User Manual

MicroLogix 1100 Embedded Web Server

Bulletin 1763 Controllers

Allen-Bradley

Allen-Bradley · Rockwell Software

Rockwell Automation

Important User Information

Solid-state equipment has operational characteristics differing from those of electromechanical equipment. Safety Guidelines for the Application, Installation and Maintenance of Solid State Controls (publication SGI-1.1 available from your local Rockwell Automation sales office or online at http://www.rockwellautomation.com/literature/) describes some important differences between solid-state equipment and hard-wired electromechanical devices. Because of this difference, and also because of the wide variety of uses for solid-state equipment, all persons responsible for applying this equipment must satisfy themselves that each intended application of this equipment is acceptable.

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The examples and diagrams in this manual are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular installation, Rockwell Automation, Inc. cannot assume responsibility or liability for actual use based on the examples and diagrams.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.

⚠	**WARNING:** Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.
⚠	**ATTENTION:** Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence
⚡	**SHOCK HAZARD:** Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.
🔥	**BURN HAZARD:** Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.
IMPORTANT	Identifies information that is critical for successful application and understanding of the product.

Summary of Changes

The information below summarizes the changes to this manual since the last printing.

To help you find new and updated information in this release of the manual, we have included change bars as shown next to this paragraph.

The table below lists the sections that document new features and additional or updated information about existing features. Web view disable function is added.

Topic	Page
Disable Web View	9
Browser support is specified as Internet Explorer 6.0 , 7.0, and 8.0. Internet Explorer 9.0 and above are not supported.	1

Notes:

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MicroLogix 1100 Embedded Web Server

How to Use This Chapter

Rockwell Automation offers enhanced MicroLogix 1100 controllers for your EtherNet/IP control systems so you can monitor data remotely via web pages.

This chapter shows how you can use a MicroLogix 1100 controller in your control system.

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Typical Applications

The MicroLogix 1100 controller provides access to controller data. This access opens up different, remote access applications to control systems. Use the MicroLogix 1100 controller to remotely access controller data using a web browser. Use a web browser to monitor live controller data.

Browser Requirements

You can access the MicroLogix 1100 Web Server only with Internet Explorer 6, 7, or 8. Internet Explorer 9 or above are not supported because of JavaScript incompatibility.

To access data view pages, the browser requires Javascript support.

The supported display size is 640 x 480 or greater. Smaller display sizes work but might require extensive scrolling to view the information.

Connect the MicroLogix 1100 controller to the Network

1. Connect the module to the network

Connect the MicroLogix 1100 controller to the Ethernet network. The RJ-45 connector is on the left-hand side of the module.
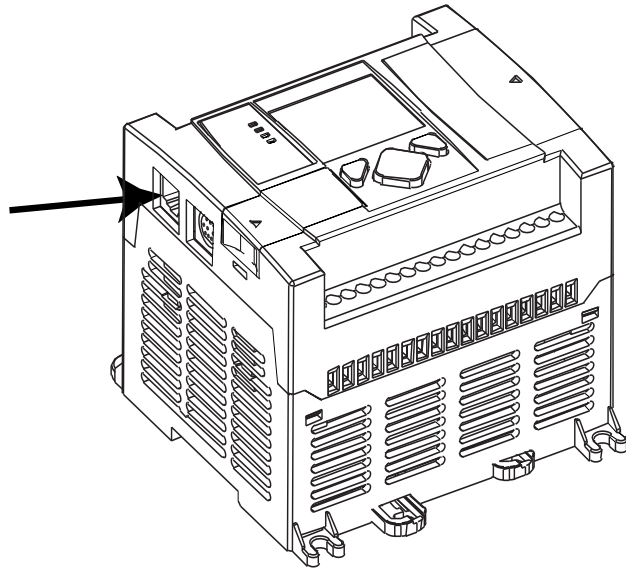
2. Obtain an IP address.

| IMPORTANT	For more information, see MicroLogix1100 Programmable Controllers User Manual, 1763-UM001.

