

ADDISON®

Automated Logic Controls (ALC)

NEW!



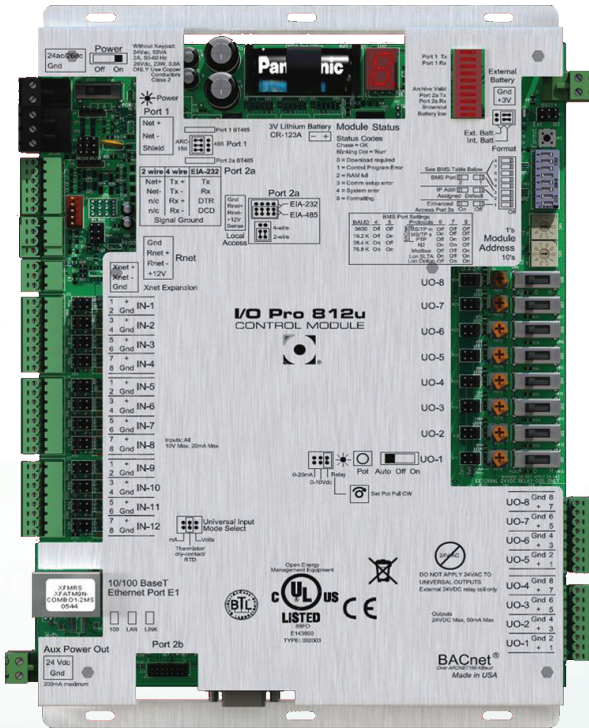
with Equipment Touch Interface

STAND-ALONE CONTROLLER

The I/O Pro 812u Control module is a general use controller that can be easily customized to meet various sequence of operation needs. Capable of operating in a 100% stand-alone control mode, the I/O Pro 812u can connect to a Building Automation System (BAS) using BACnet®, Modbus, N2 or LonWorks protocols. The point mapping to these protocols can be pre-set, so that the protocol and baud rates desired can be easily field-selected without the need for additional downloads or technician assistance. The I/O Pro 812u provides ample input/output capacity on the base controller, plus support for an expander board if additional input/output capacity is needed.

DESIGN FEATURES

- I/O point count: up to 48 I/O points using the I/O Pro Ex8160.
- Built-in dip switch-configurable protocol support for automation systems: BACnet (IP, ARC156, MS/TP, and PTP modes), Modbus RTU, N2, and LonWorks
- Remote access support over the Internet/Intranet or modem
- Powerful, high-speed 32-bit Motorola Power PC microprocessor with 8MB Flash memory and 16MB of battery-backed SDRAM.



SPECIFICATIONS

POWER

24 Vac \pm 10%, 50-60 Hz, 50 VA power consumption (56 VA with BACview attached), 26 Vdc (25 V min, 30 V max), Single Class 2 source only, 100 VA or less.

PHYSICAL

Rugged aluminum housing, removable screw terminals with custom silk screening available.

OPERATING RANGE

-20° to 140°F (-29° to 60°C); 10 to 95% relative humidity, non-condensing.

UNIVERSAL OUTPUTS

8 universal outputs that are jumper-configurable as 0-10 Vdc, or 0-20 mA dc with 12-bit A/D or 24 Vdc @ 50 mA relay drive. HOA (hand/off/auto) switches for all outputs, including potentiometer for manual adjustment of analog outputs.

UNIVERSAL INPUTS

12 configurable universal inputs with 14-bit A/D resolution. Supported input types include: 0-5 Vdc, 0-10 Vdc, 0-20 mA, Thermistor (10k Ohm Type II), 1k Ohm RTD (Platinum, Nickel, or Balco), and Dry Contact. All inputs support pulse counting up to 40 cycles per second (25mSec minimum pulse).

STANDARD COMMUNICATION PORTS

Port 1: Configurable for ARC156 or EIA-485 (2-wire). Built-in support for BACnet (MS/TP or ARC156), N2, and Modbus, allowing connection to auxiliary devices such as equipment-mounted VFD's, burners, compressors, etc.. Proprietary communication protocol support is also available.

