

Products and systems for control and monitoring of critical environments

- *Envirotrak[®] control systems*
- *Lab~Link[®] protocol translators*
- *Airflow measurement and control devices*



**Introducing Envirotrak IV[®]
multiple protocol controllers**

LCS Inc.
Air Flow Control Solutions
Laboratory Control Systems, Inc.

Control and monitor airflow and pressure for critical environments with unprecedented speed

Single source responsibility for your laboratory, hospital, clean room/isolation room, and aseptic/containment suite

Requirements for accurate and repeatable controlled environment conditions are becoming increasingly more stringent. Equipment and systems for managing critical environments must operate continuously at peak performance levels. There can be no tolerance for failure when health and safety are at stake. We understand these implications, and have built an enviable reputation by providing advanced control and instrumentation products to establish and maintain reliable, accurate, integrated airflow, humidity, temperature, and pressurization capabilities. We offer many years of successful experience developing products and designing systems for specialized applications at life science, biotech, and industrial research/processing facilities:

- At laboratories, hospitals, and industrial facilities to *control fume hoods, room pressurization, and temperature*
- For *isolation room control systems* in hospitals and other institutions
- For *airflow, pressurization, and temperature control systems* for aseptic and containment suites



Now with new Envirotrak IV® multiple protocol controllers – 48 independent I/O control points for extraordinary applications flexibility

Precise, repeatable, and reliable control and monitoring for all critical environment facilities

The Envirotrak IV high speed, microprocessor-based controller (25 msec scan rate) represents the latest technology for managing a variety of equipment and processes at critical environment facilities. This controller offers substantial capacity to handle complex HVAC equipment and systems, and may be used virtually anywhere precise control of room pressure, temperature, humidity, airflow, or any

combination must be maintained. The Envirotrak IV supports all four popular protocols used in most building automation systems (BAS) including ASHRAE's *BACnet*, *Modbus*, *LonWorks*, and *Johnson Control's N2*. Envirotrak's seamless integration with most devices and systems used in current building automation systems is a key advantage for managing multiple controlled environment areas within a facility, for example, or even a facility with just two laboratories.

For BSL laboratories...

Rapid growth in biotechnology and bioscience research during the past few years has created a virtual construction boom in biosafety level (BSL) laboratories. BSL-3 and -4 laboratories in particular require highest possible control and management of their environments for obvious reasons, a task well suited to the LCS Envirotrak IV as well as our expertise and experience in developing environmental control systems for these applications.



For hospital isolation rooms...

The health and safety of hospital isolation room patients – and those around them – cannot be compromised. Envirotrak IV multiple protocol controllers – with their rapid scan rates and large memory capacities – are ideal for managing these complex, critical environments.



Flow, humidity, temperature, environments – and accuracy

LCS Envirotrak IV multiple protocol controllers Seamless integration to BAS systems...

- **Envirotrak IV permits virtually seamless integration** with most devices and systems used in current building automation systems.

- **Protocol support includes ASHRAE's BACnet, Modbus, LonWorks, and Johnson Control's N2.**

BACnet/IP communications are also supported through optional Ethernet plug-in cards. The cards can serve up web pages to a standard internet browser package for remotely monitoring any system, anywhere.

- **Up to 48 I/O control points maximize flexibility;** each is programmable for individual scanning in any desired sequence.



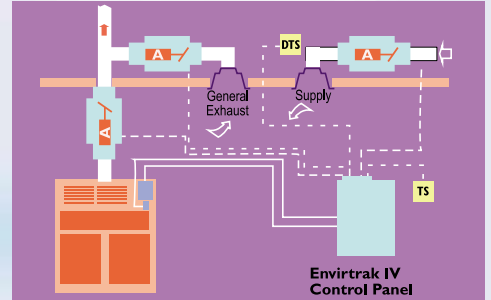
- **Point "mapping" can be pre-set to any protocol,** permitting discrete protocol and baud rates to be quickly and conveniently field selectable, or switched without the need for additional downloads or technical assistance.

- **For maximum applications flexibility** six digital outputs, twelve universal inputs, and six universal outputs (switch selectable for digital or analog format) are available.

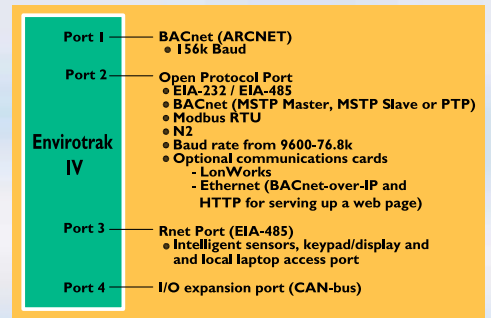
- **To accommodate system/facility growth,** Envirotrak IV expander boards are available with I/O x 440, I/O x 880, and I/O x 8160 capacities.

- **An integral battery-backed, real-time clock** permits full standalone scheduling capabilities as well as historical trend data storage and alarm event time stamping.

Envirotrak IV Typical laboratory piping and wiring diagram



Envirotrak IV Block diagram



Specifications/Features

- Powerful high speed processor
- 25msec scan rate
- Graphic programming language
- 12 universal inputs, 6 analog inputs, and 6 digital outputs
- Supports BACnet, Modbus, N2 and LonWorks communications protocols
- DIP switch selectable protocol and baud rates
- Additional I/O with expander boards

For pharmaceutical manufacturing/pilot facilities...

For product efficacy and worker safety, many pharmaceutical formulations must be processed under rigidly controlled environmental conditions – precisely those that Envirotrak IV controllers are designed to manage and maintain.



For laboratories and fume hood control...

LCS capabilities also include developing equipment and designing/building systems for managing laboratory workstation fume hoods for enhanced safety, performance, cost-effectiveness, and compliance with appropriate pollution abatement standards.





Lab~Link® protocol translator

Network architecture and systems integration

**LCS adds capabilities, enhances control,
and maximizes cost-effectiveness**

LCS offers many products and systems for control and monitoring of critical environments. Our network architecture and systems integration capabilities are offered to accommodate most critical environment applications. In addition to Envirotrak IV control systems, LCS

Lab~Link® protocol translators permit integration of existing Envirotrak control systems with other environmental control equipment via industry standard protocols to provide a fully integrated, high performance system.

How to get more information...

Tell us about your controlled environment application. Chances are an LCS product, system, or service can help meet your requirements for precise control and

monitoring of critical parameters. We'll be pleased to discuss your application in detail, and suggest a practical and cost-effective solution. **Let us hear from you today.**



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