By default, the MicroLogix 1100 controller is BOOTP enabled. If you connect the MicroLogix 1100 controller to a network that has a BOOTP server, that server will assign an IP address to the MicroLogix 1100 controller and the LCD screen of the MicroLogix 1100 controller will display BOOTP IP address.

If your network does not have a BOOTP server, use one of the methods described in the MicroLogix 1100 Programmable Controllers User Manual 1763-UM001 to assign an IP address to the MicroLogix 1100 controller.

3. Access the home page of the web server.

From your web browser, enter the IP address of the MicroLogix 1100 controller. The module displays its Home page

Specify the IP address of the MicroLogix 1100 controller in the Address window of your web browser.
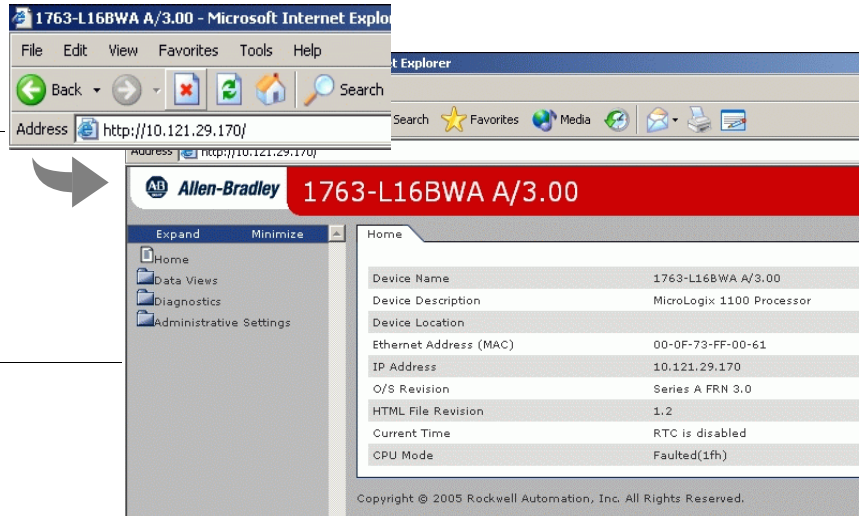
This is the module's Home page.

4. Log into the web server.

Many of the features of the MicroLogix 1100 controller require you to log in with appropriate access. If you select a feature, such as Data Views, the MicroLogix 1100 controller prompts you to enter your user name and password. The user name is either administrator or guest. The password is ml1100 for administrator and guest for guest.

Default Access
User Name: administrator or guest
(case sensitive)
Password:
(ml1100 for administrator, guest for guest)

You can set up as many as 10 user accounts. Each account can have read, write, or administrator access. For more information, see Chapter 3.
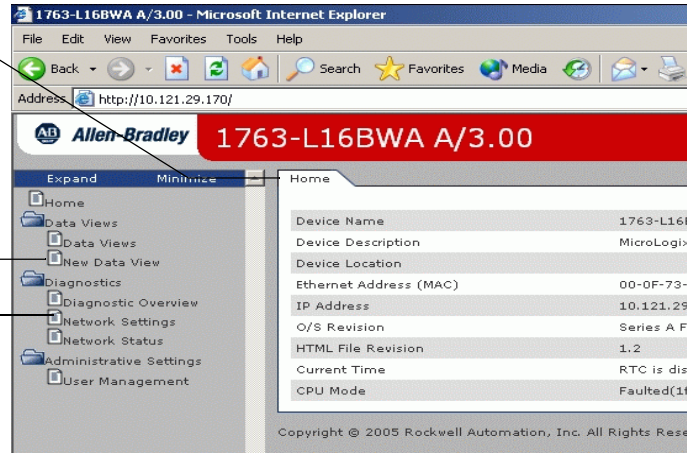
Navigate the MicroLogix 1100 Controller

You navigate the web server's web pages by using the navigation panel on the left of the screen. There are also tabs across the top you can use to navigate the sections within folders.

Tabs across the top match the documents within a folder, as shown in the left navigation panel.

Click folders to open and close additional levels of information.

Click a document to display a web page showing specific information.

Use Data Views to Access Controller Data

How to Use This Chapter

The MicroLogix 1100 controllers provide access to the controller data table files. This chapter shows you how to set up data views of data table files.