Port 2a: Configurable for EIA-232 or EIA-485 (2-wire or 4-wire). Network protocol selectable for BACnet (MS/TP or PTP), Modbus, N2, LonWorks SLTA, or modem. Rnet port: Interface with a BACview5, BACview6, RS sensors, or local laptop.

OPTIONAL CARD PORT

LonWorks Option Card for connection to Free Topology LON networks (TP/FT-10 Channel).

STATUS INDICATION

Visual (LED) status of power, running, and errors. LED indicators for transmit/ receive for Port 1 and Port 2 and for each of the 8 outputs.

BATTERY

Battery CR123A has a life of 10 years with 720 hours of cumulative power outage.

PROTECTION

Surge and transient protection circuitry for power and communications.

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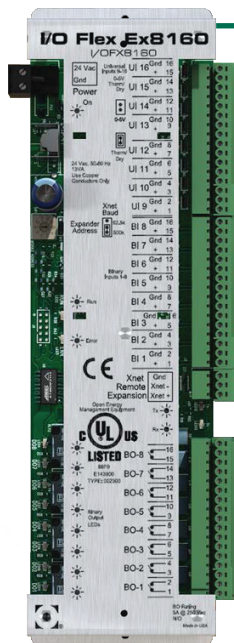
UL-916 (Canadian Std C22.2 No. 205-M1983), CE, FCC Part 15-Subpart B - Class A. BTL (BACnet Test Labs) - BACnet Building Controller (B-BC) - BTL Listed Product. <http://www.bacnetinternational.net/btl/index.php?m=47>

DIMENSIONS

7½" x 11½" x 1½"

POINT EXPANDER

The I/O Flex Ex8160 is an expander that can be connected to the I/O Pro 812u to increase the number of inputs and outputs. Expanders let your system grow as the size of the job increases.



SPECIFICATIONS

POWER

24 Vac $\pm 10\%$, 50–60 Hz, 13 VA power consumption, 26 Vdc (25 V min, 30 V max), Single Class 2 source only, 100 VA or less.

BINARY INPUTS

Inputs 1 - 8 support pulse counting up to 10 Hertz, dry contact only

UNIVERSAL INPUTS

Inputs 9 - 16 are jumper-selectable between thermistor/dry contact and 0-5 Vdc

INPUT RESOLUTION

10 bit A/D

INPUT PULSE FREQUENCY

Maximum of 10 pulses per second. Minimum pulse width required for each pulse:

- ON to OFF time (half cycle) is 50 msec
- ON to OFF to ON time (full cycle) is 100 msec

BINARY OUTPUTS

8 outputs, relay contacts rated up to 5 A at 250 Vac, configured as dry contact, normally open

OUTPUT RESOLUTION

8 bit A/D

PROTECTION

Built-in surge and transient protection circuitry - internal solid state Polyswitches on the incoming power and network connections.

STATUS INDICATORS

LED's indicate status of communications, running, errors, and outputs

ENVIRONMENTAL OPERATING RANGE

-20 to 140°F (-29 to 60°C), 10–90% relative humidity, noncondensing

PHYSICAL

Rugged aluminum housing, removable screw terminals with custom silk-screening available

EQUIPMENT TOUCH INTERFACE

The Equipment Touch interface is designed as an equipment HMI diagnostic tool. Equipment Touch's color LCD touch screen display used to provide a graphic interface for the control of your equipment. Equipment Touch provides a set of "built-in" features/screens that provide the following:

- Schedule Interface – view and edit a BACnet schedule
- Access Control – limit access to data based on credentials
- Alarm Viewing – view the device's alarm history buffer
- BACnet Object browser - of visible BACnet Objects
- Controller Status Screen - present device performance data
- Historical trending

NEW!



