

## Communications Interface Module

### Installation Instructions

**NOTE:** The unit has been shipped with the Power Clips attached. Please remove the clips before installing the module on the DIN rail. If the Power Clips are chosen as the means to route power, they can be installed once the modules are in place on the DIN rail.

#### DIN Rail Mounting

The WVC16 mounts on a 35mm TS35 DIN rail, by simply hooking one side of the mounting foot over the rail and pressing the module towards the rail until it locks into place. To remove the unit from the rail, place the tip of a flat-bladed screwdriver under the release clip on either the top or the bottom of the module and pry up until the module releases from the rail. See Figure 1.



Figure 1

the front side of the upper and lower terminal blocks for a positive fit. The board slides in where the switch and the switch position chart on the case can be viewed together.

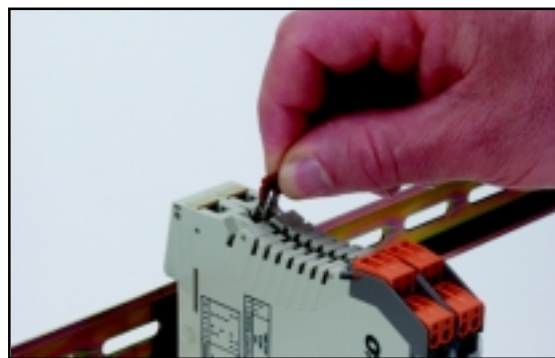
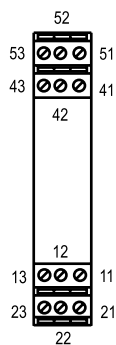


Figure 2

#### Wiring Connections



Pin	Description
11	DC Power (+)
12	DC Power (-)
13	No Connection
21	DC Power (+)
22	DC Power (-)
23	No Connection
41	RS-232 TX
42	RS-232 RX
43	RS-232 COM
51	No Connection
52	No Connection
53	No Connection

#### Power Connections

The power jumper clips (see Figure 2) are used to distribute power to a maximum of 16 modules. In applications using more than 16 modules, power wiring must be connected to the first and last module, and distributed to the remaining modules using the power clips. This technique allows for "hot swapping" of a module without interrupting power to the remaining units.

#### Opening the Case

The case can be opened by simultaneously pressing in on the two ribbed tabs located at the top and bottom of the front cap of the case and sliding out the circuit board. This provides easy access to the DIP switch for range selection. To close the case, slide the board back in until the two tabs lock firmly in place. This may require pressing on

#### Ethernet Configuration

The WVC16 Communications Interface User's Guide is contained on the utility CD (model C650-0000). Section 4 of the manual describes how to configure the module. Specifically, section 4.2 describes configuring the Ethernet interface (there are 2 choices - DHCP client or fixed IP address).

#### Switches

There are two switches located behind the translucent front cover. Facing the unit, the switch on the left is a reset switch that can be used to return the WVC16 to the initial power-on state. The switch on the right is an On/Off switch for the battery. In order to ensure a fresh battery, units are shipped with this switch in the Off position. To activate the battery back-up feature, this switch must be placed in the On position once the unit is put into service.

#### The Software

There are two software programs built into the WVC16. The first is a web server that provides the connection between the WVC16 and the client's computer. The second is the Data Viewer applet.

The web server (see Figure 1) is the "Home" page. Other functions can be selected from there. The Statistics frame contains information on the Ethernet connection, the frames sent and received, as well as information about the infrared bus between the modules. An Error Log will list any errors that have occurred. The Help file contains the entire user instruction manual for the WVC16.

The Data Viewer applet is launched from the Home page. Note that in order to install the Data Viewer, you must first have the Java Runtime Environment (JRE) 1.3.1 (or greater) plug-in installed on the client machine. If the plug-in has not been installed, the web browser will detect the fact and automatically connect to Sun Microsystems Java site in order to download and install the plug-in. Once the plug-in is installed, the Data Viewer will download and open.

The Data Viewer is used to view process data, define data logging parameters, and set up e-mail and address book information. The applet runs in a window of its own. The window shows all of the modules connected to the WVC16 (see Figure 2). The data logging function is defined in this window. Note that data logging is not simultaneous data from channel to channel - there is a time delay from sample to sample, as well as network delays that may need to be considered. The time-stamped data gathered here would then be downloaded to a program like MS Excel for further analysis.

Clicking on a module name brings up a window showing the signal connected to the selected module. From this window, the input and output ranges can be viewed, high and low alarm limits can be set, and module calibration can be performed. The About tab will list the firmware revision, the current temperature of the module, the high and low temperature to which the module has been subjected, and the number of hours it has been in operation.