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Overview of Data Views

Data views give you the ability to read from controller through a browser interface. The MicroLogix 1100 controller provides web pages that let you configure a set of files (a data view) that can be read.

A data view consists of an HTML file with data file information. The HTML file is in a readable ASCII format. It contains the File Name, File Type, # of Element, and Access Group.

Change an Access Group

Each data view contains a group of files that you want to monitor. Each MicroLogix 1100 controller can support multiple data views. One browser supports one data view, so if you want to look at many data views, you need to run a corresponding number of browsers.

You change an access group from the Data Views → New Data View page.

1. From the Access Group pull-down menu for the given data table file, choose the access group type you wish to assign. Choose from:
   - Administrator (all access)
   - Write (read/write access only)
   - Read (read access only)

2. Choose Administrator, Write, or Read from the Access Group pull-down menu to change a file's access group.
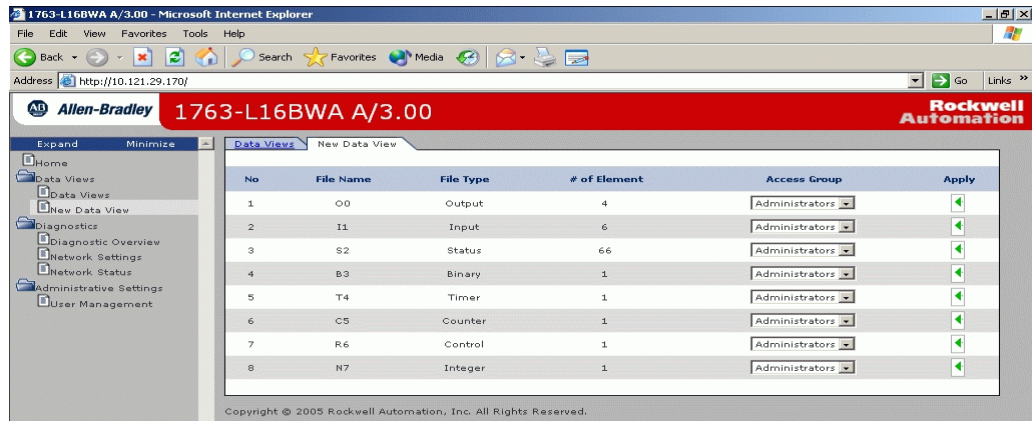
3. Click Apply ◀ to change an access group for the data table file you specified.

Monitor Data Views and Data Table File

Use the Data Views → Data Views page to view existing data table files.

Click the file name to view the data within a data table file.

Data View Page

The Data Views page displays a list of the data table files, their type, and size in elements for a connected MicroLogix 1100, as shown in the following example.

Each file contains a hyperlink that takes you to the specific Data Views page for that file. When you click a particular file, the Data Views page appears, displaying the contents of the data table file you selected.

The available and default display formats depend on the data type of the file.

Click Back to display the previous page. To refresh data, click Update.

Change Data Table Files

The data in the Data File Types such as Binary, Integer, Long, Float, and String can be changed. The Binary, Integer, and Long types support all the Display formats. The Binary can be changed by bit, and the octal, decimal, and hexadecimal can be changed by element. A user account with either Write or

Administrator access level can change the Data Table Files. When you click N7 in Data Views, Data Writable appears beside a Data File Type (Integer here) as shown below.

How to Change a Data File Type

The following steps assume Binary type is used.