DESIGN FEATURES

- Automatically uploads and stores custom screens from the base controller
- Build up custom screens and navigation with access to virtually any data point in the equipment
- Includes a library of interactive controls from the ViewBuilder tool
- Mounts on equipment or wall
- Real -time clock

SPECIFICATIONS

POWER

24 Vac ($\pm 15\%$), 5 VA, 50-60 Hz, Class 2

BACKLIT COLOR LCD DISPLAY

4.3" resistive touchscreen color LCD display w/ backlighting

OPERATING RANGE

-4° to 140°F (-20°C to 60°C), 10%-90% RH non-condensing

MEMORY

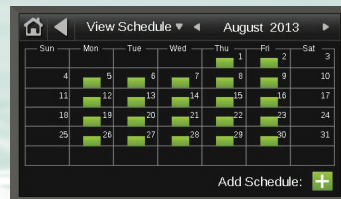
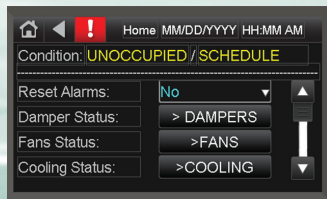
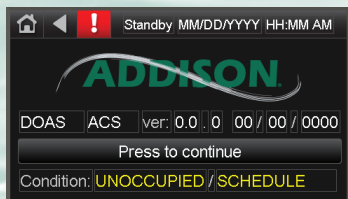
- 16 MB Flash memory to store screen file
- 1.5 MB RAM to store variable data and LCD data
- 4 KB Serial EEPROM to store non-volatile configuration data

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UL-916 (PAZX), CE, FCC Part 15-Subpart B-Class A

DIMENSIONS

5 $\frac{7}{16}$ " x 4 $\frac{1}{16}$ " x 1 $\frac{3}{8}$ "



ZONE SENSOR

For use with the ALC controllers, a zone sensor provides precision measurement and communication capabilities in a low profile enclosure. A hidden communication port provides access to equipment for commissioning and maintenance.

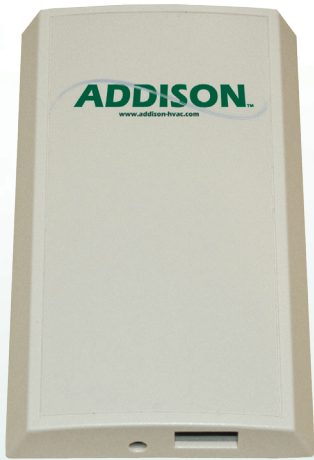
DESIGN FEATURES

ZS STANDARD

- Temperature, CO₂, humidity
- Addressable supports daisy-chaining
- Hidden communication port
- Dimensions: 3" x 4¹³/₁₆" x ¹³/₁₆"

ZS PRO

- Temperature, CO₂, humidity
- Addressable supports daisy-chaining
- Hidden communication port
- Occupancy status indicator
- Push-button occupancy override
- Setpoint adjust
- Large, easy-to-read LCD
- Alarm indicator
- Dimensions: 3" x 4¹³/₁₆" x ¹³/₁₆"



SPECIFICATIONS

POWER SUPPLY

A controller supplies the Rnet sensor network with 12 Vdc @ 210mA. Additional power may be required for your application.

COMMUNICATION

115 kbps Rnet connection between sensor(s) and controller. 15 sensors max per Rnet network; 5 sensors max per control program

LOCAL ACCESS PORT

For connecting a laptop computer to the local equipment for maintenance and commissioning

ENVIRONMENTAL OPERATING RANGE

32° to 122° F (0° - 50° C), 10% to 90% relative humidity, non-condensing

MOUNTING

Mounts on standard 2" x 4" electrical box

SENSING ELEMENT TABLE

Sensing Element	Range	Accuracy
Temperature (on non-Humidity models)	-4° to 122° F (-20° C to 50° C)	±0.35° F (0.2° C)
Temperature (on Humidity models)	50° F to 104° F (10° C to 40° C)	±0.5° F (0.3° C)
Humidity	10% to 90%	±1.8% typical
CO ₂	400 to 1250 PPM 1250 to 2000 PPM	±30PPM or +/-3% of reading (greater of two) ±5% of reading plus 30 PPM
VOC	0 to 2,000 PPM	±100 PPM

POWER REQUIREMENT TABLE

Power Requirements	Sensor Type	Power Required
Temperature Only Temperature with Humidity	All Models	12 Vdc @ 8 mA
Temp with VOC, or Temp/VOC/Humidity	All Models	12 Vdc @ 60 mA
Temp with CO ₂ , or Temp/ CO ₂ /Humidity	All Models	12 Vdc @ 15 mA (idle) to 190 mA (CO ₂ measurement cycle)

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