SmartLab System

SLI/N2 CONVERTER

SmartLab Interface Converter for networking the SmartLab Network to the Johnson Controls N2 Network.

- **Provides seamless integration of SmartLab Controls to Johnson Controls N2 network**
- **Provides a simple communications port into SmartLab Room Network**
- **Includes a room temperature sensor**
- **Isolates the room network from the N2 network**
- **Provides terminating resistor for the ARCnet network**

General Description

The design of the **Lab Interface Converter (SLI/N2)** provides a true communications protocol converter. There are two ports for connecting the converter. The signals are isolated, and the communications protocol is converted from one side to the other in a bi-directional fashion. The controllers within the lab are connected to the ARCnet side, while the N2 side connects to the Johnson Controls N2 network. The Johnson Controls N2 trunk connects all of the **SLI/N2** units to one another and to the Front End Computer. Due to the isolation provided by each **SLI/N2** to its respective lab, if there is a failure in the lab network, the main network remains unaffected. Conversely, if there is a failure in the main network, the lab remains unaffected.

The **SLI/N2** is always considered to be the last unit on the ARCnet network, therefor terminating resistors for the ARCnet port are provided internally. There is no internal termination resistor installed in the N2 port because this port is not the last unit in the N2 network.

A 3-pin, female receptacle provides user access to the SmartLab network through an ARCnet port on a computer. Any controller within the room network can be accessed from this point. Diagnostics and programming can be performed on-line without disturbing the operation of the rest of the network's controllers.

The temperature sensor in the **SLI/N2** is a 10,000-ohm, T3 thermistor, which can connect directly to analog input 1 or 2 on a **SmartLab SLC2000 Controller**. The **SLC2000** inputs can be jumper-selected to accept the thermistor signal directly, eliminating the need for an electronic transmitter.

Applications

The **SLI/N2** is designed solely for use in Tek-Air's **SmartLab Control Systems**. Typically, one **SLI/N2** is included in each lab in the **SmartLab** network, and provides a point of connection for technicians using a computer to configure the lab controls. The **SLI/N2** converter also provides isolation between the lab network it serves and the main N2 network trunk. In addition, the **SLI/N2** houses a temperature sensor that can connect directly to a **SmartLab Controller** input for measurement of lab temperature.

Mounting

The **SLI/N2** is the size of a wall thermostat, and mounts easily on a standard 4" x 2" switch box. If the **SLI/N2** on-board thermistor is to be used for lab temperature control, then the location selected must be suitable. Otherwise, any accessible location which allows a user to connect a PC and work comfortably will suffice. A mounting back-plate is provided, which screws to the switch box using screws provided. Communications and power cables feed through the back-plate, into the box, and up the wall or conduit to the associated power source and controllers.

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SmartLab System Converter SLI/N2

NOTE: Consult your local Tek-Air representative for further information.
(for your local representative listing please visit our web site at www.tek-air.com)

Specifications

Power .....24 VAC +1- 10%, 2VA

Communications Ports:
- 1 RS485 9600 Baud, bi-directional, with 3-wire connection terminals
- 1 ARCnet 625 kBaud, bi-directional, with 3-wire connection terminals

SmartLab System Access
- 1-3 pin D female; automatic insertion into network

Termination
- ARCnet Port: 120 ohm internal
- N2 Port: none

Thermistor
- Internally mounted, 10,000 ohm type III, 2-wire connection terminal

Visual Indicators (under front cover)
- Red LED: Power
- Green LED: N2 communications
- Yellow LED: ARCnet communications

Controller and Point Capacity
- 25 Controllers Maximum: Any combination of SLC2000 and FVC2000 Controllers.
- SmartLab N2 Points per Controller (user definable):
  - 6 analog read points
  - 2 binary read points
  - 3 analog read/write points
  - 2 binary read/write points
- Fume Hood N2 Points per Controller (device specific)
  - 4 analog read points
  - 2 binary read points
  - 5 analog read/write points
  - 2 binary read/write points

All specifications are subject to change without notice.

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