1. Change Display As to Binary, then the following screen appears.

2. Double-click the data you want to change, then the background color becomes pink.
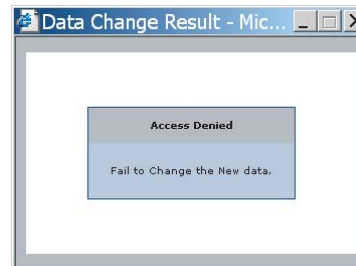
3. Enter a value and either press Enter or click somewhere in the screen, then a confirmation window appears.
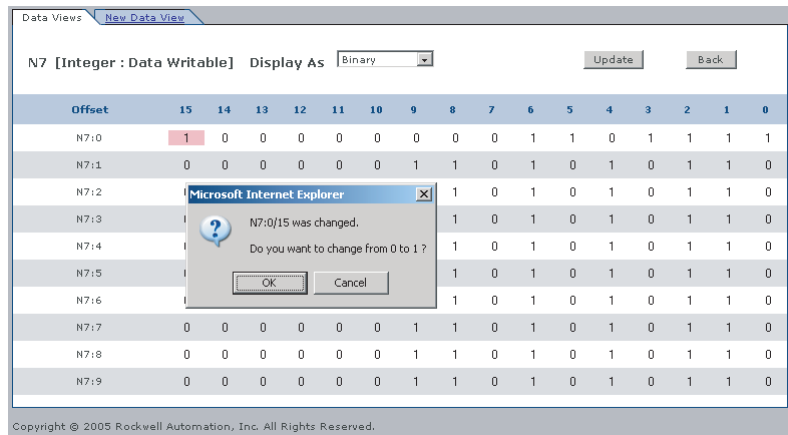
4. Click OK to change the value in the server.
If following screen appears when the value is successfully saved into the server.
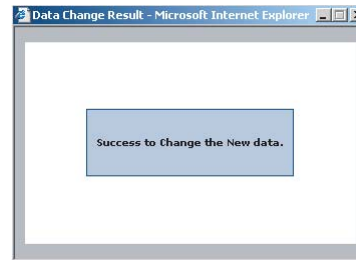
If the following screen appears, the value is not saved and the value returns to the original value.

If you want to change the data in Decimal, click pull-down menu to change the Display As to Decimal and follow the above procedures in sequence. The procedures are all the same for String too. (This feature is supported only when the OS FRN is 3 (HTML File Revision is 1.2) or later.

Disable Web View

Using RSLogix 500 version 7.20 or higher, you can disable individual data files from being viewed via any web browser by selecting the data file's properties page

and checking the Web View Disable checkbox as shown below. Any data file property changes must be made offline and downloaded to the processor.
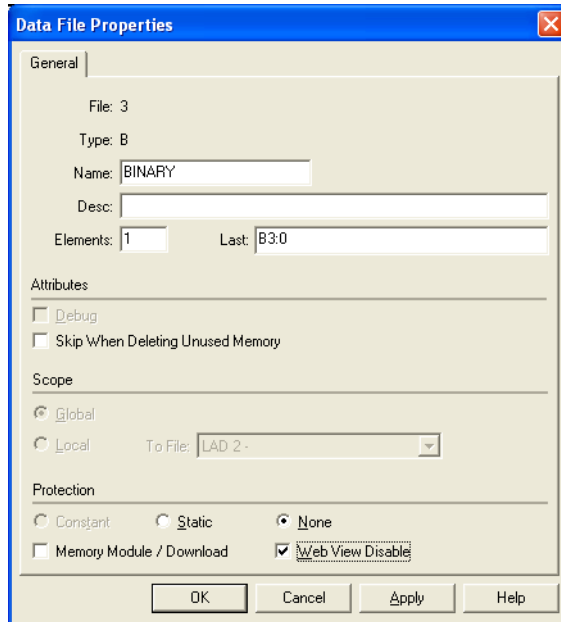
Manage User Accounts and Access Levels

How to Use This Chapter

This chapter describes how to configure user access levels to different information on the module.

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By assigning user accounts with different access levels, you can manage which users have access to view network configuration or have access to view and change data views.

Several pages on the MicroLogix 1100 controller, such as diagnostics pages and data views pages, have default access protection. Before accessing these pages, you must authenticate your access by entering a user name and password. The module displays the log-in box when you access these web pages.

IMPORTANT	Once authenticated, you do not have to re-enter a user name or password when accessing subsequent pages. You **must** close your browser to log out.

The default user name is administrator with password 'ml1100' or guest with password 'guest'.

IMPORTANT	It is strongly recommended that you change the password for the default Administrator account.

User Accounts and Privilege Classes

The MicroLogix 1100 controller supports multiple user accounts, each with a user name and password. Each user account is configured for one of these access levels:

- Administrator (all access)
- Write (read/write access only)
- Read (read access only)

The access level determines which web pages the user can access. You configure access limits for individual web pages.