### Battery Back-up

All of the SRAM (which contains the logged data) and the real-time clock is battery backed. The home page displays battery status as "good" when the battery voltage is above 2.7VDC. The battery should be replaced when a low condition is reported. A fresh battery will read between 3.0 and 3.1VDC.

### Battery Handling and Disposal

1. Improper use or handling may cause the battery to explode or leak, causing potential bodily injury.
2. Do NOT: recharge, place in or dispose of in fire, disassemble, put in backwards or short circuit.
3. Lithium cells may be considered hazardous waste, but are not an EPA listed hazardous waste. Disposal and recycling regulations vary among jurisdictions. Contact local authorities for specific advice regarding disposal.
4. Replace ONLY with a 3V Lithium button/coin cell, type CR2032 or BR2032.

### LED Indicators

There are six LED indicators, in two groups of three, that can be viewed through the translucent front cover. They are located down the left side of the unit. There is also a power LED located on the right side of the unit. There functions are described as follows:

#### POWER (Green):

On when 9 to 30VDC is applied to the unit.

#### (Upper Group)

#### ERROR (Red):

Flashes if a module error has been logged into the non-volatile SRAM or if the battery was disabled prior to applying power.

#### CONNECT (Green):

On to indicate Ethernet Client connection.

Flashes if no connection.

Off if network parameters need to be set.

#### MODULE (Yellow):

On when modules are detected on IR bus.

Flashes if no modules are detected on IR bus.

#### (Lower Group)

#### OFFLINE (Red):

On to indicate a network socket connection fault.

#### TRAFFIC (Yellow):

On to indicate 10Base-T transmit/receive and collision activity.

#### LINK (Yellow):

On to indicate 10Base-T link activity.

