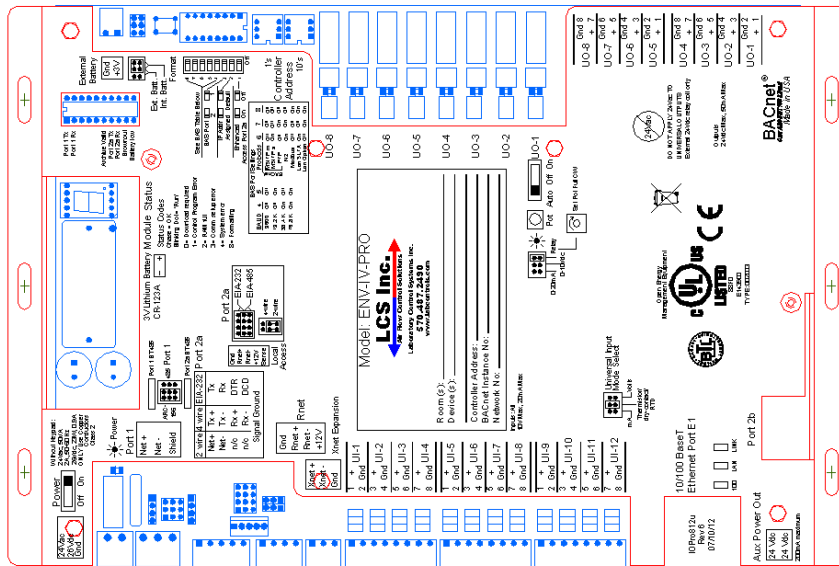# ENVIROTRAK® IV PRO CONTROLLER
ENV-IV-PRO

GENERAL DESCRIPTION

The Envirotrak® IV Pro (Model No.: ENV-IV-PRO) is a high speed native BACnet microprocessor based controller, designed for fume hood, laboratory air flow, isolation and containment room control applications. The ENV IV PRO can easily be customize to meet any sequence of operation needs for demanding and complex applications. Fully capable of operating in a 100% stand-alone control mode, the ENV IV PRO can connect to a Building Automation System (BAS) using any of today's four leading protocols: BACnet (IP, Ethernet, ARC156, MS/TP, and PTP), Modbus RTU, N2, and LonWorks. The point mapping to all of these protocols can be pre-set, so that the protocol and baud rates desired can be easily field-selected without the need for any additional downloads or technician assistance. The ENV IV PRO provides ample input/output capacity on the base controller, plus support for multiple expansion boards if additional I/O capacity is needed.

Key Features and Benefits

Communications:

♦ 3 - Configurable Communication
   1. Ports 1. Port E1: 10/100 Base T Ethernet Port for BACnet or Modbus communication
   2. Port 1: EIA-485 Port for BACnet MS/TP or ARC156. Also configurable for Modbus or N2.
   3. Port 2a/2b: EIA-485 or EIA-232 This port allows integration with a Building Automation System (BAS). A dip switch is used to choose the active protocol between BACnet, Modbus RTU, N2, and LonWorks. (*Note: LonWorks requires SLTA-10 or additional plug-in card for full support)

♦ 2 - Dedicated Communication Ports
   1. Rnet Sensor/Display Network and Local Access
   2. Xnet Point Expansion Network

I/O Control:

♦ I/O point count: up to 140 I/O points by using up to 5 ENV-IV-PRO Ex816u expanders

♦ ON-OFF-AUTO switches and potentiometers for override of outputs during service and troubleshooting

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Air Flow Control Solutions

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♦ Jumper configurable universal inputs and outputs to minimize wasted points

Programmability / Serviceability:

♦ Custom-programmable using our powerful EIKON® graphic programming tool. The EIKON tool allows you to create graphic control sequences for your application, which can be fully simulated off-line (with the EIKON simulation tool)

♦ Support for "Live Logic", the ultimate diagnostic tool allows for real-time troubleshooting of the control logic while the equipment is running

♦ Built-in support through an Rnet port for custom-configurable keypad display units including the Equipment Touch 4.3" touchscreen, ZS intelligent communicating sensors, and for local laptop access

Performance:

♦ Powerful, high-speed 32-bit Motorola Power PC microprocessor with 8MB Flash memory and 16MB of battery-backed SDRAM. Memory upgrades can be downloaded locally via the Rnet or Ethernet ports or remotely via the network - no chip replacements necessary

♦ Rugged, proven hardware platform

Power	24 Vac ± 10%, 50-60 Hz, 50 VA power consumption (56 VA with BAC*view* 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).
Communication Ports	**Port E1**: 10/100 BaseT Ethernet Port for BACnet over Ethernet, BACnet over IP, or Modbus over IP communications **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 System Touch, Equipment Touch BAC*view*5, BAC*view*6 , RS sensors, or local laptop. **Xnet Remote Expansion port:** Connect up to five ENV-IV-PROEX816 point expanders via the Xnet network
Optional Card Port	**Port 2b:** 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
Listed by	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
Dimensions	7-1/2" (width) by 11-5/16" (height) by 1-9/16" (recommended panel depth), 19cm (width) by 28.7cm (height) by 4cm (recommended panel depth)
Mounting Hole Dimensions	1-1/4" from left and right (width) by 10-7/8" (height), 3.2cm width by 227.6cm height
Weight	1.7 lb. (0.8 kg)

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