Configure Access Limits for Web Pages

Each page in the MicroLogix 1100 controller has one of these protection levels:
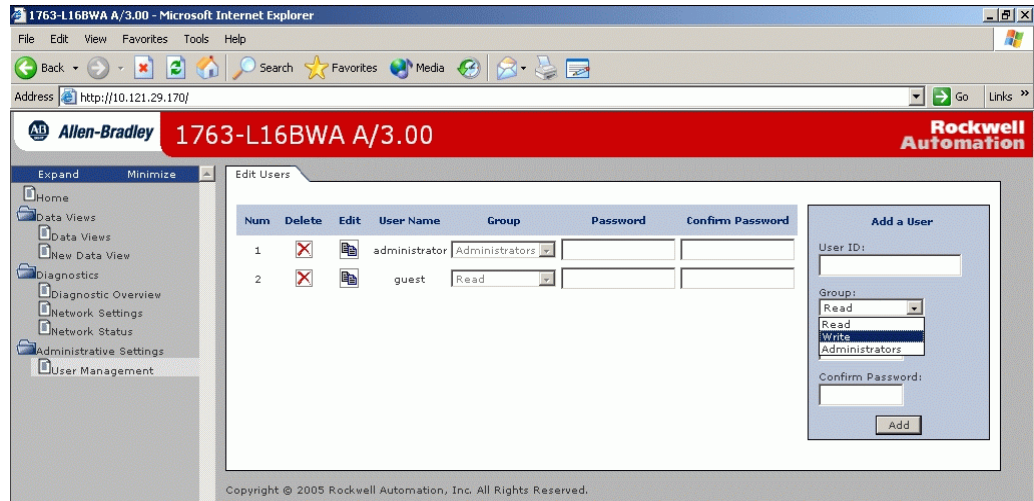
- Administrator
- Write
- Read

The protection levels are hierarchical. Administrator users can access Read protected pages.

These predefined pages (those web pages that come with the MicroLogix 1100 controller) in the MicroLogix 1100 controller have these default access levels. You can change the Data View access group, if needed, with administrator privilege.

| Web Page	Default Protection Level
Home page	no protection
Diagnostics pages	Read protection
Data Views	Read protection
New Data View	Administrator protection
User Management page	Administrator protection

Create User Accounts

You need Administrator access to create and modify user accounts. You can create as many as 10 individual accounts. You manage accounts from the Administrative Settings → User Management → Edit Users page.

In this field	Do this
User ID	Enter the user name for the account. 20 characters maximum Can contain these characters: A…Z, a…z, 0…9, underscore (_), and dash (-)
Group	Select Administrator, Write, or Read access for the user account
Password	Enter the password for the account. 10 characters maximum
Confirm Password	Re-enter the same password for the account.

IMPORTANT If you use Internet Explorer, the number of characters allowed for a user ID or password depends on how many characters "fit in the box." Larger characters (such as "W") take more room and reduce the total number of allowed characters.

A user account with a specific privilege can access the Data corresponding to the specific access level, that is, a user account with Read access level can not access the Data belonging to Write or Administrator acess group. The following screen, which shows only Read Access Group, appears when you log in with the guest account.
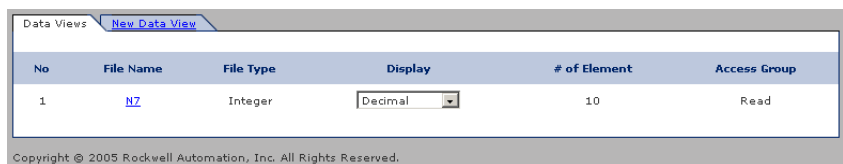
Recover with Unknown Password

Update the firmware using ControlFlash to initialize both user accounts and the access level of data view. This feature is supported only when the OS FRN is 3 (HTML File Revision is 1.2) or later.

Monitor Diagnostics

How to Use This Chapter

This chapter describes the diagnostics presented on the user-oriented diagnostic pages.