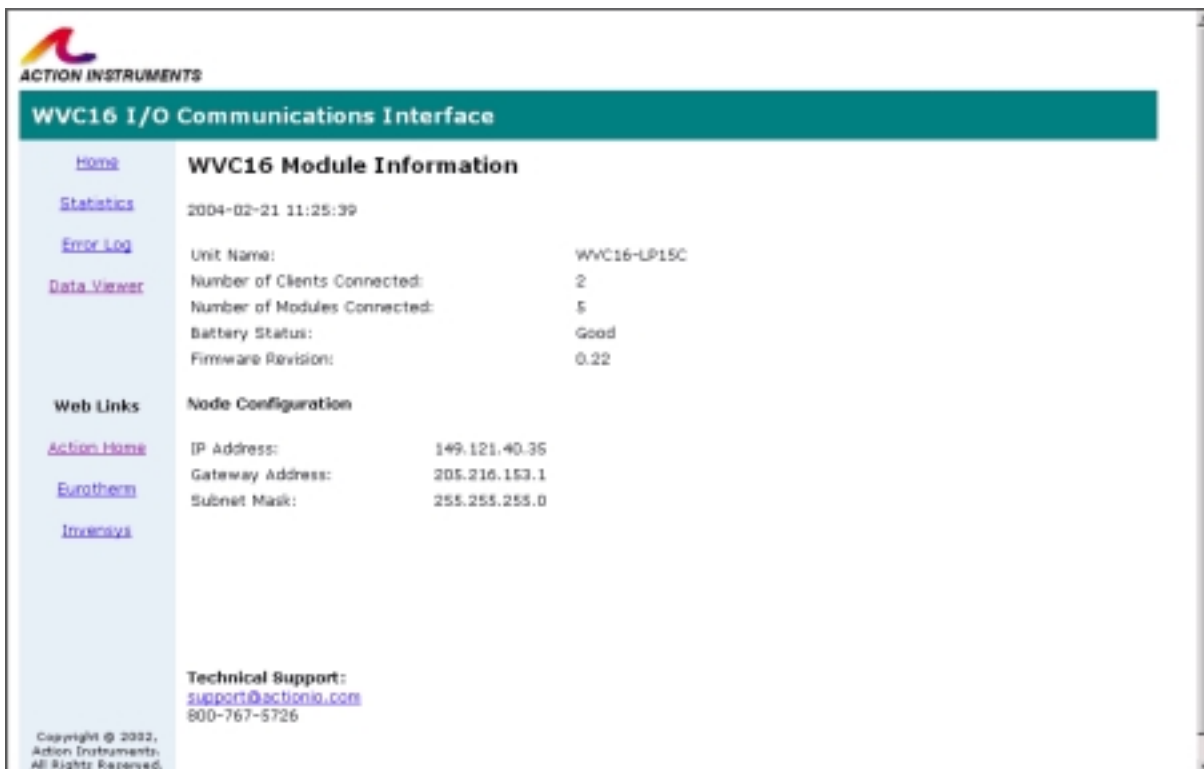


Figure 1: The Webserver Home Page

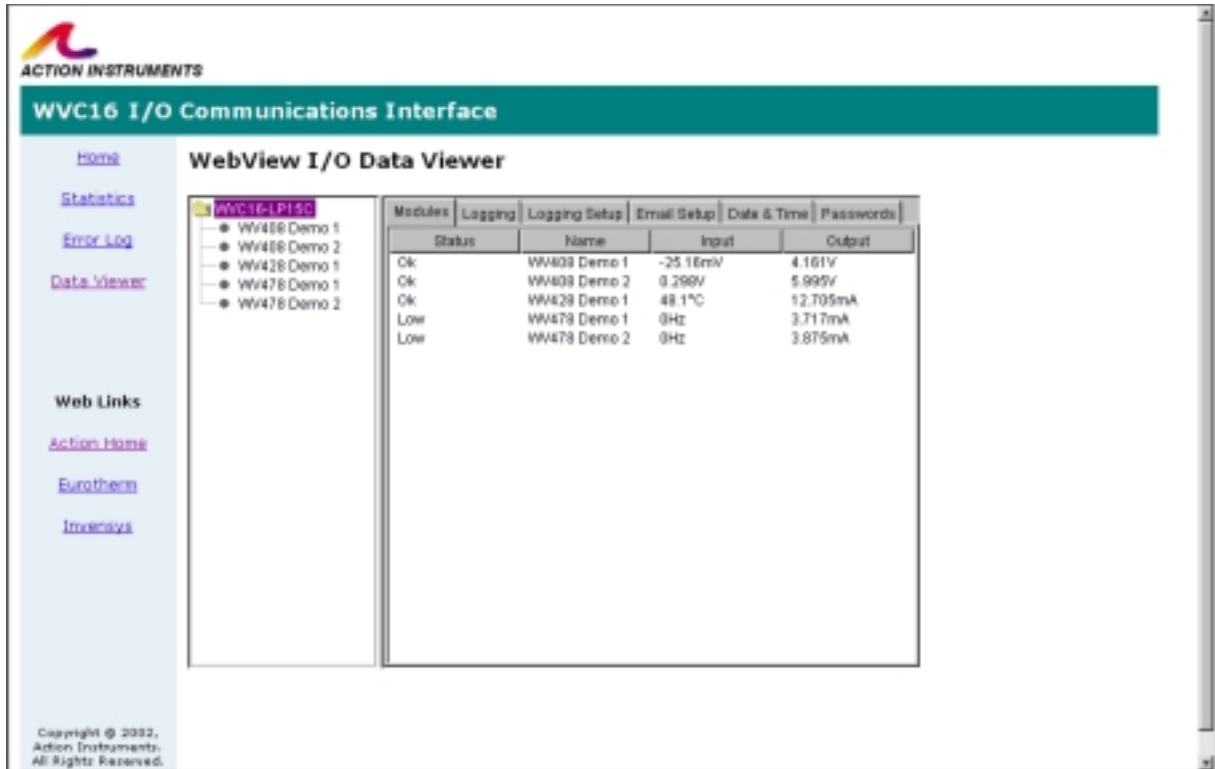


Figure 2: Data Viewer Home Page

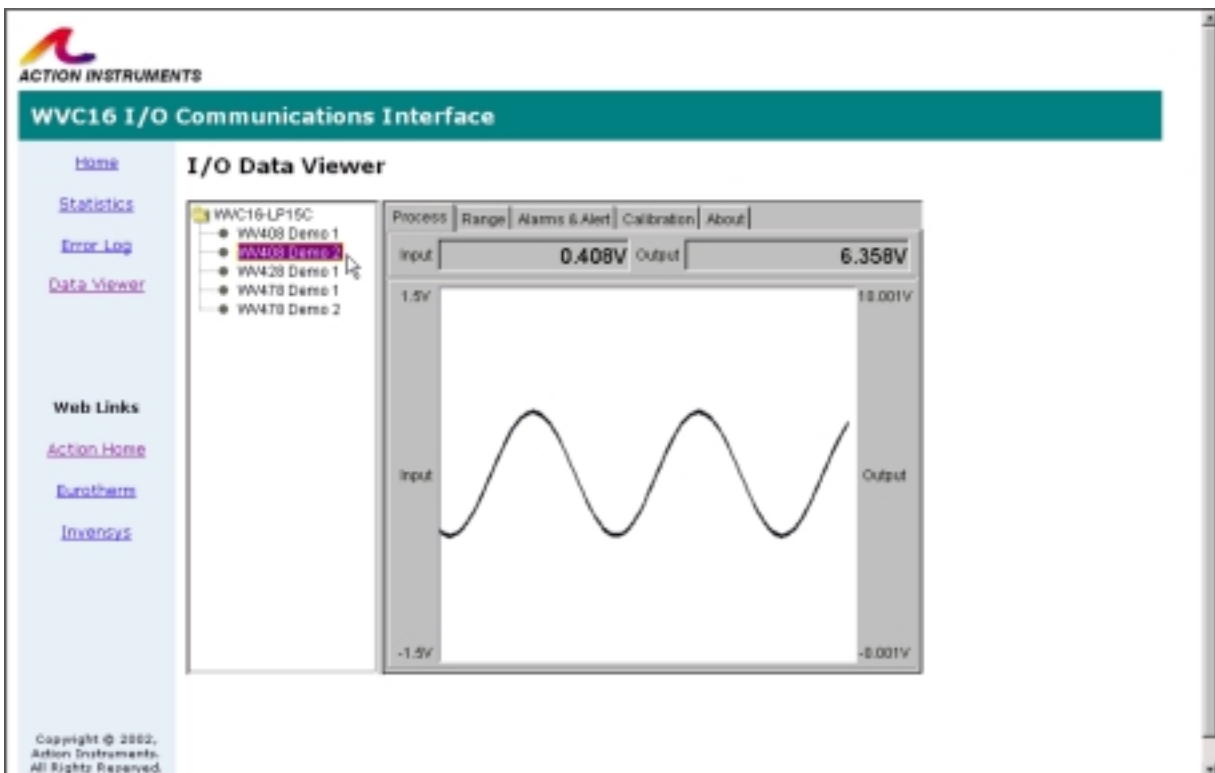


Figure 3: Module Page

## Specifications

### Processor

AM186ESLV, 25MHz

### Data Logging Capacity

>24k samples

### Host Interface

Type: Ethernet, 10Base-T

Connector: RJ45

Cable: Cat 5 recommended

### Utility Interface

Type: RS-232

Baud Rate: 9600

Data Bits: 8

Stop Bits: 1

Parity: None

Flow Control: None

### Module Interface

Type: Infrared

32 Modules max

### User Interface

Type: Web Browser, requires Java 2 Plug-in; Internet Explorer 5.01 (or later) or Netscape Navigator 4.7 (or later)

### Isolation

1500Vrms between 10Base-T port and all other external connections.

### Battery

Type: 3V Lithium, non-rechargeable  
CR2032 or BR2032

