



Ethernet PLC-5 Programmable Controllers

(Cat. No. 1785-L20E, -L40E, -L80E)

Introduction

This release note describes the changes to the PLC-5[®] firmware included in the series E, revision D.2. release for the Ethernet PLC-5 programmable controllers.

Enhancements

This release includes these enhancements for the Ethernet PLC-5 processors:

- additional diagnostics are available for use within a user program as words 44 through 49 of the Ethernet diagnostic file:

This word:	Displays:
44	Network storm counter
45-47	Ethernet hardware address
48-49	Assigned Internet Protocol Address

Words 48 and 49 contain 4 bytes of data, with each byte holding one of the numbers of the address in hex in the dot address format. For example an IP address of 142.169.124.1 will be displayed as 8EA9 7C01

To access these additional words, you must create the diagnostic file in the channel configuration and manually expand the data table file from 44 to 49 words.

- enhanced connectivity over Ethernet, so that processors can communicate over Ethernet with ControlLogix devices or through a ControlLogix Ethernet (1756-ENET) module to other PLC-5 processors. You need either an Ethernet PLC-5 processor or any PLC-5 processor with a series B, revision A 1785-ENET sidecar module.
- support for SLC Typed Read and Write MSG instructions through the Ethernet interface module (1785-ENET) to SLC 5/05 controllers.
- to provide more security on PLC-5 processors, the processor no longer supports the use of a “back door” password as a default password to gain access to privilege classes when passwords are enabled.

To take advantage of these Ethernet enhancements, you need RSLogix 5 programming software, release 3.22 or later.

Using multihop and non-multihop messages over Ethernet

For non-multihop connections, the Connection Inactivity Timeout is user configurable. For multihop connections, it is not configurable. Instead, it uses a default timeout value of 17 seconds.

When an outbound connection's inactivity timer has expired and a MSG is pending on that connection, the MSG receives an error. On a multihop connection, the error is 0x18 (Broken Connection). On a non-multihop connection, the error is 0x16 (Connection Timeout).

Keep in mind these considerations:

- RSLogix programming software on ControlNet and DH+ links cannot see the controllers on an Ethernet link.
- The RSLinx DDE server on a ControlNet link cannot poll data from the controllers on an Ethernet link.
- The RSLinx DDE server on a ControlNet link cannot accept unsolicited data from controllers on an Ethernet link.
- Applications which register themselves as nodes on the RSLinx "Virtual Link" in workstations on ControlNet cannot accept unsolicited packets from controllers on Ethernet.
- Applications which register themselves as nodes on the RSLinx "Virtual Link" in workstations on an Ethernet link cannot accept unsolicited packets from the controllers on an Ethernet link.

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