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MicroLogix 1100 Controller Diagnostics

The MicroLogix 1100 controller provides four diagnostic pages of user-oriented diagnostics. This information is organized into:

For this information	Access this web page
Overview of the current configuration of the MicroLogix 1100 controller	Diagnostics → Diagnostic Overview
Summary of the network settings configured for the MicroLogix 1100 controller	Diagnostics → Network Settings
Ethernet statistics	Diagnostics → Ethernet Statistics

Diagnostic Overview

The Diagnostics → Diagnostic Overview page presents a summary of the current configuration and overall status of the MicroLogix 1100 controller. This summary includes:

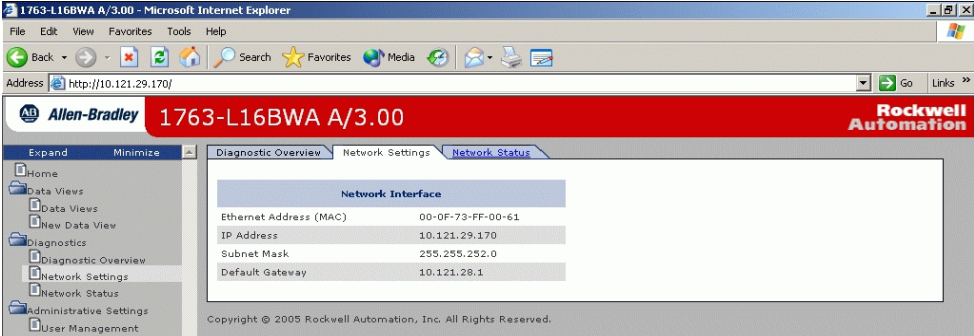- Ethernet configuration.
- Ethernet connection use.
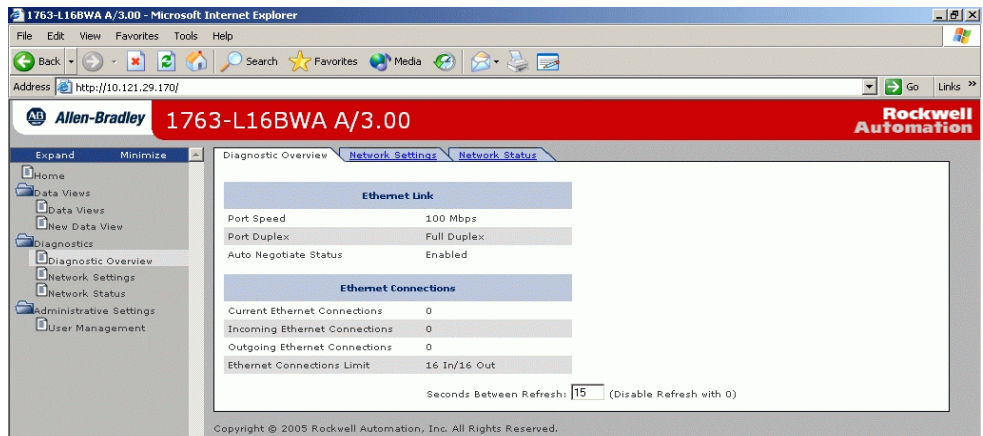
This field	Specifies
Ethernet Link	
Port Speed	whether the Ethernet port is operating @ 10 Mbps or 100 Mbps
Port Duplex	whether the Ethernet port is operating @ half duplex or full duplex
Auto negotiate Status	whether the port speed and duplex mode were determined via autonegotiation or whether they were manually configured
Ethernet Connections	
Current Ethernet Connections	current number of active connections
Incoming Ethernet Connections	current number of incoming connections
Outgoing Ethernet Connections	current number of outgoing ethernet connections
Ethernet Connection Limit	maximum number of Ethernet incoming/outgoing connections

Network Settings

The Diagnostics → Network Settings page presents a summary of the current Ethernet configuration for MicroLogix 1100. This summary includes:

- Ethernet address details.

Any fields not configured remain blank.