Life expectancy is 16 months typical in use (battery enable switch ON).  
Shelf life 10 yrs.

### Power

9-30VDC;

1.2W max

### Size

DIN rail case – 0.89" (22.5mm) wide

### Operating Temperature

0°C to +60°C (32°F to 140°F)

### Storage Temperature

-25°C to +85°C (-13°F to 185°F)

### Operating Humidity

15% to 95% RHNC @ 45°C

### Storage Humidity

90% RHNC @ 60°C for 24 hours

### Agency Approvals (EMC & Safety)

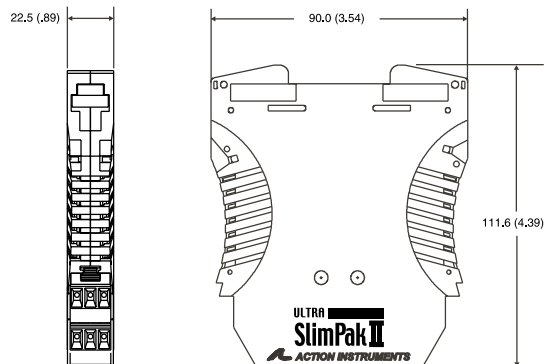
CE, EN50081-1, EN50082-2, EN61010

CSA C22.2, No. 0-M91, 142-M1987

UL508

## Dimensions

Dimensions are in mm (inches)



Eurotherm Controls  
741-F Miller Drive  
Leesburg, VA 20175-8993  
703-443-0000  
info@eurotherm.com

### Factory Assistance

For additional information on calibration, operation and installation contact our Technical Services Group:

**703-669-1318**

actionsupport@eurotherm.com

HA136738WVC16 Rev - Copyright © Eurotherm, Inc 2004