any point names or programs.

Smart Sensor Interface

The i2810 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.

Local Display

The local display with keypad (xP-Display) allows for the addition of a fully programmable local display module that can be mounted within 10 feet (3 meters) of the controller. Connected via a ribbon cable, the xP-Display easily allows the Operator Interface to be mounted on the door of an enclosure or on a wall below or next to the controller.

Optional Wireless Andover Continuum Infinet

The i2810 Series 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.

Dimensional Drawings

1 Power Drawing

2 Communication Drawing

3 Smart Sensor and Inputs Drawing

4 Outputs Drawing
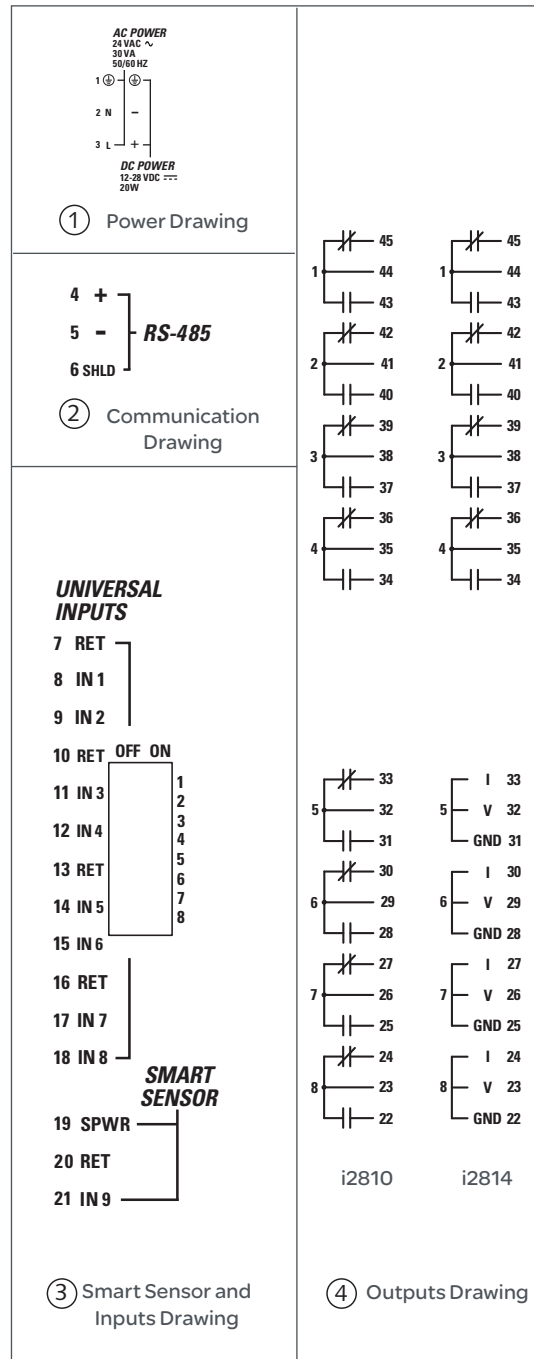
Andover Continuum Infinet II
i2810 Series Local Controllers
Specifications

i2810 Series Local Controllers

Electrical

Power
24VAC, 12-24VDC - auto sensing,
+10% -15%, 50/60 Hz

Power Consumption
30 VA

Overload Protection
Fused with 3 amp fuse.
MOV protected

Real-Time Clock
Battery-backed real-time clock

Mechanical

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

Size
9.51″ H x 7.26″ W x 2.14″ D
(241 H x 184 W x 54 D) mm

Weight
1.65 lbs. (0.75 kg)

Enclosure Type
UL Open class, IP 10.
Flammability rating of UL94-5V

Mounting
Panel mount

Battery

Battery Backup
Replaceable, non-rechargeable,
lithium battery. Provides 5 years
typical accumulated power failure
backup of RAM memory

Communications

Communications Interface
Through Andover 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
Andover Continuum Infinet, i2 Infilink
module allows extension to longer distances
and is required after every group of
32 units on the network.

Bus Media
Andover Continuum Infinet: 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
Andover Continuum Cyberstation
and Infinity SX 8000 systems
Note: The i2814 is compatible with
Andover Continuum software version 1.5
(or later).

Inputs/Outputs

Inputs
8 Universal inputs: Voltage (0-10 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).
Supervised Alarm (single or double resistor).
Current input (0 - 20 mA) using external 500
ohm resistor
1 Smart Sensor Temperature Input (32°F to
105°F) (0°C to 41°C)

Input Voltage Range
0-10 volts DC

Input Impedance
30.1K ohm to 10V or 5M ohm with
pull-up resistor disabled

Input Resolution
2.5 mV

Input Accuracy
±7.5mV (±0.25°C from -23°C to
+54°C) or (±0.46°F from -10°F to +130°F)

Digital Outputs

8 single pole single throw (SPST) Form C
relays (4 Form C on i2814)
(Any two consecutive Form C outputs can
be configured as one Form K Tri-state)

Output Rating
Maximum 3A, 24VAC/30VDC,
±1500V transients (Tested according
to EN61000-4-4)

Output Accuracy
0.1 sec. for pulse width modulation

Andover Continuum Infinet II
i2810 Series Local Controllers
Specifications (continued)

i2810 Series Local Controllers

Analog Outputs

4 analog outputs (i2814 only)

Output Rating

For 0-10V: 5mA maximum,
2K ohm minimum impedance,
±1000V transients (Tested according to
EN61000-4-4). Fuse-protected
only on the i2814

Output Resolution

0.1V for 0-10V

Output Overrides

Each output is equipped with a manual
override switch. Software feedback
of the switch position is provided,
for display and alarming

Expansion Bus

Interfaces to optional xP I/O
Expansion Modules

Connections

Power

3-position fixed screw terminal connector

Inputs

Removable two-piece terminal strip

Outputs

Removable two-piece terminal strip

Smart Sensor

Removable two-piece terminal strip

Communications

Removable 3-position terminal
connector

Expansion Port

6-position shrouded connector

Service Port

4-position shrouded connector

User LEDs/Switches

Status Indicator LEDs

CPU	CPU Active
TD	Transmit Data
RD	Receive Data
Output	Output Status (per output) (Digital only)
EXPANSION PORT PWR	Power Status

Switches

RESET
Input Pull-up Resistor Switch (per input)
Individual Output Override Switches

General

Memory

256K SRAM, 1MB FLASH

Processor

Motorola 32-Bit Coldfire

Agency Listings

UL/CUL 916, FCC CFR 47 Part 15,
ICES-003, EN55022, ASIN2S 3548,
Class A, CE

Models

i2810

Infinet II i2810 Local Controller

i2810-WL

Wireless Infinet II i2810 Local Controller

i2814

Infinet II i2814 Local Controller

i2814-WL

Wireless Infinet II i2814 Local Controller

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