This field	Specifies
Network Interface	
Ethernet Address (MAC)	Ethernet (MAC) address of the controller
IP Address	IP address for the controller
Subnet Mask	subnet mask for the controller
Default Gateway	gateway address for the controller

Network Status

The Diagnostics → Network Status page presents a summary of the status of communication activity on the Ethernet network. This summary includes:

- Ethernet network configuration.
- packets sent and received over the Ethernet network.
- frames sent and received over the Ethernet network.
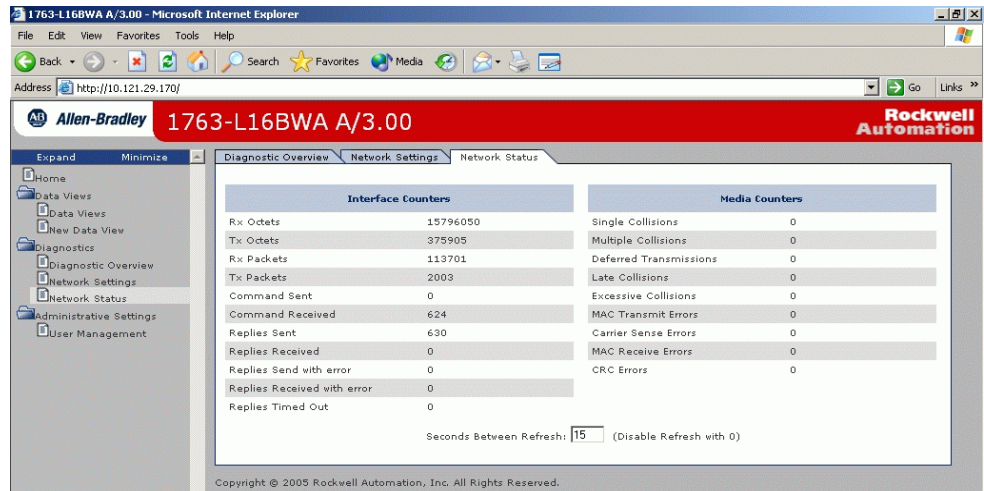
This field	Specifies
Interface Counters	
Rx Octets	Octets received on the Ethernet interface
Tx Octets	Octets sent on the Ethernet interface
Rx Packets	Packets received on the Ethernet interface
Tx Packets	Packets sent on the Ethernet interface
Command Sent	Command sent on the Ethernet interface
Command Received	Command received on the Ethernet interface
Replies Sent	Replies sent on the Ethernet interface
Replies Received	Replies received on the Ethernet interface
Replies Sent with error	Outbound packets that contain errors
Replies Received with error	Inbound packets that contain errors
Replies Timed Out	No reply within a specified time period
Media Counters	
Single Collisions	Successfully transmitted frames which experienced exactly one collision
Multiple Collisions	Successfully transmitted frames which experienced more than one collision
Deferred Transmissions	Frames for which first transmission attempt is delayed because the medium is busy
Late Collisions	Number of times a collision is detected later than 512 bit-times into the transmission of a packet
Excessive Collisions	Frames for which transmission fails due to excessive collisions
MAC Transmit Errors	Frames for which transmission fails due to an internal MAC sublayer transmit error

This field	Specifies
Carrier Sense Errors	Times that the carrier sense condition was lost or never asserted when attempting to transmit a frame
MAC Receive Errors	Frames for which reception on the Ethernet interface failed due to an internal MAC sublayer receive error
CRC Errors	Frames for which CRC error is detected

Notes:

Notes:

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products.
At http://www.rockwellautomation.com/support/, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration, and troubleshooting, we offer TechConnect support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit http://www.rockwellautomation.com/support/.

Installation Assistance

If you experience a problem within the first 24 hours of installation, review the information that is contained in this manual. You can contact Customer Support for initial help in getting your product up and running.

United States or Canada	1.440.646.3434
Outside United States or Canada	Use the Worldwide Locator at http://www.rockwellautomation.com/support/americas/phone_en.html, or contact your local Rockwell Automation representative.

New Product Satisfaction Return

Rockwell Automation tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning and needs to be returned, follow these procedures.

United States	Contact your distributor. You must provide a Customer Support case number (call the phone number above to obtain one) to your distributor to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

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